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The layered structure of the clause in English and Arabic ditransitive verbs: A Role and Reference Grammar Perspective

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Abstract. This paper presents the syntactic dimension of ditransitive verbs in terms of the universal theory of Role and Reference Grammar (RRG). This theory is syntactic in nature, but it also covers the semantic as well as the pragmatic aspects of any linguistic phenomenon. It assumes a universal framework through which syntactic constructions can be analyzed. However, the morphological structure that each language enjoys renders the universal treatment more complicated and can question the universal nature of such a theory. In this paper, an attempt is made to check if the universal tenet of the theory is maintained over two typologically different languages: English and Arabic in respect of the way that double-object constructions (DOCs) are represented in the theory. A limitation is made to answer these questions: does the rich morphological nature of Arabic affect the universality of RRG in so far as Layered Structure of the Clause (LSC) is concerned? and; where and how does the information about tense is represented in both languages? The results show that this theory is indeed universal when it deals with a syntactic phenomenon like DOCs and that a separate projection is dedicated to represent some related information about the clause and this is concluded from the analysis of the selected data.

Keywords. Ditransitive verbs; double-object constructions (DOCs); layered structure of the clause (LSC); direct object (DO); indirect object (IO)

1.   Introduction

Ditransitive verbs are regarded as verbs that have two objects, one direct and the other is indirect. The first object is regarded as the indirect object (IO) and the second object is regarded as the direct object (DO) [1]. These objects indicate a meaning that is related to the action referred to by the verbs. In other words, these objects add further information to complete the meaning indicated by the ditransitive verbs. This relatioship is captured in logical structures. They represent the lexical decomposition of the verbs. These logical structures are based on the class that the verb belongs to. This paper is composed of four parts. The next part is devoted to review the way DOCs have been treated with historically. In the third section, the theoretical background upon which the paper is based is represented. In the forth part, the selected data are analysed. Finally, the last part draws some conclusions.

2. Literature Review

The ditransitive verbs require three arguments to fully satisfy their argument structures. One of them is the subject and the non-subject arguments are the objects. The subject is the doer of the action and it is the agent and the DO is the "AFFECTED participant". The IO is the recipient that usually receives something from the action indicated by the verb. One point worthy to be clarified is the fact that the IO is mostly an animate entity, but this is not a prerequisite [2].

From a structural standpoint, the structuralists employ the term actant to refer to arguments. The ditransitive verbs, by definition, have three actants. The first is the doer of the action that is called the subject. There is no controversy over this coinage as it was used in traditional grammar as well as structural books. The second actant is usually called "object complement" which is then reduced to "object". The third actant is called "complement of attribution" and usually receives benefit from what is indicated by the meaning of the verb. It also "takes detriment from the action". The actants are distinguished according to the syntactic slot that they occupy in the sentence as well as the inflected form of a pronoun, if present. In other words, English shows its case through word order and the only element that is modified by case is the pronoun [3].

It is not easy to force a well-defined procedure of the way that DOCs have been treated within the realm of generative linguistics. This is mainly because the "models and approaches are changed and appended within the very generative theory." Therefore, the generative thinking has gone through many stages in the second part of the 20th century that makes it appears "as much more than a series of dozens of very diversified theories, related by the same fundamental epistemological framework." Beginning with Syntactic Structures in 1957 that laid the foundation of generative Linguistics, moving towards Aspects of the Theory of Syntax in 1965. Then, in 1980s there were Government and Binding Theory, and Principles and Parameters Theory. In 1995, all the above approaches have been synthesized in Minimalist Program [4].

It is not really possible to historically trace ditransitive verbs in Arabic the same way we did to English because the boundary between one linguistic school and the other is not similar to English. That is why the discussion in this section is directed in harmony with the way the topic has been approached in Arabic famous grammar books. In this respect, the classifications of great Arab scholars will be represented.

Hasan (1973) reports the classifications of different syntacticians. He shows that some believe that ditransitive verbs are divided into two broad types: transmutative and verbs of heart. The latter has four subcategorizations. They are: certainty, preponderance, certainty prevailing over preponderance and preponderance prevailing over certainty [5].

Sibawayhe (1977) avoids the subcategory which assumes that the objects of ditransitive verbs are sometimes underlyingly related and at other times unrelated. He only refers to verbs that have two related objects (i.e. the two objects of DOCs will form a well-comprehensive logical meaning), and believes that there are some verbs like *akhtar* "choose" that takes a second object after omitting a preposition. Ibn Babshath (1976) extends this classification and believes that DOCs are of three kinds:

1- One that is genuinely double-transitive e.g. *kasa* "provide with clothes";
2- The other is mono-transitive, but can be converted to double-transitive by adding an affix which is alhamza e.g. *Āta* which is derived from another verb;
3- The other is transitive over two objects but the second is originally a prepositional phrase but has its preposition deleted [6].

Ibn-aAqeel (1980) puts it in simpler words when he classifies them into only two categories with three subcategories. He believes that they can be gathered into two categories: first, transmutative verbs; and second, verbs of heart. The latter is subdivided into verbs of certainty and verbs of preponderance [7].

Wright (1996) classifies the ditransitive verbs into the following:
1- Those whose objects are not related to one another and;
2- Those whose objects have an underlying relationship between them [8].

Within English literature, many researchers tried to study DOCs and ditransitive verbs. For instance, Larson (1988) studied the topic of ditransitive verbs in one of his articles. He extensively depended on Chomsky's notion of c-command [9]. Runner (2001) talked about DOCs from a derivational point of view. He tried to answer few questions about how the two objects are "licensed" in the sentence [10]. In (2015), Haspelmath talked about these verbs and the alignment that holds between their objects. Also, he discussed the possible alternations within these structures [11].

There are many studies related to ditransitive verbs and RRG in Arabic. For instance, Murphy (2014) analyzed negation in Syrian Arabic dialect. The fact that the theory of RRG specifies a distinct projection for negation eases the analysis. In other words, the treatment of negation becomes clearer when it is analyzed in terms of RRG. He finds out that negation is achieved through separate linguistic elements. Yet, negation can be inherently conveyed through words [12]. In (2014), Willems and De Cuypere talked about the dative alternation (which is the process of altering from prepositional object constructions POCs to DOCs) in Lebanese Arabic [13]. Similariy, Camilleri etc. (2014) discussed the differences in DOCs between three different dialects in their paper [14].

This paper analyses ditransitive verbs and DOCs within the realm of RRG.

3. Theoretical framework

Within the framework of RRG, "core" is a syntactic term used to cover constituents like verbs and nouns. It is a necessary part of the sentence and essential to complete the semantic as well as the syntactic structure of the clause. In this respect, "core" is contrasted with "periphery" which is a complementary part. That is, it refers to those constituents that provide additional information to the clause, and their omission will not violate the structure [15]. Below is a figure showing basic representation of the clause.
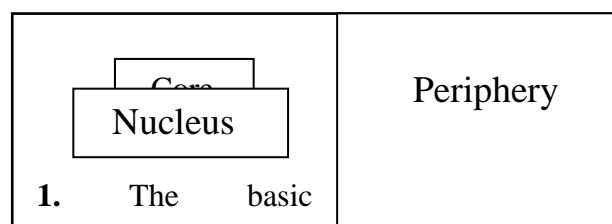

Fig. 1. The basic representation of the clause [15]

Consider the following example:
1- Jack kicked the ball in the garden

In this example, *in the garden* is the periphery since its deletion will not affect the meaning of the clause. On the contrary, *Jack kicked the ball* is the core because it is the basic component of the sentence [15].

The concept of "core argument" is essential to the discussion since it is incorporated in oblique core argument, on one hand, and direct core argument on the other hand. According to Van Valin and Lapolla (1997), the former is used to refer to the constituents that are marked by prepositions. The latter, in turn, refers to the constituents that are marked by case. A question that might be asked here: what is the difference between prepositional phrases that are encoded in the periphery and oblique core arguments? One basic assumption is that oblique core arguments can also be realized without a preposition, in contrast to objects of preposition in a periphery [16]. For an example, consider:

2- Jack presented the prize to John

In this example, to John can be treated in a different way. Altering its form to a second object, it will be:

3-   Jack Presented John the prize

This can be taken as a conclusive method to test oblique core argument against adjuncts or periphery. The aforementioned discussion leads to the conclusion that some of the core arguments (i.e. arguments that are part of the semantic representation of the verb) are marked by a preposition.

RRG enjoys a unique method of representing extra information that can modify a sentence. Sentences may be modified by a number of categories that are formulated differently in different languages. These categories may be tense, aspect, status and illocutionary force. Such information is illustrated in a separate projection called "operator projection." Each operator modifies a different part of the clause. That is to say, aspect affects the predicate while the clause is affected by tense, on one hand, and illocutionary force, on the other hand. It is worth-mentioning that such information (information about tense, aspect, etc.) can be either represented through a separate linguistic item (i.e. auxiliary) or through affixes that are attached to other constituents. Below is the typical representation of "operator projection" together with non-universal slots [15].
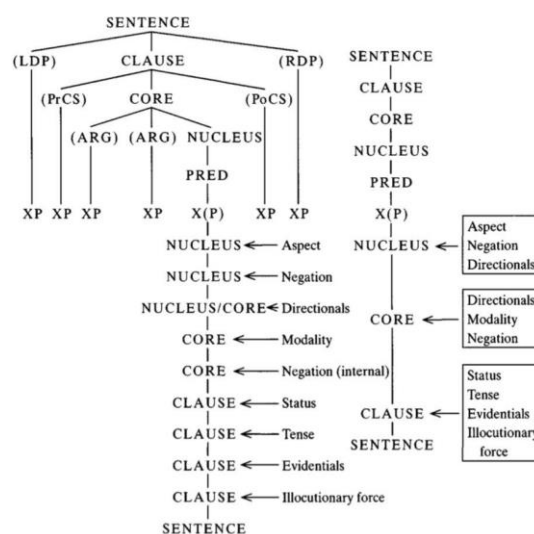

Fig. 2. The representation of operators [15]

Also, there is a third projection which represents the focus structure (i.e the pragmatic dimension of the clause), but it is out of the scope of the study so it is excluded.

4.   Data analysis

In this section, some DOCs are taken from credible English and Arabic books and are analyzed within the realm of the theory.

4.1 The analysis of English dtata. The English clause consists of a core. The core includes the verb (which is the nucleus) and the arguments of that verb. These arguments are the subject and the objects [15]. In the case of DOCs, the clause consists of one nucleus (which is the ditransitive verb) and three arguments (the subject x preceding the verb and two objects following the verb y and z). The second object of a ditransitive verb is represented in the logical structure of the verb as an argument of the verb z. Therefore, it will be reflected in the layered structure of the clause. Consider [17]:

3-   They rent everyone his mantle
4-   It gave you a face-ache
5-   I lent him the bug
6-   You would pay me a visit

The following examples are cited from the New Testament according to Saint John and Luke respectively [18]:

7-   He offers them money (8:18)
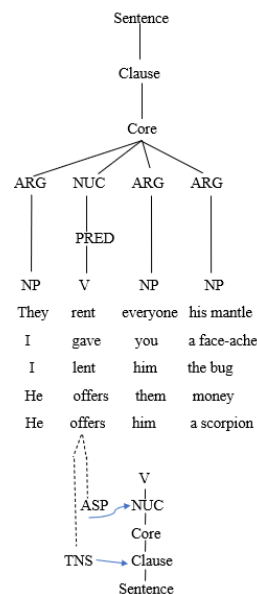8-   He offers him a scorpion (11:12)

Fig. 3. LSC of examples 3, 4, 5, 7 and 8

In examples (3-7) and (8) the x argument is the subject *they, I, I, he, he* respectively. The first object is *everyone, you, him, them him* and the second object is *his mantle, a face-ache, the bug, money, a scorpion.* The tense in these examples is realized through verbs'

inflection (whether it is present or past) and is represented through separate projection (operators). Example (6) is different because it has a modal verb, and information about modality must be represented in a separate projection in LSC. Thus, example (6) will have the following LSC:
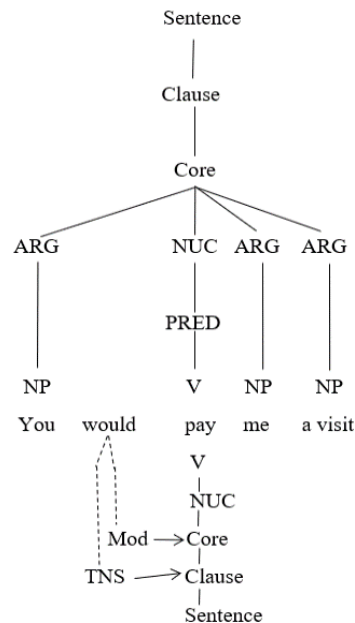

Fig. 4. LSC of example 6

Tense (past) and modality are shown through a different projection that mirrors the constituent projection. Each modifies part of the sentence. In the above example, the model verb *would* modifies the core, while the tense *past*, represented through the model verb, modifies the whole clause.

In some cases, one of the arguments of ditransitive verbs can be an extended noun phrase or can be preceded by the negative form of the auxiliary. Consider:

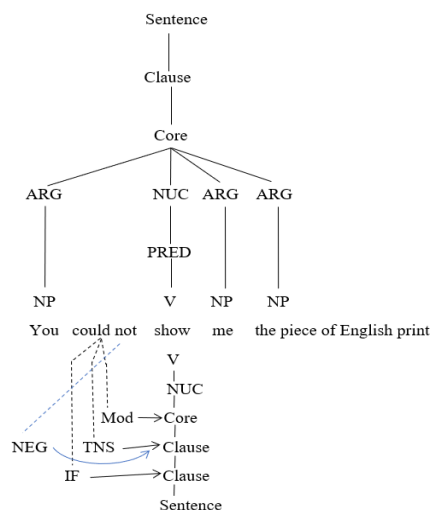9-　　　You could not show me the piece of English print [17]

Fig. 5. LSC of example 9

In the above example, the direct object *the piece of English print* is a complex noun phrase. A closer look at its elements reveals that its LSC goes as follows:
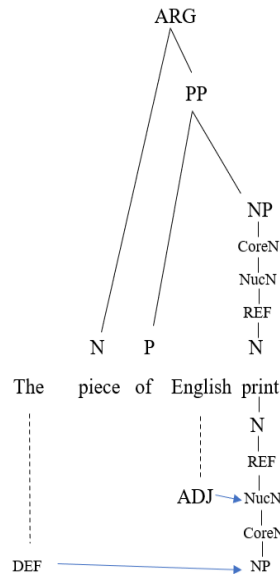

Fig. 6. LSC of the noun phrase of example 9

In the above example, the direct object argument consists of a core noun *print* that is modified by an adjective that has scope over the nucleus noun. The noun is preceded by the preposition *of*; therefore, it appears in a preposition phrase (PP, for short). This PP is modified by another noun *piece*. The whole noun phrase is modified by *the*. In other words, the definite article has scope over the whole noun phrase.

Also consider:
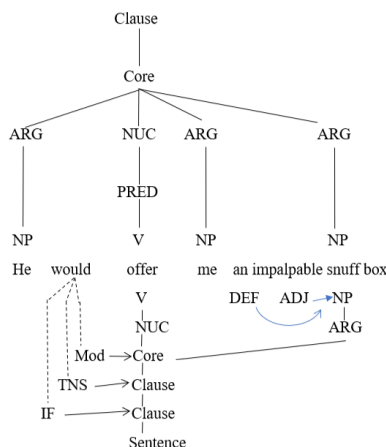
10-   He would offer me an impalpable snuff-box [19]

Fig. 7. LSC of example 10

In this example, the DO *an impalpable snuff box* is a complex noun phrase. A noun *snuff-box* is modified by an adjective *impalpable* and an indefinite article that extends over the whole noun phrase.

In some cases, the DO is realized by a clause. See the following example:
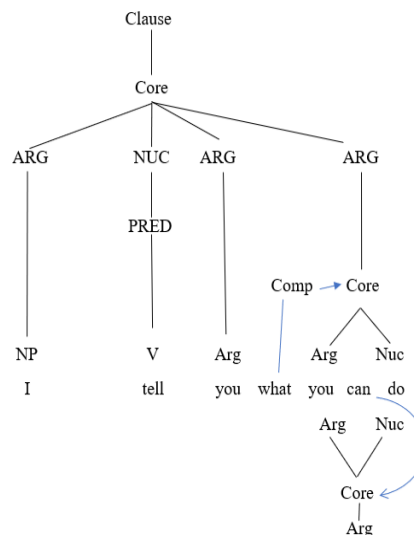
11-   I tell you what you can do

Fig. 8. LSC of example 11

Figure (8) shows that the DO *what you can do* is a clause that is introduced by a complementizer. The main verb of the clause *do* is modified by the model verb *can*.

English ditransitive verbs like *ask* can appear in simple as well as complex structures. See the following examples from the New Testament according to Saint James and Matthews [18]:

12-   I also will ask you one thing (21:24)

13-   To give an answer to every man that asketh you a reason of the hope (4:15)

Example (12) has a simple structure. The core of the sentence is modified by the model verb *will*. Example (13) is not very different except that the subject of the ditransitive verb is realized by *that*. See its LSC:
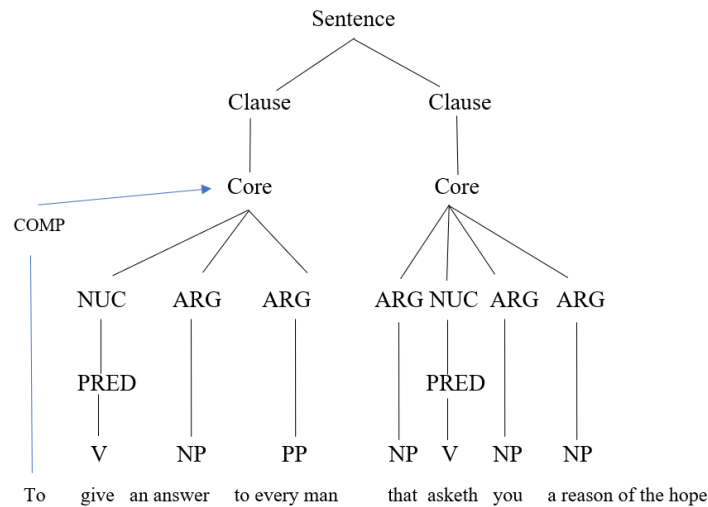
Fig. 9. LSC of example 13

The above figure shows that within the same sentence there are two ditransitive verbs *give* and *asketh*. The former appears in a POC and the latter in a DOC.

English object complements are not considered as part of DOCs although at first glance they seem so. Jesperson and Swan, on one hand, believe that the verb *make* cannot be used as a ditransitive verb in the sense of having two objects. They believe that the verb *make*, alongside other verbs like *consider*, *explain, paint, cut* has only one object. Even if it is followed by two noun phrases, the first noun phrase is regarded as an object but the second noun phrase is an object complement. The following examples go in compliance with this argument [20] [21]. Consider:

14-   They made Brown President [20]

Quirk and Greenbaum, on the other hand, believe that the verb make can be used in three different structures:

a)   monotransitive
b)   ditransitive
c)   complex transitive,

Complex transitive is different from ditransitive in that the third noun phrase is not an argument of the verb. It gives an additional meaning to the second noun phrase as in example (17) below.

15-   She made a cake (monotransitive)
16-   She made him a cake (ditransitive)
17-   She made him a good husband (complex transitive) [2]

4.2 The analysis of Arabic data. The Arabic DOCs consist of three arguments. One for the subject and two for the objects. However, Arabic is a pro-drop language and therefore, the subject may be realized by a covert pronoun [22]. Also, one or more than one argument can be deleted from the actual structure because it can be detected from the context. So, one may wonder how RRG deals with this fact assuming that the theory provides three slots for the non-predicate arguments of DOCs.

A basic Arabic DOCs that has all it arguments as overt elements is:

18-   Āta Mohammadon ʿliyan āl-kitaba
18a- [give: past] [Mohammad: NOM] [Ali: ACC] [the book: ACC]
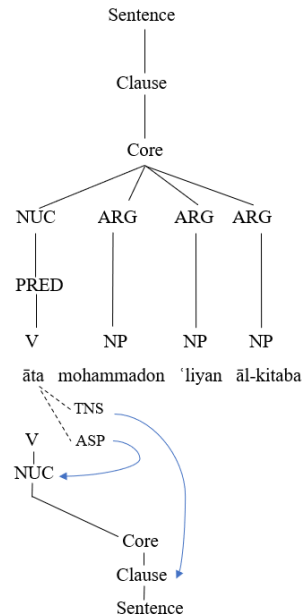18b- Mohammad gave Ali the book
Its LSC goes as follows:

Fig. 10. LSC of example 18

Example (18) represents the simple verbal sentence with one ditransitive verb *āta*. There are three arguments: the subject *mohammadon "Mohammad"*, the first object *ʿliyan "Ali"* and the second object *āl-kitaba "the book"*. The verb in this example is an invariable one and it is declined with fatha. However, as it is mentioned just above, not all ditransitive verbs have all of their arguments as overt elements. See the following example:

19- Manaha āl-mawadata ġairana wa ġafana
19a- [grant: past, he] [intimacy: ACC] [someone else: ACC] [and] [avoided us: past)]
Translated as:
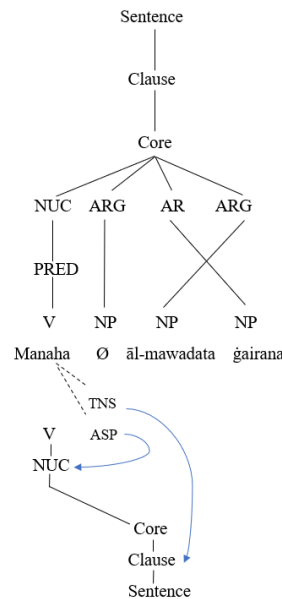19b- he gave intimacy to someone else and avoided us
Its LSC goes as follows:

Fig. 11. LSC of example 19

In the above example, the DO precedes the IO but in the LSC they are represented in the way they are actually uttered. Also, the subject is an implied pronoun which is understood to be *huwa "he"*. The tense of this clause is past and it is realized by adding *fatha* to the end of the verb. As it can be seen from figure (11), the syntactic slot of the subject is preserved but it is empty in so far as pronunciation is concerned. For such covert elements the symbol Ø is used.

Consider the following example:

20- "āwraṯna āl-kitaba ālladina āṣṭafayna min ʿibadana" [23]

20a- [bequeath: past, we] [the book: ACC] [who: ACC] [choose: past, we] [such] [servants: prepositional phrase]

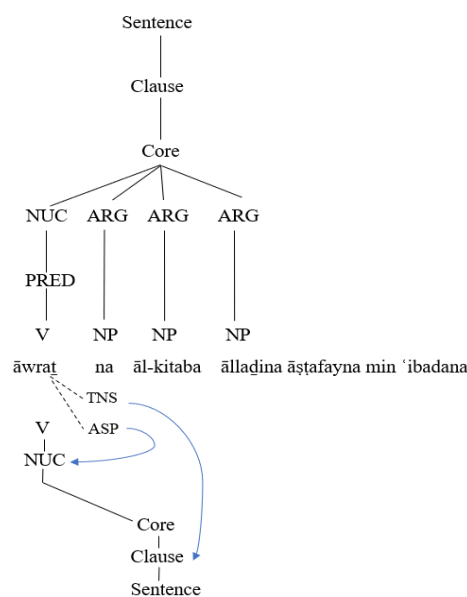20b- "we bequeathed the book to those chosen servants" [24]

Fig. 12. LSC of example 20

In example (20) the subject of the ditransitive verb *āwraṯ "bequeath"* is realized by the attached pronoun *na "we"*. The DO is *āl-kitaba the book"* and the IO slot is filled by a relative pronoun *āllaḏina "those"* which in turn has a related clause after it. In this case the relative pronoun together with the relative clause constitute the IO. The tense of this example is past and it is realized through the inflection that appears at the end of the verb before the subject. Also see:

21- "ḫawwalnahu niʿmatan" [23]

21a- [bestow: past, we, him (ACC)] [grace: ACC]

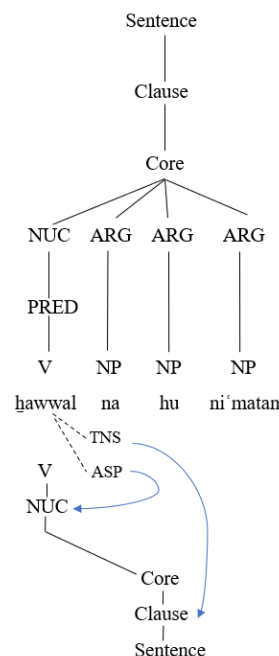21b- "we bestow on him a grace from us" [24]

Fig. 13. LSC of example 21

In this example, the subject and the IO are realized by attached pronouns *na "we"* and *hu "him"*. The DO is the word *niʿmatan "grace"*. The tense of this verb is past because it is inflected with *fatha*.

Sometimes in Arabic one or both objects are omitted from the sentence and they can be deduced from the context. See the following example:

22- "fayagul ayina šurakaʾy allaḏina kuntum tazʿamun" [23]

22a- [then] [say: present, he] [where] [my partners: NOM] [that: NOM] [used to: past, you] [claim: present, you]
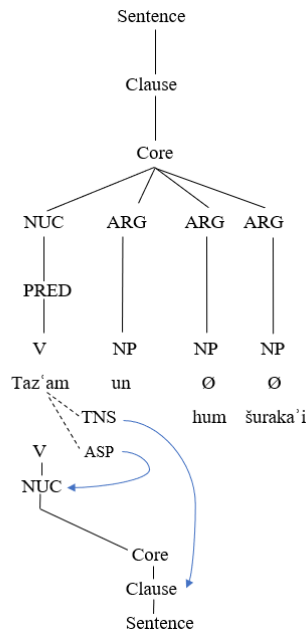
22b- "Where are my partners which you used to claim?"

Fig 14. LSC of example 22

In this example, the ditransitive verb *tazʿam "claim"* has an overt subject *un* and two implied objects that can be understood from the previous elements to be *hum "them"* and *šurakaʾy "partners"*. This verb is in the present tense because it starts with the prefix *ya.*

5.   Conclusions

In this paper, we have argued that the universal tenet of RRG is maintained in so far as the syntactic representation of the DOCs is concerned. This is cnoncluded from the analyses of DOCs in two typological different langauges. English is a Germanic language and Arabic is a semetic one. This means that the morphosyntactic varieties found in Arabic do not really affect the major assumption made by the theory that three-place predicates need three arguments in LSC. Even if Arabic is a pro-drop language and it allows the demotion of the subject, its syntactic slot is preserved in LSC. Also, the theory helped us to conclude that information about tense and aspect is represented through a separate linguistic element in English which is the auixilary   verb;   in   contrast   to Arabic such information is usually represented through affixes (prefixes or suffixes).

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