Interpreting Bantu Clause Structure within Role and Reference Grammar

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Abstract. This paper investigates the constituent structure of simple clauses in Bantu from the perspective of the Role and Reference Grammar (RRG) theoretical framework. The analysis focuses on the status of bound arguments in Bantu verbs, the lexical subject and object noun phrases, topics and topicalization, Wh-questions, relative clauses, and the representation of these constituents in the layered structure of the clause (LSC), the RRG model of representing clause structure. A layered structure of a Bantu simple clause is proposed. The article concludes that the LSC accounts for the syntactic, semantic, and discourse-pragmatic functions of clausal constituents in simple clauses in Bantu.

1.0   Introduction

Approaching syntactic analysis of African languages from a discourse-oriented perspective reveals structures beyond the sentence level, thereby expanding the focus of linguistic theories (Childs 2003).

Bantu syntax exhibits phenomena that ignite theoretical debate (van der Wal 2015). Indeed, investigations of the syntax of African languages have contributed to the development and/or refinement of linguistic theories, as well as offering opportunities for cross-linguistic testing of theoretical claims. For example, Watters' (1979) study of Aghem focus marking contributed to the theory of focus in Functional Grammar of Dik et al. (1981). Kimenyi's (1980) study of Kinyarwanda had a direct bearing on Relational Grammar. Lexical Functional Grammar, e.g. Bresnan (2001), was influenced by studies of Chichewa. Generative grammar has also benefitted from the study of Bantu languages (see Baker 2008). The Bantu influence on linguistic theories shows that these languages provide data to test and compare claims in linguistic theories.

The syntax-discourse approach to Bantu clauses by Bresnan and Mchombo (1987) exposed the interaction between syntax, semantics and pragmatics in Bantu clauses. They considered the clausal order of arguments, and topical and focal elements in Bantu. Among other things, they concluded

that in Chichewa and other Bantu languages, the subject marker (SM) is ambiguous, being both a subject and an anaphoric agreement marker for grammatical topics.

Bresnan and Mchombo's article attracted attention from other Bantuists, e.g. Bergvall (1988), Demuth and Johnson (1988, 1989), Keach (1995), Deen (2006), Riedel (2009), and Mchombo and Morimoto (2004), who tested the claims in related Bantu languages. These studies were mainly concerned with the status and representation of bound subject and object arguments, the status of lexical noun phrases (NPs), order of arguments, and the nature of focal and topical elements in clauses. Bresnan and Mchombo's arguments were variously confirmed in other languages. For example, Demuth and Johnson (1988, 1989) concurred that bound subject and object arguments in Setawana (a dialect of Setswana) are anaphoric pronouns. Bergvall (1988:92) ruled out object agreement in Gĩkũyũ since Gĩkũyũ disallows co-concurrence of a bound argument and a lexical object in a clause. Bergvall concluded that Gĩkũyũ is a 'topic-oriented language'. Overall, Bergvall agreed that Bresnan and Mchombo's theory is largely applicable in Gĩkũyũ.

Keach (1995) concurred with Bresnan and Mchombo that the SM in Kiswahili is both a pronoun and an agreement marker, as in Chichewa. As for the Kiswahili object marker (OM), Keach argued that it is not an anaphoric agreement marker. This view is rejected by Deen (2006), who argues that the SM marks agreement, but it is not a pronoun. Deen added that lexical NPs in Kiswahili lack 'topical' properties, thereby casting doubts on a pronominal analysis of the SM. According to Deen, the lexical NP is the 'subject' in Kiswahili clauses.

Extending the approaches by Bresnan and Mchombo and others, this article, describes the status of lexical subject and object NPs, bound argument markers, topical and focal constituents, and Wh-words in selected Bantu languages based on the Role and Reference Grammar [RRG] framework by Van Valin and LaPolla (1997) and Van Valin (2005, 2013). The main objective is to propose a layered structure of the clause for Bantu languages.

2.0 Clausal Representations in RRG: The Layered Structure of the Clause

Typological issues such as free-word order languages, flat-syntax languages, head-marking languages, fixed-word-order languages, configurational languages, and dependent-marking languages influenced the development of RRG (Foley and Van Valin 1984).

As a structural-functional theory, RRG is concerned with the interaction of syntax, semantics, and pragmatics in grammatical systems. Consequently, in the representation of clauses, these interactions are captured. RRG proposes a layered structure of the clause [LSC] to represent clause structure in languages. The LSC distinguishes between a predicate and its argument(s).

It also separates arguments of the predicate and non-argument adpositional phrases, e.g. peripheral and adjunct elements. The concern with arguments and predicates indicates that the LSC is a semantically motivated model used for the syntactic representation of clauses.

The primary units of the LSC are the *nucleus*, containing the predicate, usually a verb, but not in all cases; the *core,* containing the nucleus and arguments of the predicate; and the *periphery*, containing non-arguments, e.g. temporal and locative adjuncts. Combined, the *core* and the *periphery* make the *clause*. These primary units are semantically defined. They may occur in any order that a language allows because issues of immediate or linear dominance have no major role. Underlying the semantic units are the syntactic units. For instance, a *predicate* (a semantic unit) has the *nucleus*, which is a syntactic unit. Non-arguments (semantic elements), are syntactically found in the *periphery* as a syntactic unit. The predicate and arguments make the *core*, a syntactic unit. The *predicate*, argument(s), and *periphery* make a *clause*, a syntactic unit.

For clausal representations, RRG posits two representations: a syntactic and a semantic representation. The semantic representation expounds more on lexical representation of verbs and *Aktionsart* of verbs. This article is concerned with the syntactic (constituent) representation.

To represent clauses, RRG posits three projections in the LSC: the constituent projection, the operator projection, and the focus projection. The operator projection contains grammatical operators of the respective layers. For example, the nuclear layer has the following operators: aspect, negation, and directionals (involving orientation of event/action). The core layer operators include directionals (which involve core arguments), event quantification, deontic modals, and internal (narrow scope) negation. Finally, the clause layer has the following operators: evidentials, illocutionary force, tense, and epistemic modality. These operators are crucial in the discussion of complex sentences in RRG. However, however, since they are not relevant to the present discussion, nothing more will be said about them.

The focus structure projection is concerned with the expression of aspects of information structure, such as focus and topic in clauses. The constituent projection is syntactic representation proper. Since information structure usually interacts with syntax, these two projections are closely connected. Indeed, the constituent and focus structure projections join at the speech act node in the LSC, with the syntactic constituents being the basic information units (IU) of the focus structure projection.

Other than the primary universal components of the LSC, the LSC has non-universal components. One of them is a left-detached position [LDP] occupied by left dislocated elements and sentence initial adverbs. The right-detached position [RDP] is for right dislocated sentence-final elements. When a constituent is both a detached element and semantic argument of a predicate, it may be co-referenced to a pronominal clitic.

Other non-universal elements include the pre-core slot [PrCS], the post-core slot [PoCS], and the extra core slot (ECS). All these are extra-core positions because they are outside the core, although inside the clause. The PrCS precedes the core while the PoCS follows the core in the languages it occurs. In languages that do not have in situ question-words, e.g. English and Italian, question words occupy the PrCS. Verb-final languages, e.g. Japanese and Sinhala, have a PoCS for the same purpose as the PrCS. The PrCS and PoCS are also occupied by narrowly focused and tropicalized elements.

The ECS is the latest addition to the LSC by Van Valin (2013). The ECS is on the same layer with the PrCS and the PoCS. However, the ECS differs from the PrCS and the PoCS. First, it is not positionally restricted; it can precede or follow a PrCS. Second, there can be more than one ECS in a clause, unlike the PrCS or the PoCS, which are limited to one. Third, the ECS is not reserved for informationally-marked constituents like both the PrCS and PoCS. Finally, while the ECS is unique to head-marking languages, PrCS and PoCS are found in both dependent and head-marking languages.

2.1   Head-Marking in Bantu

In head-marking languages, bound argument affixes satisfy the clausal valency requirements, since overt lexical nouns are optional. This differs from dependent-marking languages where overt nouns have semantic roles in their syntax. See Bentley (1999) on head-marking and dependent-marking features in Chichewa, Gĩkũyũ, and Kiswahili. The examples in (1) and (2) present aspects of head-marking in Gĩkũyũ and Swahili, respectively.[7]

(1)   a. βita   ne   ɛ-ɛnd-ɛt-ɛ   Maria.
           Peter   AM   3sgSM-love-PFT-FV   Maria
           'Peter loves Mary.'

       b. Ne   a-mw-ɛnd-ɛt-ɛ.
           AM   3sgSM-3sgOM-love-ASP-FV
           'He loves her (Maria).'

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[7]Abbreviations: Arabic numerals refer to noun classes, 1,2,3sg/pl–1st,2nd3rd person singular/plural, A/FM-assertive/focus marker , RCPST-recent past, S/OM-subject/object marker, PST-past, PRS-present TNS-tense, PFV-perfective, PFT-perfect, PROG-progressive, HAB-habitual , FV-final vowel, RP- reference phrase, TOP-topic, TM-topic marker, SUBJ-subject, AGR-agreement, DC-discontinuous, PrCS-pre core slot, PoCS post core slot, (Pr/Po)ESC-Pre /Post extra core slot, L/RDP-left/right detached position, PA-pronominal anaphor, Pro-pronoun, ARG-argument, NEG-negation, COP-copula, RPRN-relative pronoun, REL-relativiser, RM-relative marker, RSP-relative subject prefix, NUC-nucleus, PRED-predicate, V-verb, PASS-passive, Q-question.

[7] 'NP' is replaced with 'RP' in RRG, since the nucleus in a noun phrase need not be a noun, yet it remains referential. See Van Valin (2008) for more on the suitability of the notion of RP.

c. *ne   Ø-ɛnd-ɛt-ɛ   Maria.
    AM   Ø-love-ASP-FV   Maria
    'He loves Maria.'

(2)   a. Pɛtro   a-na-m- pɛnd-a   Maria.
             Peter   3sgSM-TNS-3sgOM-love-FV   Maria
             'Peter loves Maria.'

            b. *Petro Ø-na- pɛnd-a   Maria.
              Peter   3sgSM-TNS-3sgOM-love-FV   Maria
             'Peter loves Maria.'

            c. A-na-m-pɛnd-a   (Maria).
              3sgSM-TNS-3sgOM-love-FV (Maria)
             'He loves her (Maria).'

            d. *A-na- pɛnd--a   Maria.
              3sgSM-TNS-love-FV   Maria
             'He loves Maria.'

In Bantu, a lexical NP (called a 'Reference Phrase (RP)' in RRG) co-occurs with a subject marker (SM) prefix. See Gĩkũyũ (1a) and Kiswahili (2a). The RP is optional in (1b) and (2b), but the SM is obligatory as seen in the ungrammaticality of (1c and 2b). A SM prefix seems universal in Bantu although Swahili differs when the habitual aspect is considered (see 9b). Kiswahili obligatorily requires a bound object marker (OM) cross-referenced with a lexical object RP. Because of the missing OM, (2b) is ungrammatical. However, such a constraint does not hold in Gĩkũyũ, although *-ɛnda,* ('love'), is transitive and it requires a lexical object.

Zulu (Zeller 2014); isiNdebele (Khumalo 2014); Chichewa (Bresnan and Mchombo 1987); Herero and Kivunjo (Marten and Kula 2012), resemble Gĩkũyũ, in that lexical objects do not co-occur with an OM in the same clause. The incorporated Swahili OM is said to be connected to animacy features of an object, since it is not required for some nouns, unless definiteness is intended. The obligatory OM also holds in ChiBemba (Marten and Kula 2012), although it is not pegged on animacy as in Swahili.

2.2   The Status of Bound Arguments in Bantu and the LSC

Word order variations and agreement relations in Bantu have informed syntactic theories in the past and will continue doing so (van der Wal 2015). It is evident in generative studies of Bantu languages and in LFG as argued by Bresnan and Mchombo (1987) that the Bantu SM is both an agreement

marker (in the presence of an overt subject RP) and a pronoun (in the absence of an overt object RP).

With the Bantu pro-drop features illustrated in Gĩkũyũ and Swahili in (1) and (2) respectively, the bound arguments (3sgSM and 3sgOM) are the core (semantic) arguments of the predicates in Gĩkũyũ and Kiswahili.

However, the status of the SM differs for languages. Creissels' (2005) typological study of subject and object markers in African languages shows that although most African languages obligatorily have SM agreement markers, it is not a general phenomenon. As for OMs, Creissels says, "they are not 'obligatory agreement markers'" (p.43). Creissels' observation agrees with Khumalo's (2014) observation that the isiNdebele SM is an agreement marker, not a pronominal clitic. Zeller (2008) also rejects a pronominal analysis of the SM in Kinyarwanda; the SM and OM in Setawana are agreement markers (Demuth and Johnson, 1989). Theories on the status of the Bantu SM can be narrowed down to the three 'Alternatives' elucidated by Zeller (2008:407-8): Alternative 1 – the SM is functionally ambiguous; Alternative 2 – the SM is a syntactic pronoun; and Alternative 3 – the SM is a *pro* (as in generative grammar usage).

Zeller's Alternative 1 reflects Bresnan and Mchombo's (1987) analysis. It is also analogous to the 'dual nature view' of the SM by Haspelmath (2013:210). Alternative 2 is similar to the pronominal analysis of Kiswahili SM by Zvart (1997) and also to Haspelmath's (2003) 'bound-argument view' in which the SM is the argument of the verb, with or without a lexical RP. Alternative 3 leans more towards Alternative 1 than to Alternative 2, although it has features of both. In this analysis, it is assumed that a phonetically null pronoun (*pro*) in the subject position triggers agreement in the verb. However, the SM is not a pronoun in this analysis but an agreement marker, according to Zeller (2008:408). Alternative 3 is comparable to the 'virtual agreement view' (Haspelmath 2003:209) where an 'unpronounced virtual controller' is hypothesized. Alternative 3 is a generative analysis; therefore, such an analysis is ineligible to approaches that do not posit phonologically null elements, e.g. RRG.

Still regarding the SM, Haspelmath (2013:212) proposes 'a double-expression view'. He argues that both the 'co-nominal' (lexical RP) and the 'index' (SM/OM) constitute the 'argument'. The index is not an agreement marker or a pronoun; it provides person information together with the lexical RP. Without a lexical RP, the index is a subject or object argument providing information of the missing lexical RP. When the lexical RP and the bound argument co-occur, they are jointly the arguments of the verb, and, therefore, the argument is doubly expressed. Similarly, Mithun (2003:276) notes that in Iroquoian languages, lexical nominals and co-referential pronominal clitics evoke a similar entity and, therefore, they share referential status.

Haspelmath's double-expression view accounts for both the SM and OM, especially in languages in which lexical objects and OM markers co-occur,

e.g. Kiswahili. Haspelmath's rejection of agreement functions of the bound arguments resonates with that of Creissels (2005) that OMs are not agreement markers.

Elsewhere, Deen (2006:225-6) suggests an agreement and pronominal analysis of bound arguments in Kiswahili. In an agreement analysis, two units in a local configuration share morphological features through feature checking. In pronominal analysis, the SM is a 'DP' and the lexical NP a topic bound to the affix 'DP'. These are illustrated in (3), repeated from (2a) above.

(3) Pɛtro a-na-m-pɛnd -a Maria.
 SUBJ   AGR
  Agreement analysis
 TOP   SUBJ
  Pronominal analysis

Dean's agreement analysis is Chomskyan, and the pronominal analysis leans to a functional analysis. Zvart (1997) is congruent to Deen's because Zvart rejected the 'subject' label for Kiswahili lexical RPs, opting for the 'topic' label.

Calling a bound argument a 'pronoun' is variously criticized in literature, such as Corbett (2006), Haspelmath (2013), Croft (2013), Van Valin (2013), and others. Haspelmath (2013) notes that it is unhelpful and confusing to call the bound argument markers 'bound pronouns' or 'pronominal affixes' or 'pronouns' because they do not conform to the 'the coherent concept of pronoun or under the coherent concept of agreement' (p.197). Croft (2013) argues that the prefix arguments are not real 'pronouns'. Based on Lakhota, Van Valin (2013) shows that bound argument prefixes are not pronouns.

In Warlpiri, Jelinek (1984:44) notes clitic 'pronouns' lack agreement, since they can be co-indexed with a co-occurring nominal with which they do not agree in number, person, or case. However, in Bantu, lexical RPs 'agree' with obligatory SMs in number, person, and noun class. However, example (4) shows that agreement in Bantu is not so obvious. The RP *tata* 'aunt' is singular, but the SM *ma-* is plural. Thus, the subject RP and the SM lack number agreement as the translation indicates plurality – i.e. 'Aunt and others went to the farm to plant' – meaning that the SM *ma-* includes a covert coordinated unit.

(4) Tata ma-a-thi-ir-ɛ   mo-gonda ko-hand-a
 1.aunt 2-RCPST-go-PFV-FV 3-farm   15-plant-FV
 'My aunt (and others) went to the farm to plant.'

Lakhota argument markers are not pronouns *per se* since they violate the Principle B of Government and Binding theory (Van Valin 2013). This is because they are cross-referenced with a clause-internal argument. They are

not anaphors because they refer independently. Furthermore, in Lakhota, bound arguments can be cross-referenced to definite and indefinite RPs. Therefore, bound arguments are not real pronouns in Lakhota. Van Valin concludes that because bound arguments bind internal RPs akin to anaphors and have referential interpretation like pronouns, they are best interpreted as falling between anaphors and pronouns. Such a unit may be called a 'pronominal anaphor' (PA).

(5) a. Wičhaša ki hená wówapi ki Ø- wičhá-wa- k'u.
         man   the those book   the INAN-3plANIMU-1sgA-give
         'I gave the book to those men.'

   b. Ø- wičhá- wa- k'u.
      INAN-3plANIMU-1sgA-give
      'I gave it to them.'   (Van Valin 2013)

The Lakhota example is comparable to that of Chichewa in (6) by Mchombo (2004: 19-20).

(6) a. Mik´ango i-ku-s´ak-´   a zigaw´enga.
         4-lions   4SM-pres-hunt-fv   8-terrorists
         'The lions are hunting the terrorists.'

   b. I-ku-z´ɪ-sˇak-a.
      4SM-8OM-hunt-fv
      'They are hunting them.'

    The pronominal arguments in (6b) were formerly co-referenced to the bolded RP arguments in (6a). Lakhota and Chichewa show that pronominal arguments are semantic argument of the verb without lexical RPs (5b and 6b). However, in Chichewa the presence of an OM results into a free ordering of constituents (Mchombo 2004; Bresnan & Mchombo 1997). It will be shown that unlike in Lakhota and Chichewa, there are Bantu languages that do not allow the co-occurrence of the OM with its RP object.
    In terms of agreement, the animate and inanimate features of the Lakhota independent RPs are copied on the pronominals in (5b). The 'Ø' glossed 'INAN' in (5b) indicates that transitive verbs entail a specific object argument (undergoer in RRG terms) even though inanimate undergoers are not explicitly indicated morphologically on transitive verbs (Van Valin 2013). The Chichewa example carries the number (plural (*mi-*) and (*-zi-*) and noun class agreement (4 and 8). The RP *wichasa* in (5a) agrees with *wičhá* in terms of person (3rd) , number (plural) , animacy (ANIM) and grammatical function of Undergoer hence (3plANIMU) while in Chichewa, the SM *i-* shows agreement (the plural and noun class) with the overt subject RP *mik'ango* '

lions', in the same way the OM *-z´ɪ-* does for the object RP. LSC representations of Lakhota and Chichewa examples are shown in Figures 1 and 2, respectively.
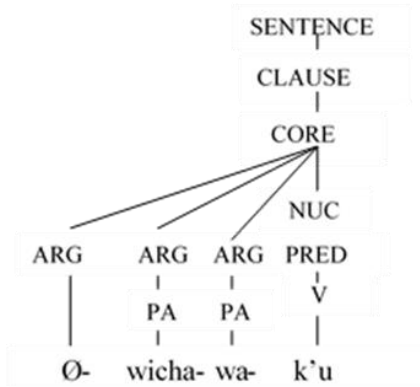

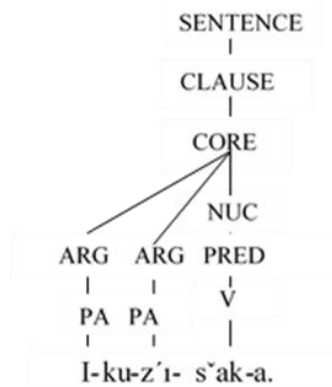Figure 1: *Pronominal Arguments in Lakhota*

Figure 2: *Pronominal Arguments in Chichewa*

At this juncture, I note that Lakhota subject pronominal anaphor is similar to those of Bantu languages in that it is bound locally by a lexical RP, which may be dropped. However, unlike a language such as Kiswahili, Lakhota does not allow an OM together with an object RP.

Bantu SM differs from the Lakhota affix. It cannot refer independently as Lakhota examples. The Bantu-type are anaphorically bound to a lexical RP. The phi-features of the RP are usually mirrored on the SM. Nonetheless, the SM lacks features of a true pronoun, and, in that way, it is like the Lakhota PA.

In an RRG analysis, the Bantu SM is the first direct core argument while any other bound argument is a second direct or an oblique core argument. Figure 3 represents (7) below. In the LSC, both SM and OM are arguments (ARG) of the predicate. The SM is a pronominal anaphor (PA) and the OM, a pronoun (Pro) in Gĩkũyũ and similar languages. In this analysis, the SM does not change status with or without a lexical RP; it remains a direct core argument. The temporal adverb *ira* 'yesterday' occupies the core periphery.

(7) Ne   a-ra-me-thenj-ir-ɛ   ira
     AM   3sgSM-RCPST-9sgOM-slaughter-PFV-FV   yesterday
     'He slaughtered it yesterday.'

Figure 3: *Bound Core Arguments in Gĩkũyũ*

In languages with bound locative arguments, e.g. Lubukusu, Sambaa, or Kihaya (which allows locative and instrument clitics), the bound clitics will be oblique core arguments.

Gĩkũyũ and Kiswahili differ in respect to OM clitics. Gĩkũyũ allows lexical subject and object RPs (8a). Co-occurrence of an OM (-*me*-) and an object RP is ungrammatical (8b). However, in Kiswahili, the OM is obligatory, especially for animate objects (9a) as seen in the acceptability of (9b).

(8) a. Mo-thenji   ne   a-ra-thenj-ir-ε   mbori
      1-slaughter   AM   3sgSM-RCPST-slaughter-PFV-FV   9.goat
      'The slaughterer slaughtered the goat.'

   b. *Mo-thenji   a-ra-me-thenj-ir-ε   mbori
      1-slaughter   3sgSM-RCPST-9sgOM-slaughter-PFV-FV 9.goat
      'The slaughterer slaughtered the goat.'

(9) a. M-chijanji   a-li-m-chinj-a   mbuzi
      1-slaughter   3sgSM -PST-9sgOM-slaughter-FV   9.goat
      'The slaughterer slaughtered the goat.'

   b. *Mchinjaji   a-li-chinj-a   mbuzi
      'The slaughterer slaughtered the goat.'

The fact that in Gĩkũyũ an object RP and an OM argument cannot co-occur is evidence that the OM is a true pronoun (Pro), as it adheres to the binding principle by binding an external RP. That is why it indicated 'Pro' in Figure 1. This is not unique to Gĩkũyũ because Chichewa, Kihaya, Tswana, Sesotho, Kinyarwanda, Herero, and Zulu have this feature (see Henderson 2006; Riedel 2009; Marten and Kula 2012; Zeller 2014).

Languages in which the OM is a pronoun and is in complementary distribution with its object RP will be referred to as 'Gĩkũyũ-type languages'.

Languages such as Kiswahili, Bemba, Sambaa, Chaga and Makhuwa etc., which allow OMs to co-occur with object RPs, will be referred to as 'Kiswahili-type languages'. This typology is for convenience and not really typologically founded. In the subject and object markers typology by Creissels (2005:44-5), Gĩkũyũ-type languages are in the stage I pronominal type, and the Kiswahili-type languages are stage II pronominals.

In Gĩkũyũ-type languages, the second direct core argument may be a lexical RP or a bound argument, while in Kiswahili-type languages, lexical objects and even bound OMs can be direct core arguments. In Kiswahili-type languages, the obligatory OM clitic argument is like the PA, as it co-occurs with a lexical object, just like an SM and a lexical subject RP. Consequently, in Kiswahili-type languages, both the SM and OM are PAs when the OM co-occurs with an object RP. In such a case, the OM is not interpreted as a Pro. In this way, Kiswahili-type languages differ from Gĩkũyũ-type languages, which can only have one PA in the LSC since the OM, if present, is a Pro (noun).

To this point, I conclude that in an RRG analysis, bound arguments in Bantu are semantic arguments either as pronominal anaphors or pronouns. Until now, the lexical RPs that stand in apposition to these bound arguments are unaccounted for. This is the concern of the next section.

3.0   Status of Lexical Subjects in Bantu

Bresnan and Mchombo (1987:741) say that the 'floating constituent that agrees with the OM is a topic, anaphorically bound to an incorporated object pronoun'.

In pronominal argument languages, 'overt nominals are optional topics or adjuncts connected to a sentence by pronominal anaphora' (Austin and Bresnan 1996:223). Subject RPs can be topics. Topics and subjects may occur in identical syntactic positions (Cheng and Downing 2009; Mchombo and Morimoto 2004). The question is what kind of 'topics' they are.

Bantu languages have two types of topics: 'I-(internal) Topic and E-(xternal) Topic' (Mchombo and Morimoto 2004). An I-topic is clause-internal (subject or object), and an E-topic can be an argument or an adjunct, hence clause-external. Kiswahili subject RPs are topics (Zvart 1997; Krifka 1995). Krifka asserts that the so-called 'subject agreement' in Kiswahili is in fact 'topic agreement' with a constituent in a topic position, although it is not necessarily the logical subject. Based on that, Krifka compared Kiswahili to 'topic-prominent languages'.

This paper distinguishes between subject (clause) topics and discourse (sentence) topics – following Chafe (1976), Lambrecht (1994), and Downing (2011) – and also anti-topics (Lambrecht 1994, 2001). Clausal topics are lexical subject RPs, and the discourse topics are the dislocated elements, and these two types of topics occupy different positions in the LSC (Kihara 2017).

The claim is that a lexical RP may have subject and topic functions, i.e. 'topic-like subjects' and 'subject-like topics' (Downing 2011:782). Although Lambrecht (1994:118) defines a 'topic' based on the traditional notion of a 'subject', (that which the proposition of the clause is about), he cautions against conflating 'subject' and 'topic' because, in languages such as English, topics are not necessarily subjects and subjects are not necessarily topics'. This means subjects can be topics and topics can be subjects in some languages. Relying on 'aboutness' to define a topic, the Bantu subject RPs must be clausal topics, since the propositions in these clauses are about them.

Analyzing Hungarian, Gécseg and Kiefer (2009) argued that a logical subject and topic belong to different levels or domains. The topic is a pragmatic notion and subject is a syntactico-semantic notion as illustrated in (10). The same RP is a clausal (subject) topic and a sentential (detached) topic. In (10a), the 'topical subject' (clausal topic) is 'Kamau', and the SM is the logical subject argument. *Kamau* in (10b) is prosodically set off from the clause by a topic marker (TM) enclitic =*re*, making it a detached topic.

(10) a. Kamau   ne   a-r-ɛnd-ir-i-ɛ   i-ndɔ   ci-akɛ   ci-ɔthɛ
        Kamau   AM   3sgSM-RCPST-PFV-DC-FV 5-things 5-his   5-all
        'Kamau sold all his property.'

    b. Kamau=re   ne   a-r-ɛnd-ir-i-ɛ   i-ndɔ
        Kamau=TM   AM   3sgSM-RCPST-PFV-DC-FV 5-things

        ci-akɛ   ci-ɔthɛ
        5-his   5-all
        'Kamau, he sold all his property.'

    c. Waithera   go-ko   ne-kee   ko-re?
        Waithera   16-here   FM-what   16-be
        'Waithera, what is happening here?' (lit. Waithera here it is what?)

Sentence (10c) illustrates Lambrecht's observation that not all topics will be subjects and vice versa, and the RP *Waithera* is such an example. Note that it is a 'hanging' vocative without a corresponding PA in the verb and therefore not a semantic argument. The locative *go-ko,* 'here', is the one coreferenced to PA (*ko-*) in the verb, which means that a topic need not be an integrated core argument. Demuth and Johnson (1989:23) noted that grammaticalized topics have topic discourse functions, but not all discourse topics are grammaticalized, and *Waithera* is therefore an ungrammaticalized discourse topic.

To account for lexical RPs, Van Valin (2013) proposed the 'Extra Core Slot' (ECS) in the LSC. The ECS is for appositional RPs and constituents that are not direct core arguments of the verb. However, ECS constituents must

have a relation with the verb through a PA, making it a clause-internal position. Therefore, *Waithera* in (8c) cannot be in the ECS because it is not coreferenced with the PA. ECS units are not separated from the clause by a phonological contour; thus, they are detached. Recall that the ECS is not positionally restricted nor limited in number; thus, it can cater for several co-occurring RPs in Bantu.

Bantu languages call for two types of ECS: pre-core ECS (PrECS), the universal slot in Bantu RPs, which precedes the PA; and post-core ECS (PoECS), reserved for Kiswahili-type languages where RP objects co-occur with OMs. PoECS caters for object RPs. Thus, Kiswahili-type languages have both PrECS and PoECS. However, the PoECS should not be confused with the PoCS reserved for tropicalized and focused constituents.

While Gĩkũyũ-type languages have one PA position, Kiswahili-type languages have two: one for the subject topic and another for the object topic (when an object co-occurs with its PA instead of, as in Gĩkũyũ, the OM being a Pro (noun)). The claim for subject and object topics made here was antedated in Allan (1983:326), arguing that a lexical object in Kiswahili is a topic that co-occurs with a bound OM. Figure 4a represents Kiswahili; Figure 4b, Gĩkũyũ.
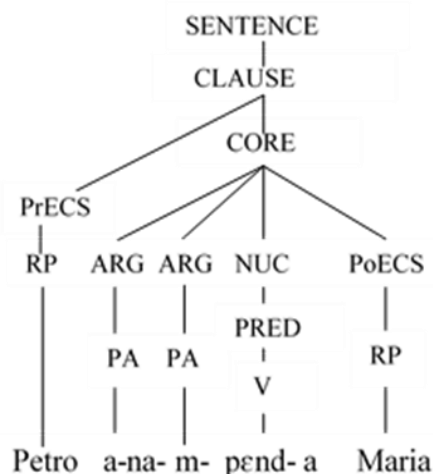
Figure 4a: *Kiswahili LSC*
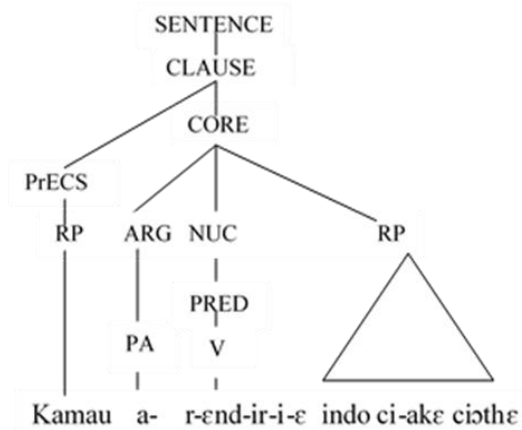
Figure 4b: Gĩkũyũ LSC

Recall that direct core arguments are PAs in Bantu. It is unusual for lexical RPs to be direct core arguments, e.g. in Swahili (11b). However, in the absence of a PA argument, the lexical RP, *watu wa Kenya*, becomes the semantic argument and not a PrECS constituent. Note that (11b) lacks a SM and tense.

(11) a. Watu wa Kenya wa-na-wa-penda watoto.
People of Kenya SM-TNS-OM-like children
'Kenyan people like children.' (Keach 1995:110-1)

b . Watu wa Kenya hu-wa-penda watoto.
People of Kenya HAB-OM-like children
'Kenyan people like children.' (originally Kenyans like children)

c* Ø-hu-wa-pend-a watoto watu wa Kenya.
'They like children, Kenyan people.'

Null person-marking in Bantu is rare; therefore, (11b) is certainly a *rarissimum* of person-marking or 'rarity of person-marking', to use Grossmann's (2016) term. The issue of null-person marking seems uncommon. In a cross-linguistic study of null person-marking, Siewierska (2013) presented Lango, a Ugandan Nilotic language, as one that does not indicate a third person marker when it co-occurs with habitual aspect. This is exactly the case in Kiswahili, although Siewierska did not notice it.[8]

Keach (1995) argued that when a SM is missing in a clause in (11a), noun displacement is disallowed (11c) because the theta-criterion is violated, since

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[8]Gĩkũyũ does not indicate the 1st person marker (*n-*) in *Ø-hing-ɛ mo-rangɔ*? Ø-close-FV 3-door, 'do I close the door?'. This is phonologically conditioned, i.e. *n-* disappears before /h/,/m/,/n/ and /th/.

a detached topic has no theta role. The RP in (11b), *watu wa Kenya*, is the core argument that cannot be moved (lest it becomes a detached unit), so as not to leave the position bare. This is evidence that *watu wa Kenya* is a direct core argument.

4.0 Left and Right Detached Units

Another element of the LSC involves left or right dislocated units. Such units co-occur with RPs and clitic core arguments. Several studies have dealt with dislocated units in Bantu, e.g. Downing (2011) and Zerbian (2006). Both treat such RPs as right or left-dislocated topics. It is generally agreed that such RPs are outside the VP (Bresnan and Mchombo 1987), or they are 'clause-external topics' (Downing 2011) because they are co-referenced with a clause-internal clitic argument. In a RRG, such dislocated RPs are placed in LDP or RDP, the clause external positions for detached elements.

There are four criteria for identifying dislocated constituents in sentences: extra-clausal positioning of elements, prosodic intervention, co-indexed (co-referential) argument in the predicate, and alternative placement of the constituents (right or left) (Lambrecht 2001:1050). Although insufficient, the extra-clausal positioning criterion is most necessary in identifying a detached unit. Relying on co-indexation alone can falsely predict dislocated units in Kiswahili-type languages where clitic objects and lexical RPs co-occur.

Left detached units in Gĩkũyũ use co-indexation (12a) and prosodic intervention (12b). *Mwana* has a clitic OM in the verb, and it is also the most external RP to the verb. Example (12b) is similar to (6b) whereby a subject RP is prosodically detached because of the TM enclitic attached to it.

(12) a. *Mw-ana$_j$ Wamboi$_i$ ne   a$_i$-ra-mo$_j$-hɛ-ir-ɛ*
     1-child Wamboi   AM   3sgSM-RCPST-1sgOM-give-PFV-FV

   ka-ramu.
   12-pen
   'As for the child, Wambui gave him a pen.'

   b. *Mo-iretu=re   ne   a-a-goth-ir-ɛ   m-wana.*
      1-girl-TM   AM   1-RMPST-hit-PFV-FV   1-child
      'The girl, she hit the child.'

   c. *Ne   a-a-goth-ir-ɛ mw-ana,   mo-iretu/mo-iretu *=re.*
      AM   1-RMPST-hit-PFV-FV   1-child /1-girl
      'She hit the child, the girl.'

The agent RP *moiretu,* 'girl', can be right detached from the initial position to the final position but without the TM. The difference between LD and RD elements is clear in Gĩkũyũ, because RD units do not take TM *=re*

(12c). The TM signals forthcoming information to a hearer, and the hearer anticipates more information after the final constituent as in (12b). However, this is not the case in (12c). There is no additional information. Therefore, *mo-iretu *=re* seems an impractical 'topic'. Based on the above, Bantu LD and RD sentential topics are separate from ECS clausal topics in RRG. Their differences are both syntactic (PrECS and PoECS) and discoursal (LD and RD units).

It is inappropriate to see LD and RD constituents as simply identical 'topics' (e.g. Bresnan and Mchombo 1987), since they are positionally and informationally different. If the RD is a 'topic' (what is talked about), and it is the last unit in a clause with nothing more said about it, then it does not reflect the common understanding of a 'topic'. In that position, such a constituent is more an afterthought element. It is better to consider a RD unit an 'Antitopic' (Lambrecht 1994, 2001) so as to distinguish it from a LD 'topic'.

Figure (5) represents (12a). The LDP unit *mwana* joins the LSC at the sentence layer on the left. A RDP constituent, e.g. *moiretu* in (12c), would branch from the same layer to the right. *Wamboi* is the PrECS stemming from the clause layer. The PA (*a-*) is a direct core argument and the second one is Pro (*-mo-*).
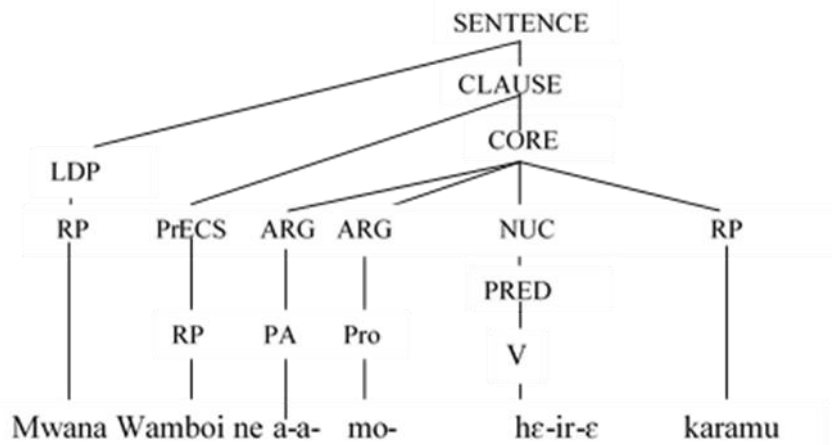
Figure 5: LDP and PrECS in Gĩkũyũ

5.0   Topicalization, Wh-questions, and Relative Clauses

Wh-questions, topicalization, and relativization share some syntactic similarities in many languages, but they differ in their discourse functions (Van Valin 2005:284-5). For instance, Wh-questions concern marking focus, and topicalization is about both focus and expression of topics, while relative clauses (RCs) identify a noun.

To cater for the syntactic and discourse functions of topical and focal constituents, RRG has designated positions in the LSC, and these positions

are associated with markedness. The object *mbɔcɔ* in (13b) is a displaced RP without a clitic argument in the verb. However, human objects – e.g. *maama* ('uncle') in (14b) – require a clitic argument after displacement.

(13) a. Ne nd-e-ag-a   mbɔcɔ.
       AM 1sgSM-eat-HAB-FV 9.beans
       'I eat beans.'

    b. Mbɔcɔ   ne nd-e-ag-a.
       9.beans   AM1sgSM-eat-HAB-FV
       'Beans I eat.'

(14) a. N-di-ɛnd-ɛt-ɛ   Maama.
       1sgSM-NEG-like-PFT-FV   1.uncle
       'I do not like my uncle.'

    b. Maama   n-di-*(mw-)ɛnd-ɛt-ɛ
       1.uncle   1sgSM-NEG-(3sgOM)-like-PFT-FV
       'My uncle, I do not love (him).'

Kiswahili makes a distinction between a displaced RP (15b) and a dislocated one (15c). Even with a clitic OM in both sentences, the co-indexation criterion is not the absolute indicator of dislocation. It is prosodic marking that marks a dislocated unit in Kiswahili. Like Kiswahili, Zulu and Northern Sotho indicate dislocation phonologically (Zeller 2014; Zerbian 2006).

(15) a. Ni-li-mw-on-a   mtoto huyo jana.
       1sgSM-PST-1sgOM-see-FV   1-child that   yesterday
       'I saw that boy yesterday.' (Augustin 2007:4)

    b. Mtoto   huyo ni-li-mw-on-a jana.
       'That child I saw yesterday.'

    c. Mtoto huyo, ni-li-mw-on-a jana.
       'That child, I saw him yesterday.'

In RRG displaced units, contrastive focal units and Wh-words in languages such as English occupy the PrCS. The PrCS differs from the PrECS as it is a marked position. Whereas more than one PrECS is allowed, there can only be one PrCS in a clause.

A PrCS differs from detached units in that the PrCS is a clause-internal position and, therefore, within focus scope, while LD/RD are clause external and, therefore, outside focus scope. As such, in Gĩkũyũ, *mbɔcɔ* in (13b) and

maama in (16b) can take FM *ne* to become clefted (contrastive) constituents. This is because the PrECS and PrCS occur at the clause layer, which allows a PrECS element to be be converted into a PrCS element by placing *ne* before it. On the contrary, detached units cannot take *ne* since they are clause-external beyond focus scope.

Wh-words in Gĩkũyũ can occur in situ (16a), be partially left-displaced (16b), occur ex situ (16c), or be in a core periphery (16d). Except (16d), the other examples are derived from (16a), although they are morphosyntactically different.

(16) a. Kamau   a-ra-ak-ir-ε   kee?
        Kamau   1-RCPST-build-PFV-FV   Q
        'What did Kamau build?'

     b. Kamau   ne-kee   a-ra-ak-ir-ε?
        Kamau   FM-Q   1-RCPST-build-PFV-FV
        'Kamau what did he build?'

     c. Ne-kee   Kamau   a-ra-ak-ir-ε ?
        FM-Q   Kamau   1-RCPST-build-PFV-FV
        'What is it that Kamau built?'

     d. E-r-ak-ir-wɔ   n.oo?
        9-RCPST-build-PFV-PASS   by whom?
        'It was built by whom?'/ 'Who built it ?'

Like Gĩkũyũ, Northern Sotho (17a) and Kiswahili (17b) have ex-situ Wh-words that belong to the PrCS. In (16b-c), the lexical RP (Kamau) occupies the PrECS and the Wh-words the PrCS. Both the PrECS and the PrCS occur side by side in the LSC, and they can even alternate positions (see (16c). This is because both are clausal positions although the PrECS is topical and the PrCS is focal.

The examples in (17) are subject-related questions. Northern Sotho, Kiswahili, and also Gĩkũyũ use a copula in order to question a subject, resulting in cleft constructions. The Wh-questions have COP/FM in (17) making them focal and, therefore, in the PrCS.

(17) a. Ké   mang (yo)   a-nyaka-ng   nga:ka?
         COP who 1.RPRN   1-look.for-REL   9.doctor
         'Who is looking for the doctor?' (Zerbian 2006:270)

     b. Ni   nani   a-na-m-tafuta   daktari?
        COP who   3sgSM-PRS-1sg9OM-look.for 9.doctor
        'Who is looking for the doctor?'

By assigning topical subject RPs and focused RPs different structural positions, RRG captures their functional and structural differences, meaning they cannot be assigned to the same constituent concurrently. To show the PrCS in the LSC, Figure 6a represents (16c) and Figure 6b represents (17a).
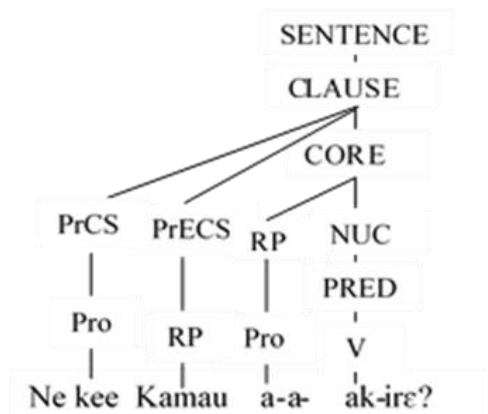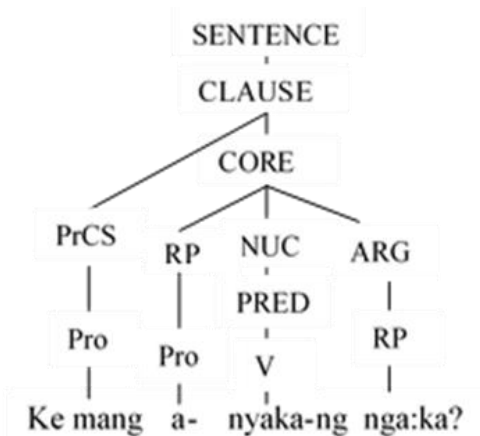

Figure 6a: *PrCS and PrECS in Gĩkũyũ*

Figure 6b: PrCS in N. Sotho

The representation of noun phrases (reference phrases in RRG) is analogous to that of clauses. However, instead of the LSC, RPs are represented by the Layered Structure of the Reference Phrase [LSRP].

The LSRP resembles the LSC in some aspects: both have layers, constituent projections, and operator projections. However, they differ when it comes to the layers. Whereas the LSC has the sentence, clause, core, and nucleus layers, the LSRP has the RP, core, and nucleus layers. The RP layer is the highest in the LSRP, corresponding to the sentence and clause layers in the LSC. Figure 5 is a sketch of a Kiswahili LSRP representing a complex RP. The LSRP will not be deeply discussed as it not germane to the present study.

Kiswahili allows an anaphoric OM in relative clauses (RCs). The head noun *kitabu* ('book') in (18) has two anaphors, *-cho* and *–ki*. Kiswahili RCs may have a clitic relative marker (RM) *–cho-* (18a) or a relative root *amba-* attached to *–cho-* to make a relative pronoun (RLPRN) (18b). The RLPRN *ambacho* cannot co-occur with *–cho-*. Notice the head *kitabu* in (18b) is external, making it an externally headed RC.

(18) a. Ki-tabu$_i$ tu-li-cho$_j$-ki$_j$-nunu-a
            7-book   2plSM-PST-7RM-7.-buy-FV
            'The book which we bought'

    b. Ki-tabu$_i$ amba-cho$_i$ tu-li-ki$_j$-nunu-a
        7-book   RL-7.RM   2plSM-PST-7-give-FV
        'The book which we gave the student'

Van Valin and LaPolla (1997:497) posits that in English RCs, the relative pronoun is in the PrCS. This follows from the fact that it is the same position occupied by a Wh-word if the RC is turned into a question; e.g. *the man **who (m)** he saw* versus *Who (m) did he see?* However, the same is not replicable in Kiswahili since relative pronouns are not derived from questions words. Also, a Wh-word and a relative cannot co-occur side by side as in **mtu yupi uliyemwona*? Therefore, it becomes implausible to claim that the relative pronoun is a PrCS constituent in Kiswahili or in Bantu.

Bresnan and Mchombo (1987:763) regard relative pronouns as topics that bind anaphoric OMs in Chichewa RCs. Chichewa allows an OM in the RC just as Kiswahili -type languages.

The relative a*mbacho* in (18b) is not a topic but a clause linkage marker (CLM); it has the same function that a complementiser has joining a matrix clause to another. Indeed, *amba-* is the root for the Kiswahili complementiser *kwamba* derived from the verb *amba* ('say'). Therefore, a*mbacho* links the head noun to a subordinate clause. It cannot be a topic because it cannot refer independently and therefore is unacceptable in the PrECS. The enclitic *–cho-* is a relative pronoun in (18a) coreferenced to the head noun *kitabu*. Together with the SM, *-cho-* and *–ki-* are core arguments. In Fig. 7, the SM and OM are PAs while *-cho-* is a relative marker core argument. The head noun has a layered structure containing a referent CORE$_R$, NUC$_R$ and N (oun). Note that the RP Periphery is a subordinate clause.
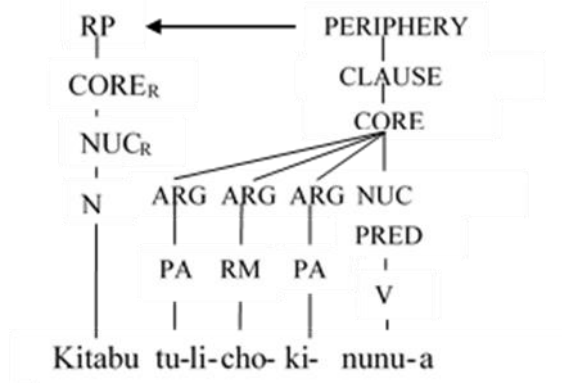
Figure 7: *Kiswahili Relative Clause*

The examples below contain reflexives in ǀGĩkũyũ (19a and 19b) and Kiswahili (19c).

(19) a. Kamau   ne-wɛ wɛ   mw-ɛnɛ   o-tɛm-ir-ɛ   mo-te.
       Kamau   FM-he he   himself   1.RSP-cut-PFV-FV 3-tree
       'Kamau, it is he himself who cut the tree. (Lit. Kamau, it is he he himself who cut the tree)

    b. Ne Kamau   wɛ   mw-ɛnɛ o-tɛm-ir-ɛ   mo-te.
       FM Kamau   he   himself 1-RSP-cut-PFV-FV 3-tree
       'It is Kamau himself, who cut the tree.'

    c. Kamau   mw-ɛnyɛwɛ   ndi-yɛ   a-li-kat-a   m-ti.
       Kamau   1-himself   it is-1.he   1-PST-cut-FV   3-tree.
       'Kamau himself, he cut the tree.'

In (19a), *Kamau* is in co-reference with several units: the PrCS unit *ne wɛ*; the PrECS unit *wɛ mw-ɛnɛ* ('he himself'); and the RSP *-o*. Recall that PrCS and PrECS constituents can switch positions. The lexical RP *Kamau* is not in the LDP in spite of the constituents intervening between it and the RSP.

Still another independent pronoun co-occurs with *ne* to form *ne wɛ* 'it is he'. Evidence that it is not detached comes from (19b), where *ne* is placed before *Kamau*; remember that detached units do not take *ne* unlike PrECS units that can be focused by *ne*. Therefore, in (19a), *Kamau* is in the PrECS together with reflexive *wɛ mw-ɛnɛ*.

In the Kiswahili example in (19c), the reflexive pronoun *mwɛnyɛwɛ* and the independent pronoun *ndiyɛ* cannot switch positions as in Gĩkũyũ (17a) – *ne-wɛ wɛ mw-ɛnɛ* ('it is he himself') in *Kamau wɛ mw-ɛnɛ ne-wɛ o-tɛm-ir-ɛ mo-te*. A possible reason why Kiswahili disallows switching units may be because the lexical RP and the reflexive unit form a single emphatic unit to mean that 'Kamau did the cutting all by himself' and *ndiyɛ* has an identificational contrastive function. The emphatic phrase *Kamau mw-ɛnyɛwɛ*

is prosodically separated from the rest of the clause, making it a LDP element. The identificational unit *ndiyɛ* is in the PrCS since it is focal.

From the examples given this far, possible constituent positions in a Bantu clause have been illustrated. From that evidence, I am proposing the structure in (20) indicating the linear order of constituents in the LSC of Bantu simple clauses.
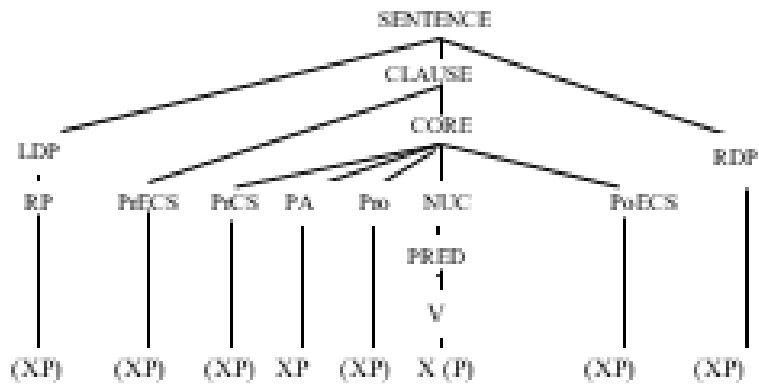
(20)   (LDP) (PrECS) (PrCS) PA- (-Pro-)-NUC-(PoECS) (RDP)

Figure 8: *Proposed Layered Structure of the Clause for Bantu Languages*

The structural formation in (20) is represented in Figure 8, the proposed constituent projection of the LSC for Bantu simple clauses. It indicates that the SM (PA) and the NUC (nucleus/predicate) are obligatory. Although shown as optional, PrECS is not optional if the subject RP is not discoverable from the context. It is only optional after the concerned RP has been already introduced as the topic. For Kiswahili-type languages, PoECS and Pro are obligatory at times. The real optional units are the LDP/RDP and PrCS, which involve marked constituents. The Pro and PoECS units are in complementary distribution in Gĩkũyũ-type languages but obligatory in Kiswahili-type languages, since they are syntactically motivated in such languages. It worth noting that the Pro argument is not limited in number, and it can therefore cater for languages such as Kihaya with multiple OMs in the verb. Riedel (2009:75) notes that most Bantu languages that allow OMs have two to three OMs and not more. In summary, it is the units that are motivated by discourse-information structure needs that are optional.

6.0   Conclusion

In this article, I set out to describe Bantu clause structure based on the RRG framework. I have tried to account for the most common constituents in the LSC of simple Bantu clauses. The subject marker in Bantu is here called a 'pronominal anaphor', rather than a pronoun, since it lacks the full status of a

pronoun. The primary function of the prefix is to indicate arguments in the LSC, making the agreement function secondary.

Based on the RRG theory of clause structure, I have shown that RRG accounts for Bantu clause constituents structurally and functionally within the LSC. The Bantu subject prefixes are designated as direct core arguments together with arguments that behave like pronouns. Clitic object arguments co-occurring with lexical objects are also considered direct core arguments. When only the clitic argument is allowed in a core, they are considered as Pro (noun) arguments.

Wh-words, displaced (tropicalized) arguments focused constituents, occupy the pre core slot (PrCS). The ECS by Van Valin (2013) was modified into pre extra core slot (PrECS) and post extra core slot (PoECS) to cater for specific clausal constituents in Bantu. The PrECS houses unmarked clausal subject topic, and the PoECS contains lexical object RPs that co-occur with clitic object arguments. Languages that do not allow co-occurrence of clitic OM and a lexical object are referred to as 'Kiswahili-type languages', and those that prohibit such co-occurrence are 'Gĩkũyũ-type languages'. For Gĩkũyũ-type languages, Pro was posited to cater for the clitic object argument, as it replaces the object itself. However, for Kiswahili-type languages, the object clitic remains a pronominal anaphor akin to the subject prefix.

Left detached constituents occupy the left detached position (LDP), and right detached units occupy the right detached position (RDP). There are distinctions between clausal topics (PrECS and PoECS); sentential (discourse) topics in the LDP; and one 'antitopic', the RDP.

The data used in this paper indicates the LSC captures the morphosyntactic facts of constituents in Bantu simple clauses. Bantu languages were not part of the data used in the development of the theory and the fact that the LSC can account for Bantu clause structure extends RRG's endeavor to be a typologically universal theory of language.

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