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The Syntax of Applicative Constructions in Spoken Sudanese Arabic

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ABSTRACT

Different languages have different means for structuring clauses which allow the coding of a thematically peripheral argument or adjunct as a core-object argument. The resulting constructions are known as double object or applicative constructions. The primary aim of this paper is to present a syntactic analysis of applicative constructions in Sudanese Arabic within the theoretical framework of the Minimalist Program (Chomsky, 1993, 1995), in particular, the notion of phases, in combination with Pylkkänen's proposed phrase structure and the semantics of I-applicative (2000, 2008). The overall endeavor is to provide answers to the central questions: how applicatives in Sudanese Arabic are derived? Whether applicatives in Sudanese Arabic are I-applicatives or E-applicatives? The derivation of such constructions in Sudanese Arabic involves the coding of new argument in the argument structure of the verb. This new argument is introduced via a preposition and has a benefactive/goal interpretation. This argument is c-commanded by any internal argument. The applied argument is placed in the complement position of the head ApplI, and can undergo neither A-movement nor wh-movement. This makes Sudanese Arabic fit into the general syntactic typology of ***I-type applicative*** *languages cross-linguistically and consequently promoting contrastive linguistics.*

Keywords: Applied argument; applicative construction; minimalist program; spoken Sudanese Arabic; syntax

INTRODUCTION

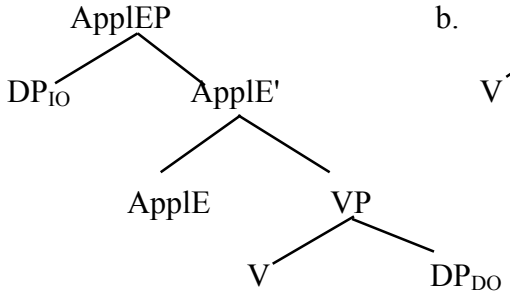
Verbs are categorized in terms of the number of arguments and the thematic roles in which they are assigned as unaccusatives, unergatives, accusatives and ditransitives (Adger 2003, Chomsky 1993, 1995, 2005, 2008, Radford 2004, 2009). Some languages may have additional categories, for example, causative verbs in Japanese (Harley 2008); applicative verbs in South Caucasian languages, Chichewa, Tsou and Austronesian languages (Baker 1988, Lomashvili 2010, Chang 2015, Aldridge 2015) respectively. On the other hand, ditransitive verbs in languages such as English can alternatively appear in two different syntactic configurations: either as dative shift (*Mary gave the book to John*) or as a double object (*Mary gave John the book*). Some other languages offer the possibility of adding an indirect object to the argument structure of a verb. This additional argument is called applied argument and the construction involving it as applicative construction (Culicover 2009). In terms of Mehri (a pre-Islamic minority language spoken in Yemen) the ditransitive can alternatively appear in a third syntactic configuration: it is

the double prepositional phrase (PP), that is, the two PPs are used when the verbs are P-ditransitive type, which obligatorily select two PP arguments, otherwise the syntactic configuration must be crashed (Al Qumairi 2017).

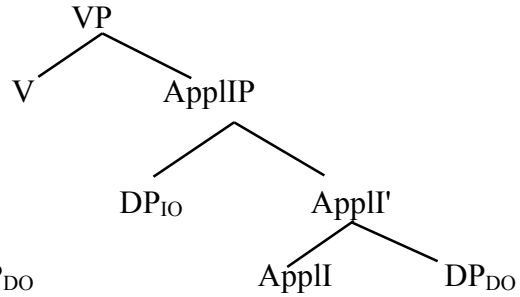
Although applicative constructions appear to have similar meanings across languages, their syntactic derivation differs. For example, in South Caucasian languages and Bantu languages, the additional functional head is added in the structure of applicative construction which introduces the applied argument (Lomashvili 2010, Culicover 2009). In Hiaki, the suffix -*ria* is added to the verb which consequently requires a benefactive argument (Harley, Blanco & Haugen 2009). In Malay, the applicative is constructed by circumfixing either *me-kan* or *me-i* into the verb (Jubilado 2010, Siti Hamin Stapa & Mohd Mustafa Izahar 2010); through these two affixes, the applied argument has either benefactive or goal interpretation. Bantik language on the other hand, constructs the applicative by adding a prefix *paN-* to the double-voiced verb in which the new argument receives a locative or an instrument interpretation (Utsumi 2012). According to Ouali and Fortin (2007), the middle sound within a verb, in Moroccan Arabic, is duplicated as in *yw**k**kal-ha* in which the verb requires recipient argument and theme argument. In Mehri also, the prefix *ha-* is added to the verb in order to show the applicative structure, as in *ha-rkūb* (Al Qumairi 2017).

Cross-linguistic differences in the syntax of applicative constructions have been referred to as arbitrary variation (Baker 1988, Bresnan & Moshi 1990, Marantz 1993, McGinnis 1998a, 1998b, Ura 1995). Therefore, McGinnis (1998b, 2001) and McGinnis and Gerdts (2004) argue that A-movement satisfies the relativized minimality of Rizzi (1997) and the economy conditions of Chomsky (1995, Chomsky & Lasnik 1993), and that cross-linguistic variations in the formation of the double-object construction arise from minimalism's Extended Projection Principle which allows the lower object to leapfrog over the higher one to the subject position in *E-type* applicative languages (McGinnis 2001). Pylkkänen (2000) argues in her proposal that transitivity properties of applicative constructions arise from a semantic difference, not from arbitrary syntactic variation. She proposed two types of applicatives, ***E-applicatives*** and ***I-applicatives***. The E-applicative head (ApplE) denotes a relation between an event and an individual, while the I-applicative head (ApplI) denotes a relation between two individuals as follows:

(1) a.



b.



However, the two structures are similar because the applied argument in both structures asymmetrically c-commands the direct object (Pylkkänen, 2008). This c-command asymmetry then is considered as one of the defining characteristics of applied/double object construction cross-linguistically (Marantz 1993, Pesetsky 1992, Pylkkänen 2008). In this paper, we analyze applicatives in spoken Sudanese Arabic and aim to answer the following questions: How applicatives in Sudanese Arabic are derived? Whether applicatives in Sudanese Arabic are I-

applicatives or E-applicatives in terms of transitivity, A-movement, wh-movement, and quantifier scope?

METHODOLOGY

This paper analyzes the syntax of applicatives in Sudanese Arabic, and aims to identify how such constructions are derived. A group of 15 native Sudanese Arabic speakers were given a questionnaire that contained sample sentences and were asked to make grammaticality judgements. This observational method is adapted from Brown (2009). Data were obtained by using open-ended questions in the questionnaire. This observational method gave the informants the option to provide a range of possible answers, which may reflect their own views on the formation of sentences in relation to the syntactic configuration of applicatives in Sudanese Arabic. Similarly, Culicover (1997) states that the methodology that has proven most productive in the development of linguistic theory has been the close examination of selected sentences and phrases that native speakers of a language judge to be possible, impossible, or marginal.

The interview was then conducted to double confirm the data collected via open-ended questionnaire. The aim of the interview was measure respondents' perception of their language, and at testing their ability to make grammaticality judgements for sentences presented to them in a questionnaire form. Since the present study focuses mainly on a single aspect of the syntax of applicative in Sudanese Arabic, the corpus of verbal syntax data collected (based on either observation or recording) is not considered to be more reliable than the use of a questionnaire during the interview. This claim can be justified by two main reasons: first, it is not possible to ensure that a large corpus of informal speech could offer sufficient data regarding verbal syntax; second, data collected by corpora could trace and keep a record of the correct and the most common structures that native speakers use. This type of data is not sufficient since a corpus does not capture grammatical/ungrammatical structures.

The questionnaire was based on grammaticality judgments: the informants were given sentences, which mainly contained different structures of verbs, and were asked to decide using their intuition whether or not those sentences were grammatical in their native language. In addition, they were asked to construct different sentences using various verbs presented to them by adding a new argument. The questionnaire involved 144 questions, both closed-ended questions which required informants to respond with 'right' or 'wrong', and open-ended questions which required informants to provide written answers in their own words in the spaces provided.

Section 1 includes a set of questions that require the informants to provide brief biographical information, i.e. background and knowledge. These questions were designed to investigate whether or not different aspects, i.e. education and demographics, interact with the informants' daily use of Sudanese Arabic. Section 2 includes questions about argument structure of different categories of verbs in Sudanese Arabic. The informants comprised 10 postgraduate and 5 undergraduate students from different institutions within the Sudan. They were 10 males and 5 females within the age group of 25-30 years.

THEORETICAL ASSUMPTIONS

In the literature, different accounts have been proposed for the set of variations in the syntax of applicative construction, but most of them rely on Lexical Functional Grammar's (LFG) functional requirements, Government and Binding's (GB) Case properties or government domains or Minimalism's Extended Projection Principal (EPP) requirement (McGinnis, 2001). However, Pylkkänen (2000, 2008) differentiates between E-applicatives and I-applicatives in terms of their semantics. The head of E-applicative signifies a relation between an event expressed by the verb and an applied argument, while the head of I-applicative signifies a relation between two individuals – direct and indirect objects. According to this proposal, ApplE has a verb phrase (VP) in its domain, while ApplI has a determiner phrase (DP). Pylkkänen's proposal has been adopted universally for double object constructions. In this study, we adopt her proposal concerning phrase structure and the semantics of I-applicative; in combination with Chomsky's derivation by phases (Chomsky, 2001, 2005), according to which, phases are headed by complementizer (C), or by theta-assigning light verb (*v)*. Upon the completion of a phase, movement and agreement operations are only accessible to the head and constituents in its periphery such as adjuncts and specifiers.

ANALYSIS AND RESULTS

APPLICATIVES IN SPOKEN SUDANESE ARABIC

The term Sudanese Arabic or Khartoum Arabic is used to refer to the spoken variety of classical Arabic, which is mostly spoken in the capital city of Sudan (Dickins, 2007). This spoken variety is completely different from Standard Arabic or any other Arabic variety: speakers of other varieties are not able to communicate effectively with Sudanese people (Author). Like many other languages, Sudanese Arabic derives applicative construction where a new argument is accorded into the thematic structure of the verb. We assume that Sudanese Arabic is *low applicative-language-type* where low applied arguments bear no semantic relation to the verb; they only bear a transfer of possession in relation to the direct object as in the following example:

(2) Zainab eshtara-t qameess **li-Ahmed**
Zainab buy.Past-Fem shirt to-Ahmed
'Zainab bought a shirt to Ahmed' (Lit: Zainab bought Ahmed a shirt)
eshtarat: V: <DP_1, DP_2, PP>
<agent, theme, recipient>

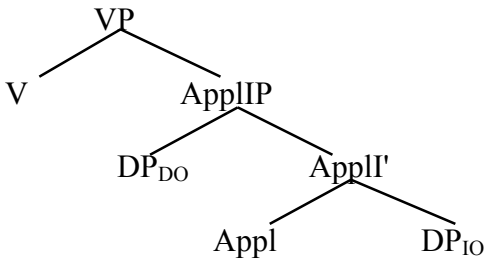
The verb *eshtaraa* "buy" in Sudanese Arabic is an accusative verb which assigns two arguments – subject and object, which receive thematic roles as Agent and Theme respectively. However, in (2), indirect object *Ahmed* is added to the argument structure of *eshtaraa* and which receives Benefactive/Recipient theta role. This new argument is introduced by the preposition *li* "to" which assigns Dative Case to DP *Ahmed* and is c-commanded by any internal argument. The sentence in (2) is analysed as low applicative where the applied argument is an intended recipient of the direct object *qameess* "shirt". In the other type of applicative construction in

Sudanese Arabic, the indirect object bears a *goal*, rather than a recipient, in relation to the direct object. The example below illustrates such a construction.

(3) Zainab eshtara-t qameess **li-lhafla**
Zainab buy.Past-Fem shirt for-the party
Zainab bought a shirt for the party
eshtarat: V: <DP1, DP2, PP>
<agent, theme, goal>

Thus we assume that applicatives in (2) and (3) relate a recipient or a goal to an entity which is the internal argument of the verb. As mentioned earlier, the c-command properties of applicatives entail that the applied argument is c-commanded by the direct object, as in the following example:

(4)



Mentioning c-command properties of applicatives in Sudanese Arabic dictates that, and since the relation is established between the direct and indirect object through the preposition *li* which we hypothesized as an applicative element, an applied argument cannot appear in a structure that lacks a direct object, as in examples (5) and (6).

(5) *Nada jara-t **li-hu**
Nada run.Past-Fem for/to him
'Nada run for/to him'

(6) *Al-warda waga-at **li-ha**
the-flower fall.Past-Fem to/for-her
'The flower has fallen for/to her'

(7) Al-talaba zaakar-uu **li-l-emtihan**
The-students study.past-Pl for-the-exam
'The student studied for the exam'

As in English, Korean and Japanese, an applied argument in Sudanese Arabic can also be added to a transitive predicate (2) and (3), but not to an intransitive one (5) and (6) except to an unergative with an implicit object (7). This transitivity restriction is one of the well-known differences between the two types of applicatives crosslinguistically. See, for instance, the examples from English, Korean and Japanese.

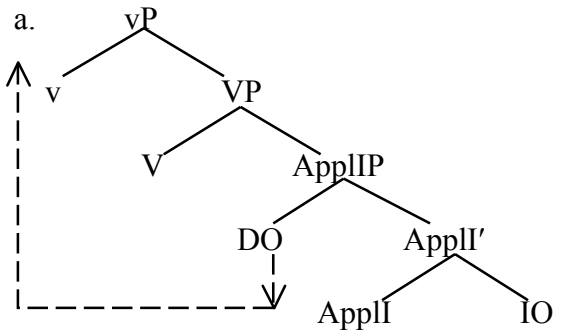
(8) ENGLISH
* I ran for her

(9) KOREAN
*Mary-ka John-hanthey talli-essta.
Mary-Nom John-Dat run-Past
'Mary ran to/from John'

(10) JAPANESE
*Taroo-ga Hanako-ni hasitta.
Taroo-Nom Hanako-Dat run-Past
'Taro ran for Hanako'

The evidence in (8-10) supports our assumption that Sudanese Arabic is *low applicative-language-type*. Another hypothesis to assume Sudanese Arabic as a low applicative-language comes from A-movement parameters. In a passive or raising, only the higher object (Theme) can undergo A-movement to the subject position. Since the higher object is the DP closest to T, it blocks the lower applied object (Benefactive/Goal) from undergoing A-movement to the specifier of T due to locality conditions, as in (11). The EPP features can be checked only by the higher argument because this argument blocks the lower one from raising to [Spec, T]. And since ApplIP is not a phase, no phase-EPP feature can be added to the head ApplI, to allow the IO to undergo A-movement to a specifier above direct object (DO).

(11) a.



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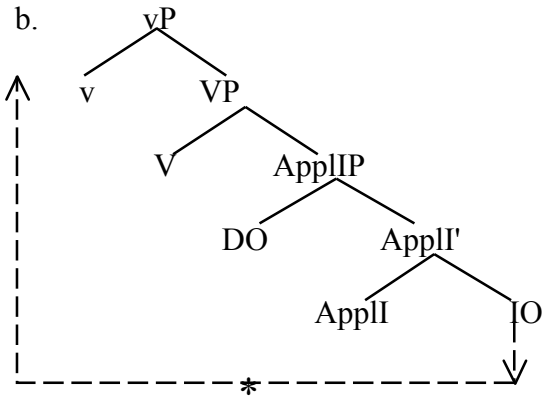


The structures in (11) illustrate that the applied argument cannot leapfrog over the direct object to the subject position, even in the constructions where an applied argument precedes a direct object in the linear representation, because word ordering in Sudanese Arabic is fairly free, as in the following example:

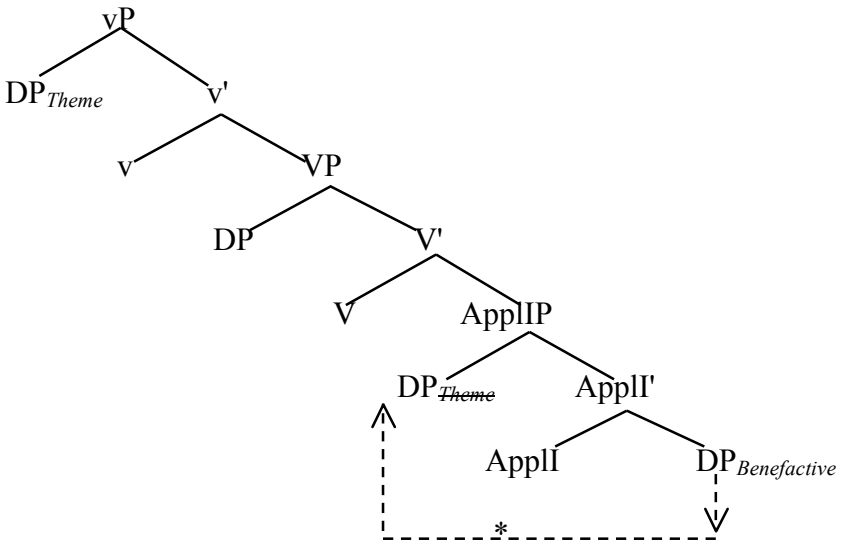
(12) a. Kawa **li-ha** malaabisa-ha
iron.Past.Sg.Mas to-her clothes-her
'He ironed her clothes' (Lit: he ironed her clothes to her)

b. malaabisa-ha alli kawa ***t*** **li-ha** huwa
clothes-her which iron.Past to-her he
'Her clothes which he ironed to her'

c. ***li-ha** kawa malaabisa-ha huwa *t*
to-her iron.Past clothes-her he
'To her, he ironed her clothes'

These examples illustrate that the indirect object (IO) cannot move past the DO, as in (12c), because the complement of a head X cannot move to [Spec, X]. Under this proposal, a higher DP that is not the complement of ApplI should be able to move to the Spec of higher verb (V). The Benefactive would be trapped in the domain of the ApplIP phase, unable to escape via phase-EPP, while the Theme would move to [Spec, T] as described in the following example:

(13)

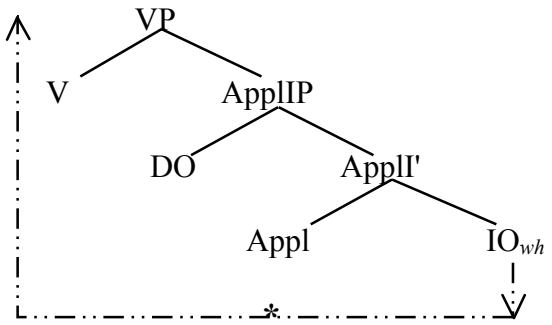


And since we assume Sudanese Arabic to be *I-type applicative*, the Minimal Link Condition allows only the higher object to move to the subject position of a passive in non-phasal applicatives as argued by McGinnis and Gerdts (2004). As shown in (13), the Benefactive merges below the vP phase in the complement of the head ApplI like a cascade PP in English, while the Theme merges in the specifier position of ApplI like the external argument.

Another phase can be accounted for cross-linguistic variation in *wh*-movement in *I*-type applicative languages. In these languages, the lower object cannot undergo wh-movement past the higher object. This is derived from Relativized Minimality where DO has DP feature and wh-feature; it blocks A-movement, of IO and wh-movement as well. Thus (14) would have the structure as in example (15).

(14) Shunu Sara taba?at **li-hu** *t*?
What Sara print.Past.Fem for-him
What Sara printed for him?

(15)



The final phase account of *I*-applicatives can be predicted also from quantifier scope. It has long been argued that quantifier scope is 'frozen' in I-type applicative languages. The same is observed in Sudanese Arabic. For example, (16a) allows the direct scope reading, in which Ahmed receives all the shirts, but not the inverse scope reading, in which any shirt goes to a different Ahmed as in example (16b).

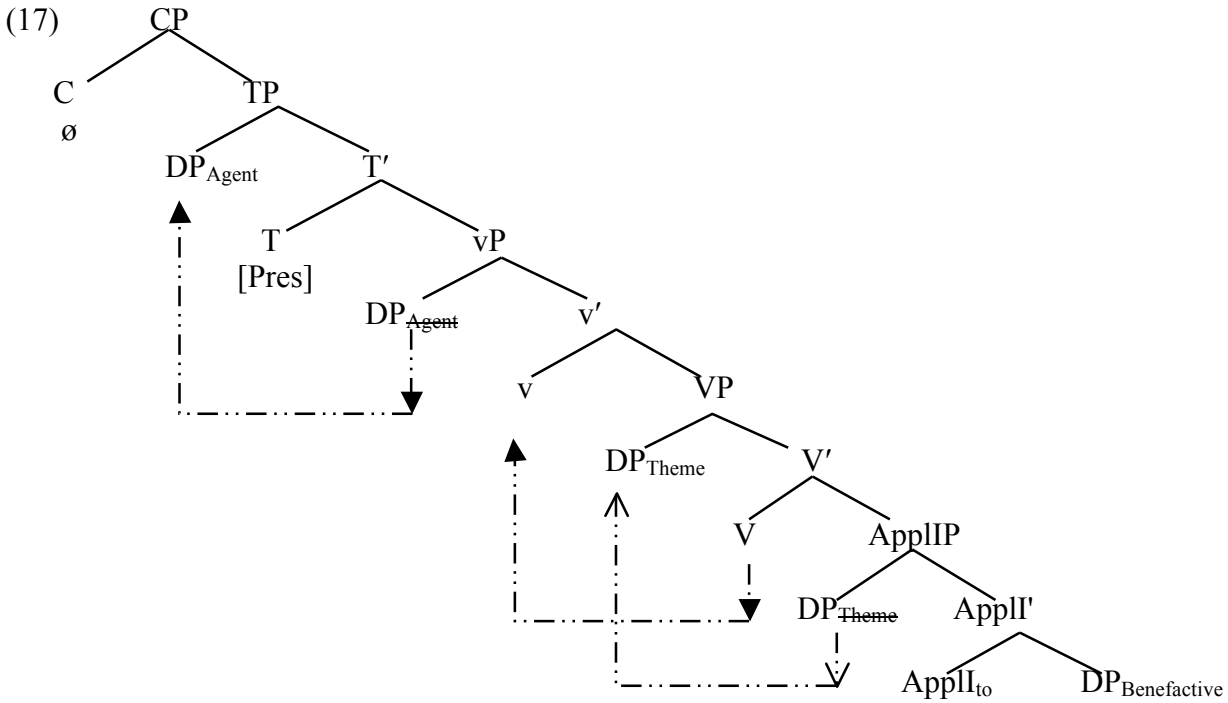
(16) a. Zainab eshtara-t ***ayyi*** qameess li-Ahmed
Zainab buy.Past-Fem any shirt to-Ahmed
'Zainab bought any shirt to Ahmed'

b. *Zainab eshtara-t qameess li-***ayyi*** Ahamed
'Zainab bought a shirt to each Ahmed'

The examples in (16) suggest that the quantified Theme in (16a) c-commands and binds the possessive pronoun, while the quantified Beneficiary in (16b) does not c-command the possessive pronoun. It also proposes that the quantifier scope is frozen in (16b) because Quantifier Raising (QR) respects locality condition. Therefore, a lower quantifier cannot undergo QR over a higher one to take a wide scope. The Beneficiary cannot undergo QR over the Theme to the edge of the vP phase.

In line with Chomsky's phase theory, each syntactic structure is built up in phases, with each phase including vP and CP. Consequently, at the end of each phase, a part of syntactic structure undergoes transfer to phonological and logical form. At this point, the relevant part of the syntactic structure is inaccessible to further syntactic operation (Chomsky, 2005). Therefore, the derivation in (11a) proceeds to the next step towards establishing the consequent phase, and merges with tense (T) which is a probe looking for the goal; however, the probe-goal relationship is local in the domain; therefore, the closest constituent to T is the DP, the Theme. Thus, to achieve this relation, this DP moves to [Spec, TP] satisfying this requirement and others such as EPP and Case. As mentioned, the derivation in (11a) merges with T to form T′, which in turn merges with the goal – the Theme to form TP, whereby the subject receives the nominative Case from the functional head T. TP is then merged with the null complementizer C, which is declarative in force to form CP, as follows:

(17)



In relation to phases, Chomsky (2005) maintains that phases must be as minimal as possible, and he rationalizes taking vP and CP as phases; that vP provides complete information about thematic/argument structure of the verb including external arguments, whereas CP represents a complete clause. Thus once all syntactic operations have been completed in a given phase, the domain of the phase becomes impenetrable to further syntactic operations, hence achieving Phase Impenetrable Condition (PIC) which is formally defined as follows:

(18) Phase Impenetrable Condition
The domain of the phase (the complement of its head) is not penetrable to an external probe c-commanding the phase (Radford 2009, p. 324).

To make this point clear, once the phase CP has been completed, TP which is the domain of head C of CP, is simultaneously sent to the phonological component and semantic component for a proper representation, as a result, neither TP nor the constituents of it can be considered as a goal to higher probe of any kind.

CONCLUSION

This study proposes that Sudanese Arabic is an *I-type* applicative language in terms of transitivity, A-movement, wh-movement and quantifier scope. However, this is only a preliminary outline of the kinds of syntactic properties related to I-applicatives cross-linguistically. It might be a misinterpretation to suggest that all applicatives in Sudanese Arabic fall neatly into this categorization. Taking the phase account of I-applicatives, it is possible to add new generalizations bridging the continuum from semantics to syntax of Sudanese Arabic. This account also makes it possible to underline the cross linguistic variation in the syntax of *I-*

applicatives. Therefore, further research may take this account to formulate an explanatory account of such variation.

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