An agree-based account of verbless copula sentences in Standard Arabic

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A B S T R A C T

This paper presents an account of Standard Arabic (SA) verbless copula sentences with a nominal or adjectival predicate (DP-DP and DP-AP structures) in terms of the basic notions of the Minimalist Program — Merge, Move and Agree. The proposed account posits a functional projection, nominal phrase (NomP) headed by Nom located between NP and TP. The functional head, Nom, in ways akin to C, T and v, serves as a Probe initiating an Agree relation with a nominal Goal complement which leads to valuing of nominative Case on the complement and of 4 features on the Nom Probe. The initiated Probe-Goal relation observes the claims of Agree Theory in the sense that the relation holds at a distance without having to move the Goal from its base position. Further, the relation also observes the activity condition in that Nom is an active Probe by virtue of carrying uninterpretable 4 features of person, number and gender, and the nominal predicate Goal is likewise active in view of its uninterpretable Case feature. It will be argued that the nominative Case in copular sentences is not a default Case but is the consequence of normal Agree. The analysis provides support for eliminating Case-driven movement and consequently eliminating the Spec head configuration requirement on Case assignment.

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1. Theoretical background

In this section, the key concepts of the Minimalist Program (MP) which will play an important role in the analysis will be introduced.

1.1. Select, numeration and merge

Within the Minimalist program ([10] and later work), the human language faculty consists of a lexicon and a derivational system. Two basic operations, Select and Merge, operate on a set of lexical items called Numeration to build syntactic structures in a successive binary fashion. Two instances of Merge are distinguished in Chomsky [14] — External and Internal. External Merge takes two separate linguistic expressions (A and B) from the Numeration and merges them forming a new unified expression (C):

1. \[ \text{C} / \backslash \text{A B} \]

Internal Merge, on the other hand, takes B which is already part of A as a result of External Merge, and re-merges it in a new projection — a specifier of A - at the edge or periphery of the new projection A. The operation is shown in (3):

2. \[ \text{DP} / \backslash \text{D NP} \text{The boy} \]

\[ \text{N} \]

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Internal Merge is displacement or Move understood within MP as moving a copy of B [11,13], Internal Merge is triggered by the need to license the Edge Feature (EF) of functional heads, specifically phase heads.1 This operation must apply early in the course of the derivation prior to Spell out and Transfer of the relevant structure to the phonological (PF) and semantic (LF) components.2

Within GB and the Principles and Parameters frameworks, it was assumed that the rule Move a moves any syntactic constituent anywhere at any point at any level of the system. Within the MP, however, movement is restricted and appealed to as a Last Resort3 to satisfy the EF of Tense in English for example. A central concept in MP is the economy of derivations and the economy of representations. Such considerations demand “that there … be no superfluous symbols in representations … or superfluous steps in derivations.” Chomsky and Lasnik [9]: 23. If formal features of Edge and Case can be accounted for in terms of External Merge only, such an account will be more compatible with the Least Effort Principle than an account which adopts both operations, External and Internal Merge (displacement).

The following subsection explains features and interpretability.

1.2. Features and their interpretability

An important concept in the MP is the distinction between features of functional and substantive categories. Functional and lexical categories have a bundle of features. Features on functional heads (φ features) such as person, number and gender are “formal features” ([11,13]: 10), and play no role in the semantic interpretation of such heads as C, T, and v at LF.4 That is to say they are uninterpretable, and therefore enter the derivation unvalued. Conversely, φ features on nominal elements are crucial for their semantic interpretation, and therefore enter the derivation valued. The Case feature on nominals appears to be a purely formal syntactic feature with no semantic role, and therefore uninterpretable at LF. Likewise, EF is another formal uninterpretable feature on phase heads which, when present, must be active by having an uninterpretable feature or features.9 To establish a relationship between a Probe and a Goal both of which case are valued, but through Merge of a constituent in Spec T.

The other concept relevant to the analysis of NomP7 is the vP Shell discussed in the next section.5

1.3. vP shell analysis

Work within earlier versions of MP [10,43] has adopted the idea of splitting the VP structure into two projections: the inner core VP headed by the lexical verb and an outer vP headed by a functional verb v. The functional v, also known as a light v, takes the VP as its complement. This analysis is referred to in the literature as the vP Shell structure as one VP is embedded directly under a higher vP node. This is schematized in (4) below:

\[
\begin{array}{ccc}
\text{v} & \text{P} \\
\text{DP} & \text{v}^* \\
\text{Bill} & \text{VP} \\
\text{V} & \text{DP} \\
\text{See} & \text{Mary}
\end{array}
\]

The internal theme argument Mary originates as a sister to V inside the lower VP and, under the VP-Internal Subject Hypothesis adopted by a number of researchers ([25,41,16], among others), the external agent argument Bill originates within the projection of light v inside Spec v.4

The other fundamental concept discussed next is Agree, an operation which matches uninterpretable features with their interpretable counterparts.

1.4. Agree

A related key derivational operation in the MP is Agree. Agree establishes a relationship between a Probe and a Goal both of which must be active by having an uninterpretable feature or features.5 To value its unvalued uninterpretable features, the Probe searches for an active Goal in its C-commanding domain. Once the Probe locates the active Goal, the uninterpretable features of both the Probe and the Goal are valued under matching. This feature valuing is performed by means of Agree. For example, Agree between T and a DP Goal located in Spec v results in nominative Case assigned on that Goal and the φ features of T are assigned a value by those matching but valued features of the Probe; and Agree between v and a DP complement (Goal) results in accusative Case assigned to that DP Goal and, conversely, the φ features of v are assigned a value by

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1 CP and vP are identified as phases in Chomsky [11]; the argument being that both represent propositions. CP encodes tense and the illocutionary force while vP encodes argument structure. A phase head, like other functional heads, may have an EF which is a property indicating that a lexical head can be merged. This may result in an additional Spec on the phase's left periphery, acting as an escape hatch for displacement of constituents. By passing through this extra displacement-attracting intermediate Spec v position to higher positions outside the phase, a violation of the Phase Impenetrability Condition (PIC) is avoided (Cf. [12]: 108 for a formulation of PIC).
2 Spell out and Transfer are technical terms for the operation whereby the syntactic structure, once completed, is submitted to PF and to LF.
3 Chomsky (1988, [10]) refers to this as the Least Effort Principle the essence of which is “if there is no need to do, then don’t do it.”
4 C, T and v do have other features, however, that play a role in their interpretation. C has discourse-related features such as topic and wh, T has tense and v has agentivity.
5 The idea that nominal phrases have a nominal head similar to v is not a new one; it has been proposed in Refs. [8,32,33]; as discussed in Section (2.2.1) below.
6 The relevance of the vP Shell analysis to the topic of this paper is as follows: just as VPs have a functional vP projection, so does nominal clauses include a NomP functional projection headed by Nom located between N and T.
7 The vP Shell analysis goes back to Larson [26] who refers to Chomsky [10].
8 The idea that the subject was actually in Spec, vP (rather than Spec, VP) was suggested later, not in the references cited since the little v head was introduced later.
9 For a proposal that the probe-goal relation results from the operation Merge, see Pesetsky and Torrego [31]. When Merge combines two elements, a probe-goal relation “must be established between these elements” (Ibid.: 1). They call this the Vehicle Requirement on Merge (VRM) formulated as follows:

Vehicle Requirement on Merge (VRM)
If α and β merge, some feature F of α must probe F on β.
those matching but valued features on the Probe.

It will be proposed that Nom is also a functional head carrying a set of uninterpretable nominal features which enable it serve as a probe to value nominative Case on DPs in SA verbless nominal clauses.

2. Literature review

There have been various proposals in the literature to account for copula sentences in SA. For example, Jelinek [23]; using Egyptian Arabic data, proposed a null auxiliary (AUX) for verbless sentences situated between the subject and the predicate. Bakir [44] and Fassi Fehri [20] argued for a null copula in such structures. The view held by traditional Arabic grammarians [39] is that predication in verbless sentences is obtained without the agency of a verbal form, and that nominative Case is assigned to the subject function of serving as a linkage between the subject and its predicate in verbless structures. He states that “ibtidaa” “inception” whereas the predicate nominal acquires its nominative Case through agreement with the subject.

Adopting Rizzi’s Split CP Hypothesis, Jouini [24] assumes a small clause analysis of SA verbless clauses where a phonetically empty verb is generated. That is to say, their structure includes a lexical VP above the small clause (DP, AP or PP) with a higher functional vP structure. He states that “although the auxiliary verb kaana is not in the Numeration … V still needs to adjoin to v” (P. 130) to value the uninterpretable features of v under head-head agreement relation between T and v. The following is an example:10

10 The language morphologically marks DPs ending in a consonant by the addition of the morpheme [n] suffixed onto the Case-marking vowel of the DP; a process referred to in Arabic as tanwiin ‘nunciation’ or attachment of [n]. The suffix -n is glossed as Nunation throughout the paper since it serves various functions such as specificity, agreement, indefiniteness and NP substitution. It has an additional function of serving as a linkage between the subject and its predicate in verbless predicative clauses (see Section 3.2.1).

(5) al-walad-u ḏakiyy-u-n The-boy-nom intelligent-nom-Nunation10 “The boy is intelligent.”

(6) kaana al-walad-u ḏakiyy-a-n The-boy-nom intelligent-acc-Nunation “The boy is intelligent.”

In this case, Jouini (ibid) assumes that the subject DP al-walad-u is merged in the specifier of the small clause and ends up in [Spec, TP] through internal merge. The complex [V-v-T] raises to Fin heading FinP above TP to give the correct VSO word order.

Benmamoun [6]: on the basis of Moroccan Arabic data (7 below), suggested that [DP XP] structures where XP is DP, AdjP or PP have a TP structure:

<table>
<thead>
<tr>
<th>(7) a.</th>
<th>cūmar muqallīm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omar teacher</td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>d-dar khaba</td>
</tr>
<tr>
<td>the-house big</td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>l-ktāb fuq l-maktab</td>
</tr>
<tr>
<td>the-book on the-desk</td>
<td></td>
</tr>
</tbody>
</table>

Such verbless nominal clauses have an obligatory present tense interpretation [20]. Under Benmamoun’s analysis, T lacks a verbal feature and enters into a probe-goal relation with the subject DP generated in Spec, DP which then moves to Spec, TP as diagrammed in (8):

TPs with overt past tense verbal copulas are analyzed in a similar way except T is specified for a verbal feature [+V] and takes VP as a complement instead of DP.11 The subject DP undergoes movement from Spec VP to Spec TP. It is not clear, however, what motivates this movement as the Case of the DP is valued in situ via Agree. Presumably the T edge feature (EF) triggers this movement but such an assumption, while necessary for English, is unnecessary for SA since raising of the copula verb derives the correct word order.

Another analysis of SA present tense (verbless) and past tense (with a verbal copula) clauses is Baker’s [5] implementing a PrP (Predicate Phrase) headed by Pr. Under this analysis, present tense copulas are assigned the structure in (9):

As the arrow indicates, the subject DP moves from [Spec, PrP] to

11 It is not my primary goal in this paper to address sentences with verbal copulas; hence the relevant literature on their properties will not be reviewed thoroughly here. Since the analysis is limited to zero copula nominal clauses, those clauses with a lexical verbal predicate (DP-VP structures) will not receive a lengthy discussion either.
[Spec, TP]. Past and future tense copulas (verbal), on the other hand, are assigned a structure in which the overt copula projects a V and in which the subject DP moves cyclically from Spec PrP to Spec VP and ends up in Spec TP. The Pr head is posited to license the subject in both the verbal and non-verbal copular TPs.

Analyses adopting movement rather than base-generation need to address two questions: first, what is the motivation for the subject or topic DP to move to the periphery of the clause, given that its Case can be valued in its base position without having to move? The second question is how does the movement analysis handle the apparent double Case marking of this subject DP in sentences where it gets nominative Case in situ and accusative Case from the Case-assigning (complementizer) inna as in the following examples:

\[
\begin{array}{ll}
\text{(10) a.} & \text{inna Zayd-an mu'allim-u-n} \\
& \text{that Zayd-acc teacher-nom-Nomination} \\
& \text{“Zayd is a teacher.”} \\
\text{b.} & \text{inna al-walad-a li-akiiy-u-n} \\
& \text{that the-boy-acc intelligent-nom-Nomination} \\
& \text{“The boy is intelligent.”} \\
\text{c.} & \text{inna al-walad-a fi-l-madrassat-i} \\
& \text{that the-boy-acc in the-school-gen} \\
& \text{“The boy is at the school.”} \\
\end{array}
\]

Higgins [22]: 204–293 proposed a taxonomy of copula sentences in English into four categories based on their semantic interpretation as in (11):

\[
\begin{array}{ll}
\text{(11) a.} & \text{Predicational: The hat is big.} \\
\text{b.} & \text{Specificational: The director of BC Tel is Bill.} \\
\text{c.} & \text{Identificational: That (woman) is Sylvia.} \\
\text{d.} & \text{Equative: Sylvia is Her.} \\
\end{array}
\]

An analysis in terms of predication/PredP headed by a functional head ‘Pred’ and surmounted by a IP/TP and CP layers has been proposed by Bowers [7]; Bailyn [4] and Baker [5]. Adger and Ramchand [1]; adopting the minimalist approach, analyzed various copula constructions in Scottish Gaelic as consisting of PredP. APs and PPs occur in the predicate position of copula constructions in the language but when an NP is used, a preposition is needed. The authors suggest that the preposition incorporates a pronoun agreeing with the subject.

In Russian [3] short adjectives are only used predicatively; they cannot be used attributively whereas ordinary adjectives and nouns can be used predicatively. A copula verb ‘byl’ must be used to express past and future tenses; its use in the present tense, however, would be unnatural. In equative or identification copulas an overt copula verb ‘est’ can be employed in the present tense. Otherwise, the two pillars of the copula construction must be set apart intonationally by a pause.

2.1. Default case

A number of proposal exit in the literature which argue that nominative is a default Case. For example, Jouini [24] assumes the nominative Case of the nominal in the following sentence is a non-structural default Case (Adapted from Ref. [24]: 133):

\[
\begin{array}{ll}
\text{(12) al-rajul-u mu'allim-u-n} \\
& \text{The-man teacher-nom-Nomination} \\
& \text{“The man is a teacher.”} \\
\end{array}
\]

He attributes this default Case feature to “the absence of a lexicalized V position that would lexicalize the relation between T and V.”

The default nominative Case has also been proposed earlier by Mohammad [29] and Fassi Fehri [20]; arguing that T cannot act as a Case assigner since it lacks lexical support. Thus within the assumptions adopted by these authors, a default Case is posited. Such a Case does not result from a Probe-Goal Agree relation but is assumed to obtain when all else apparently fails.

Soltan [40]; implementing a small clause analysis within Minimalism, also assumes a default nominative Case on the Topic DP in all verbal and non-verbal copula sentences, and in sentences with a lexical verb of the subject-verb (SV) order.

2.2. A functional nP projection

The idea of a nominal functional projection is not a new one (cf. footnote 5); DP analyses [2,8,32,33]; positing such a projection within DPs in English will be discussed below.

2.2.1. Adger [2]; Carstens [8]; Radford [32,33]

Based on the structural parallelism between clauses and DPs, ([2]: 219) proposes an analysis of the behavior of arguments within DP in terms of an nP projection. He argues that just as VPs “are contained in a little V projection, noun phrases are [also] contained within a little nP.” The DP in (13) will have the tree structure in (14) (adapted from Ref. [2]: 220):

\[
\begin{array}{ll}
\text{(13) The government’s imposition of a fine} \\
\text{(14) The government’s imposition of a fine} \\
\end{array}
\]

The agent DP the government moves from Spec n to Spec D, and the lexical head noun imposition moves and adjoins to n as the arrows indicate. In Adger’s Case checking system, the D heading the topmost DP checks genitive Case, that is to say the [gen] feature on D agrees with the Case feature on the government resulting in the latter being valued and deleted.

Carstens [8]; Radford [32,33]; also proposes a nP projection within the structure of DP akin to the vP Shell structure. The
functional nP Shell dominates the NP core as in (15) (cf. [33]: 10 who uses the label NumP to designate nP; hence the use of NumP in the structure 15):

![Diagram](image1)

Within this nominal expression, the noun heading the core lexical NP is merged in the head N position, and moves into the higher functional Num which heads the shell NumP projection. D carries an EF which requires D to project a DP with a subject. Radford [32] applies the nP Shell analysis to arguments within DP structure such as (16):

![Diagram](image2)

The DP in (16) has the following structural representation:

![Diagram](image3)

The lexical N demolition undergoes internal merge in the head n position, an operation triggered by the affixal nature of n. The [n + N] complex moves further up to D. D is an active probe as its φ features are unvalued and uninterpretable. It thus enters into a probe-goal relation under Agree with the possessor DP the council in Spec n marking it genitive Case. The EF of D triggers the displacement of the possessor agent, internally merging it in Spec D.

3. Standard Arabic copula clauses

As stated earlier, the primary aim of the study is to investigate the verbless structures. However, for the sake of comparison, structures in which an overt copula form occurs will also be considered below.

3.1. Verbal copula clauses

The past and future forms of verbal copulas are expressed by using the verbal forms kaana “was” and saykuunu “will be” respectively:

![Diagram](image4)

The subject DP al-rajul-u appears in the nominative Case while the predicate DP appears in the accusative. Also, the verbal form kaana agrees with the subject in gender, number and person suggesting verb raising to T:

![Diagram](image5)

The clauses showing an overt copula (VSO order) can be analyzed as containing a VP headed by the copula verb. Assuming the vP Shell analysis, the VP is dominated by vP which is selected by T. The subject DP al-rajul-u is merged in Spec vP and its Case is valued as nominative in situ under the familiar Probe – Goal relation with T. The accusative Case of the predicate DP kaatib-an is also valued under the same relation with v which attracts the lexical copula V kaana. The subsequent raising of the complex [v + V] to T produces the correct surface VSO order in the manner shown by the arrows in (20):

![Diagram](image6)

This account utilizing the vP Shell rather than the NomP projection seems reasonable and straightforward given that the copular kaana is verbal in nature, not nominal.

The verbal copula examples (18) above also have an SVO version as in (21):

![Diagram](image7)

13 VSO clauses are not the primary focus of this paper, so they will not be dealt with further. Nominal structures which include verbs are initiated by nouns and they are called Subject-Verb-Object (SVO) structures. By contrast, verbless structures show the relation between two DPs usually a topic and a comment. These structures are expressed in the present tense.
I am assuming that the DP al-rajul-u in (21) is base-generated at the periphery of TP as an instance of left-dislocation, topic or focus [30]. Under the present analysis, it enters into an Agree relation with a null C valuing its Case as nominative eliminating the notion of default Case. A coreferential pro is merged in Spec vP where it is probed by T under Agree.14

3.2. Verbless copula clauses: predicative

The first syntactic fact to observe about the following examples is that they have no overt verbal copular verb:

The verbless structures show a predicational relation between two DPs (22a where the predicate DP is nunate), DP and AP (22b), DP and an active participle (22c), DP and a passive participle (22d) and DP and PP (22e-f) where the complement ascribes a given feature to the subject DP.15

Also, an important difference should be noted between the form of the predicate nominal DP kaatib-u-n (writer-nom) in the verbless copula sentences and its corresponding form kaatib-an (writer-acc) in the verbal counterpart in (18 above). It is nominative in verbless copulas but accusative in verbal copulas. In other words, the predicate DP changes Case.

Another observation is that despite the lack of an overt verbal form in verbless copulas, the sentences have a present tense interpretation [20], suggesting the presence of an abstract T node and hence a TP clausal structure. They are by default present-tensed clauses; this means that the role of T cannot be ignored. Notice that a temporal expression such bil-humsi ‘yesterday’ or yadan ‘tomorrow’ cannot occur (23 a-b). The occurrence of a pronominal16 in predicational copular sentences with a nunate complement would render the sentence ungrammatical or unnatural at best (23 c-h). The pronoun is in boldfaced:

<table>
<thead>
<tr>
<th>(22)</th>
<th>al-rajul-u kaatib-u-n</th>
<th>the-man-nom writer-nom-Nunation</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>al-rajul-u kaatib-u-n</td>
<td>“The man is a writer.”</td>
</tr>
<tr>
<td>b.</td>
<td>al-rajul-u tawiil-u-n</td>
<td>The-man-nom tall-nom-Nunation</td>
</tr>
<tr>
<td>c.</td>
<td>al-rajul-u laaial-un fi l-daar-i</td>
<td>the-man sitting-nom in the-hous-gen</td>
</tr>
<tr>
<td>d.</td>
<td>al-f-ams-u mahjuubat-u-n</td>
<td>the-sun-nom blocked-nom-Nunation</td>
</tr>
<tr>
<td>e.</td>
<td>al-rajul-u fi l-daar-i</td>
<td>the-man in the-hous-gen</td>
</tr>
<tr>
<td>f.</td>
<td>al-rijal-u hunaa/hunaaka</td>
<td>the-men-nom here/there</td>
</tr>
</tbody>
</table>

These sentences encode a predicational interpretation contributed by the predicate complement [22], and the pronominal copula does not appear to make semantic contribution nor is it required to distinguish a sentential reading from a phrasal reading.

The general view held in Arabic grammar is that derived adjectives/nominals such as active participles kaatib-u-n “writer”, tawiil-u-n “tall”, laaial-un-n “sitting” and mahjuubat-u-n “blocked” (22 a-d) contain an implicit pronominal acting as a link between the subject and the predicate. Following this line of reasoning, I propose that this pronominal is the clitic -n (Nunation) which is discussed in the following section. In the case of locative, it is claimed that PP predicates (22e-f), the linkage is established through an implicit existential nominal copula maujuud/mustaqir/kaaAn “existing” as (24) shows:

14 A distinction will not be made here between preverbal subjects, topics, left-dislocation and focused DPs. For a distinction between VS and SV orders see Sol-tan [40] who argues that the two orders differ in their semantic, syntactic and Case properties. One argument is based on definiteness and specificity effects, such that indefinite non-specific DPs cannot appear pre-verbally, that position being restricted to discourse topics. The second argument is based on extraction possibilities; it is possible across a post-verbal DP but disallowed across a pre-verbal DP (cf. [20], showing Defective Intervention effects. The third argument has to do with Case properties, post-verbal DPs being uniformly nominative while pre-verbal DP’s either nominative or accusative.

15 A distinction will be made in the following subsections between predicational and equative or identity verbless copula clauses based on the occurrence of a pronominal copula, definiteness effects and inversion.

16 The occurrence of a pronominal copula has been noted in the relevant literature [19,20]. Fassi Fehri provides the following example from SA:

al-maas/u hun al-masal-ul-un
the-soldiers-nom they the-responsible-nom
“The soldiers are the responsible.”
The appearance of the morpheme -n at the end of nominal predicates in predicative clauses is curious and significant. The addition of this morpheme, referred to as nunation, typically to adjectives and derived nominals signals more than one syntactic and semantic feature, making it truly multi-functional. Among such features is the three-way Case marking on the nominal, that is the ability of the nominal category to receive Case in the nominative, accusative and genitive as an indication of its inherently being multi-functional. Among such adjectives and derived nominals signals more than one syntactic feature, making it truly multi-functional.

The -n morpheme can in fact be suffixed onto proper names as well in the nominative, accusative and genitive which seems to be marking specificity or uniqueness, as for example in Muhamad-a-n, Muhamad-i-n which is evidently definite. This morpheme can also function as a pro-NP, i.e., a pronominal replacing an NP, as in for example:

(27) a. kull-u-n ya-ktub-u wajib-a-hu each-nom-Nunation imperf-write-indic-homework-acc-his "Each (one) shall write his homework.

The -n cliticized on kull in (27a) stands for ʃajrats “person”, wahid “one” or tilmiið “pupil”, etc. lexically specified in (27b). The removal of the clitic in (c) renders the sentence ungrammatical. The sentence is left untranslated since the translation would not reflect its being ungrammatical.

In the context of predicative clauses in which the predicate is a DP or an AP, I would like to propose that -n is a pronominal clitic having the function of linking the subject with the predicate. It is located under the functional head Nom, and is endowed with ability to enter into an Agree relation with the predicate due to its unvalued features. Being affixal, it also attracts the head of the predicate raising it for lexical support. These points will be clarified below.

The structure created by Merge of the predicative [DP DP_Nunation]17 sentence (25a) al-walad-u tilmiið-un is shown in (28) where NomP is a functional predicational projection:

(25)
a. al-walad-u tilmiið-u-n/a-n the-boy-nom student-nom-Nunation/-acc-Nunation "The boy is a student.

b. al-tawlaad-u talaamiið-u-n/tilmiið-u-n the-boys-nom students-nom-Nunation/student-nom-Nunation "The boys are students.

c. al-walad-u tilmiið-u-n/a-n the-boy-nom hard-working-nom-Nunation/-fem-nom-Nunation "The boy is hard-working."

(27) a. kull-u-n ya-ktub-u wajib-a-hu each-nom-Nunation imperf-write-indic-homework-acc-his "Each (one) shall write his homework.

b. kull-u ʃajrat-i-n/wahid-i-n ya-ktub-u wajib-a-hu each-nom-person-gen-Nunation/one imperf-write-indic-homework-acc-his "Each person/one shall write his homework.

c. kull-u ya-ktub-u wajib-a-hu each-nom imperf-write-indic-homework-acc-his
The functional head Nom which includes the clitic -n merges with DP1 forming Nom’ which merges with DP2 al-walad-u in Spec-Nom to form NomP, and the resulting NomP is then merged with T to form TP. Merging TP with a phonetically null C [ø] derives a CP structure. Assuming a non-visible C [ø] the TP in (28) merges with [ø] which carries an interpretable declarative feature force to form a CP.

The predicate DP1 tilmiidi-u-ün is in the search domain of Nom, and DP2 al-walad-u is in the search domain of T, paving the way for an Agree relation between the Probes and the DP Goals whereby the Case feature on both DPs is valued nominative and the φ features on T and Nom are also valued accordingly as 3rd person singular masculine.

Note that the DP2 al-walad-u is base-generated in the Spec

18 The proposal that a null C acts as a probe is not a new one. The idea of a null C introducing declarative clauses for English has been proposed by various researchers (cf. [35] among others). This assumption achieves a high degree of consistency and uniformity across clausal structure. Suppose all Arabic clauses, embedded and root clauses, are CPs headed by C, overt or null. C is optionally null: If there is no overt C in the clause, it would be headed by a phonetically null C.

19 The fact that C does not receive phonological spell out does not change the meaning of the sentence:

\[
\begin{align*}
(1) & \\
a. & \text{al-muṣallimu ya-fraḥu l-darsa} \\
& \text{“The teacher is explaining the lesson.”} \\
b. & \text{ṣīma al-muṣallīma ya-fraḥu l-darsa} \\
& \text{“C The teacher is explaining the lesson”} \\
c. & \text{ḥal al-muṣallīma ya-fraḥu l-darsa?} \\
& \text{“whether/if the teacher is explaining the lesson.”}
\end{align*}
\]

(1a) and (1b) are parallel in meaning, both are finite, declarative and both are realis or indicative; the event in both is realized or it will be realized despite the fact that C in (a) is null whereas it is overt in (b). The CP in (1b) displays additional semantic effects being emphatic and assertive which correlates with a different structural representation. (1c) is interrogative in force by virtue of being a question introduced by the head C hal carrying the interrogative force feature. In this connection Radford ([33]: 72) remarks “theoretical considerations require us to assume that [such matrix clauses are CPs headed by a null C with a declarative force feature] if we follow Rizzi ([35], p.288) in posting ... a Categorial Uniformity Principle to the effect that all expressions of the same type belong to the same category.” This means all clauses with the same illocutionary force – imperative, interrogative, realis, unrealis, etc. – belong to the same syntactic category. It follows that the declarative main clause in (1a) must be a CP since (b-c) are CPs. Notice that the Q feature associated with C can also have an affixal nature as in (2) which presumably triggers verb raising to C for lexical support:

\[
\begin{align*}
(2) & \\
& \text{ṭa-ya-fraḥu al-muṣallīmu l-darsa} \\
& \text{“whether/if explain the teacher the lesson”} \\
& \text{“Is the teacher explaining the lesson?”}
\end{align*}
\]

TP is merged with the interrogative C ṭa- resulting in CP.

20 If φ features and Case in Arabic are valued in situ just as in English, the prediction would be that Arabic shows no such movement. In fact, in view of minimalist assumptions, this movement should not occur. This position is adopted here without providing detailed arguments as it is beyond the scope of this paper, referring the reader to Soltan [40] who argues that SA shows no such movement.

Nom – a position in which the argument is initially merged in syntactic structure, and likewise DP1 tilmiidi-u-ün is also base generated as a complement of Nom by initial external Merge. This is consistent with the proposal stated in (29):

\[
(29) \text{Predicate-Internal Argument Hypothesis} \\
\text{All the arguments of a predicate originate within a projection of the predicate. ([33]: 158).}
\]

The proposal in (29) “allows us to maintain ... a uniform mapping ... between syntactic structure and semantic argument structure – more specifically, between the position in which arguments are initially merged in a syntactic structure and their semantic function” (ibid). To see how this is put into practice, reconsider structure (28). DP1 tilmiidi-u-ün is contained within the immediate projection of Nom, the subject DP2 al-walad-u is contained within the projection of Nom. Since Nom has an EF requiring it to have a specifier, DP2 is merged in this position to serve as the specifier of Nom, thus guaranteeing that Spec Nom will be filled. Under the structure in (28), the argument structure of Nom is reflected in the internal structure of NomP.

As noted earlier, the pronounal clitic -n is located in Nom but it is a suffix cliticized on DP1 tilmiidi-u-ün. The fact that -n is an affix raises the head noun tilmiidi to left-adjoin to the clitic to form a complex head with -n surfaceing in the correct order as a suffix after the Case marker -u. Sentences such as (30) which display [DP XP] where XP is a PP or an AP are assigned the structure in (31):

\[
\begin{align*}
(30) & \\
a. & \text{al-rajul-u (mawjuud-u-n) fi l-daar-i} \\
& \text{“the-man (existing) in the-hous-gen} \\
& \text{“The man is in the house.”} \\
b. & \text{al-f-ams-u mahjuubat-u-n} \\
& \text{the-sun-nom blocked-nom-Nunation} \\
& \text{“The sun is blocked.”}
\end{align*}
\]

As in the previous structure (28), the pronounal clitic -n on the predicate adjective mahjuubat-u-ün should start in Nom in the

21 The following order is disallowed:

\begin{align*}
\text{tilmiidi-} & \text{n-} \\
\text{n-} & \text{tilmiidi-}
\end{align*}

The ordering appears to be phonological having to do with a constraint on the syllable structure in standard Arabic which prohibits consonant clusters.
structure (31). Then, after Adj raising which left-joins the Adj, the clitic ends up in the correct position. In contexts where the predicate is a PP (30a), Nom expresses the notion of mawjūdūd “existence”. Note the DP in Spec Nom must be definite; an indefinite DP is barred from this position:

   b. ḥuwa ḥunaaka ṭarjul-u-n fi l-daar-i “There is a man in the house.”
   c. ḥuwa ḥunaaka ṭarjul-u-n in the-house-gen there man-nom-indef “A man is in the house.”

The sentence can be saved by preposing the PP predicate or by inserting the existential expletive ḥunaaka ‘there’ as shown in (33):

(33) a. fi l-daar-i ṭarjul-u-n in the-house-gen man-nom-indef “There is a man in the house.”
   b. ḥunaaka ṭarjul-u-n fi l-daar-i “There is a man in the house.”
   c. ḥunaaka ṭarjul-u-n in the-house-gen there man-nom-indef “A man is in the house.”

3.2.2. Equative/identificational

Standard Arabic uses a strong (overt and free standing) 3rd person pronoun to mark the sentence as equative. The following examples show the occurrence of such a pronoun separating the two constituents [DP al-baqarat-u and DP al-baqarat-u], [DP al-kharuuf-u and DP al-baqarat-u], [DP al-rājul-u and DP al-muṣihilat-u], [DP al-marrat-u and DP al-hall-u] and [DP al-hayaat-u and DP al-rīḥlat-u].22 Sentence (34f) shows that the post-pronominal predicate is a CP. The pronoun is boldfaced:

(34) a. al-baqarat-u hiya al-baqarat-u
    The-cow-fem-nom the-docile-nom/docile-nom-Nunation
    “The cow is docile.”
   b. al-kharuuf-u huwa al-baqarat-u
    The-lamb-nom the-docile-nom/docile-nom-Nunation
    “The lamb is docile/meek.”
   c. al-rājul-u huwa al-muṣihilat-u
    The-man-nom the-problem/problem-nom-Nunation
    “Man is the (real) problem.”
   d. al-marrat-u hiya al-hall-u
    The-woman-nom the-solution-nom/solution-nom-Nunation
    “The woman is the (real) solution.”
   e. al-hayaat-u hiya al-rīḥlat-u
    the-life-fem-the-journey-nom/journey-nom-Nunation
    “Life is a journey.”
   f. al-ḥaqiqat-u hiya anna-ka waṣal-ta muḥākiran
    the-fact-nom that-you arrived-you early
    “The fact is that you arrived early.”

Notice that the pronoun in these examples agrees with the subject DP not with the predicate DP or AP. Such copular clauses in which the predicate is a definite DP or a nominalized AP are referred to as equative or identity copulas in the sense that the referents of the two DPs are equated [22]. The two DPs must be definite and specific, and they must be linked by a pronoun as noted above to obtain a clausal reading, not only a DP post-modified by an adjective.

Another defining feature of equative clauses is the fact that the order of the two pillars [DP DP] forming the equative can be switched. (35a and 35b) are the inverted version of (34a and 34b) respectively, the (b) sentences in (36–37) are the inverted version of the sentences in (a):

(35) a. al-baqarat-u hiya al-baqarat-u
    The-cow-fem-nom the-docile-nom/docile-nom-Nunation
    “The docile (one/animal) is the cow.”
   b. al-muṣihilat-u hiya al-rājul-u
    The-health blessing-nom the-blessing-nom
    “Health is the blessing.”
   c. al-rājul-u hiya al-ṣiḥat-u
    al-baqarat-u hiya al-ṣiḥat-u
    The-man-nom the-solution-nom/solution-nom-Nunation
    “The man is the health.”
   d. al-baqarat-u hiya al-ṣiḥat-u
    al-muṣihilat-u hiya al-ṣiḥat-u
    The-cow-fem-the-solution-nom/solution-nom-Nunation
    “The woman is the blessing.”
   e. al-ṣiḥat-u hiya al-muṣihilat-u
    “Health is the blessing.”
   f. al-muṣihilat-u hiya al-rājul-u
    “The blessing is the man.”

The switching of the two constituents has no substantial meaning change but results in rhetorical pragmatic effects such as emphasis or contrastive focus. A similar pattern of mediation by a pronoun and of constituent switching is found in relative clauses. The examples in (b) are the inverted version:

(36) a. al-ṣiḥat-u hiya al-niṣmat-u
    al-baqarat-u hiya al-ṣiḥat-u
    the-health blessing-nom the-health-nom
    “Health is a blessing.”
   b. al-niṣmat-u hiya al-ṣiḥat-u
    “The health is the blessing.”

(37) a. Salma al-dākiyyat-u
    al-baqarat-u hiya Salma
    the-writer-nom the-smart-nom
    “Salma is the smart one.”
   b. al-dākiyyat-u hiya Salma
    “The smart one is Salma.”

To sum up, SA employs three strategies of copular structures - a verbal copula (kaana, sayakuumu) in the past and present tenses respectively, a zero copula (phonetically null) and a pronominal

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22 I am indebted to anonymous *Ampersand* reviewer for pointing this out to me. This pronoun is referred to as dami`iru `fi`ṣal `distinguishing pronoun` as it distinguishes between the DP and TP clausal interpretations.
copula strategy. The semantic relations of identity/equation, attribution were briefly discussed, compared and contrasted on the basis of pronominal (non)occurrence which is required in equatives but disallowed in predicatives and interchangeability of the constituent DPs.

The following section introduces the clausal structure of verbless equative copulas which includes a functional projection Nom heading a nominal phrase (NomP) in ways similar to predicative clause type; the difference between the two clause types is that equatives involve left-dislocation of the initial DP.

3.2.2.1. The structure of equatives as nominal phrase (NomP).

Note that the initial DP of an equative sentence appears in a position following, not preceding, the complementizer (C) ʔinna/ʔanna in embedded contexts. (a) is a non-embedded single equative, (b) in which the DP ʔSalma24 occurs following ʔinna is grammatical whereas (c) in which ʔSalma occurs to the left of ʔinna is ruled out:

| (40) a. | ʔSalma ʔhiya al-kaatibat-u |
| b. | qul-tu ʔinna ʔSalma ʔhiya al-kaatibat-u |
| c. | qul-tu ʔSalma ʔinna ʔhiya al-kaatibat-u |

This fact suggests the initial DP should occur after C at the periphery of TP. I assume it is base-generated (directly merged) in Spec T as an instance of Left-dislocation/topic or focused constituent with the resumptive pronominal (RP) 25 acting as subject.

23 A copula structure is also achieved through the use of a negative particle laysa ‘is not’ in the present tense:

1. laysa al-dawaʔ-u jahiz-an
   is-not the-medicine-nom ready-acc
   “The medication is not ready.”

laysa can also occur in between the subject pillar and the predicate pillar as shown below:

2. al-dawaʔ-u laysa jahiz-an
   the-medicine-nom is-not ready-acc
   “The medication is not ready.”

And it can inflect for person, number and gender:

3. al-ʔawalaad-u lays-u jahiz-iin
   the-boys-nom are-not-they ready-acc
   “The boys are not ready.”

It is plausible to analyse this construction in terms of NegP dominating TP which includes the copular clause. This analysis will not be pursued in this paper.

24 The noun ʔSalma is morphologically uninflectable for Case; it belongs to a restricted class of nouns such as Layli, Huda and Khudii known in Arabic Grammar as muzri “fixed, frozen or uniform” displaying no overt Case.

25 Resumptive pronouns are attested in many languages including for example Irish [28], Italian [15] and Hebrew [36,37]. The phenomenon is investigated in the context of relativization and left-dislocation where the resumptive pronoun is described as being bound by its antecedent in an A-bar position. (Clinic) Left-dislocation is traditionally referred to in the literature on Arabic as Topic-comment [18,20,40]. In such structures, a definite initial DP, i.e., the topic is left-dislocated followed by the comment clause consisting of a subject and a predicate. The comment clause of verbal predication contains a resumptive pronoun in subject (typically non-overt, Arabic being a pro-drop language), in object or possessor position.

26 An analysis in terms of PredP [1,7,45] has been proposed to account for equative clauses. For a proposal that the pronominal is located in (in)section as the phonetic realization of subject agreement, see Doron [17] for Hebrew, Shlonsky [38] and Benjamoune [46]. The problem with treating the pronoun as the instantiation of agreement in the I node is that the pronoun displays gender and number agreement only which makes it different from regular subject-verb agreement found in the language:

1. ʔʔanta ʔhuwa al-muʔnib-u
   you sg he the-guilty-nom
   “you are the guilty one.”

2. ʔʔanta ʔal-muʔnib-u
   you you the-guilty-nom
   “We are the guilty ones.”

3. ʔnahee ʔhumu al-μuʔnib-un
   we they the-guilty-nom
   “We are the guilty ones.”

It also raises the question of why this particular form of independent pronoun in Arabic is found in the I constituents of equative clauses only. Left-dislocation of DPs which are resumed by a pronoun, by contrast, is productively employed in the language.

27 Baker [5] presents an analysis of Arabic present tense copula sentences which implements a predicational projection, PrP, headed by a functional head, Pr. In his analysis, Pr is generated to license the subject which raises from the specifier position of PrP to the specifier of TP.
ungrammaticality of (b) and (d) is expected since the pronoun subject is optional in equative clauses. Also, as expected, this pronoun is disallowed in predicative clauses which is illustrated in (43), thus (a) is grammatical but (b and c) are not:

(43) a. ʔinna caliy-an fi il-daari
b. ʔinna caliy-an huwa fi il-daari
c. ʔinna Salma hiya ɗakiyy-at-u-n

Since DP₁ and DP₂ are both definite, they may interchange positions, i.e., either DP may undergo Left-dislocation/displacement. DP₁ al-kitaab-u is dislocated in the following example:

(44) al-kaatibat-u hiya Salma
the-writer-nom Salma
"The writer is Salma."

As schematized in the structure (41) above, equative copulas have the format [DP RP DP] where both DPs are definite. The first DP is analyzed as left-dislocated in Spec T, and is obligatorily co-indexed with a RP in Spec Nom. The RP is analyzed as the subject of NomP, a projection of the head Nom which mediates a predication-features, Nom also carries uninterpretable Case features, initiating an Agree relation. In the same way, as v, being affixal, attracts V for lexical support, Nom as well as T do so too for lexical support. C, T, Nom, and v are all assumed to probe independently of one another for agreement and Case-marking.29

5. Conclusion

An analysis is presented of verbless copula sentence which includes a functional NomP layer located between the lexical predicate layer and TP. Nominative Case features are accounted for in terms of a Probe-Goal relations rather than a traditional local Spec-head configuration or as a default Case. Probe-Goal is a long distance relation established by Agree between Nom and the nominal resulting in valuation of Case on the nominal and of φ features on Nom. By the same Agree operation, valuation of nominative Case of the subject DP in Spec Nom and of the φ features of T are valued at a distance rather than in a Spec T configuration.

A structural distinction is drawn between equative and predicational copula clauses wherein equatives are treated as displaying left-displacement (dislocation) of the initial DP. The position of this displacement is assumed to be Spec T obligatorily requiring a phonologically overt independent pronoun. The pronoun is treated as the actual subject directly merged in Spec Nom. Predicative clauses, in contrast, are assigned a structure wherein the initial DP is treated as the actual subject directly merged in Spec Nom. The subject in both copular constructions enters into a predicational relationship with its predicate through the functional head Nom.

The data provide support for the minimalist view that Case assignment results from the fundamental Probe-Goal Agree operation at a distance while the nominal substantive category remains in situ in Arabic zero copula construction.

References


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28 Recall from structure (28), the pronominal clitic -n is actually functioning as Nom and should be placed in the correct position in Nom in structure (45). Subsequent raising and junction of the N tilmiið “student” to Nom produces the correct surface order. These details are not shown in (45).

29 Chomsky [47] argues for a different view whereby the different heads, C, T and v, can probe either independently of each other or randomly (in any order) or ‘in a parallel’ (i.e., simultaneously) within a given phase.
Linguistics, Peter Lang, Frankfurt, Germany, 2003, pp. 461–482.


