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The Morphosyntax of Causative Construction in Sudanese Arabic

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ABSTRACT

This paper explores the morphosyntax of causative construction in Sudanese Arabic. The theoretical framework of this study was based on the Minimalist Programme (Chomsky, 1993, 1995). This construction is projected by the causative verb, which is itself derived via a particular morphological process. It is universally assumed that all predicates fulfil their lexical-semantic requirements e.g. displaying their argument/thematic structure, in their syntactic structure (e.g. VP shell). The analysis of causative construction involves the presence of the head CAUSE, which is morphologically realised on the verb. The presence of CAUSE requires the obligatory presence of an external argument (causer). Semantically, CAUSE is a functional head that signifies the meaning of the causative to that particular linguistic expression. Overall, Sudanese Arabic projects use the causative morphologically via germination of a second consonant. The derived causative is a lexical causative with respect to many syntactic examinations. Therefore, the typological difference between Sudanese Arabic and other languages is due to the implications of Universal Grammar theories, in particular principles and parameters.

Keywords: Causative construction, minimalist programme, morphosyntax, Sudanese Arabic

INTRODUCTION

Languages differ with regard to causative construction. For example, in languages like English, Spanish and other Romance languages, the productive causation is derived via the supporting verb e.g. to *make* in English, whereas languages like Japanese, Finnish and Hiaki, have the causation morphologically derived via the same

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base form (Blanco, 2010). In the literature of generative linguistics, the Japanese language was the first language to receive much attention in terms of morphological affixation of causative morphemes (Harley, 2008). Thus, the typological variances between Japanese and English were seen as the first explanation of the hypothesis raised in the study of the Universal Grammar, wherein unrelated language families share important resemblances in terms of grammatical structure (Harley, 2008). In contrast, Standard Arabic derives the causative in two different ways: either by germination of the second consonant or ablaut of the second vowel to /a/ (Hallman, 2006; Mousser, 2010; AlRashed, 2012). Moroccan Arabic, on the other hand, projects the causative through germination, where the derived causative can be analysed either as lexical or syntactic (Benmamoun, 1991), while Juba Arabic derives causation by adding the verb *ámulu* "make, do" before the main verb (Manfredi & Petrollino, 2013). Consequently, the analysis of causative predicates has had a major influence on many fundamental aspects of syntactic theory such as control, case marking, clause structure, theta theory and argument structure and the morphology-syntax interface.

Syntactically, different instances of CAUSE properties are applicable cross-linguistically and within a language itself (e.g. lexical causative vs syntactic causative) in certain languages (e.g. Japanese). However, causative-inchoative alterations are a common property across languages (Blanco, 2010). Consider the following English sentence for causative-inchoative alteration of the verb *melt*.

(1) a. Inchoative
The ice melted
Melt: V: <DP>
<theme>

b. Causative
John melted the ice.
Melt: V: <DP_1, DP_2>
<agent, theme>

The sentence in (1) is an illustration of causative-inchoative alteration in English. The verb *melt* is an alternating verb because it has two usages; intransitive (1a) and transitive (1b). Thus, verbs with two variant usages alternate if the transitive usage means CAUSE while the subject of the intransitive variant and the object of transitive variant receive the same theta role (Levin and Rappaport Hovav, 1993). Therefore, the verb *melt* in (1b) contributes to the causative alternation because it has a paraphrased form as *John caused the ice to melt*. Similarly, the subject of (1a) receives an identical theta role to the object in (1b) as a theme.

Conventionally, the category of verbs with causative-inchoative alternation is described as lexical causative (Levin & Rappaport Hovav, 1995; Song, 2014; Piñón, 2001; Alexiadou et al., 2004; Schäfer, 2007). The common debate about causative construction among scholars was whether the causative alternation was derived from its inchoative counterpart or not. Among them, Fodor (1970) and Cruse (1972) argued

that causative alternation was not derived from inchoative alternation. In most recent models, Borer (1991), Harley (1995, 2006), Piñón (2001), Pylkkänen (2002, 2008), Ramchand (2008) and Schäfer (2007) maintained that the root verb signifies the elementary lexical meaning while the syntactic structure determines whether the resulting structure is causative or inchoative. Despite this, the typological survey of Haspelmath (1993) identified different language categories in relation to causative-inchoative alternation e.g. in French, the inchoative is the basic and the causative is morphologically derived from it. In Russian on the other hand, the causative is the basic form and the inchoative is derived. Japanese, in comparison, restricts neither form from being derived from the other. Accommodating these variations, the model developed by Pylkkänen (2002, 2008) significantly contributed to the study of discrepancy in causative structures by predicting the behaviour and properties of the pieces contributing to causative constructions.

METHOD AND PROCEDURES

This paper analysed the morphosyntax of causatives in Sudanese Arabic, and aimed to identify how such construction is derived in terms of morphology and how it is syntactically analysed. A group of 15 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 collected via the open-response questions on the questionnaire. The importance of the observational method is that it gives informants the option to provide a range of possible answers, which may reflect their own views on the formation of sentences in relation to causative formation in Sudanese Arabic. Similarly, Culicover (1997), Dikken et al. (2007) and Featherston (2005) stated that the methodology that has proven most productive in the development of linguistic theory has been that of closely examining selected sentences and phrases that native speakers of a language judge to be possible, impossible and marginal.

Therefore, speakers' perception of their language tests their ability to make grammaticality judgement for sentences presented to them in form of a questionnaire. Thus, data collected by a corpus are not considered to be more reliable than the use of a questionnaire. There are two main reasons for this claim: first, it is not possible to ensure that a large corpus of informal speech can offer sufficient data regarding causative formation; second, data collected by corpora can trace and keep a record of the correct and the most common structures that the native speakers use. This type of data is not sufficient as a corpus does not capture grammatical/ungrammatical structures. The questionnaire was based on grammaticality judgements, where the informants were given sentences and asked to decide whether or not the sentences in their native language were grammatical based on intuition. The questionnaire involved both closed-response questions, to which the informants chose

'right' or 'wrong', and open-response questions that asked the informants to supply written answers in the space provided in their own words.

THEORETICAL FRAMEWORK

The Minimalist Programme assumes that the derivation of any syntactic structure is built upon successive cyclicity: phase by phase (Chomsky, 1999, 2000, 2001, 2004, 2005, 2007, 2008), whereby a phase is a syntactic element in which the complement of its head is checked for convergence at logical and phonological forms (Hornstein, Nunes, & Grohmann, 2005). Consequently, Chomsky identified two fundamental phases by virtue of being strong: vP and CP. vP displays the argument/thematic structure (the constituents of the VP shell) and CP provides information about clause force (e.g. whether it is declarative, interrogative, imperative or exclamatory). Chomsky further argued that strong phases are spelt out cyclically, where syntactic derivation and spell-out has implication for the derivation of lexical items (Lomashvili, 2010). In relation, the conceptual allomorphy model of Embick (2009) argued that the morphological processes, which define the phonological form, are controlled by the cyclic organisation of the grammar.

In his proposal, Chomsky (2001) maintained that vP is a phase peripheral in the syntactic structure where the v complement is sent for interpretation at the interface level and is further impenetrable to later syntactic operation. Thus, in lexical causative, the v complement selects the root as its complement (Harley, 2008). In relation, Pylkkänen (2002) identified three categories of complement that the functional head CAUSE could take. They are the root, vP and VP. The root-selecting cause is closely associated with the lexical causative whereas vP and VP-selecting causatives are usually associated with the syntactic causative. Adopting these ideas, this study aimed to discuss the morphosyntax of causative construction in Sudanese Arabic.

The Causative in Sudanese Arabic

In Sudanese Arabic, causativisation is a productive morphological process. The causative affix is inserted in the root of the intransitive or transitive verb. However, the process does not involve insertion of the independent morpheme common to all the verb classes, e.g. *-(s)ase* in Japanese; rather, it involves doubling of the second consonant in the root verb. The resulting causative alternation entails the presence of the obligatory causer argument and consequently, increases the thematic/argument structure of the verb. This phenomenon of argument-increasing is one of the common features of causative constructions across languages. In terms of morphology, causation in Sudanese Arabic involves causative morphology, which is overtly realised through germinating the second radical of the root, which is articulated as two identical segments, as in the following table:

Table 1
Derivation of causative verb

(2) the derivation of causative verb			
Intransitive verb	Inchoative	Causative	Root gloss
Transitive verb	tala?	ta**ll**a?	to exit
	dakhal	da**khkh**al	to enter
	masha	ma**shsh**aa	to go
	waga?	wa**gg**a	to fall
	simi?	sa**mm**a?	to hear
	shirib	sha**rr**ab	to drink
	gara	ga**rr**aa	to read
	gasam	ga**ss**am	to divide
	gata?	ga**tt**a?	to cut

Notice the change in the verb root in the causative column; the second consonant is reduplicated to obtain the causative reading. The combination of root verbs and germination exhibits similar morphophonological properties that specify the indivisible nature of the single phonological word. This category of the causative is the lexical causative with respect to different syntactic tests. First, the derived causative verb heads a single verb phrase and the clause involves such a verb phrase. It behaves typically like a mono-clause in the syntactic tree of such construction. Second, the process alters the argument structure of the verb; therefore, the process must be analysed as lexical, otherwise it violates the projection principle, which states that lexical information must be presented categorically at every syntactic level (Chomsky, 1985, p. 84). Consider the following intransitive (3 and 4) and transitive (5 and 6) causatives.

Intransitive causative

(3) Idris ta**ll**a? Laila
Idris exit.CAUSE.Past Laila
Idris made Laila go out
Tatta?: V: <DP_1, DP_2>
<agent, theme>

(4) Humma da**khkh**alu malaabisa-hum juwwa
They enter.CAUSE.Past clothes-their inside
They moved in their clothes
dakhkhal V: <DP_1, DP_2>
<agent, theme>

Transitive causative

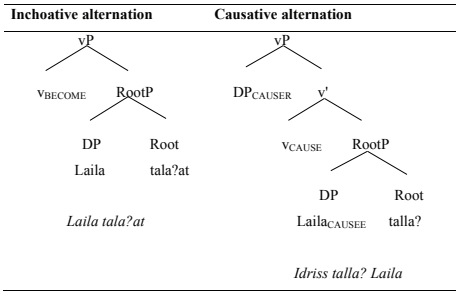
(5) Nora sa**mm**a?a-t Ahmed al-ughniya
Nora hear.CAUSE.Past-Fem Ahamed the-song
Nora made Ahmed listen to the song
Samma?: V: <DP_1, DP_2, DP_3>
<agent, experiencer, theme>

(6) Ana gassamata lai-hu al-waraqa
I divid.CAUSE.Past for-him the-paper
I divided the paper for him
gassama: V: <DP_1, DP_2, DP_3>
<agent, goal, theme>

In relation to the debate on whether causative alternation is derived from its counterpart inchoative or not, we adopted Harley's (2006) proposal that the lexical root provides significant information about

construction (e.g. semantic interpretation) and the syntactic structure specifies whether the resulting construction is causative or inchoative, depending on the constituents of the VP shell. Consider the following structure of (3) along with its inchoative counterpart.

(7) Inchoative and causative VP shell



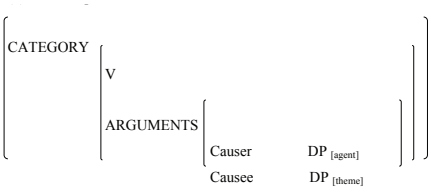
In the structure of the causative in (7), the presence of v_{Cause} entails the presence of the obligatory external argument, the causer. Therefore, many theoretical frameworks maintain that light verbs with CAUSE features always host external causer arguments (see for example Harley, 2006; Chomsky, 1995; Folli & Harley, 2003, 2007). Second, in relation to case licensing, only the single accusative (Acc) case and the nominative (Nom) case are possible for the arguments of the causative verb. The abstract accusative case is assigned to the CAUSEE by the root verb via a head-complement relationship between the root verb and the internal argument while the abstract nominative case is assigned to the CAUSER by finite T via spec-head relationship between the specifier and the functional head T. Evidence for case marking comes from Standard Arabic ,which morphologically marks the case, as in the following:

(8) Na**ww**am-a al-umm-**u** walad-**a**-ha
Sleep.CAUSE.Past-Acc the-mother-**Nom** child-**Acc**-her
The mother made her child sleep

As the sentence in (8) shows, the nominative case is assigned to the CAUSER (the mother), and the accusative case is assigned to the CAUSEE (her child). However, morphological-case-marking is one of the formal distinctions between Sudanese Arabic and Standard Arabic, although both share the same protolanguage.

From close examination, all the evidence proves that Sudanese Arabic is a lexical causative language. Therefore, we propose the following feature specification schema for causative construction in Sudanese Arabic.

(9) Feature specification of causative verb



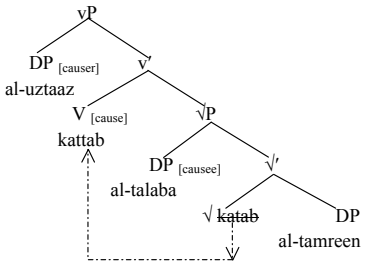
The schema does not fully represent the structure of causative construction; rather, it captures the common property of all causatives. Accordingly, this category

of the predicate obligatorily selects dual arguments, with the subject always being the CAUSER and bearing the agent theta role, while the object is the CAUSEE that bears the theme theta role. Transitive causative alternation, on the other hand, requires an additional indirect object as in (10) below, but still shares the schema proposed in (9) in the sense that they both require causer and causee arguments.

(10) Al-uztaaz ka**tt**ab al-talaba al-tamreen
The-teacher write.CAUSE.Past the-students the-assignment
The teacher made the students write the assignment
Kattab: V: <DP_1, DP_2, DP_3>
<agent, theme, theme>

The syntactic structure of (10) proceeds as follows: first, the root √ **katab**, "write," is merged with its complement **al-tamreen**, "the assignment," which receives the theta-role as theme to form √′ **katab al-tamreen** "write the assignment." The resulting √′ is then merged with **al-talaba**, "the students," to form √P. The lexical √ **katab** then rises to a high position, leaving a trace behind and adjoining the light causative affix in v, which carries [cause] features to form v'. The adjunction of the root to the causative affix results in the causative reading **kattab al-talab ~~katab~~ al-tamreen**, "made the students write the assignment." At this point, the causative affix on the verb changes the state of the event. The sequential v with causative reading entails the compulsory presence of a CAUSER (i.e. entity originating the change of state) and CAUSEE (i.e. entity affected by the change of state). To fulfil this requirement, the resulting v' is then merged with the causer **al-uztaaz**, "the teacher," to form the complete vP phase, with full semantic representation as in the following:

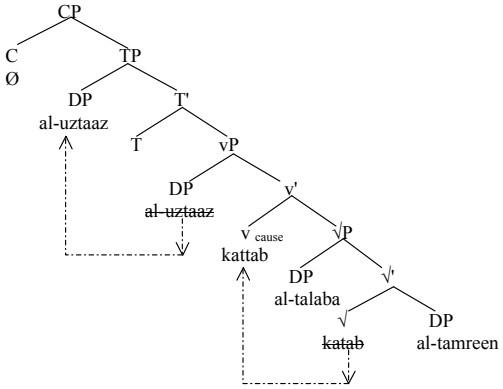
(11)



Since the structure involves a double object, a new case-assignment needs to be checked in a proper checking domain. Radford (2004, 2009) offered a solution for this issue. Claiming that the light causative v assigns the accusative case to direct object and the lexical root assigns the same case to indirect object, the resulting vP in (11) is then merged with T to check and value its voice, tense and agreement features, thus, forming T′. This T′ then merges with the causer that was initially raised from [Spec, vP] to check and value its nominative case and to fulfil the EPP requirements, thus, forming TP. This TP is then merged with a null declarative affix to form the CP. The derivation of the causative predicate is built upon the successive application of the fundamental syntactic operations of numeration, select, merge, move and adjoin of the lexical items to construct large

syntactic structure. Numeration selects the lexical items and combines them with other lexical items until the derivation of the causative structure is converged at LF, as shown in the following:

(12)



Each application of the syntactic operation merge moves the derivation a step forwards (Adger, 2003) until it converges at LF because no further syntactic operation can be applied. The interpretation given to the derivation at this stage is a conceptual and semantic interpretation. However, the derivation involves many sub-derivations such as √P, vP, TP and CP. Therefore, the computational system selects the numeration as its input and the derived syntactic objects as its output. Thus, the first step in the derivation of any syntactic structure is to select the lexical items from numeration, wherein the syntactic operation, select, is applied to introduce another object. The syntax merges or adjoins these objects to form new objects.

CONCLUSION

This study analysed and discussed the morphosyntax of causative constructions in Sudanese Arabic within the framework of Chomsky's Minimalism. The study aimed to identify how the causative is morphologically derived, and it was syntactically analysed. To accomplish this, grammatical judgements were obtained from a group of 15 Sudanese informants. The causative in Sudanese Arabic is derived via the functional head CAUSE that attaches to the root, which requires an obligatory external argument. Many works in syntax-semantics of the argument structure assume the notion that verbs express different eventualities, where the members in an event are the arguments. We extended this assumption further and claimed that the relations between verbs and their arguments and between the arguments were built from the event structure. Therefore, the causative event links the causer to the event of causing, whereas the inchoative involves only the event without any causing effect. Overall, we concluded that the functional head CAUSE in Sudanese Arabic introduced the CAUSER argument, which is significantly contributed to the semantic interpretation of causative construction. The implication of this conclusion significantly calls for further research to investigate the typology of causative constructions cross linguistically and within Arabic languages.

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