VERBS AS CENTRAL ELEMENTS IN ROLE AND REFERENCE GRAMMAR AND DEPENDENCY GRAMMAR AND VALENCY THEORIES

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ABSTRACT

Purpose: The study takes into consideration the role a verb plays in the English language, how it has been described by the traditional grammar approach, the deficiencies in their definitions, and a critical look at how verbs play the central roles in two grammatical theories: Role and Reference Grammar as well as Dependency Grammar and Valency.

Design/Methodology/Approach: The study used the review approach to analyse texts based on examples. It relies on a thorough examination of existing literature on the topic. Content analysis was adopted to analyse the study.

Findings: From the analysis used in the study, it was established that verbs were seen in both theories to be at the heart of meaning.

Research Limitation: The study discusses the research limitations of both theories, including issues related to cross-linguistic differences and the difficulty of accounting for idiosyncratic uses of verbs.

Practical Implication: The practical implications of these theories are explored, such as their usefulness in language teaching and the development of natural language processing systems.

Social Implication: The social implications of these theories are also considered, including the potential for these theories to contribute to a better understanding of language diversity and promote linguistic equality.

Originality/Value: The study contributes to a deeper understanding of these theoretical frameworks and their potential to enhance language research, teaching, and societal understanding.

Keywords: Dependency grammar. illocutionary force. reference grammar. valency. verbal node

INTRODUCTION

It is a known fact that the facet of language has undergone a number of transformations since its inception from Traditional Grammar to Universal Grammar and it is still undergoing changes (McWhorter, 2020). Languages do not occur in a vacuum; therefore, certain theories are adopted to facilitate them (languages) in their usage. Such tools are called linguistic models or theories. Linguistic theory as a term was propounded by R.M.W. Dixon to describe the theoretical framework and concepts that are generally used in the grammatical description of languages, and in linguistic typology (Dixon, 1997). Since the 'linguist theory' was propounded as a yardstick for language analysis, a huge number of theories have been developed. Among such theories are Transformational Generative Grammar, Relational Grammar, Role and Reference Grammar but a

mother to all of them is Traditional Grammar. Traditional Grammar prescribed the rules of the English Language in terms of the parts of sentences (nouns, verbs, adverbs, etc.). Some of the definitions of the parts of sentences in Traditional Grammar sprouted controversies. For instance, nouns were defined as a name but the deficiency in such a definition lies in the case of a referent for things that are abstract in nature (ghost, Santa Claus, etc.) (Long, 1975).

Another problematic definition is that of a verb: a verb connotes an action (Vanderveken, 2005). This definition does not cater for auxiliary verbs, which do not undertake any action in its performance. Irrespective of the deficiencies in the definition of verbs, verbs play a dominant role in making meaning; i.e., they occupy an essential role that all other elements in the sentence rely on. It is for this reason that Constance Hale (2013) explains that "a *sentence can offer a moment of quiet; it can crackle with energy or it can just lie there, listless and uninteresting. What makes the difference? The verb"* (p135). This quotation, thus, underscores the importance of the verb in any grammatical structure. Theories like Categorical Grammar, Role and Reference Grammar, Dependency Grammar and Valency and Cognitive Grammar among others have their roots in Traditional Grammar; therefore, this study selects Role and Reference Grammar as well as Dependency Grammar and Valency Theories to discuss the place of the verb in the theories since it sprouted from a theory in which verbs were not downplayed.

BACKGROUND TO THE THEORY OF ROLE AND REFERENCE GRAMMAR

William A. Foley and Robert Van Valin Jnr. are the brains behind Role and Reference Grammar [henceforth to be referred to as RRG] which came into existence in the 1980's. The organization of RRG is centred on the structure of the clause and a sentence is seen as the highest point of analysis of a structure. RRG posits a direct mapping between the semantic representation of a sentence and its syntactic representation. Many of the typological issues, i.e., the universality of the notion of a subject, and theoretical issues, i.e. the relation between a subject and a topic in grammatical systems, were central in the initial conceptualization of RRG (Foley & Van Valin, 1977, Van Valin, (2012). Osswald and Kallmeyer (2018) also add their view to complement Foley and Van Valin to explain that RRG grew out of an attempt to answer two basic questions: (i) What would linguistic theory look like if it were based on the analysis of languages with complex syntactic, semantic and pragmatic systems rather than on the analysis of English? (ii) How can the interaction of syntax, semantics and pragmatics in different grammatical systems best be captured and explained?

Role and Reference Grammar (RRG) was developed as a theory which seeks to find the interaction between syntax, semantics, and pragmatics. RRG works with three (3) basic concepts: Clause structure, Semantic structure and Focus structure. These concepts help to answer what RRG seeks. In terms of syntax, clause structure caters for that aspect, while semantic structures look at aspects of semantics. Finally, pragmatics is also sorted by focus structure which deals with the illocutionary force i.e., the function of the sentence (question, statement, etc.) and the focus domain which is dependent on the stress patterns (prosody). In lieu of this, the place of the verb will be looked at in terms of syntax, semantics and pragmatics.

Clause Structure and the Place of Verbs (Syntax)

Clause structure in RRG is fuelled by the layered structure of the clause (henceforth, LSC). LSC is made up of the core (usually the verb), which contains the nucleus plus the argument(s) of the predicate(s), and the periphery, which is usually made up of adjuncts and locative modifiers of the core. Syntactic arguments that are found within the core are called the core arguments, and they may be direct or oblique (Aboitz, 2012; Arbib, 2012; Arnon 2011; Van Valin, 2012). The structure of the layered form of the clause cannot hold without the core (verb) since it holds all other elements together.
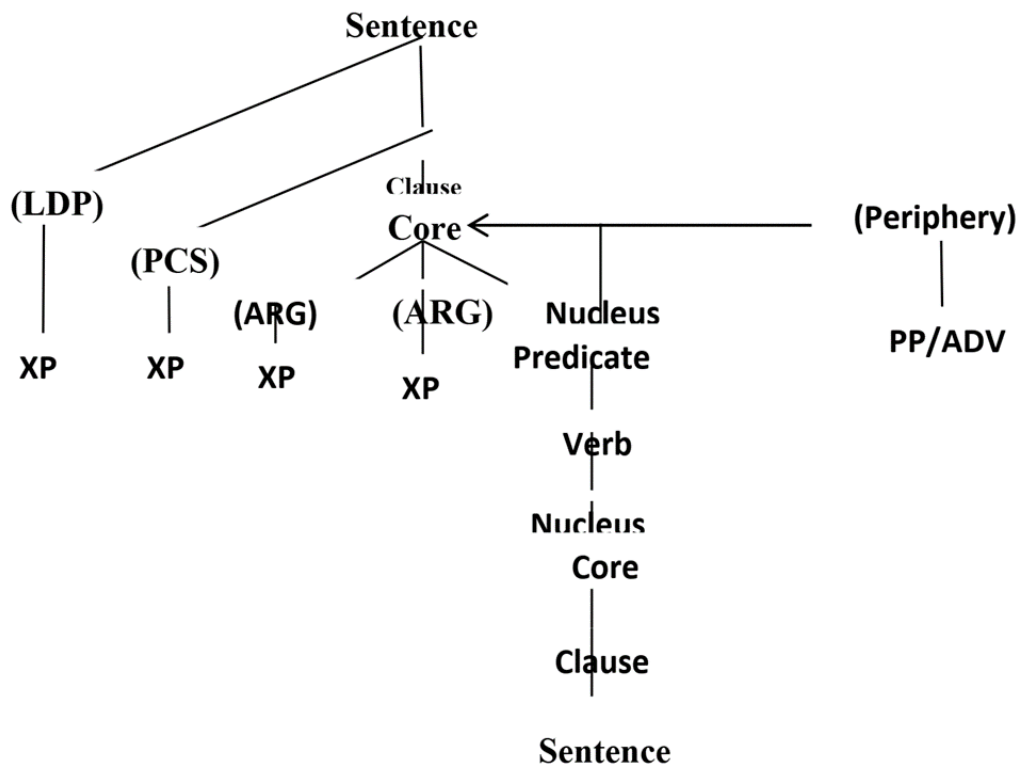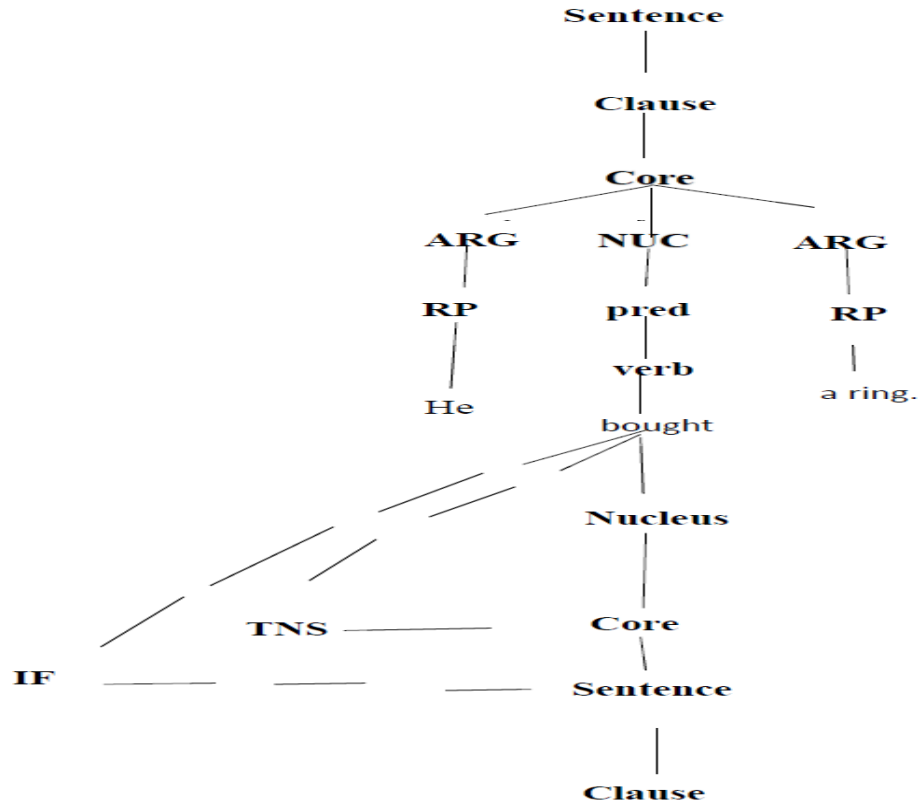

Figure 1: Layered Structure of the Clause

Figure 1 represents the layered structure of the clause as propounded by Foley and Van Valin in the 1980's. From the diagram depicting the LSC, it can be seen that some of the elements are placed in parentheses while others are not. Elements like left detached position (LDP), pre-core slot (PSC), ARG (arguments) and periphery are optional elements in a sentence while those elements that are not in parenthesis are compulsory elements that are required for a sentence to be meaningful. Beneath the clause is the core and all other elements sprout from the core because when the core is taken out of the structure, whatever remains cannot stand or make meaning. This depicts how relevant the core (verb) is as it serves as the pivot that holds all the other elements together. The above structure shows the complete LSC structure but since the study lays emphasis
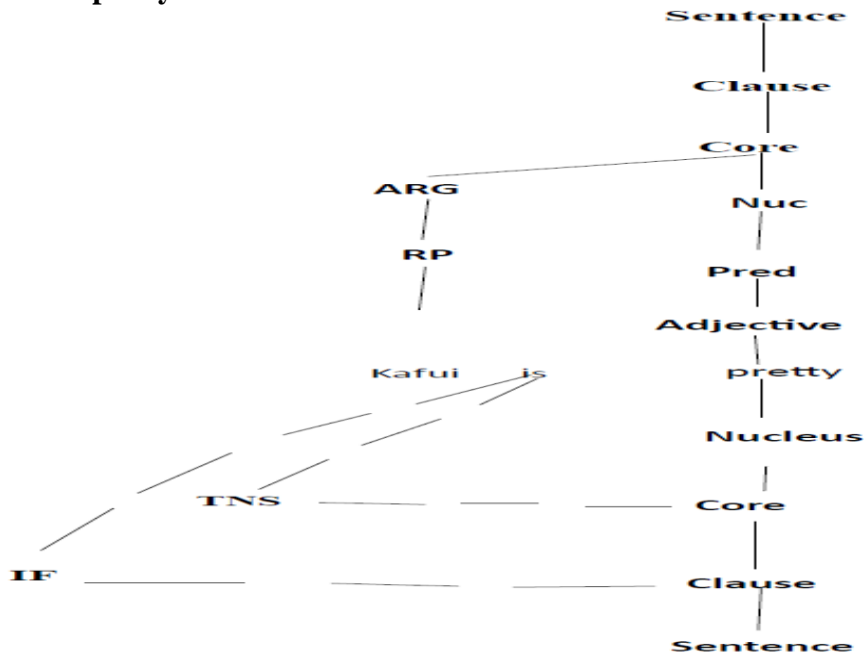
on the verb or core, some elements of the structure will be left untouched since they are optional elements. Examples of how the verb is positioned in sentences are demonstrated in the following illustrations:
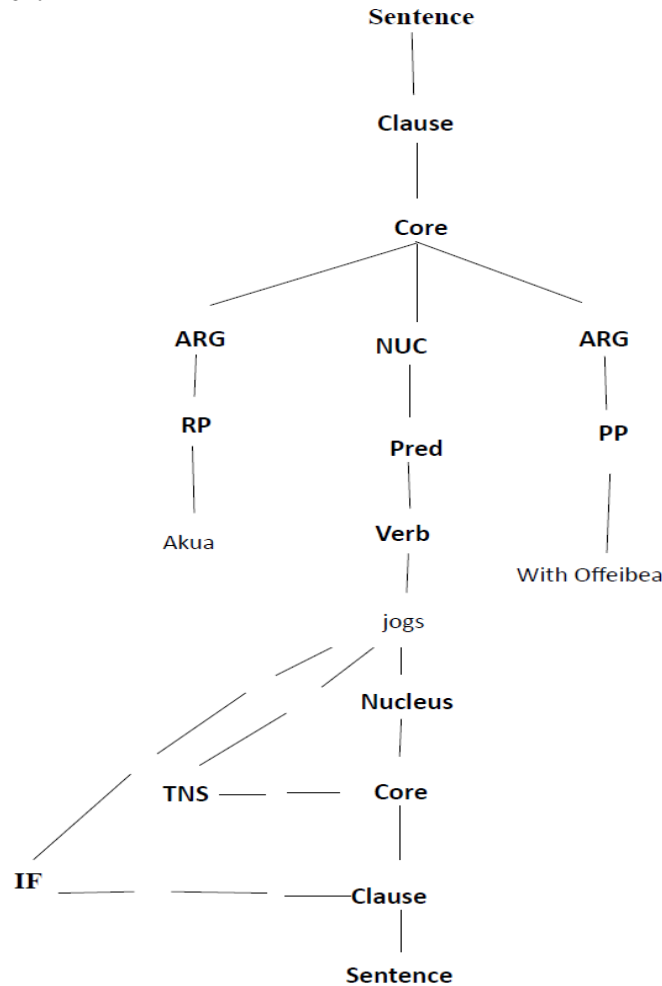
1. **He bought a ring.**

2. Kafui is pretty.

```
                                          Sentence
                                           |
                                          Clause
                                           |
                                          Core
                         ARG                |
                          |                Nuc
                          |                 |
                          RP               Pred
                          |                 |
                          |              Adjective
                                           |
                  Kafui        is          pretty
                              /            |
                             /            Nucleus
                            /              |
                   TNS  —————————————————  Core
                   /                        |
                  /                         |
           IF  ————————————————————————  Clause
                                           |
                                        Sentence
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3. Akua jogs with her.

Sentence

Clause

Core

ARG — NUC — ARG

RP

PP

Akua

Pred

Verb

With Offeibea

jogs

Nucleus

TNS —— —— Core

IF —— —— ——Clause

Sentence

From the illustrations above, it is seen in examples 1 and 3 that all the arguments are generated from the core (verb) and without the verbs, example 1 will read "He a ring" and example 3 will read "Akua with her" and these constructions do not pass to be called sentences because they do not communicate any message or meaning. Again, tense is marked by the verbs in the sentence by determining the state of the sentence whether they are in the present or past. In addition, the onus lies on the verbs in the sentences to determine the illocutionary force (the speaker's intention in producing that utterance), if the utterance is a declarative, imperative, exclamatory or interrogative. In all cases, the verb becomes the determinant of the illocutionary force.

Example 2 brings a twist to the discussion: the verb in the sentence is not the nucleus. When the verb is an auxiliary verb like the situation in example 2, in which case the verb is an auxiliary verb and is followed by an adjective, the nucleus is placed on the adjective because the adjective introduces new information about the reference phrase or subject. However, the onus still lies on the auxiliary verb to determine the tense and illocutionary force of the sentence.

Semantic Structure and the Place of Verbs
The centrality of verbs is once again emphasized in RRG in terms of semantic structures. A salient component of this system is a set of syntactic and semantic tests for determining the class membership of a verb in a particular sentence, since the class of the verb determines the lexical representation or logical structure [LS] (Arnon, 2011). Verbs have been further divided into two categories under semantic structures: thematic or lexical semantic roles and generalized semantic roles or Semantic macroroles.

Thematic or Semantic Roles
Verbs are classified into stative, activity, achievement and accomplishment verbs and the scheme for lexical decomposition (Van Valin, 2012). The major idea under the thematic or semantic role is that the verb acts as the major determinant of utterances. Based on the type of verb chosen in an utterance, the discourse is identified. Stative verbs express a state rather than an action. Examples of stative verbs are "know", "broken", "love". Activity verbs are dynamic, non-telic situations. A verb is said to be non-telic when it (action) is incomplete or characterized by constant change (Van Valin, 2004, Van Valin, 2012). Examples of activity verbs are "dance", "jog", "cook", "slap", etc. Achievement verbs denote instantaneous changes of state. Examples of achievement verbs are "broke", "popped". Accomplishment verbs express changes in states that are inherently telic (an action that is complete in some sense) and have durations. Examples of accomplishment verbs are "discover" and "learn" (Engelberg, 2000).

It is important to note that a decomposition approach is taken in the illustrations of verbs under thematic or semantic roles. Lexical decomposition assumes that the meaning of each verb is encapsulated in a hierarchical representation based on a predicate logic that contains primitive predicates like *cause* and *become* (Engelberg 2000). This means that the verb which is at the centre causes other elements in a construction or an utterance to attain (become) a new state or to change its current position. Below are illustrations of the categories of verbs and how they are represented inferring from Heine and Narrog (2015) in his lexical decomposition:

Verb Class	*Formal Representation*
4. State: The mirror **broke**	'broke' (the mirror)
5. Achievement: The meat **reddened**	**'BECOME reddened'** (the meat)
6. Accomplishment: Afi **broke** the mirror	['**do**' (Afi)] CAUSE [BECOME]

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broke' (the mirror)

7. Activity: He **sings** everyday   **'do'** (he, [sings' (everyday)])

From the illustrations above, the verbs are responsible for making meaning. For instance, if the verbs in the sentences are taken out, no message can be communicated and this is in line with how the verbs are portrayed under the syntactic structure of LSC to be the major determinant of meaning.

Generalized Semantic Roles or Semantic Macroroles.
Generalized semantic macroroles are a set of thematic roles that are organized in a hierarchical order. The participant who is most active is ranked the highest participant and is given the name 'actor' while the least participant is called 'undergoer (Van Valin, 2004, Van Valin, 2012). RRG has two Macroroles: Actor and Undergoer. A sentence may have just an actor or undergoer or both depending on the type of verb used in the construction. The verb can take up to three arguments. It takes two (2) arguments, i.e., a subject and a direct object when it is a mono-transitive verb, three (3), when it is a di-transitive verb, i.e., a subject, an indirect object and a direct object and, one (1), when it is an intransitive verb. The following examples will prove useful:

8. He bought his wife a car.

           Actor (He)   **Undergoer (his wife)**

"He" is the actor because "he" participates immensely in the action of the verb, which is 'buying' and the wife is the undergoer because she participates little in the action of the verb but 'a car' suffers the action of the verb and also performs a less active role, which could pass to be an undergoer but in RRG, there can be only one undergoer.

9. She wept.

         Undergoer (She)

The verb 'wept' will not allow or give way for an actor in this context.

10. Tom is ill.

       Actor (Tom)
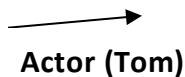
Again, in example 10, it also has room for an actor and not an undergoer. Apart from the verbs, nothing in the structures has the power to select the number of arguments in the sentences. The verb is too powerful to be overlooked since it accounts for the presence and absence of elements

found or not found in sentences. RRG places verbs at the centre of meaning because without them, no communication can be held using language; therefore, RRG tows the line of positioning verbs as the central element.

Focus Structure and Illocutionary Force: The Place of the Verb
Pragmatics under RRG is divided into two: focus structure and illocutionary force. Focus structure is the feature which helps to indicate the scope of the assertion in an utterance or the part of an utterance that is being emphasized. There are two types of focus structures: potential focus structure and actual focus domain. Potential Focus Domain (PFD) targets what the sentence may likely focus on and this focus domain may be subjective depending on the prosody of the language. Examples of PFDs in sentences are:

11. . Aba **washed** her clothes.
              PFD

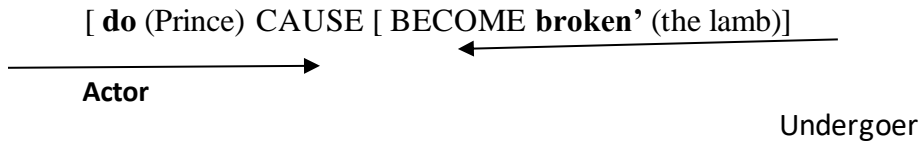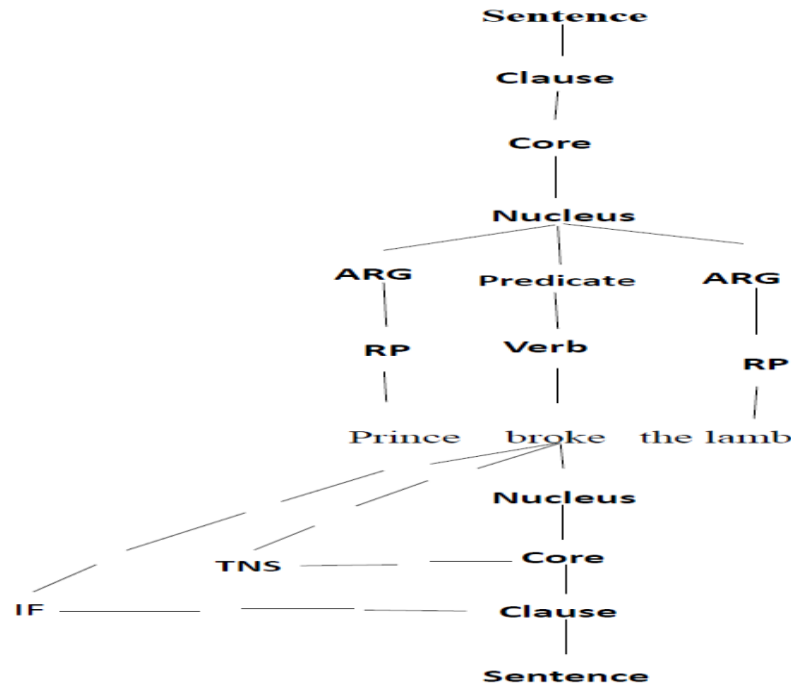12. He **is** handsome.
              PFD

Potential focus domain may shift depending on what is of importance to the speaker; so, in the above sentences, the focus structures are placed on the verbs but Actual Focus Domain (AFD) is what happens in the usage of the sentence or utterance and this focus usually lies on the periphery of the adverbs in a sentence. AFD actually does not depend on verbs but it is worth mentioning.

Examples of AFD's in sentences are:

13. Yesterday, Ama **cooked**.
                AFD
14. Philip **is** my brother.
          AFD

Illocutionary, on the other hand, deals with the intention of an utterance and this intention is dependent on the position of the verb or the presence of verbs in a sentence. For example, the two utterances "You will sit down" and "Sit down!" have the same propositional content, namely that you will sit down; but characteristically the first of these has the illocutionary force of a prediction and the second has the illocutionary force of an order and these differences are brought out by the verbs i.e., the position of the verbs. The following is an illustration depicting the centrality of verbs in RRG in terms of Syntax, Semantics and Pragmatics:

Sentence
|
Clause
|
Core
|
Nucleus
ARG   Predicate   ARG
| | |
RP   Verb   RP
| | |
Prince   broke   the lamb
Nucleus
TNS ———— Core
IF ————————— Clause
Sentence

[**do** (Prince) CAUSE [BECOME **broken'** (the lamb)]

Actor

Undergoer

Background to the Dependency Grammar and Valency Theory

Lucien Tesnière developed Dependency Grammar (DG) and Valency Theory (VT) but the theory was not available for public use till after his demise in 1954. His initial work which led to the popularity of the name of theory was titled 'Elements de Syntaxe Structural' which was published in 1959 after his death in 1954. The work was first translated into German and later into the English Language by his followers and they (followers) gave the name Dependency Grammar and Valency Theory to their master's work (Fischer et al., 2010). The basic premise of this theory is that it gives the topmost primacy to verbs. Below is a figure that represents how sentences are analyzed under this theory.
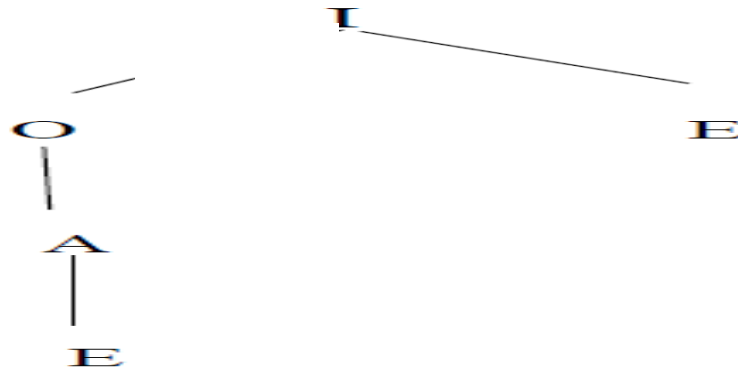
Figure 2: Universal Dependency Structure (Cited in Fischer et al., 2010)
Where I=verb; 0=noun; A=adjective; E=adverb. E stands for a recursive relation; i.e., adverbs can also depend on adverbs.

**The Place of the Verb in the Theory**

The verb is at the centre of the clause structure. All other components in the structure (words) are either directly or indirectly connected to the verb in terms of the directed links, which are called 'dependencies' (Somers, 1987). In this theory, no structure can hold or make meaning without depending on the verb for assistance. Tesnière is said to have grouped the whole sentence structure into a verbal node (Barres & Lee, 2014). Below are some illustrations depicting the centrality of verbs as found in the theory.

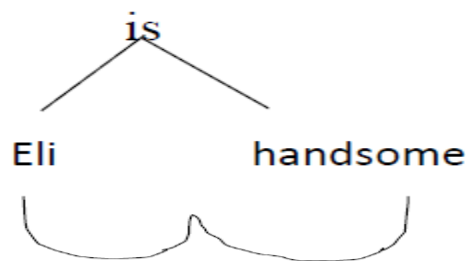**15. Rockie slapped Dorcas.**
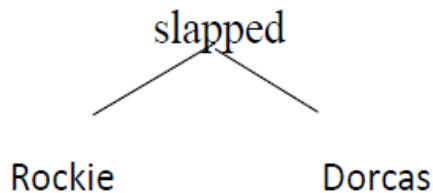
16. Stella bought a book today.
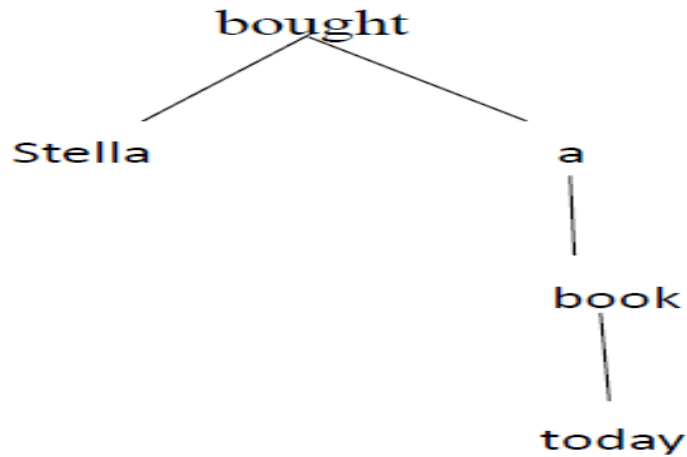

17. Eli is handsome.

In the above structures, the verbs are placed above any other element. The meaning of other elements depends on the lexical verbs. Without the verbs, the sentences cannot communicate their intended messages. The sentences will read "Rockie Dorcas", "Stella a book today", "Eli handsome". Beyond that, the whole idea of dependency is about connectedness. That is, it looks at how linguistic units are connected in the structure in order to ensure the grammaticality of the entire structure (Agel & Fischer, 2010). In essence, the meaning of one element is dependent upon the next one close to it so that the whole sentence structure becomes coherent. Each element found in the sentence is connected to the other elements to make meaning with the exception of optional elements (adverbs). Any element taken out will render the sentence meaningless but central to all of them is the verb.

For instance,

18. Kojo visited yesterday.
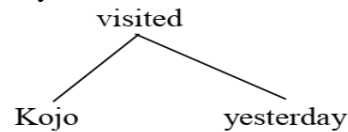
Thus, there is a link or connection between the principal element, the verbal node, and other constituents.

Valency Theory
Valency is the number of potential actants (arguments) a verb can carry (Agel & Fischer, 2010). The verbal node contains a central nucleus, which according to the universal dependency structure, can govern two types of nodes: noun nodes and adverb nodes. For instance.

18. Yafa read the book slowly.
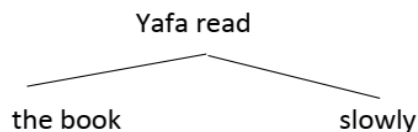
The verb (read) in Valency theory is called Verbal Valency Carrier and the actants are the noun node (the book) and the adjunct node (slowly). Based on the above assertion of the centrality of verbs or the valency of verbs, there are four major valency types: impersonal, intransitive, di-transitive and transitive (Agel & Fischer, 2010).

Impersonal verbs have no determinant subject and they are usually weather verbs. Examples:

19. It rains.
20. It snows.

The subject "it" is there just to fill the subject position. The verbs "rains" and "snows" in these contexts have no real argument in the syntactic structures. As such, the argument (**it**) in the above structures is just there to occupy the place of argument. It is called a dummy element in that it is there just to occupy the subject position.

Intransitive verbs are verbs that cannot or do not take objects but can take an adjunct which is optional. For instance,

21. Yaa coughed.
22. The plane landed slowly.
23. The plane landed.

Transitive verbs are verbs that can take two argument positions or are verbs that give way for one or two slots of objects. For Instance, "They **borrow** a book".

The verb "**borrow**" creates two slots of objects that need to be filled. The verb "borrow" allocates the function of a borrower (agent) to the first slot and the function of an item being borrowed (patient) to the second slot. The functional requirement of the verb largely determines the filling of the slots.

The last valency type is the di-transitive verb. Di-transitive verbs are verbs that take two arguments in a possible sentence structure.
For example:

24. He **bought** his son a car.

The verb "bought" requires a slot for an agent (animate) who will carry out the action of buying, a participant who benefits from the action and an item that has been bought. From the discussion under Dependency Grammar and Valency Theory, it can be seen that no other element that helps form a sentence was emphasized like the verb. Verbs under this theory are seen as the most influential and powerful element which all the other elements are subjected to, in terms of meaning, sentence structure, and how well structures are formed, among others.

CONCLUSION

This paper has provided a comprehensive review of the central element of verbs in the theories of role-and-reference and dependency-grammar-and-valency. The study has analyzed the methodology used in both theories, highlighting their similarities and differences, and discussed research limitations. Additionally, the paper explored the practical and social implications of these theoretical frameworks. The study has shown that while both theories offer distinct approaches to understanding the central element of verbs, they complement each other in their respective strengths. Role-and-reference theory emphasizes the semantic and pragmatic roles of verbs, while dependency-grammar-and-valency theory emphasizes the syntactic structure of verbs. However, both theories face challenges in accounting for cross-linguistic differences and idiosyncratic uses of verbs. The practical implications of these theories include their usefulness in language teaching and the development of natural language processing systems. Social implications of these theories include their potential to promote linguistic diversity and equality. Overall, this study highlights the importance of examining different theoretical frameworks to deepen our understanding of language and its role in society. Further research is needed to address the limitations of these theories and explore their potential for enhancing language research, teaching, and societal understanding.

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