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The Syntax-Semantics Interface of Copular Constructions: Evidence from Standard Arabic

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Abstract
This paper aims to provide additional supporting evidence for the Equative Approach by reducing the taxonomy of copular clauses into just two categories: predicational and equative. Data from copular structures in Standard Arabic are presented to bolster this approach. These data reveal that Standard Arabic features two distinct lexical copulas: (i) an inflected verbal copula, "kaana," and (ii) a pro copula. A detailed examination of these two copular structures shows that the verbal copula is exclusively utilized in predicational clauses. In contrast, the pro copula is designated explicitly for equative clauses. This delineation indicates that the semantics of copular constructions cannot be adequately captured solely by the single-be analysis advocated by the Inverse Approach. Instead, an approach positing two copulas, one for prediction and one for equation, is deemed necessary, thereby advocating for the equivalent approach.
Keywords: Copular Clauses; Kaana; Predication; Equative Approach; Inverse Approach.

INTRODUCTION

The syntax and semantics of copular constructions cross-linguistically pose a significant problem for any formal theory of syntax-semantics interfaces. "The principal issues involve in particular the relation between syntactic and semantic representation, are complicated by the syntactic and semantic ambiguities which copular structures exhibit" (Zaring, 1996, p. 103). The paper seeks to present initial findings from a cross-linguistic examination of copula constructions, categorizing the variety of structures that languages employ as their fundamental copula construction(s). Of particular interest is the investigation of these features to ascertain whether there exist universal patterns concerning the syntactic and semantic roles played by the two noun phrases (NPs) within a copula construction. By doing this, the paper aims to add supporting evidence to the Equative Approach to the type of copular constructions that a variety of languages exhibit (e.g. Zaring 1996, Carnie 1997, Heycock and Kroch 1999). This approach, unlike the Inverse Approach, argues that there are, and no more, two kinds of *be* constructions, one for predicatives and one for equatives, distinguished by the types of their arguments. This approach is named by Carnie (1997: 57) as *Multiple Be analysis* which, there are two kinds of copular structures:

1. Predicative Structures: NP2' (NP1)
2. Equative Structures: (EQUALS' (NP!, NP2)

In contrast, the Inverse Approach refutes the presence of equative structures (e.g., as asserted by Williams, 1983, Moro, 1997, Adger and Ramchand, 2003, Mikkelsen 2005, den Dikken, 2006, and others). It proposes instead that there exists only one argument structure for copular constructions. This perspective, termed the Unified Be Analysis by Heggie (1988), posits the format NP2(NP1), suggesting that copular constructions entail the predication of NP by the other, even within equative contexts (Carnie 1997).

Evidence in favor of the Equative Approach is provided with data from copular constructions in Standard Arabic (Arabic, henceforth). The evidence adds also significant support for two studies done by Zaring (1996) and Carnie (1997) about copular constructions in Welsh; having explored issues related to the syntax and semantics of pseudo-cleft sentences in Welsh, Zaring (1996) arrived at the conclusion that there exists a correlation between the morphological paradigm of the copula employed and the interpretation of the pseudo-cleft. These findings concerning Welsh pseudo-cleft sentences are not adequately explained by the single-be analysis but are rather comprehensively accounted for by an approach positing two copulas: one for predication and one for equation (or identity, as expressed by Zaring) and Irish; Carnie (1997) provided syntactic evidence for the semantic division between equatives and predicatives that is argued by the Equative Approach. He convincingly argued that in Modern Irish copular constructions, there are two-word orders corresponding to the equative/predicative split and these two have distinct syntactic and semantic properties, respectively, in favor of the Equative Approach.

To this end, the paper is organized as follows. Section 2 outlines taxonomy of Copular Clauses distinguished by Higgins and illustrates how the Equative Approach collapses them. Section 3 delves into a detailed analysis of cross-linguistic variations in the form and characteristics of copular constructions employed by languages to convey either an equation or predication of the subject. Section 4 provides evidence in favor of the Equative Approach. It does this on the basis of data from taxonomy of Arabic copular clauses. Finally, section 5 concludes the paper.

METHOD

This paper adopts a qualitative, descriptive-analytical approach within a comparative syntactic-semantic framework. It investigates the nature of copular constructions in Standard Arabic through a theory-driven analysis grounded in typological linguistics and formal semantics. The primary aim is to evaluate the empirical adequacy of the Equative Approach vis-à-vis the Inverse Approach by analyzing data extracted from Standard Arabic, supported by relevant cross-linguistic evidence.

"Copular constructions generally refer to clause structures where the subject is linked with nonverbal predicates like nominal, adjectival and locative" (Dey and Barbora 2012, p. 353). The purpose of such constructions is to express some semantic notions like equation, attribution, location, existence and possession (Dryer 1985, Payne 1997). More specifically, Higgins (1979, pp. 204–293) distinguishes four semantic types of copular clauses taxonomy as shown below in (2-5); for a full discussion about these four-way taxonomy proposed by Higgins (1979) and a good reference to the formal syntax/semantics literature on copular constructions, see Mikkelsen (2011).

(2) Predicational
a. The hat is big.

b. The hat/present/thing I bought for Harvey is big.
c. What I bought for Harvey is big.

(3) Specificational
a. The director of *Anatomy of a Murder* is Otto Preminger.
b. The only director/person/one I met was Otto Preminger.
c. Who I met was Otto Preminger.

(4) Identificational
a. That (woman) is Sylvia.
b. That (stuff) is DDT.

(5) Equative
a. Sylvia Obernauer is HER.
b. Cicero is Tully.

As pointed out in the introduction, the Equative Approach collapses Higgins' taxonomy and distinguishes irreversible predicational copular sentences from generally reversible equative ones. under this approach, both identificational and specificational copular clauses are argued to be derived from the same structure and they are considered as equatives. That is, the subject phrase in (3) and (4) is not considered an inverted predicate, as argued by the Inverse Approach, and the copula itself is considered to be an equative copula much like that found in (5) (for relevant discussion see Selvanathan 2016). Consequently, the taxonomy of Copular Clauses can be divided into two broad classes. (i) the copula *be* of predication as in (1) and (ii) the distinct copula *be* of equative/identity as in (4) & (5), distinguished by the types of their arguments (see Partee, 1976, 1999). Based on the two senses of the copula, a copular construction can be semantically defined as "the most basic construction or constructions which a language uses to encode: (a) the meanings of identity of two participants normally encoded as noun phrases in that language (for example, 'that man is my father', 'that woman is Mary')" (Curnow 2000, p. 1); and (b) a characterization or attribute of the subject using noun phrases (for example, 'Mary is a doctor', 'John is a teacher') (Pereltsvaig, 2007) .

Before I proceed with discussing the two types of copulas and how they are presented in Arabic, a brief outline of how languages use this crosscategoriality of the copula to encode equatives and predicatives is demonstrated in the next section.

Cross-Linguistic Classification Of The Copular Constructions

In fact, there is significant cross-linguistic variation in the form and properties of copular constructions used by the world languages to introduce an equation or predication of the subject. Thus, the encoding strategies for copular constructions in the world languages are not the same and are divided into five strategies (see Payne, 1997, Curnow, 2000). The first most common strategy used by languages is an overt copular verb (i.e. the copula is phonetically expressed with its subject and its complement). This is the only strategy used by English to encode copula relations as shown by the examples mentioned by Higgins in (2-5) above. Examples of this common strategy from others languages are shown in the following:

(6)a. larki-yãã bazaar gaa- y˜ı˜ hã˜I (Hindi)
girls.f-pl bazaar go-f.pl be.pres.3.pl
"The girls have gone to the bazaar".

b. larki-yãã bazaar gaa-y˜ı˜ th-ı˜
girls.f-pl bazaar go-f.pl be.pst-3.pl
"The girls had gone to the bazaar." (Poornima, 2013, p. 14)

(7) a.Raymond est un acteur. (French)
Raymond is an actor
"Raymond is an actor."

b. Paul etait (un) champion olympique.
Paul was a champion Olympic
"Paul was an Olympic champion." (Roy, 2013, p. 37,40)

(8) a.Kocka je savec. (Czech)
Cat-Nom is-3s mammal-Nom
"The cat is a mammal".

b. Otec je moudry
father-Nom is-3s wise-Nom
"'Father is wise".

c. Praha je hlavni mesto Geske Republiky
Prague-Nom is-3s main city-Nom Czech Republic-Gen
"Prague is the capital of the Czech Republic". (Clancy, 2010, p. 93).

(9) Kongzi *shi* xian ren. (Mandarin Chinese)
Confucius is virtuous person.
"Confucius is a virtuous person." (Chang 2006, p. 132)

(10) Böckerna är lätta att läsa. (Swedish)
books-DEF are easy to read
"The books are easy to read." (Klingvall, 2011, p.132)

A second construction employed by certain languages to denote copula relations involves the utilization of a copula element that functions solely as a particle. Curnow (2000) refers to this type of construction as a "particle copula construction." One instance of such a construction can be observed in K'abeena, a Semitic language spoken in Ethiopia, wherein the particle copula "-ti" is utilized. This particle is employed when the predicate of the copula clause comprises a proper name, a personal pronoun, a wh-word, an adverb, or a noun ending in "**-e**" or "**-o**" (Crass, 2005). Additionally, it is used when the predicate is marked with dative, instrumental, locative, or ablative, as exemplified by the following example taken from Crass et al. (2005, p. 24):

(11) a. ’ise c’aaltoo-ti.
she Chaltu-PARCOP
"She is Chaltu."

b. ’ii kodati teesoo-ti

my turn now-PARCOP
"My turn is now."

A somewhat similar patterning is found in Modern Irish, where the particle copula "Is" is employed, and it is inflected for tense/aspect, as illustrated by example (12) below.

(12) Is é Seamus an captaen
Cop 3s James the captain
"James is the captain." (Carnie 1997, p. 58)

Other languages encode copula relations via a copular clitic. This kind of copula is best reflected in Beja, (an Afroasiatic language spoken in the western coast of the Red Sea, especially in the Sudan). Interestingly, the Copular clitic, in this language, "marks gender and number in agreement with its subject when the predicate to which it is suffixed is a nominal: an NP, an adjective, or a relative clause" (Appleyard 2007, p. 476).

(13) ti-ndee-took-tu
she your mother-Cop.3sf
"she is your mother" (Appleyard, 2007, p. 477)

This copula type is also present in Korean and Turkish, as evidenced by the examples in (14) and (15), as cited in Yoon (2003) and Broadwell (2008), respectively:

(14) ku haysayng-un cinccalo [ilpon-eyse o-n salam]-i-ta
that student-TOP actually [Japan-from come-MOD person]-COP-DECL
"That student is actually a person from Japan".

(15) [Zengin ve ünlü] i-di-m.
rich and famous cop-past-1sg
"I was rich and famous."

The fourth type of copula construction which a language may have is the 'null copula construction'. Languages strategy with this are of three types. (i) in the majority of these languages, the use of the null copula is restricted by a condition of some sort. A well-known, and frequent, condition in this respect involves a split between present and non-present tense. Russian (16) and Sumerian; Sumerian was spoken in the southern part of ancient Mesopotamia, an area that roughly corresponds to today's Iraq. Sumerian is not genetically related to any known language. It is a mainly agglutinative language, characterized by ergativity with a split according to the semantic nature of the NP4 and to the tense and modality of the finite verb" (Zólyomi 2014, p. 4) (17) are examples of languages in which a zero copula is used in the present tense, whereas a full copula is obligatory for all other tenses.

(16) a. Tatyana studientka.
Tatyana-a student
"Tatyana is a student".

b. Tatyana byla studientka
Tatyana be-Past student
"Tatyana was a student". (Sarage, 2014, p. 121)

(17) [nin=ø] PC[hedu=ø]
[lady=abs] PC[ornament=abs]
"The lady is an-ornament" (Zólyomi, 2014, p. 23)

(ii) In some null copula languages, like Hungarian, null copula is restricted not only to the present tense, but also to sentences with third person subjects. In all other cases, the use of the full copula *vagy* is mandatory.

(18) a. én tanár vagyok
1sg teacher be.1sg.pres
" I am a teacher".

b. ö diák
3sg.m pupil
"He is a pupil". (Ginter and Tarnói 1991, pp. 76, 78)

The picture in Standard Arabic is more complicated; for recent comprehensive studies on the typology of Copular Constructions in Arabic and related topics, please refer to Alsaeedi (2015), Alharbi (2017), Tayalati & Danckaert (2020), Al-Horais (2021). In this language, the copula in the present tense can be either overt or covert. The construction where the copular element remains covert is considered as null copular construction with the same condition mentioned above with Russian and Sumerian null copula constructions. That is, a lack of an overt form of the copula is obligatory in the present tense, whereas the presence of a full copula for all other tenses is required as the contrast between (19) and (20, 21) shows.

(19) a. Omar-u akh-ii.
Omar-Nom brother-my
"Omar is my brother."

b.Omar-u (*ya-kuunu) akh-ii.
Omar-Nom is brother-my

(20) Omar-u *(kaana) fii a-bait-i ʔamsi.
Omar-Nom be.past in the-house yesterday
"Omar was in the house yesterday."

(21) *(sa-yakuunu) akh-ii huna ghadan.
fut-be brother-my here tomorrow
"My brother will be here tomorrow."

As for the overt copula of present tense constructions, the copula in these constructions is phonetically realized, but it is limited to the following certain cases:
-A stative, adjective and locative copula conveys a general or habitual meaning as in (22):

(22) ʔindamaa yakuunu r-rajul-u mariiĎ-an fa-ʔinna-hu

when is the-man-Nom sick-Acc then-that-him

laa y-ubaalii.
not 3ms–care
"When the man is sick, he does not care." (Fassi Fehri, 1993, p. 155)

- A polite use as in (23):

(23) ʔa-kuunu saʕeed-an bi-liQaaʔ-i-ka.
am I-Nom happy-Acc with-meeting-Gen-you
"I would be happy to meet you." (Fassi Fehri, 1993, p. 205)

-Modality with *qad* "may", *yajib ʔan* "must" and *yastatiiʕu ʔan* "can". These all are represented in (24-26), respectively (Bahloul, 1994):

(24)a. al-Qalam-u taħta T-Taawilat-i.
the-pen-Nom under the-table-Gen
"The pen is under the table."
b.* Qad al-qalam-u taħta T-Tawelaht-i.
may the-pen-Nom under the-table-Gen

c. Qad yakuunu al-Galam-u taħta T-Tawilaht-i.
may is the-pen-Nom under the-table-Gen
"The pen may be under the table."

(25) a. * *yajibu ʔan* al-Qalam-u taħta T-Tawilaht-i.
must the-pen-Nom under the-table-Gen

b. *yajib ʔan* yakuunu al-Galam-u taħta T-Tawilaht-i.
must that be the-pen-Nom under the-table-GEN
"The pen must be under the table."

(26) huwa mudiir-un.
he director-Nom
"He is a director."

In all of these cases, the verb (yakuun) is syntactically in the form of present tense "imperfect" and semantically refers to a situation which often happens in the present.
(iii) In some languages, the absence of the copula is mandatory in all cases. This can be seen in Sinhalese; Sinhalese is the major language spoken in Sri Lanka and a member of the Indo-European language family. For more information about this language, see Geiger (1938). as shown in the following example taken from (Gair, 1970, p. 145):

(27) unnaehee hungak preside kene-k
He very famous person
"He is/was a very famous person."

The final strategy used by languages to introduce an identification or predication of the subject is the pronominal copula strategy. Languages using this strategy

have special sorting rules. in Hebrew, for example, the pro copula must be a nominative third person pronoun, which is obligatory in nominal predication of the present tense as in (28) whereas in Russian (29), it must be a demonstrative pronoun, eto = 'this', placed between the subject and the predicate.

(28) Moše huwa talmiið-un
Moshe 3sg.m student.Nom
"Moshe is a student." (Li and Thompson, 1977, p. 428)

(29) Dom ètot Meškova.
house.Nom this.Nom Meshkov.Gen
"This house is Meshkov's." (Pereltsvaig, 2007, p. 142)

In Standard Arabic, pro copula, as will be seen in section 4, is found but it is limited to definite predicates. If so, the 3rd person pronoun must occur between the subject and definite predicate; The major function of this pronoun, as suggested first by early Arab grammarians and adopted later by Eid (1983, 1993), is as an anti-ambiguity device to force a sentential, vs. a phrasal, interpretation of a structure. Thus, it is traditionally called the pronoun of separation because the sentences in (30) and (31) would be interpreted as phrases rather than sentences if the pronoun was not there. Consider the contrast in the following examples:

(30) a. ʔar-rijaal-u hum l-mudaraaʔ-u.
the-men-Nom they the-managers-Nom
"The men are the managers."

b. * mohammed-un l-mudir-u.
Mohammed-Nom the-manger-Nom

(31) a. Omar-u huwa T-Taalib-u.
Omar-Nom he the-student-Nom
"Omar is the student."

b.* Omar-u T-Taalib-un.
Omar-Nom the-student-Nom

Having demonstrated the typology of copula constructions strategies used cross-linguistically, the next section discusses the semantic types of copular constructions in Arabic in order to provide evidence to the Equative Approach.

RESULTS AND DISCUSSION

The Semantic Classification Of Arabic Copular Constructions

Having described the syntax of copular constructions in the previous section, the current section is allocated to explain how the copular constructions in Arabic is semantically structured. First, I start with the semantic types of Arabic copular clauses taxonomy and then I show how they provide evidence to the Equative Approach.

Taxonomy of Arabic Copular Clauses

Following Heller (2005), the four semantic types of copular clauses taxonomy distinguished by Higgins (1979) as illustrated in section 2, can be reduced to two types: predicational, which includes both identificational and predicational clauses, and equative, which involve equative and specificational clauses; also, Verheugd (1990) has attempted to reduce Higgins's (1979) taxonomy to just two: referential and non-referential.. This is can be evidenced by Arabic copular clauses taxonomy. Crucially, Arabic exhibits two lexical copulas: (i) an inflected verbal copula *kaana*, which can be overt or covert, and (ii) a pro copula which is always overt when it is used. The first type of copula is used only in predicational clauses, whereas the second one is allocated to equative clauses. In the next subsection, I start, first, with explaining the properties of predicational which, includes predicational and identificational clauses in Arabic.

1. Predicational

The predicational clauses in Arabic, like other languages, predicate a property about a referential subject. This referential subject must be definite as illustrated by the contrast in (32) or a specified NP by an adjective as in (33), or by another nominal as in (34) or by an attribute as in (35) or by being the first member of a construct state NP as in (36).

(32) a. al-walad-u fii d-daar-i
the-boy-Nom in the-house-Gen
"The boy is in the house."

b.*walad-un fii d-daar-i
boy-Nom in the-house-Gen
"A boy is in the house."

(33) rajul-un tawiil-un fii d-daar-i
man-Nom tall-Nom in the-house-Gen
"A tall man is in the house."

(34) rajul-un tabiib-un saʕiid-un
man-Nom doctor-Nom happy-Nom
"A man (who is) a doctor (is) happy."

(35) rajul-un min l-pakstaan fii l- Yaman -i
man-Nom from the-pakstan in the- Yamen -Gen
"A man from Pakstan is in Yamen."

(36) ʔibn-u Sadiiq-ii fii l-madrasat-i
son-Nom friend-my in the-school-Gen
"A son of my friend (is) in the school."

In predicational clauses, predication can be accomplished without an inflected verb; the accurate interpretation of the clause relies on identifying the constituent that serves as the predicate. This phenomenon is restricted solely to present tense contexts, as

exemplified in (37). However, in other tense contexts, the presence of an overt verbal copula is mandatory, as demonstrated in (38) and (39).

(37) Omar-u muʕallim-un
Omar-Nom teacher -Nom
"Omar is a teacher."

(38) a. Omar-u kaana hunaa ʔamsi
Omar-Nom be.past here yesterday
"Omar was here yesterday."

b.*Omar-u hunaa ʔamsi
Omar-Nom here yesterday

(39) a.sa-yakuunu ʔakh-ii hunaa ghad-an
FUT-be brother-my here tomorrow-Acc
"My brother will be here tomorrow."

b. *ʔakh-ii huna ghad-an
brother-my here tomorrow-Acc

The use of pro copula is not allowed in predicational clauses. Consider the following sentences:

(40) *ahmad-u huwa Taalib-un
Ahmad-Nom pro-Cop student-Nom
"Ahmad is student."

Moreover, it is not allowed in identificational ones as shown by the following ungrammatical example in (41b). In identificational clauses, the subject consists of either a demonstrative pronoun or a headed description featuring a demonstrative determiner (demonstrative NP) It should be noted here that "the demonstrative must be understood as having deictic, not anaphoric, reference" (Mikkelsen 2011, p. 1812):

(41) a. tilka (almarʔat-u) Hind-un
That (the-woman-Nom) Hind
"That (woman) is Hind."

b. *tilka (almarʔat-u) hiya Hind-un
That (the-woman-Nom) pro-Cop Hind

The absence of the pro copula in both predicational and identificational clauses serves as compelling evidence supporting the argument put forth by Heller (2005) that predicational clauses encompass both types of clauses. Semantically, according to Partee (1987), the role of the copula is to signify that the property denoted by its complement P holds true for its external argument x. The copula "be" of predication selects for a predicative complement of type ***e***, ***t*** but does not impose

any restrictions on its syntactic nature. Various expressions of type ***e***, ***t*** such as NPs, APs, and PPs can occur in the complement position of the copula, and under certain conditions, DPs may also be permissible (for more discussion about the universality of syntax and semantics of predicational clauses, see Geist 2007).

2. Equative

Arabic equative sentences exhibit a distinct syntactic structure that sets them apart from predicational sentences. They necessitate the consistent presence of a pro copula to denote that the two XPs share the same referent. In technical semantics terms, both NPs are arguments of type *e* (Geist 2007). This pro copula is normally inserted between the subject and the predicate when both of them are definite (see Ziadeh and Winder, 1957, p. 48 for related structures); recall from section 3 that in Arabic syntax, the function of pro copula is to remove the confusion of the predicate's classification as an adjective

(42) a. saariqu l-banki huwa Khaid-un
robber-the bank pro-Cop Khalid-Nom
"The bank robber is Khalid."

b. * saariqu l-banki Khaid-un
robber-the bank Khalid-Nom

(43) a. raiisu-u l-jaamiʕati huwa Abdurhman al-Dawuud
president-Nom university-Gen pro-Cop Abdurhman al-Dawuud
"The University president is Abdurhman al-Dawuud."

b.* raiisu-u l-jaamiʕati Abdurhman al-Dawuud
president-Nom university-Gen Abdurhman al-Dawuud

Equative sentences in (42) and (43) "identifies the referent of a description by naming it. In more technical language, it specifies the value of a variable" (Zólyomi, 2014. p. 28), and this is mediated, syntactically and semantically, by a pro copula. Hence, equative *be* is of type ⟨*X*,⟨ *X*,t⟩⟩ as argued by Equative Approach (Geist 2007).

CONCLUSION

This paper has argued in favor of the Equative Approach to copular constructions. It has provided strong evidence with data from Arabic copular constructions for semantic division between equatives and predicatives. This evidence comes from the fact that Arabic exhibits two lexical copulas: (i) an inflected verbal copula *kaana*, and (ii) a pro copula. The former is used only in predicational clauses, whereas the latter is allocated to equative clauses. This being the case, the semantics of copular constructions cannot be adequately captured solely by the single-be analysis, as posited by the Inverse Approach. Instead, they are comprehensively accounted for by an approach advocating two copulas: one for predication and another for equation, as advocated by the Equative Approach. This evidence supports related proposals that are made for Welsh by Zaring (1996) and

for Irish by Carnie (1997). These proposals provide syntactic evidence supporting the semantic division between equatives and predicatives.

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