African languages from a Role and Reference Grammar perspective

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Studies on the syntax-semantics-pragmatics interface

Edited by
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d|u|p
düsseldorf university press

ISBN 978-3-11-079497-7
e-ISBN (PDF) 978-3-11-079529-5
e-ISBN (EPUB) 978-3-11-079534-9
DOI https://doi.org/10.1515/9783110795295

Library of Congress Control Number: 2023931462

Bibliographic information published by the Deutsche Nationalbibliothek
The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available on the internet at http://dnb.dnb.de.

d|u|p düsseldorf university press is an imprint of Walter de Gruyter GmbH

Cover image: LongQuattro / iStock / Getty Images Plus
Printing and binding: CPI books GmbH, Leck

dup.degruyter.com

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Jens Fleischhauer and Claudius Patrick Kihara

African languages from a Role and Reference Grammar perspective: An introduction

1 Why African languages?

Role and Reference Grammar – in short RRG – is a syntactic theory first developed in the 1970s by Robert D. Van Valin Jr. and William Foley. RRG is a moderate functional theory of syntax (Nichols, 1984) which has been developed on the basis of two leading questions. First, how would a syntactic theory look which takes linguistic diversity seriously and is not primarily developed on the basis of English? Second, how can the interaction between syntax, semantics, and pragmatics be captured and explained?

This introduction to the volume takes up the issue of linguistic diversity and raises the question of what role the languages of Africa have played in the development of Role and Reference Grammar. But why should we care about African languages? Africa is a continent hosting a huge linguistic diversity, not in the number of diverse language families but in terms of individual languages. The languages of Africa belong to six languages families: Afroasiatic, Nilo-Saharan, Niger-Congo, Khoisan, Austronesian, and Indo-European. Austronesian is represented by Malagasy although the family did not originate in Africa. The same is true of Indo-European, which was imported to Africa in the course of European trade, colonization, and settlement. The only indigenous Indo-European language is Afrikaans. Afroasiatic is not only spoken in (northern) Africa but in the Middle East as well. The other three families – Nilo-Saharan, Niger-Congo, and Khoisan – are exclusively spoken in Africa.

It is not clear how many individual languages are spoken in Africa and this is for the very same reason as in other parts of the world (Heine & Nurse, 2000, 1–3). Languages are known under different names and sometimes it is not clear whether two different names designate different languages or the same one. Furthermore, the division between different languages and different varieties of the same language is hard to draw. However, www.ethnologue.com (Eberhard et al., 2022) mentions a number of 2,158 languages spoken in Africa. At the same time,

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https://doi.org/10.1515/9783110795295-001

the *Ethnologue* mentions a total number of 7,151 living languages in the world. Thus, African languages represent roughly 30% of the world's languages. To answer the question why we should care about African languages: they represent almost one third of the world's languages. If RRG is intended to be a typologically oriented syntactic theory which takes linguistic diversity seriously, it cannot ignore African languages. Does this mean that African languages have had a fair representation in the development of Role and Reference Grammar? We will have a look at three monographs which represent three steps in the development of RRG: Foley & Van Valin (1984); Van Valin & LaPolla (1997), and Van Valin (2005).

We start in section 2 by presenting some background on Role and Reference Grammar which allows us to reconstruct the major developments within RRG over roughly the last 40 years. For reasons of space, we concentrate on constituent structure and leave other aspects – for example logical decomposition and information structure – aside. In section 3, we discuss these three monographs with respect to the question of to what extent African languages have played a role in the formation of Role and Reference Grammar. But first we present some basics of the theory which will serve as background for the individual chapters of this volume.

2 The RRG theory of clause structure

In his 2005 book, Van Valin proposes the following general considerations for a theory of clause structure:

i. A theory of clause structure should capture all of the universal features of clauses without imposing features on languages in which there is no evidence for them.
ii. A theory should represent comparable structures in different languages in comparable ways.

(Van Valin, 2005, 3)

The universal features of clause structure are semantically motivated. This concerns, first, the distinction between predicates and non-predicating elements and, second, the distinction between arguments and adjuncts among the non-predicating elements. A brief note on the term 'predicate' is required. Semantically speaking, every noun, for instance, is a predicate. But 'predicate' is used here in a narrow sense designating the sentence predicate only. The predicate represents the center of the clause, which is dubbed the 'nucleus' in RRG. The identifica-

tion of arguments and adjuncts is only possible with respect to the verb since (i) the verb determines the number of argument expressions, and (ii) it imposes selectional restrictions on its arguments. Thus, which of the non-predicating elements represents an argument and which an adjunct largely depends on the predicate within the clausal nucleus. This is illustrated by an example from the East Cushitic (< Afroasiatic) language Somali in (1). The sentence contains the predicate *dilay* 'kill' and two non-predicating elements which are *wiilku* 'the boy' and *shimbírta* 'the bird'. The focus marker *búu* is left out of consideration for the current discussion.[1] As 'kill' is a two-place predicate, it takes two arguments. These two arguments are instantiated by *wiilku* and *shimbírta*.

(1) *Wiil=ka baa shimbír=ta dil-∅-ay*.
boy=K.DEF FOC bird=T.DEF kill-3SG.M-PST
'The boy killed the bird.'[2]

(Green, 2021, 329)

A constituent structure representation of the example in (1) is provided in figure 1.

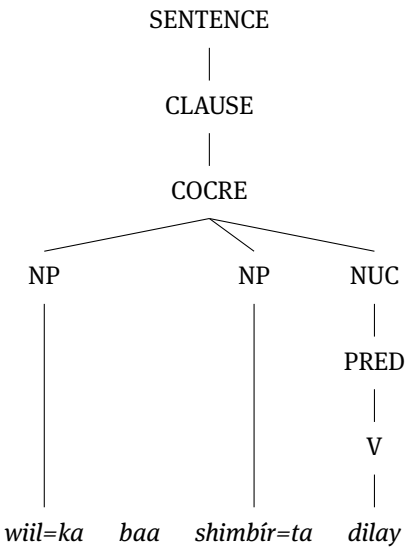

Fig. 1: Constituent structure representation of the sentence in (1).

1 For a discussion of Somali focus structure from the perspective of RRG, see Saeed (2004).

2 'T' and 'K' refer to different agreement classes; cf. Green (2021, 119–120).

While the nucleus contains the predicate, its arguments are represented at the core layer. In contrast to other theories, RRG does not impose a structural distinction between different types of arguments but represents all arguments within the core layer. Thus, the core of a clause contains the nucleus and all arguments. The clausal layer contains the core and core-external elements (to which we will turn later). Since clauses can be combined, e.g., coordinated, the clausal layer is embedded under a sentence node, which contains one or more clauses.

Adjuncts are located within the periphery. In the earlier stages of the theory (Foley & Van Valin, 1984; Van Valin & LaPolla, 1997), the clause was split into the core and the periphery. A major innovation in Van Valin (2005) is the view that each syntactic layer has its own periphery. This has a direct consequence for the analysis of adjuncts. Prior to 2005, all (semantic) types of adjuncts were located within the same periphery. Since every syntactic layer now has its own periphery, different types of adjuncts – nuclear adjuncts, core adjuncts, and clausal adjuncts – can be distinguished depending on their respective scope. The Lango (< Nilotic < Nilo-Saharan) adverb *òkkɔ́* 'completely' (2a) is treated as an aspectual adverb which modifies the nucleus. *Àténî* 'certainly' (2b), on the other hand, is a clausal adverb as it represents the speaker's evaluation of the proposition expressed by the clause. The constituent structure representation of the two examples is shown in figure 2 (on page 5).

(2) a. *Dákô òcàmò òkkɔ́.*
woman 3SG.eat.PERF completely
'The woman ate it up.'
b. *Ìcɔ́ òkwàlò gwɛ̀nò àté nî.*
man 3SG.steal.PERF chicken certainly
'Certainly, the man stole the chicken.'

(Noonan, 1992, 183–184)

As the semantic distinction between predicates, arguments, and adjuncts is universal, the constituent structure representation presented so far exists in all languages. RRG also posits pragmatically motivated syntactic positions which do not exist universally. First, there is a core-external but clause-internal position which is termed either the precore slot [PrCs] or postcore slot [PoCs] depending on whether it precedes or follows the core. The precore slot hosts *ex situ* WH-words and other focal units in languages like English. The post core slot does the same in languages such as Somali. In Somali, the WH-word stays *in situ*, i.e., occurs in the same linear position as the questioned constituent. The sentence in (3) does not differ with respect to its constituent structure from the one in (1).

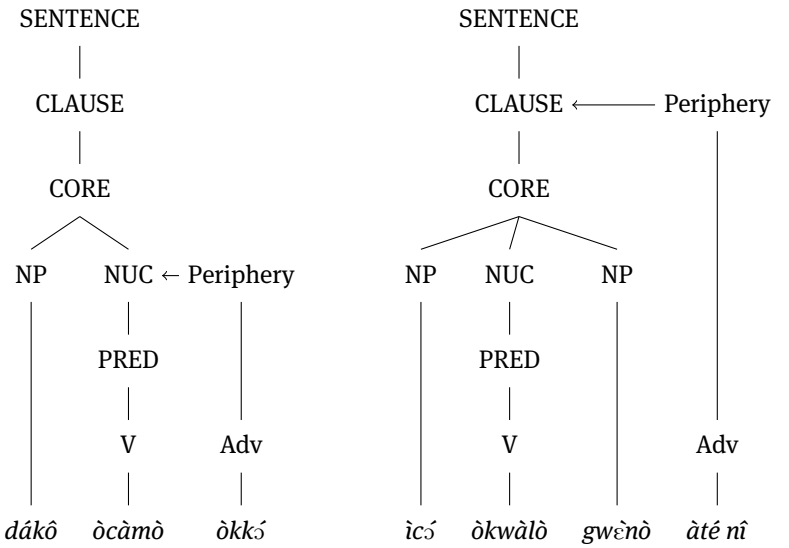

Fig. 2: Constituent structure representation of the Lango examples in (2).

(3) *Cáli yúu dilay*?
Cali QM=FOC.3SG.M beat.3SG.M.PST
'Whom did Cali beat?'

(Green, 2021, 409)

This is different in Akan (Kwa < Niger-Congo), which has a basic Actor-Verb-Undergoer word order. If the undergoer argument is questioned, the question word precedes the actor argument (4) and is therefore not realized in the same position as the phrase expressing the undergoer argument would usually be. In Akan, the WH-word is realized core-externally in the precore slot as represented in figure 3 (on page 6).

(4) *Déɛ́ń nà Kòfí bé-!dúá*.
what FOC Kofi FUT-sow
'What will Kofi sow?' (Marfo, 2005, 119)

There is also a clause-external but sentence-internal position which is termed the left-detached position if it precedes the clause or the right-detached position if it follows the clause. This position already hosts dislocated elements. Dislocation is often accompanied by (i) an intonation break between the dislocated element and the rest of the clause and (ii) a resumptive pronoun coreferential with the

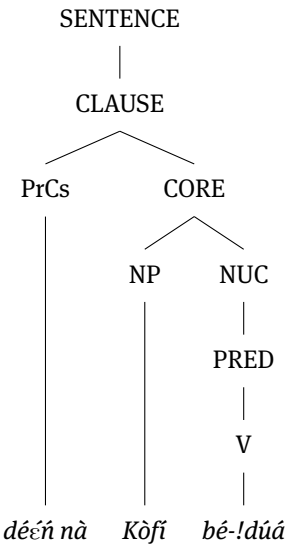

Fig. 3: Constituent structure representation of the Akan sentence in (4).

dislocated element (cf. Lambrecht, 2001 for a more detailed discussion of dislocation). An example of right-dislocation from Somali is shown in (5). *Shimbírta* 'the bird' is the undergoer argument of 'kill' and is placed in the right-detached position. The phrase follows the verb, which results in an Actor-Verb-Undergoer word order. There is no resumptive element taking up the dislocated constituent, and Green does not mention any intonation break. However, the author describes the construction as an instance of right-dislocation. The constituent structure representation of the example is shown in figure 4 (on page 7).

(5) *Will=ka baa dil-∅-ay shimbír=ta.*
boy=K.DEF FOC kill-3SG.M-PST bird=T.DEF
'The boy killed it, the bird.'

(Green, 2021, 332)

Different from Somali, Akan requires a resumptive pronoun realized where the dislocated constituent would normally be located. This can clearly be seen in the example in (6).

(6) *Kòfĩ, Kùsí re-sɛ̀ɛ́ nó.*
Kofi Kusi PROG-beg 3SG
'(about) Kofi, Kusi is begging him.'

(Marfo, 2005, 103)

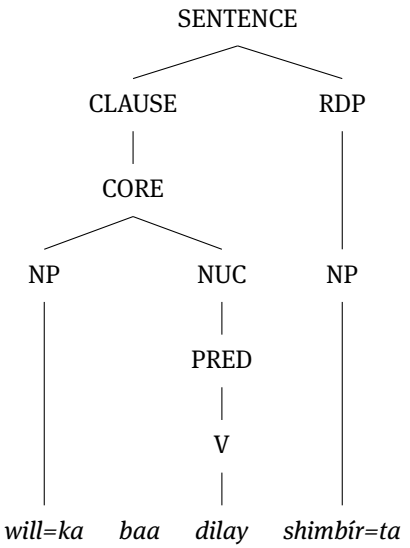

Fig. 4: Constituent structure representation of the Somali sentence in (5).

The third person pronoun *nó* in Akan is coreferential to the verb's undergoer argument *Kòfí* and therefore – as the language has a basic Actor-Verb-Undergoer word order – follows the verb.

A recent innovation within Role and Reference Grammar is the postulation of an extra-core slot (ECS) which only exists in head-marking languages. This non-universal position was introduced in Van Valin (2013) on the basis of a discussion of the head-marking language Lakhota (Siouan). The analysis has been applied to a number of languages, including Gĩkũyũ (Kihara, 2016) and Yucatec Maya (Bohnemeyer et al., 2016). Since the ECS is discussed in detail in Fleischhauer's chapter in the current volume, we will not go into detail at this stage.

A further comparatively recent change affects the notion of a 'nominal phrase' (NP), which has been replaced by the term 'referential phrase' (RP; Van Valin, 2008). The basic motivation for this change is that NP is an endocentric notion, i.e., it is a phrase with a lexical noun head. In various languages, argument expressions can be headed by elements which do not easily fall under the notion of a noun. An illustrative example from Mandinka (Mande < Niger-Congo) is shown in (7). *Kuuray* 'be sick' is a verb used as the sentence predicate in (7a). It can also be used as an argument expression like in (7b). As the example shows, there is no derivational morphology which overtly turns the verb into a noun.

(7) a. *Díndíŋ-o máŋ kuuray*.
child-DEF PF.NEG be_sick
'The child is not sick.'
b. *Kuuráy-o mâŋ díyaa*.
be_sick-DEF PF.NEG be_pleasant
'Sickness is not pleasant.'

(Creissels, 2017, 46)

Saying that *kuuráyo* in (7b) is an NP requires postulating a covert derivational process. Rather than proposing a plethora of covert derivational processes, Van Valin proposes that argument expressions are realized by referential phrases rather than noun phrases. RPs are exocentric and therefore can host elements of quite different lexical categories which need not necessarily be nouns. The constituent structure representation of example (7b) is shown in figure 5. In recent studies, the notion of a 'referential phrase' has been investigated from the perspective of African languages (Iribemwangi & Kihara, 2011 and Kihara's contribution to the current volume for the Bantu language Gĩkũyũ and Anderson, 2021 for the Grassfields language [< Niger-Congo] Bamunka).

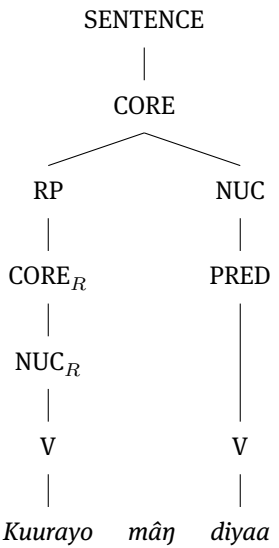

Fig. 5: Constituent structure representation of the Mandinka sentence in (7b).

The word *mâŋ* is not represented in the constituent structure as it is a fused expression of predicate negation and aspect, which are analyzed as operators within RRG. Operators are located in their own projection – the so-called operator projection – which mirrors the constituent structure presentation of the clause or RP. At this stage, we will not go into the details of the operator structure but refer the reader to Van Valin (2005, 8–11) and Matasović (2018). However, it is necessary to mention that each syntactic layer has its own set of operators. Aspect, for example, is a nucleus operator as it affects the predicate only. Tense is a clausal operator since it temporally locates the entire proposition expressed by the clause. Modality, for instance, is an operator located at the core layer.

A further representational aspect is the so-called 'focus structure projection.' Information structure plays a central role in RRG with respect to the linearization of individual constituents of a sentence. As information structure only plays a minor role in the papers collected in this volume, we will not go into detail concerning these aspects. For recent work on issues concerning information structure from an RRG perspective, see, for instance, Matić et al. (2014) and Van Valin (2016). A detailed analysis of the information structure of the Kwa language Avatime is presented in van Putten (2014) and Matić et al. (2016).

3 The role of African languages in the development of RRG

Having illustrated the RRG theory of clause structure, we now turn to the question of which aspects of the theory have been developed with reference to African languages. We look from two perspectives at the role African languages have had in the development of RRG. First, how many African languages are mentioned in the three major monographs on RRG? Second, which aspects of the theory have been developed with reference to African languages?

3.1 Quantitative data

Quantitative data on the number of African languages mentioned in the three monographs can be gained from looking at the language index of each volume. We checked the indexes for all three books and counted both the total number of languages and the number of African languages. In the 1984 book by Foley & Van Valin, 89 languages are listed in the language index, of which 13 are located in Africa (14.6%). Ninety-four languages are listed in the index of Van Valin & LaPolla

(1997), 7 of which are located in Africa (ignoring Malagasy). African languages represent just 7.4% of the entire language sample. However, the language index also makes reference to Bantu languages in general. The language index of Van Valin (2005) lists 78 languages, of which 10 are African languages (leaving Malagasy aside). African languages make up 12.8% of the entire sample in the book. Judged simply from a quantitative perspective, it is clear that African language are underrepresented in the three major monographs on RRG.

What role have African languages played in the development of RRG? In western African languages such as Akan, Yoruba, and Vagla (all Niger-Congo), serial verb constructions are quite common. Such constructions play some role in the distinction between different types of junctures in Foley & Van Valin. The Nilo-Saharan language Lango and the Bantu languages Chichêwa and Swahili have played a certain role in the development of the RRG analysis of voice alternations. We start with a deeper look at serial verb constructions first and turn afterwards to a discussion of voice constructions.

3.2 Serial verb constructions

A standard definition of 'serial verb construction' (SVC) is given by Aikhenvald Aikhenvald (2006, 1) as "a sequence of verbs which act together as a single predicate, without any overt marker of coordination, subordination, or syntactic dependency of any other sort. Serial verb constructions describe what is conceptualized as a single event." Foley (2010) argues against this view and proposes that SVCs represent neither a uniform syntactic nor a uniform semantic phenomenon. Problems with the notion of a serial verb construction stem from the fact that the structures designated this way do not necessarily represent the same grammatical properties cross-linguistically. For a more detailed discussion of the notion of a 'serial verb construction', the reader is referred to Riccio's chapter in this volume.

In the three monographs, SVCs received the most attention in the 1984 book. Although the analysis is not exclusively based on data from African languages, these languages play a central role in the discussion. Such structures are discussed in chapter 5 of the book, which is entitled 'Juncture and operators.' The term 'juncture' refers to "the level at which clauses are joined" (Foley & Van Valin, 1984, 187). This definition is somewhat imprecise as the joined units are not always entire clauses.[3] A nuclear juncture is a complex nucleus in which two nuclei

3 Note that in 1984, RRG just distinguished three layers in the layered structure of the clause: nucleus, core, and periphery. The periphery is, at this time, the outermost layer, which consists of all constituents except the predicate and its arguments.

share all core arguments. In a core-juncture, on the other hand, two independent cores form a bigger core. Each core has its own nucleus and its own core arguments. SVCs are "the simplest kind of constructions which illustrate junctures at the nuclear and the core layers" (Foley & Van Valin, 1984, 189). From an RRG perspective, SVCs are characterized as juxtaposed verbs sharing a common core argument. An example from Yoruba (Niger-Congo) is presented in (8). Although there is no formal element (e.g., complementizer or conjunction) relating the two verbs, they form a joined predication. A third-person referent has taken a book and the same referent has come (somewhere); the two verbs share their actor arguments.

(8) *Ó mú ìwé wá.*
3SG took book came
'He brought the book.'
(Bamgbọṣe, 1974, 17; quoted from Foley & Van Valin, 1984, 189)

A central claim is that two types of serializing structures exist: SVCs forming nuclear junctures and SVCs forming core junctures.[4] The difference between the two is illustrated by the Barai (Trans-New Guinea) examples in (9), which go back to Olson's (1981) analysis of serialization constructions in Barai. Although the two constructions in (9) look superficially similar, the verbs *fi* 'sit' and *isoe* 'write' come with their own set of core arguments and therefore form separate cores in (9a). As it is a serial verb construction, the two cores share one argument, which is the pronominal actor argument *fu* '3SG.' In (9b), the two verbs form a single complex nucleus, which requires a single core.

(9) a. *Fu fi fase isoe.*
3SG sit letter write
'He sat down and wrote a letter.'
b. *Fu fase fi isoe.*
3SG letter sit write
'He sat writing a letter.'
(Olson, 1981, 173)

Olson (1981) presents various differences between the two constructions in (9) which indicate that the construction in (9a) forms a tighter syntactic unit than the one in (9a). For further language data, we refer the reader to Olson (1981, 172–178), Foley & Van Valin (1984, 190–197), and Foley & Olson (1985, 38–47). The only

4 This distinction is taken up, for example, in the work by Anderson (2006) and applied to a huge range of genetically and areally distinct languages.

other example of a serializing nuclear juncture mentioned by Foley & Van Valin (1984, 193) is the Papuan language Yessan-Mayo; further languages, for example the Arandic language Kaititj and the Sepik language Yimas, are mentioned in Foley & Olson (1985, 41–47). Igbo[5] and Ịjọ are listed as two African languages with nuclear juncture SVCs and, as Foley & Olson (1985, 46) state, they are an exception among the Kwa languages, which otherwise show serialization only in terms of core junctures. Examples from Ịjọ are shown below. The one in (10a) represents a core juncture, while the one in (10b) is representative of a nuclear juncture SVC. The crucial difference is that *akana* 'encircle' in (10b) does not select any argument – i.e., it does not contribute to argument structure – but only serves as a modifier of the first predicate. This is also reflected in the constituent structure representation of the two sentences in figure 6 (on page 13); *akana* is represented within its own nucleus but does not dominate a predicate node (see, for example, Van Valin & LaPolla, 1997, 459 for a justification of this representational difference). A brief note on the representation of the example in (10a): the RP *ama* 'town' is shared by the two verbs and therefore represented as a core argument of both cores.

(10) a. *Erí wẹ́ṇi amá sụọ-mi.*
he walk-LNK town enter-PST
'He walked into town.'[6]

b. *Erí wárị wẹ̀ṇị-ṇị akana-mí́.*
he house walk-LNK encircle-PST
'He walked around the house.'

(Lord, 1977, 154; quoted from Foley, 1986, 46)

Foley & Olson relate the absence of nuclear juncture serialization to word order. Such a type of serialization construction is only attested in verb-final languages, Igbo being the sole exception. The exceptional status of Igbo is explained by the fact that Kwa languages changed their dominant word order from verb-final to verb-medial and, as claimed by Lord (1977), Igbo developed verb serialization before the word order change occurred. Ịjọ is exceptional among the Kwa languages in still being verb-final.

It is often mentioned that SVCs only have a single tense value (e.g., Aikhenvald, 2018, 1). The tense value of the individual verbs has to be the same if tense is realized on more than one verb. This is illustrated with examples from Akan in (11).

5 A detailed analysis of Igbo verbs from the perspective of Role and Reference Grammar is presented in Agbo (2013). Igbo SVCs are discussed in Agbo's contribution to the current volume.

6 The linking element occurs for phonological reasons.

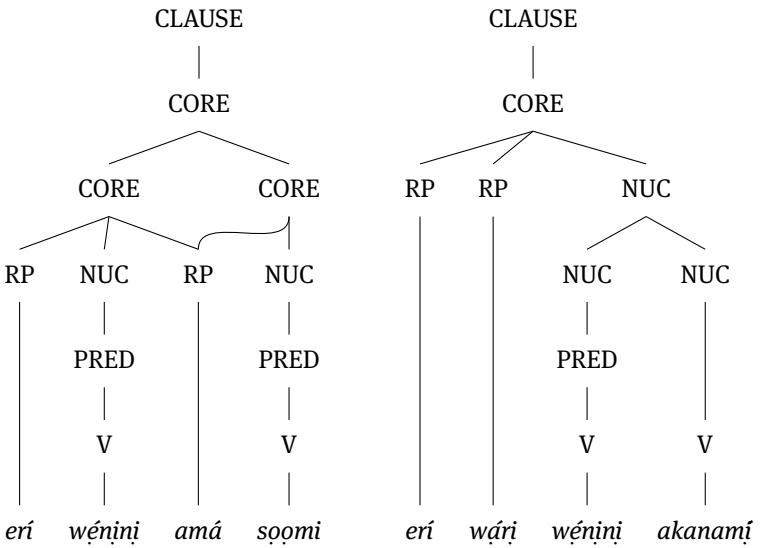

Fig. 6: Constituent structure representation of the Ịjọ examples in (10).

This constraint is explained within RRG by the fact that tense is a clause operator and therefore cannot be independently specified for individual cores. A sequence of tenses can only be expressed in a clausal juncture[7] like in (11c). The two verbs no longer form an SVC but are realized in two independent clauses conjoined by *na* 'and'.

(11) a. *Mekɔɔe mebaae.*
1SG.went 1SG.came
'I went and came back.'

b. **Mekɔɔe maba.*
1SG.went 1SG.have_come

c. *Mekɔɔe na maba.*
1SG.went and 1SG.have_come
'I went and have come back.'

(Schachter, 1974; quoted from Foley & Van Valin, 1984, 197)

The distinction between nuclear junctures, core junctures, and clausal/peripheral junctures heavily builds on the discussion of serial verb constructions in Foley & Van Valin (1984). Although the data are not taken exclusively from African

7 In Foley & Van Valin (1984), the term 'peripheral juncture' is used instead of 'clausal juncture.'

languages, they have a prominent part in the discussion. In the later books, the distinction between the juncture types is much less based on serial verb constructions, hence SVCs play a less central role in the discussion of juncture types in Van Valin & LaPolla (1997) and Van Valin (2005). However, serial verb constructions have remained a constant topic within the RRG community although the focus has mainly been on Asian languages like, for instance, Mandarin Chinese (e.g., Chang, 2007; Fan, 2020 and Riccio, 2017 for a cross-linguistic discussion of SVCs from an RRG perspective).

3.3 Voice alternations

Passive voice is often explicated with reference to the notions of 'subject' and 'object.' One frequently encounters definitions like: In the passive voice, the direct object of the active sentence becomes the subject of the passive sentence and the subject of the active sentence becomes oblique. The notions 'subject' and 'object' do not exist in the framework of Role and Reference Grammar. Passive voice, therefore, requires a different explanation than in other frameworks. A general definition for coerce constructions – subsuming passive voice but also other voice constructions like antipassive – is given in (12). Crucially, RRG (Van Valin & LaPolla, 1997, 302, Van Valin, 2005, 115–116) decomposes voice operations into two distinct processes. One process (12a) affects the choice of the privileged syntactic argument (PSA), the other (12b) concerns the realization of macrorole arguments. The two processes are independent of each other and – this is crucial – do not necessarily co-occur with each other.

(12) General characterization of basic voice constructions (Van Valin, 2005, 116):
   a. PSA modulation voice: permits an argument other than the default argument [...] to function as the privileged syntactic argument.
   b. Argument modulation voice: gives non-canonical realization to a macrorole argument.

The definition in (12) requires the introduction of two notions: these are 'macrorole' and 'privileged syntactic argument.' The two notions are key concepts in RRG, which we will introduce just briefly.

The term 'macrorole' refers to a restricted neutralization of semantic role contrasts like 'agent,' 'patient,' 'experiencer,' 'theme,' etc. RRG posits two macroroles, which are 'actor' and 'undergoer.' The actor comprises the more agent-like semantic roles, whereas the undergoer macrorole comprises the more patient-like argu-

ments. Macroroles are assigned on the basis of a verb's logical structure. The logical structure is a partial semantic representation which aims at presenting grammatically relevant semantic information. Without going into too much detail, the logical structures basically represent the *aktionsart* properties of the predicate. Following Vendler (1967), four *aktionsart* classes are distinguished: state predicates, activity predicates, achievement predicates, and accomplishment predicates. A fifth class, semelfactive predicates, has been adopted from Smith (1991). For each *aktionsart* class, a causative correspondent exists.[8] (13b) presents the logical structure of the Sambaa (Bantu) sentence in (13a). *-nka* 'give' is a causative accomplishment predicate, which has a complex logical representation. CAUSE connects two logical structures and expresses a relation between some unspecified activity (the first-person referent is doing something) which causes Stella to come into possession of a book.[9] Thus, the logical structure can be read as 'I am doing something which caused Stella to become in the possession of a book.'

(13) a. *N-za-chi-m-nka Stella ki-tabu.*
1SG-PERF.DJ-7-1-give 1.Stella 7-book
'I gave Stella a book.'
(Riedel, 2009, 79)

b. [**do'** (1sg, ∅)] CAUSE [BECOME **have'** (Stella, book)]

Macrorole assignment is based on logical structures like in (13b). The first argument of '**do'** (x, ...' is always the actor argument; the undergoer argument is, for instance, the second argument of a state predicate like '**have'** (x, y).' (For a more detailed discussion of macrorole assignment, see Van Valin, 2005, Chap. 2.4.2.) Thus, '1SG' represents the actor argument, and *kitabu* 'book' represents the undergoer.

As mentioned above, RRG does not refer to grammatical roles like 'subject' and 'object.' Instead, it uses the notion of a privileged syntactic argument (PSA). The PSA, in contrast to the traditional subject, is determined on the basis of individual constructions. Therefore, it makes sense to speak of, for instance, the PSA of a 'coreference between sentences'-construction. This construction is illustrated with an example from Lango in (14). The argument of the verb in the second sentence is not realized; the missing argument is interpreted as being coreferential with the actor argument of the first clause (as indicated by the translation). The

8 The *aktionsart* classification has fruitfully been applied to African languages by, for instance, Abdoulaye (1992) to Hausa, Agbo (2013) to Igbo, and Kihara (2016) to Gĩkũyũ.

9 Osswald (2021) introduces a more elaborate logical representation based on the more 'traditional' logical representation briefly introduced above. See in particular Fleischhauer et al. (2019) for linguistic arguments showing the need for deeper lexical decomposition.

PSA controls the gap, irrespective of whether it is an actor argument or, as we show below in (17), the undergoer argument in a passive construction.

(14) *Dákò ònénò lócà. òdɔ́k ɔ̀kɔ́.*
woman saw man left already
'The woman saw the man. She left.'
(Noonan & Bavon Woock, 1978, 130)

Now we can turn back to the passive construction. A passive sentence from Sambaa corresponding to the active one in (13a) is shown in (15). In the active sentence, *kitabu* 'book' is the undergoer argument, whereas *Stella* represents the non-macrorole core argument. This is also indicated in the order of the prefixes indexing the arguments which, according to Riedel (2009, 76), is 'subject-TAM-direct object-indirect object-verb stem.' Passive does not affect the logical structure of the predicate, therefore macrorole assignment is the same in active and passive constructions. However, the actor is optional in the passive construction and it is not longer realized within the core, but as an adjunct in the core periphery. Accordingly, the actor is no longer indexed at the verb. Differently from languages like English or German, not the undergoer argument (*kitabu*) but the non-macrorole argument – the recipient – is the PSA of the passive sentence.

(15) *N-za-chi-nkwa n' tate.*
1SG-PERF.DJ-7-give.PASS by 1.father.my
'I was given it by my father.'
(Riedel, 2009, 84)

Both processes mentioned in (12) are at work in the formation of the Sambaa passive. The process of PSA modulation obtains as a different argument than the default one – namely the non-macrorole core argument – functions as the PSA. The process of argument modulation is evidenced by the fact that one macrorole argument – namely the actor – is realized in a non-canonical way, i.e., in a *n'*-PP.

The Nilo-Saharan language Lango is used by Van Valin (2005, 116–117) to illustrate a language in which passive is associated with PSA modulation only. Van Valin (2005, 117) presents the examples in (16) and states that although (16) "looks like a simple fronting of the undergoer, [...] it is in fact a voice construction." The reason for this claim is that the undergoer argument takes over a number of syntactic control properties, which makes it the PSA.

(16) a. *Dákó ò-jwát-ò lócà.*
woman 3SG-A-hit-3SG-U man
'The woman hit the man.'

b. *Lócà dákó ò-jwát-ò.*
man woman 3SG-A-hit-3SG-U
'The man was hit by the woman.'

As the example in (17) shows, the undergoer controls the gap in the second sentence; the missing argument is interpreted as being coreferential with the undergoer argument (contrast this with the corresponding active construction in (14) above).[10] The actor, however, remains a direct core argument.

(17) *Lócà dákò ònénò. òdɔ́k ɔ̀kɔ́.*
man woman saw left already
'The woman saw the man. He left.'
(Noonan & Bavon Woock, 1978, 130)

We can add the Bantu languages Luganda (JE15) and Haya (JE22; Hyman & Duranti, 1982, 222) as being similar to Lango in having the actor realized as a direct core argument in a passive construction. This is shown by an example from Luganda in (18). The difference to the Lango example is that Luganda indicates passive voice morphologically at the verb.

(18) a. *Abaana ba-a-soma ekitabo.*
2.children 2-PST-read 7.book
'The children read a book.'
b. *Ekitabo ky-aa-som-ebw-a abaana.*
7.book 7-PST-read-PASS-FV 2.children
'The book was read (by) the children.'
(Sheehan & van der Wal, 2018, 542)

The Lango data are important as they provide empirical evidence for decomposing voice constructions into two independent processes. The explicit decomposition of voice constructions into distinct processes is missing in an earlier version of the theory (Foley & Van Valin, 1984). However, Foley & Van Valin distinguish between foregrounding and backgrounding passives. "Passives which serve to remove the actor from the core of the clause are backgrounding passives, whereas those which function to permit a non-actor to occur as PrP [pragmatic pivot] are foregrounding passives" (Foley & Van Valin, 1984, 167–168). If we substitute 'pragmatic pivot' by PSA, it is evident – as Foley & Van Valin (1984, 160) note – that the Lango passive is a clear instance of a foregrounding passive. Passivization does not reduce the actor argument from the core but only affects the choice of the PSA. Passive in the

10 For more details, the reader is referred to Noonan & Bavon Woock (1978) and the RRG analysis of the Lango data in Foley & Van Valin (1984, 160–164).

Bantu languages is characterized as a backgrounding passive by Foley & Van Valin (1984, 167). The authors base their analysis on Trithart's (1979) claim that passive is favored if the non-actor argument is higher in salience than the actor argument. The function of the passive is to foreground the more salient argument.

As explicated in Van Valin (1993, 66), the notions 'foregrounding passive' and 'backgrounding passive' refer to the functional motivation of PSA modulation and argument modulation, respectively. This makes it possible to trace the current RRG treatment of voice phenomena back to Foley & Van Valin (1984).

Other voice constructions illustrated on the basis of African languages include the applicative construction. Applicative marking is common among the Bantu languages and is illustrated with data from Chichêwa and Kinyarwanda in Van Valin (2005, 121–122). The Kinyarwanda data are presented in (19). The logical structure of *-soma* 'read' – **do'** (x, **read'** (x, y)) – does not contain a beneficiary argument. The argument is introduced by the applicative morpheme *-er*. As the argument has to be integrated in the predication, the applicative marker affects the logical representation. For a general discussion of applicatives within the framework of Role and Reference Grammar, see Conti (2009).

(19) a. *Umukoôbwa a-ra-som-a igitabo*.
girl 1-PRS-read-FV book
'The girl is reading a book.'

b. *Umukoôbwa a-ra-som-er-a umuhuûngu igitabo*.
girl 1-PRS-read-APPL-FV boy book
'The girl is reading the boy a book.'

The function of the applicative construction is not to only license an additional argument but this new argument also becomes the undergoer argument. Kinyarwanda differs from Chichêwa since any direct core argument (except the actor) can function as the PSA in a passive construction (Van Valin, 2005, 122). A more detailed RRG-based discussion of applicatives in the two mentioned Bantu languages is found in Roberts (1995).

As the discussion has revealed, African languages – and especially Lango – played a central role in the (early) RRG analysis of voice in general but also of particular voice phenomena.

3.4 Evaluating the role of African languages in the development of RRG

The previous section revealed that African languages played a certain role in the development of Role and Reference Grammar. It seems that West African lan-

guages had their greatest impact in the early work on RRG, which might be due to the fact that serial verb constructions played a greater role in Foley & Van Valin (1984) than in the later work. The Nilotic language Lango has been important for the RRG conception of voice constructions in general and of passive in particular, both in the earlier work (Foley & Van Valin, 1984) and in the later publication by Van Valin & LaPolla (1997). The Bantu languages – Chichêwa and Kinyarwanda – have been mentioned with respect to applicative voice, but a detailed analysis of this type of voice construction is still lacking.

Besides the three major monographs on Role and Reference Grammar, other publications have taken African languages into account. A number of additional publications addressing African languages from an RRG perspective have already been mentioned in the previous sections. Nonetheless, the huge linguistic diversity of Africa is (so far) not reflected within RRG. This observation provided the initial motivation for compiling the current volume, which does not simply aim at extending the coverage of African languages within the theory but also at applying the theory to new language data, which will hopefully initiate further research on African languages from an RRG perspective.

4 Overview of the current volume

The papers collected in this volume present analyses of different grammatical phenomena in different African languages. The analyses have in common that they refer to the RRG framework.

The chapters collected in this volume take up several issues mentioned in the introduction. The first two chapters by Maduabuchi Sennen Agbo and Anna Riccio discuss serial verb constructions in languages from Western Africa. In his chapter on multi-verb constructions entitled 'A Functional Typology of Igbo Multi-verb Constructions', Maduabuchi Sennen Agbo presents an analysis of different types of complex predicate constructions in Igbo. Among the constructions discussed in the chapter are verb compounds and serial verb constructions. Reexamining data and analyses from the research literature, Agbo presents a novel account on these types of expression using the Role & Reference Grammar framework. Riccio's chapter has the title 'The syntax-semantics interface of serial verb constructions in Kwa languages' and discuss syntatcic and semantic characteristics of SVCs in West African languages, especially of the Kwa group. The attention is focused on the predicate-argument structures and the logical structures of symmetrical constructions expressing a sequential relation between the sub-events within a single culturally relevant and cohesive unit, generally with an overall

goal. These SVCs are sparticularly interesting because of their apparent similarity to other multi-verb constructions, such as covert coordinations. Her analysis demonstrates that RRG provides a useful theoretical perspective that can both compare SVCs with each other and distinguish them from non-SVCs.

Staying in Western Africa, Ronald Schaefer & Francis Egbokhare discuss the effect of PAQs – which are postverbal aspectual qualifiers in the Edoid language Emai – on the possibility of a verb's argument to appear in contrastive focus position. The chapter with the title 'Postverbal Qualifiers and Constraints on Contrastive Focus' deals with PAQs that express a range of meanings including excessive 'too much' and venitive 'toward deictic center'. In the first part of the chapter, the authors present the constraints the PAQs impose on focus position. The chapter's second part is concerned with a syntactic analysis of PAQs. The authors suggest three possible analyses of PAQs: they could either be analyzed as adverbs, or, second, as operators or, third, as particle. After presenting arguments against an analysis of PAQs as being adverbs or operators, Schaefer & Egbokhare present evidence for PAQs being particles which combine with verbs in a cosubordination relation at the core layer.

Ciara Anderson also focuses on a language from Western Africa, namely the Bantoid language Babunbo spoken in Cameroon. In her chapter entitled 'A Case for the Antipassive in Babungo', she deals with voice phenomena – especially the antipassive voice – in that language. The antipassive voice is not typically associated with the Bantoid languages or their neighbouring family, Narrow Bantu. However, research points to evidence for the existence of antipassive marking in the latter. Drawing on related research, Anderson makes a case for the presence of an antipassive marker in Babungo (Bantoid) which is expressed in a polysemous fashion via the causative -*sə* suffix. Anderson presents an analysis of the dual functionality of the causative marker within the RRG framework.

The last two chapters address syntactic issues in a number of Bantu languages spoken in Eastern and Southern Africa. Claudius P. Kihara describes the morphosyntax of Gĩkũyũ referential phrases in his chapter with the title 'The Morphosyntax of the Gĩkũyũ Complex Reference Phrase'. The chapter focuses on complex referential phrases which are phrases containing lexical, phrasal or clausal modifiers. Starting with a discussion of the linear order of elements within complex referential phrases, Kihara develops a syntactic analysis of different types of complex referential phrases.

Finally, the chapter by Jens Fleischhauer presents an analysis of clausal head-marking in the Bantu language isiZulu. In the chapter entitled 'Argument doubling and right-dislocation – An RRG analysis of head-marking in isiZulu', Fleischhauer is arguing against the view that 'argument doubling' – which is the co-occurrence of a bound argument marker and a coreferential RP – requires right-

dislocation of the independent RP. The discussion shows that 'doubled RPs' do not have the properties of dislocated expressions. It is argued, that the RRG approach to head-marking – developed by Van Valin (2013) – provides a better analysis of the language data and allows for an uniform treatment of all 'doubled' argument expressions.

Acknowledgments

We like expressing our thanks to Anne Sokoll (Düsseldorf University Press/ De Gruyter) and Jessica Bartz (De Gruyter) for making this volume possible. Charlotte Webster and Gabriela Rus (Konvertus) helped solving issues with the LaTeXtemplate, we like thanking them for their help. Finally, we like acknowledging the financial support by the Universitäts- & Landesbibliothek Düsseldorf via an Open Access grant.

Abbreviations

A actor
APPL applicative
DEF definiteness
DJ disjoint
FOC focus marker
FUT future
FV final vowel
LNK linker
M masculine
NEG negation
PASS passive
PST past tense
PERF perfect
PF perfective
QM question marker
SG singular
PROG progressive
U undergoer

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A Functional Typology of Igbo Multi-verb Constructions

1 Introduction

A multi-verb construction is a combination of two or more verbs to form a single predicate. Multi-verb constructions exist in many languages of the world. It is attested in many African languages of which Igbo belong. The verbs in multi-verb constructions occur in different forms. They may appear in their root forms and uninflected or, they may appear as in inflected forms. The verbs may be or may be not juxtaposed. There may be a linker between the verbs or not. Again, one of the verbs may be subordinate to the other verb. These different forms result in different meanings and functions for the multi-verb construction. However, in each of these functions and meanings, the constructions share the feature of being conceptualized as a single predicate of one clause in a single event.

Current studies in Igbo grammar identify verb compounds and verbs in series as multi-verb constructions. The verbs in series include the prominent serial verbs construction and what is known as consecutivisation in the literature. The grammatical description of multi-verb constructions expresses the functional and typological characteristics the Igbo verb and Igbo grammar in a larger perspective. However, in the description of multi-verb constructions, a number of questions arise. These include the question of identifying verb compounds in the language, the question of what constitutes a single predicate and clause and also the question of the relations within complex clauses. These questions have implications for the conceptualization of multi-verb constructions in general and the notions of verb compounds and serial verb construction in Igbo in particular.

Therefore, the objectives of this paper include:

i. To argue for what determines a verb compound in Igbo.
ii. To argue for the features of a single clause in Igbo.
iii. To explain the relations between clauses in a complex construction.
iv. To re-examine the concept of the serial verb construction and consecutivisation construction in Igbo.
v. To determine the adequacy of the Role and Reference Grammar framework in explaining i-iv above.

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https://doi.org/10.1515/9783110795295-002

There has been a highly productive research programme on serial verb constructions (SVCs) in the RRG community but mostly on Asian languages (see the introduction to this volume). In this paper, the RRG theory of clause linkage gives an adequate analysis of SVCs in Igbo.

The rest of the chapter is laid out thus. Section 2 discusses the theoretical framework and the method of data collection. Section 3 and section 4 describe the Igbo verb and verb compounding within the RRG framework. Section 5 discusses the multi-verb constructions termed SVC and consecutivisation, to clarify their conceptualization in Igbo. In section 6 the RRG framework is applied to give a straightforward clarification to the types of multi-verb constructions inherent in the hitherto known SVC. Section 7 is the conclusion of the chapter.

2 Theoretical background

2.1 Theoretical framework

The theoretical framework of the analysis is Role and Reference Grammar as presented in Van Valin (2005) and Van Valin & LaPolla (1997). The goal of RRG is to provide a linguistic basis for the description and explanation of cognitive mechanisms in language. It assumes that human communication and cognition are the central issues in the understanding of language. In other words, in adopting this theory, this study seeks to explain the formation of Igbo verb compounds in a way that is faithful to the native speaker's knowledge about the language. This will be done through predicate decomposition to expose the functional elements, the event depicted by the verb, the argument structure and the semantic class of the verb compound.

The assumptions of RRG include the fact that all verbs are built from states such that each class of verb is derived from the combination of states and other abstract elements such as DO, BECOME and CAUSE. States include the inherent temporal properties (*aktionsart*) of individual verbs and are the primitive building blocks of the verbs. The abstract elements which combine with these states are derived from the idiosyncratic meaning of the verb. The lexical representation of the decomposition of a verb is known as its Logical Structure. This structure contains the argument structure of the verb. There is a conventional schema for representing the lexical decomposition of a verb. Following the conventions of formal semantics, Van Valin states that

> [...] constants (which are normally predicates) are presented in boldface followed by a prime, whereas variable elements are presented in normal typeface. The elements in boldface +

> prime are part of the vocabulary of the semantic metalanguage used in the decomposition; they are not words from any particular human language despite their obvious resemblance to English words. Hence, the same representations are used for all languages (where appropriate).
>
> (Van Valin, 2005, 45)

The RRG's theory of lexical decomposition has its origins in Vendler's (1967) Aktionsart-based classification of verbs into states, achievements, accomplishments and activities. It also employs a representational scheme proposed in Dowty (1979) to capture these distinctions. RRG then enlarges the verb classes to include semelfactives and active accomplishment verbs.

RRG's goal of explaining and describing the cognitive mechanisms of language is analogous to the stated objective of this paper because deriving the meaning of a verb compound from its context of usage is a cognitive approach to verb compounding.

2.2 RRG theory of clause linkage

RRG seeks to answer the two fold question of the number of units that make up a complex construction and the syntactic and semantic relationship between these units (Van Valin & LaPolla, 1997; Van Valin, 2005, 2021). The issue of the number of units that determine a complex construction is resolved through the Layered Structure of the Clause (LSC) while the structural relationship is determined by the typology of complex constructions. Following RRG, there are three nexus types of complex constructions viz (a) coordinate, (b) subordinate, and (c) cosubordination. According to Van Valin & LaPolla (1997, 441–454), coordinate constructions include those sentences that are 'grammatically coordinate' with none of them being dependent on the other. The notion of juncture in the theory includes cores, clauses and sentences with a linking morpheme.

Van Valin & LaPolla (1997) subdivided subordinate clauses into the functional types of nominal, adjectival, adverbial, etc. Van Valin (2005) recognizes that there is a periphery modifying every level of the clause while Van Valin (2007) introduces two distinct types of subordination in the theory; daughter subordination and peripheral subordination. In daughter subordination, the subordinate junct is a daughter of a higher node and in peripheral subordination, the junct is a modifier occurring in the periphery of a layer of the clause. This consists of nuclear, core and clausal subordination. Van Valin & LaPolla (1997) and Van Valin (2021) also reveal a third category of complex clause which is cosubordination. Cosubordinating clauses contain units that share within their relation the features of coordinating and subordinating constructions. Cosubordinating clauses have not

been identified in Igbo SVCs in the literature. The RRG theory of clause linkage would be adequate for explaining the linkage of the units in complex constructions, which is one of the stated objectives of this paper.

The data analyzed in this paper are motivated by the examples in extant publications on Igbo SVCs and consecutivisation constructions. These include sentences from such works as Emenanjo (1978, 2015); Lord (1975); Uwalaka (1982, 1995); Déchaine (1993); Ndimele (1996); Okorji & Mbagwu (2008); Amaechi (2013); Onuora (2014) and Ndiribe (2019). These are prominent publications on multi-verb constructions. The data from these publications were presented to competent Igbo speakers of various dialects who rendered similar representative sentences and affirmed the grammaticality of those sentences. These imitative sentences were then analyzed for verb forms, verb compounding and complex sentences within the RRG framework.

3 The Igbo verb

3.1 Simplex verbs

Emenanjo (1975, 1978, 2005, 2012) has consistently argued that the structure of the Igbo verb "is made up of three mutually obligatory and complementary elements" (Emenanjo, 1978, 129). These obligatory elements comprise the verb itself, the complement and the bound cognate noun (BCN). This claim has been substantiated by Igbo grammar scholars (Nwachukwu, 1987; Uwalaka, 1988). The construction in (1) below, with the verb *rí* 'eat', illustrates the morpho-syntactic structure of the Igbo verb.[1]

(1) *Òbí rì-rì nrí.*
Obi eat-IND food
'Obi has eaten some food.'[2]

1 The transcription follows standard Igbo orthography: à (low tone); á (high tone); and ā downstep. All tones are marked to avoid ambiguity due to lexical variance among the dialects. Igbo has phonological features of vowel harmony where the eight vowels in the language are neatly divided into two sets. One set comprises vowels produced with the Advanced Tongue Root (+ATR) while the other set comprises vowels with –ATR. In standard Igbo, -ATR vowels are represented with the sub-dot, e.g, [ọ] while the +ATR vowels do not have the sub-dot.

2 The abbreviation IND represents the –*r*V suffix indicative marker in Igbo grammar. This suffix always consists of the alveolar trill [r] and the vowel of the last syllable of the verb. This –*r*V suffix always occurs with activity verbs in Igbo and functions to indicate the 'salient facts about the verb used without regard to time' (Emenanjo, 1978, 171).

In (1) above, the verb *rí* is a lexeme. When this lexeme occurs in a syntactic context it is understood as the verb 'eat'. *rí* 'eat' obligatorily co-occurs with the noun *nrí* 'food.' The purpose of example (1) is to demonstrate that every Igbo verb must co-occur with a noun which serves as its complement. The idea of the bound cognate noun is illustrated in (2) below.

(2) *Òbí rì-rì nrí erí.*
Obi eat-IND food EMPH
'Obi has indeed eaten some food.'

Erí is a partial reduplication of the verb *rí* and it serves as an emphasiser morpheme. In Igbo grammar literature this is known as the bound cognate noun or BCN. All Igbo verbs have the BCN, which is always morphologically derived from the verb. Again, the BCN always follows the verb in the syntactic construction with reference to the verb as shown in (2) above and illustrated again in (3) below.

(3) a. *Obi jè-rè.*
Obi go-IND
'Obi went.'
b. *Obi jè-rè èjé.*
Obi go-IND EMPH
'Obi went indeed.'

In examples (1) and (2) above the noun *nrí* and the BCN *erí* are regarded as arguments and/or indirect objects of the verb, respectively, according to Emenanjo (1978, 129). This is again demonstrated in examples (3b) (which originates from (3a)), where the form *èjé* is also regarded as an argument of the verb *jé* 'go.' However, in the Role and Reference Grammar framework this study adopts, the argument of the verb is the participant in the clause that completely carries out (ACTOR) or, is completely affected by the action represented by the verb (UNDERGOER). Subsequently, within the assumptions of RRG, the BCN of the Igbo verb is not an argument but an operator that modifies the meaning of the verb. Therefore, while the noun *nrí* in (1) is the undergoer argument and because it is completely affected by the action of the verb, the BCN *erí* in (2) is simply a morphological reduplication of the verb *nrí* and not its argument or direct object. This same analysis goes for example (3b) above, where *èjé* is not an argument but a morphological derivation.

This definition of the Igbo verb will give some background to the discussion of multi-verb constructions which is the focus of this paper. The next section discusses the Igbo verb compounds.

3.2 The verb compound in Igbo

Studies in Igbo syntax make the claim that verb compounds are products of syntactic configurations (Lord, 1975; Uwalaka, 1995, 1997; Mbah, 1999, 2005; Anyanwu, 2005, 2007). These syntactic configurations have been largely motivated by the assumptions of Transformational-Generative Grammar and the Minimalist Program. The typical constructions resulting from these analyses are illustrated in examples (4a–d).

(4) a. *Ọ̀ tụ̀-fụ̀-rụ̀ ákwụ̀kwọ̀.*
3SG throw-lose-IND paper
'He throw away the paper.'

(Lord, 1975, 25)

b. *Ònyé Ézè mé-bì-rì* okwu ahụ̀.
Person chief make-end-IND talk/case DET
'The chief put an end to that case'.

(Uwalaka, 1995, 157)

c. *Ngọzí dụ́pụ̀-rù Ígè.*
Ngozi lead-exit-IND Ije
'Ngozi led Ije out'.

(Mbah, 2005, 590)

d. *Ezè mme-dhà-rà óché nà.*
Eze make-fall-IND chair one
'Eze made this chair to fall'.

(Anyanwu, 2005, 615)

The analysis of (4a) assumes it to be transformationally derived from two underlying constructions *Ó tùrù ákwụ̀kwọ̀* 's/he threw the paper' and *Ákwụ̀kwọ̀ fùrù* 'the paper is lost.' Syntactic conditions and rules are placed on these underlying constructions to derive the construction in (4a). Furthermore, the analysis of the resulting compound verb *túfù* 'throw away' in (4a) attributes the first component *tụ́* with the characteristic of an action verb while the second component *fù* indicates the goal or result of the action verb. In example (4b), the compound verb *mé-bì* 'make end' which includes a causative reading 'belongs to this subset of Igbo complex predicates' (Uwalaka, 1995, 157). The clause in (5b) is also analyzed within the Government and Binding Theory framework. The compound verb *dụ́-pụ̀* 'lead out' in (4c) 'are made possible by transformations' (Mbah, 2005, 590) and the meaning of the compound derives from the structure. Anyanwu (2005) evaluates the compound verb *mmé-dhà* 'make-fall' in (4d) within the Principle and Parameters framework and concludes that the causative reading of the verb *mmé-dhà*à is the result of syntactic derivations from a bi-clausal structure. The consistent idea in

(4a–d) is that verb compounds derive their meaning from syntactic derivations and structures.

The objective of this section is to present data and analysis which account for the fact that the meaning of a verb compound is determined by the context of usage of the verb in the language. The three main points of articulating this objective include:

- The fact that verb compounds are derived from two lexemes to form a word. This point is motivated by the discussions of the terms lexeme and compound in Aronoff (1994); Bauer (2001); Plag (2003); Lieber (2004); Booij (2005); Guevara & Scalise (2009); Scalise & Vogel (2009).
- The argument of the verb compound. This position inclines towards Bolozky (1999, 7) who argues that the meaning of a compound is not derived from the form taken by the compound but by the context of usage.
- The inherent temporal properties of the verb also known as *Aktionsart*.[3] This includes the primitive building blocks of the verb, which combine with abstract elements to derive the contingent meaning of the verb.

4 Igbo verb compounds in Role and Reference Grammar

The verb compounds in the database each comprise of two lexemes that combine to form new structures with new meanings determined by the arguments of the verb in a syntactic context. The meaning of the verb is determined by the inherent temporal properties (*Aktionsart*) of the resultant verb. The *Aktionsart* depicts the conceptual boundaries of the event represented by the verb which brings about their semantic classification.

This classification results in five verb classes, following the RRG analysis. These classes are: state, achievement, accomplishment, active achievement and semelfactive. The rest of this section discusses the syntactic representation of these verb compound classes. These classes comprise state, achievement, accomplishment, active achievement and semelfactive verb compounds. There are no morphological markings for the causative verbs in the data.

3 *Aktionsart* refers to intrinsic core features of the lexicon while aspect is syntactically configured. *Aktionsart* is not indicated in the syntax of the language but have to do solely with the meaning of verbs and predicates in relation to time. For Igbo, the imagined stream of time of an event is an intrinsic property of the verb and is not signalled by morphemes. Aspect is indicated by morphemes in Igbo.

4.1 State verb compounds

State verbs normally encode atelic events. The verb compounds in Sections section 4.1.1 and section 4.1.2 semantically represent static events that are non-dynamic and inert. The lexical representations of the events the verbs depict follow the theoretical orientation of RRG. These representations are presented for each clause following the universal semantic conventions of RRG.

4.1.1 Compositions with the *jú* lexeme

The clause presentations in examples (5b–c) include illustrations of the combination of the lexeme *jú* 'fill' ' with lexemes that function as activity verbs. This combination results in state verbs. Example (5a) indicates that *jú* morpho-phonologically functions as a result state predicate in the clause structure. This is illustrated by the construction shown in (5a). In this construction, the verb takes only one argument *Ụmụ̀ áká* 'children' which is the actor because it participates in effecting the event denoted by the verb. The emphasiser morpheme *èjú* is not an argument of the verb but only functions to give lexical integrity to the verb.

(5) a. *Ụmụ̀ áká* jù-rù *èjú*.
children fill-IND EMPH
'Children are all over the place/Children abound.'
b. *Há rì-jù-rù àfọ́*.
3PL eat-fill-IND stomach
'They are sated with food.'
c. *Ànyí fụ̀-jù-rù ànyá*.
2PL see-fill-IND eye
'We were amazed today.'

The combination of the result state predicate *jú* with lexemes that function morpho-phonologically as activity verbs in clauses, results in verb compounds that lexically represent state events. In other words, the lexeme, *rí* meaning 'eat' in a syntactic context, when combined with the result state predicate *jú* 'fill' forms the verb compound *ríjú* with the meaning 'satiate.' This is demonstrated in example (5b). The construction is represented in (5b). It shows that the subsequent verb compound is a result state predicate. Following Van Valin (2005) the argument *há* '3PL' in the logical structure has the semantic role actor. The noun *àfó* is a complement, and not argument, of the verb that functions to give it conceptual integrity as previously explained for (5a).

A similar analysis goes for the result state predication in (5c). In this example, the lexeme *fụ́* functions in a syntactic context as the verb 'see' and when combined with *jú* forms the compound *fụ́jú* 'amaze.' The construction of the verb in (5c) shows that the verb takes only one argument, ànyí '2PL', which is the actor in the clause. The noun *ànyá* 'eye' functions as a complement of the verb as previously explained.

4.1.2 Compositions with the *pụ́* lexeme

In example (6a) below, the lexeme *pụ̀* 'exit' is a locational predicate in the clause. Here the predicate takes only one argument, the actor *Ọ́*. When *pụ̀* combines with lexemes that are syntactically activity verbs, as demonstrated in (6b–c), it results in state predicates.

(6) a. *Ọ́ pụ̀-rụ̀.*
3SG exit-IND
'S/he is outside.'

b. *Óbì má-pụ̀-rụ̀ ḿ.*
heart leap-exist-IND 1SG
'I'm disconcerted.'

c. *Ọ́ mḭ́-pụ̀-rụ̀.*
3SG slip-exit-IND
'S/he sneaked out.'

In (6b) the lexemes *má* 'leap' and *pụ̀* combine to form the verb *mápụ̀* 'disconcert' in a syntactic context. The construction indicates that the verb *mápụ̀* takes one argument *óbi m̀*[4] 'my heart', which is the undergoer.

In example (6c), the lexemes *mḭ́* 'slip' combines with *pụ̀* to form the compound *mípụ̀* 'sneak out' in the clause. The construction represents the fact that the result state predicate *mḭ́pụ̀* 'sneak out' takes only one argument *ọ́* '3SG' which is the actor.

4.2 Achievement verbs

Achievement verbs describe rapid events that have endpoints. The verb compounds discussed in Sections sections 4.2.1 to 4.2.3 represent events depicted by achievement verbs in Igbo.

4 The voiced bilabial nasal stop, ḿ, is the first possessive pronoun.

4.2.1 Compositions with the *fè* lexeme

The lexeme *fè* functions as an activity verb 'fly' in a simple clause as shown in (7a). In (7a) the construction demonstrates that the verb *fé* 'fly' takes two arguments: the actor *ánwụ́ nta* and the undergoer *ntí m*. When this activity verb is composed with other activity verbs the resultant verbs represent achievement verbs in clause and logical structures. This is shown in examples (7b–c). In (7b) the lexeme *kwá*, which is an activity verb meaning 'pack' in a syntactic structure combines with *fè* to form the compound *kwáfè* 'move out.' The construction shows that the ensuing verb compound takes two arguments, which are the actor *h'a* '3PL' and undergoer *ébé ọzọ* 'another place.' A similar syntactic situation is represented in (7c) where the activity verb *nyé* combines with *fè* to form the verb compound *nyéfè* 'give in excess.' The verb takes two arguments, the actor *òbí* and the undergoer *Àdá* as shown in the construction in (7c). The noun *égó* is the complement of the verb and not its argument.

(7) a. *Ánwụ́ ńtà fè-rè nà ńtì ḿ.*
Mosquito fly-IND in ear 1SG
'A mosquito flew about my ear.'
b. *Há kwá-fè-rè n'ébé ọ̀zọ̀.*
3PL pack-fly-IND in_place another
'They have moved out to some other place.'
c. *Òbí nyé-fè-rè Àdá égó.*
Obi give-fly-IND Ada money
'Obi gave money to Ada in excess.'

4.2.2 Compositions with the *dà* lexeme

The word *dà* in (8a) is also an activity verb. It takes one argument. In the examples (8b) and (8c) the verb *dà̃* combines with the activity verbs *rí* 'eat' and *gụ́* 'read' to form the verb compounds *rídà* 'render bankrupt' in (8b) and *gúdà* 'peruse' in (8c). The constructions in (8b–c) indicate that the verbs take two arguments (actor and undergoer) in each clause.

(8) a. *Ọ̀ dà-rà gwóm.*
3SG fall-IND IDEO
'It fell with a thud.'
b. *Ézè rí-dà-rà ọ̀gá yá.*
Eze eat-fall-IND master 3SG
'Eze rendered his master bankrupt.'

c. *Òbí gụ́-dà-rà ákwụ́kwọ́ áhụ̀.*
Obi read-fall-IND book DEM
'Obi perused that book.'

4.2.3 Compositions with the *wá* lexeme

The account of the verb compounds in this section follows the same pattern of description in section 4.2.1 and section 4.2.2 above. The verb *wá* 'split' in (9a) is an activity verb that forms achievement verbs with other activity verbs. Therefore, in (9b–c) the resultant verb compounds *tìwá* and *dàwá* are achievement verbs. The constructions in (9b–c) respectively, show that the verbs take two arguments. These two arguments are actors and undergoers, with the actors preceding the verbs and the undergoers following the verbs in the constructions.

(9) a. *Ọ̀ wà-rà ńkú.*
3SG split-IND firewood
'S/he hewed firewood.'
b. *Ọ̀ tì-wà-rà éféré.*
3SG hit-split-IND plate
'S/he broke the plate.'
c. *Ùdà égbé áhụ̀ dà-wà-rà m̀ ńtì.*
sound gun DEM fall-split-IND 1SG ear
'The sound of that gun is deafening.'

4.3 Accomplishment verbs

Accomplishment verbs differ from achievement verbs in terms of the duration of the events represented. While achievement verbs describe instantaneous events, accomplishment verbs describe events that take a longer process to complete. However, accomplishment verbs are also telic verbs. The verb compounds in sections 4.3.1 to 4.3.4 showing accomplishment verbs result from the composition of a lexeme to form the verbs in the syntax.

4.3.1 Compositions with the *bá* lexeme

Example (10a) shows the occurrence of the lexeme *bá*, an achievement verb in the construction. The verb takes one argument which is the actor. Nevertheless, in example (10b) a lexeme *rị́* functioning as an activity verb meaning 'crawl' com-

bines with *bà* 'enter' to form the compound *rị́bà* 'creep.' The construction in (10b) shows that the resultant verb is an accomplishment verb with an argument that is an actor. For (10c) the achievement verb *dà* 'fall' combines with *ba* to form the verb compound *dábà* 'fit' which is an accomplishment verb. The construction in (10c) shows that the verb takes one argument which is the actor *égwù áhù* 'The action of playing that kind of music'. Therefore, the actor is the action of playing that kind of music for that occasion.

(10) a. *Ọ́ bà-rà n'ụ́lọ̀ yá.*
3SG enter-IND in_house 3SG
'S/he entered his/her house.'
b. *Ésú áhù rị́-bà-rà n'ímé òhíá.*
millipede DEM crawl-enter-IND inside bush
'That millipede crept into the bush.'
c. *Ègwú áhù dá-bà-rà àdábá.*
music DEM fall-enter-IND EMPH
'The music fits the occasion / dance.'

4.3.2 Compositions with the *lá* / *ná* lexemes

The lexemes *lá* / *ná* functions as achievement verbs (11a). In combination with the activity verbs *dú* 'guide' (11b), *gbá* 'move' (11e) and *kù* 'carry' (11c) the resultant verb compounds will be the accomplishment verbs *dùnà* 'accompany,' *gbàlá* 'flee' and *kùná* 'return' as shown in (11b–e). The construction in (11a–c) show that the verbs take two arguments, while does in (11d–e) take only one.

(11) a. *Obi là-rà ụ́lọ̀.*
Obi return-IND house
'Obi has returned home.'
b. *Ézè dù-nà-rà àdá yá.*
Eze accompany-return-IND daughter 3SG
'Eze accompanied his daughter home.'
c. *Àdá kù-nà-rà nwá há.*
Ada carry-return-IND child 3PL
'Ada returned their child.'
d. *Nwá áhụ̀ gbà-à-rà.*
child DEM move-return
'That child fled (home).'
e. *Nwá áhù gbà-là-rà.*
child DEM move-return-IND
'The child fled (home).'

4.3.3 Composition with the *gbú* lexeme

Similarly, the examples in (12a–c) and (13a–b) in section 4.3.4 would be argued for in the light of the preceding discussion. Example (12a) comprise the lexeme *gbú* functioning as an achievement verb meaning 'kill' in the clause. The construction in (12a) indicates that the verb takes two arguments. The actor *Ó* '3SG' and the undergoer *ágú* 'lion.' When this lexeme is compounded with other achievement verbs like *rí* 'eat' (12b) and *wọ̀* 'cheat' (12c) result in the accomplishment verbs *rígbú* 'swindle' and *wògbù* 'defraud.' The examples (11d–12c) illustrate the argument structure of the verbs, where they both take two arguments. In example (12b) the actor is *Ézè* while the undergoer is *ọ̀gá yá*. In (12c) the actor is *Ézè* while the undergoer is *Òbí*.

(12) a. *Ó gbù-rù ágú*.
3SG kill-IND lion
'S/he killed a lion.'
b. *Ézè rí-gbù-rù ọ̀gá yá*.
Eze eat-kill-IND master 3SG
'Eze swindled his boss.'
c. *Ézè wọ̀-gbù-rù Òbí*.
Eze cheat-kill-IND Obi
'Eze defrauded Obi.'

4.3.4 Compositions with the *nyé* lexeme

The example in (13a) is similar in explanation to (12a) in the sense that the lexeme *nyé* which means 'give' is an achievement verb, and when it combines with activity verbs like *sí* 'cook' (13b) and *nọ̀* 'stay' (13c), it results in the verb compounds *sìnyé* 'put on fire for cooking' and *nọ̀nyé* 'stand by.' The lexeme *nyé* takes three arguments in (13a). However, in (13b–c) the resulting verb compounds have comitative readings. The constructions in (13b–c) show that the resulting verb compound take actor and undergoer respectively. In (13b) the arguments include the actor *Ó* and the undergoer *nrí* while in (13c) the actor is *Òbí* and the undergoer is *Àdá*.

(13) a. *Ó nyè-rè há égó*.
3SG give-IND 3PL money
'S/he gave them some money.'
b. *Ó sì-nyè-rè nrí*.
3SG cook-give-IND food
'S/he has placed some foodstuff on fire for cooking.'

c. *Òbí nọ̀-nyè-rè Àdá.*
Obi stay-give-IND Ada
'Obi stood by Ada.'

4.4 Active Accomplishment

Active accomplishment verbs portray activity verb events with conceptual boundaries. They are composed of an activity predicate that represents a telic event. The lexemes cum verb *gá* 'go' in (14a) is an achievement verb that takes one argument, the actor *Òbí* as shown in (14a). In (14b–c) the verb *gá* 'go' combines with the activity verbs *bú* and *dé* respectively to form *bùgá* 'take to' and *dègá* 'write to.'

(14) a. *Òbí gà-rà úgbó.*
Obi go-IND farm
'Obi has gone to the farm.'
b. *Há bú-gà-rà égó há n'ụ́lọ̀ àkụ̀.*
3PL carry-go money 3PL to_house wealth
'They took their money to the bank.'
c. *Òbí dè-gà-ra Àdá ákwụ́kwọ́.*
Obi write-go-IND Ada book
'Obi wrote a letter to Ada.'

The construction in (14b) shows that the verb *bùgá* takes two arguments, the actor *há* and the undergoer ụlọ àkụ̀. The noun phrase *égó há* is the complement of the verb. Similarly, the verb *dègá* in (14c) has two arguments.

4.5 Semelfactive verbs

Semelfactive verbs denote events without much temporal duration. The verb compounds in (15b–d) include verbs that represent events where the arguments do not experience a change of state after the event. Following the method of analysis so far, example (15a) represents the lexeme cum verb bìé 'cut' which combines with achievement verbs to form verb compounds with semelfactive readings (15b–d).

(15) a. *Ókwú é-bìé.*
talk AGR-cut
'The discussion is over.'
b. *Òbí nyé-bì-rì nwá yá égó.*
Obi give-cut-IND child 3SG money
'Obi doled out money to his child.'

c. *Àdá tá-bì-rì ányá yá.*
Ada bite-but-IND eye 3SG
'Ada blinked.'
d. *Érírí áhù tí-bì-rì.*
rope DEM beat-cut-IND
'That rope cut into two.'

In (15b) the verb compound *nyé* 'dole out' takes two arguments *Òbì*, the actor, and *nwá yá* 'the undergoer'. In (15b) the verb compound nyé-bì ' 'dole out' takes two arguments, *Obi* the actor and *nwá yá* the undergoer. This is represented in the construction of (15b). In (15c) the verb *tábì* from the composition of the lexemes *tá* 'bite' and bí 'cut' takes one argument which is *Ada* as shown in the construction. (15d) in the same vein shows that the verb *tíbì* 'pull out' formed from the lexemes *tí* 'beat' and *bí* take one argument. This argument is the undergoer.

4.6 Summary of the section

The objective of this section has been to argue for the fact that, the meaning of a verb compound in Igbo is determined by the native speaker's intuition, as opposed to being derived solely from its morpho-syntactic configuration. For this section, therefore, verb meaning is usually derived from the interaction of the syntax, semantics and the linguistic situation.

The section has implications for other multi-verb construction like the SVC. In the first instance it represents a paradigm shift from the notion of the verb-verb compound in the previous approaches to the Igbo SVC. These previous approaches, as would be described in the next section, presented verb-verb compounds as simply juxtaposed verbs with the meaning consisting of what the analyst imputes to the juxtaposition. The configurational approach of previous studies, more or less, detracts from the native speaker's intuition because of the abstract nature of syntactic derivations.

Since RRG has been found suitable for describing Igbo verb compounds, it translates that the theory has cross-linguistic relevance. As far as I know, this is the first study of Igbo verb compounds with an RRG framework. This has implications for the theory and Igbo syntax. RRG could be further employed in discussing some open questions in Igbo syntax. This includes the serial verb constructions which is the focus of section 6 below. The descriptive methodology within RRG would provide insights on the syntactic issues of SVCs with specific regards to the intuitions of the native speaker.

5 Serial Verb Constructions (SVC)

A string of concatenated verbs devoid of the features of verb compounds occur in simple Igbo sentences. The term serial verb construction coined by Stewart (1963) for Akan language is used to describe this phenomenon. A Serial Verb Construction (SVC) is a multi-verb construction according to Lord (1993). Collins (1997, 462) gives the widely cited definition of SVCs in Kwa languages, "as a succession of verbs and their complements (if any) with one subject and one tense value that are not separated by any overt marker of coordination or subordination." Déchaine (1993) confirms that SVCs are common in the Kwa languages of West Africa. Durie (1997) claims that the typical SVC comprise a series of two or more verbs which act more or less like a single verb in a simple sentence. Ameka (2005, 2) identifies four criteria for distinguishing an SVC from other multi-verb constructions. They are: (i) there is no marker of syntactic dependency between the verbs in series, (ii) there is sharing of at least one argument between the verbs in series (iii), the verbs are seen to be related (iv) each of the verbs in series can function independently in a simple clause. Aikhenvald (2006, 3) proposes an approach that includes a continuum to the definition of the SVC. This approach gives the archetypal SVC the features of argument sharing and the constitution of a single event. Aikenvald suggests that the single event in the SVC is the motivation for the argument sharing features which represents cohesiveness in perception. This is in tune with the conception of the SVC by Foley & Van Valin (1984, 189) as constructions in which verbs sharing a common core argument are merely juxtaposed with no complementisers or intervening conjunctions.

Haspelmath (2016) seems to conclude that there is no agreement by scholars on the definition of SVCs. Haspelmath (2016, 292) proposes what he calls a narrow definition of SVCs. For him, the SVC consists of a single clause with multiple independent verbs. There is no element linking the verbs and no predicate argument relation between the verbs. This proposal departs from the leading characterisation of SVCs in the literature. Haspelmath (2016) settles for what is termed a comparative definition devoid of the broadness of earlier definitions, which have the tendency to include constructions that are not SVCs in the research tradition of the SVC. For him, broader definitions do not allow testable generalisations. The proposal is that Linguists should offer a particular definition for a particular language and work with that definition. This paper follows a range of phenomena spelt out in Haspelmath (2016) in order to explain the Igbo SVC phenomenon.

In the first place, the verbs in an SVC should be compositional; therefore, the meaning of the SVC should be determined by the compositional meaning of the verbs in the construction. Hence, the verb compounds analyzed in section 1 above

are excluded from Igbo SVCs. In addition, SVCs should consist only of a single clause with singleness being confirmed by a single negatability. In other words, the negation marker should have scope over all the verbs in the SVC. Again, SVCs consist of verbs that can stand alone and are dynamic in the expression of events. These verbs do not need special coding to occur in a construction. This excludes Igbo verbs that require special morphological coding to be used in predication. Finally, the SVC should have no linking element and the verbs should not have a predicate-argument relationship.

5.1 Previous Studies of Igbo SVC

Prominent studies on Igbo SVCs include Lord (1975); Uwalaka (1982, 1995); Ndimele (1996); Déchaine (1993); Okorji & Mbagwu (2008); Amaechi (2013); Onuora (2014) and Ndiribe (2019). The abiding approach in these studies has always been the adoption of the framework of generative grammar. Emenanjo (1978, 2015) also has the underpinnings of the generative approach. These studies have mostly focused on establishing the formal status of Igbo multi-verb constructions as either SVCs or consecutivisation constructions within a generative grammar framework. In the literature, consecutivisation is defined as the occurrence of two verbs in series with no overt connective morpheme between them or an intervening variable between them. Based on this definition, therefore, the perceptible difference between an SVC and a consecutivisation construction is the fact that the verbs in SVCs do not form verb compounds, whereas in consecutivisation constructions the verbs are able to form verb compounds. Example (16) below illustrate consecutivisation constructions.

(16) a. *Ó gbà-jè-rè ụ́lọ̀ ākwūkwọ̄.*
3SG move-go-IND house school
'S/he ran to school.'

b. *Òbí tù-fù-rù mmā.*
Obi throw-out-IND knife
'Obi threw away a knife.'

The typical meaning ascribed to these constructions is given in the translation of the examples. In (16a) the lexemes *gbá* 'move' and *jé* 'go' are said to form a combination termed a compound and are imputed with the meaning of 'run to' based on the combinatorial structure.

The morpheme *gbá* adds the meaning of 'hasten' when affixed to activity verbs. Therefore, the translation of (16a) is 's/he hurried to school' and not 's/he

ran to school.' In other words, the combination of verbs in the example (16a) is not a compound but a juxtaposition of verbs.

Equally, in (16b) the lexemes *tú* 'throw' and *fú* 'lose' form a combination and are given the meaning 'throw out' based on the combination. All the same, the native speaker intuition will determine the meaning to be 'lose'. Therefore, the translation of (16b) is 'Obi lost a knife' and not 'Obi threw away a knife.' Therefore, (16a–b) illustrate that the concept of consecutivisation in Igbo does not indeed demonstrate verb compounds in the language.

Nevertheless, research on Igbo multi-verb constructions focuses solely on SVCs with the issue of consecutivisation being incidental. The issues frequently discussed are coordination, complementation, and adverbial adjunction in SVCs. Emenanjo (2015, 541) establishes the features of the Igbo SVC as 'a complex syntactic structure internally made up of a series of verbs with their complements which go together without an overt linker or conjunction.' This description is updated from Emenanjo (1978, 200) where the SVC is defined as a 'complex verbal construction in which two or more independent or otherwise independent constructions of the same type are linked in special ways.' Emenanjo (1978, 2015) definition has significantly motivated the conceptualization of Igbo SVCs in Igbo grammar. This study adopts this definition in the further analysis of Igbo SVCs within the RRG framework.

Onuora (2014) is possibly the most comprehensive attempt on the issue and establishes semantic classes of Igbo SVCs and consecutivisation constructions. These classes include Instrumental, Accompaniment/Comitative, Directional, Manner, Purpose, Comparative, and Resultative. Others are the Benefactive and Simultaneous SVCs and consecutivisation constructions. Crucially, in some of these semantic classes, there are no examples of consecutivisation but only SVCs. Nevertheless, all of the classes have examples of SVCs. The constructions in (17) below illustrate typical examples of Igbo SVCs in the literature.

(17) a. *Chídị̀ wè-rè ōsīsī kụ́-ọ́ Óbi.*
Chidi take-IND stick hit-IMP Obi
'Chidi hit Obi with a stick.'

b. *Chídị̀ e-wè-ghị ōsīsī kụ́-ọ́ Óbi.*
Chidi FOC-take-NEG stick hit-IMP Obi
'Chidi didn't hit Obi with a stick (but with another thing).'

c. *Chídị̀ bù-rù ībù, dị̄ ógōlōgō kárīa Īke.*
Obi be-IND fatness COP tallness SUP Ike
'Obi is fatter and taller than Ike.'

d. *Há lọ̀tà-rà ī-gbā ńkwū.*
3PL return-IND INF-fetch wine
'They returned home for the traditional wedding.'

In sentence (17a), the first verb is *wè* 'take' and the second is *kụ́* 'hit.' The two verbs are said to be in series. The indicative mood marker is the suffix *-re*, on the first verb and it has scope over the first verb only. While the imperative mood marker is the suffix *-o* is on the second verb with scope over the second verb only. The fact that there is no shared mood is an indication that there are two clauses involved here. Although example (17a) is depicted to be a single clause in the literature, the native speaker intuition negates that concept. The structure is biclausal viz. *Chídị̀ wèrè ōsīsī* 'Chidi took a stick' and *kụ́ọ̄ Óbi* 'hit Obi.' This will be straightforwardly explained with the RRG theory of clause linkage in section 6. Moreover, following the proposals of Haspelmath (2016), example (17a) does not represent a single clause. Single negatability is the marker of singleness. For (17a), this is not so. The negative construction in (17b) is interpreted to mean that the negative marker, *-ghị*, has scope over the first verb only and not the whole construction. It is indeed a negative focus marker. Therefore, the lack of a shared mood and shared negatability, gives the indication that (17a) may not be an SVC in accordance with the cross-linguistic study of SVCs.

The verbs in (17c) are not dynamic or activity verbs. Indeed they are copulas that require special morphological coding in any construction. For example, *bù ībù* 'be fat' and *dị̄ ógōlōgō* 'be tall' occur in this code in all constructions. There is no independent occurrence of the roots *bu* or *dị*. Yet again, *karia* is a superlative marker and not a verb. So there is no verb in series in (17a). There are two clauses in (17d), *há lọ̀tà-rà* 'they returned' and *ī-gbā ńkwū* 'to fetch wine.' The verbs are activity verbs but are in a predicate-argument relationship between the verbs. The first verb *lọta* 'return' is the predicate in the clause with *igba nkwu* being an argument. The indicative mood of the first verb has no scope over the second verb which is actually an infinitival clause. Besides the native speaker knows the sentence to contain two separate events and two clauses. This analysis shows that example (17d) does not represent SVC within the crosslinguistic conception of the term. The explanation of (17a–d) indicates that structures termed SVCs in Igbo may indeed be complex constructions with some syntactic, semantic and pragmatic relationship. The RRG theory of clause linkage gives a straightforward account of these constructions for Igbo. This is the focus in section 6. However, in section 5.2 below I present the typical example of coordination constructions.

5.2 Coordination Constructions in Igbo

The following examples in (18) below depict coordination constructions in Igbo.

(18) a. *Àdá gụ̀-rụ̀ ákwụkwọ mà nwé ézigbo òmùmé.*
Ada read-IND book CONJ have good behavior
'Ada is educated and of good behavior.'
b. *Há gbà-rà égwu mà ríé nrí.*
3PL dance-IND song CONJ eat food
'They danced and ate some food.'

In example (18a) the clauses are *Àdá gụ̀-rụ̀ ákwụkwọ* 'Ada is educated' and *nwé ézigbo òmùmé* 'has good character.' In (18b) the clauses are *Há gbà-rà égwu* 'they danced' and *ríé nrí* 'ate food.' The *mà* morpheme is a clause linkage marker in coordination constructions. The stability of the low tone on the mà morpheme is evident in these constructions and indicates that the two clauses are independent of each other. Otherwise the tonal dynamics of the clause would affect the tone. Note that in (18a) *Adá* is the privileged syntactic argument in the second clause *nwé ézigbo òmùmé*. Again, in (18b) *há* is the privileged syntactic argument of the second clause *ríé nrí*.

On the other hand, the subordinate clause contains 'grammatically dependent constituents' in which the main clause is modified by one or more of the grammatically dependent constituents. This dependent constituent is introduced by a subordinating conjunction. Example (19) below illustrate subordinating conjunctions in Igbo.

(19) a. *Òbí lụ̀-rụ̀ Àdá nà Ọ̀ hụ̀-rụ̀ yá n'ánya.*
Obi marry-IND Ada COOD 3SG see-IND 3SG in_eye
'Obi married Ada for he loves her.'
b. *Òbí lụ̀-rụ̀ Àdá màkà nà Ọ̀ hụ̀-rụ̀ yá n'ánya.*
Obi marry-IND Ada COOD 3SG see-IND 3SG in_eye
'Obi married Ada because he loves her.'
c. *Òbí lụ̀-rụ̀ Àdá n'ĩhì nà ó mà-rà mmá.*
Obi marry-IND Ada COOD 3SG COP-IND beauty
'Obi married Ada for she is beautiful.'

The clause linkage markers in the constructions are the morphemes *nà*, *màkà nà* and *n'ĩhì nà*. These morphemes are varied based on the dialect in question. They function to introduce the subordinating clauses which give the reason or conditions for the event in the matrix clause. In other words they are adverbial. In (19a) the clauses are *Òbí lụ̀-rụ̀ Àdá* 'Obi married Ada' and *Ọ̀ hụ̀-rụ̀ yá n'ánya* 'He loves her.' The *nà* clause linkage marker introduces the second clause in the construc-

tion and gives the reason why the action in the first clause was done. The same analysis can be given for (19b–c). The *màkà nà* clause linkage marker in (19b) introduces the second clause which is a subordinating clause and gives the reason for the action in the first clause. In (19c) *n'ihì nà* functions the same.

6 An RRG Account of Clause Linkage in Igbo

The constructions in (18) and (19) above shed light on the typical Igbo SVCs in (17) above. For example the clause linkage marker *mà* can function to link the clauses in (17a). This is represented as (20a) below. It can also function to link the clauses in (17b) represented as (20b) below. In (17d) the clause linkage markers *maka* or *n'ihi* can introduce the second clause as a subordinating clause. This is illustrated in (20c) below.

(20) a. *Chídị̀ wè-rè ōsīsī mà kụ́-ọ́ Óbi.*
Chidi take-IND stick CLM hit-IMP Obi
'Chidi took a stick and hit Obi.'

b. *Óbì bù-rù ībù mà dị̀ ógōlōgō kárīa Īke.*
Obi be-IND fatness CLM COP tallness SUP Ike
'Obi is fatter and taller than Ike.'

c. *Há lọ̀tà-rà màkà/n'ihì ī-gbā ńkwū.*
3PL return-IND CLM INF-fetch wine
'They returned home for the traditional wedding.'

Following the RRG account of clause linkage, the relations arising among these three sentences include coordination and subordination. Examples (20a–b) are coordination constructions while (20c) is an instance of subordination. These relations are illustrated in figures 1 to 2. Figure 1 represents the coordination relations of multi-verb constructions while figure 2 (on page 47) represents the subordination.

Following the crosslinguistic conceptualization of serial verb constructions and the literature on Igbo SVCs, it seems that Igbo does not account for the phenomenon. The analysis of the concept of verb compounds within the RRG framework clarifies the conceptualization of Igbo SVCs. Therefore, the hitherto known concepts of consecutivisation and SVC which depends on the concept of verb compounds need to be re-examined. For the occurrence of verb compounds define consecutivisation constructions while their non-occurrence define Igbo SVCs. Typical examples of Igbo SVCs have grammatical properties that are not consonant with the concept of SVCs in other languages where it is attested. The Igbo examples are

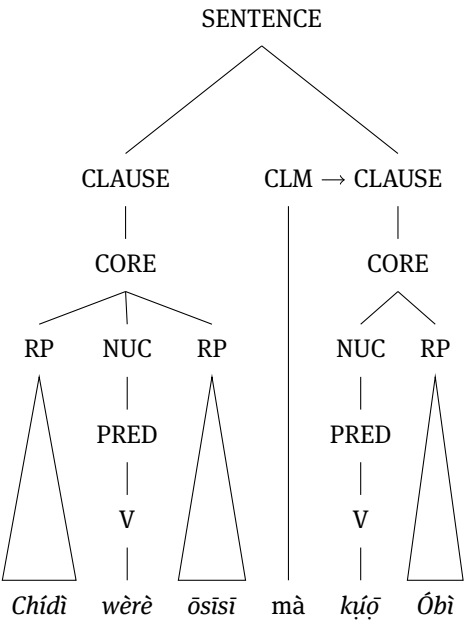

Fig. 1: Coordination in Igbo.

typically bi-clausal and also include verbs with special marking. There are also instances of SVCs with verbs in predicate-argument relationship. The RRG theory of clause linkage gives a straightforward account of the relations between the units of the clause in these constructions and depicts them as coordination and subordinating constructions.

7 Conclusion

This analysis has opened vistas for further research in complex clauses in Igbo such as the relative clause, coordinating and subordinating clauses and adverbialisation constructions. There is a dearth of literature on complex clauses in the language and the RRG clause linkage theory would be adequate for addressing the properties and issues of these clauses.

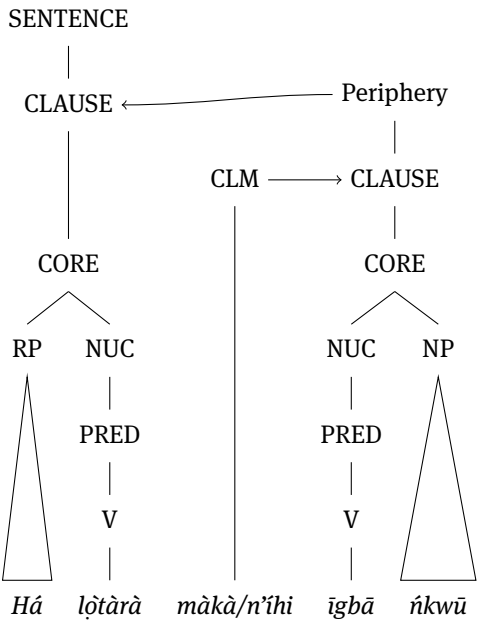

Fig. 2: Subordination in Igbo.

Abbreviations

AGR agreement marker
CLM clause linkage marker
COOD coordination
CONJ conjunction
COP copula
DEM demonstrative
DET determiner
EMPH emphasizer
FOC focus marker
IDEO ideophone
IMP imperfective
IND indicative
INF infinitive
PL plural
SG singular
SUP superlative

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Anna Riccio

The syntax-semantics interface of serial verb constructions in Kwa languages

1 Introduction

A large number of languages spoken around the world have verbs in series, or series/strings of verbs, that behave as a single predicate within the clause, without explicit linking elements of coordination, subordination, or any other form of syntactic dependence. Consider examples (1a) and (1b):

(1) a. *Sabuki kpɔ blɛfo pɔ* [Dangme]
Sabuki harvest.PERF maise sock.PERF
'Sabuki has harvested maize (and) socked (it).'
(Caesar, 2016, 38)

b. *mʊ̀-ná kòfí élútɔ̀ dì* [Efutu]
3SG-give kofi food eat
'S/he gave Kofi food (to) eat.'
(Agyeman, 2016, 261)

The verbs *kpɔ* 'harvest' and *pɔ* 'sock' in (1a) from Dangme (Kwa, Ga-Dangme; South-eastern Ghana) behave as a single predicate expressing one complex event composed by two single logically related events. The same occurs in example (1b). The verbs *ná* 'give' and *dì* 'eat' in Efutu (Kwa, South Guang; Southern Ghana) express two sub-events that are construed as a single whole. This phenomenon is known in the literature as "serial verb construction" (henceforth SVC) (Balmer & Grant, 1929), or "serial verbs" (henceforth SVs) (Ansre, 1966).

The earlier studies on SVCs date back to the second half of the 1800s. Since then, studies have been increasing over the years, but despite this growth, SVCs continue to be a challenge. Their intricate and complex nature in languages and their cross-linguistic comparison make them still vague, controversial and ill-defined phenomena. The lack of a systematic, large-scale examination and testing process certainly does not allow for the identification and analysis of SVCs (cf. Haspelmath, 2016). This is partially demonstrated by the most recent typological investigations in which SVCs definitions are often based on prototypical features rather than on strictly required properties (Aikhenvald, 2006;

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https://doi.org/10.1515/9783110795295-003

Bisang, 2009; Haspelmath, 2016, and many others). Making methodological decisions for distinguishing the types of SVCs not only from each other but also from other multi-verb constructions in and among languages can become a difficult undertaking.

One of the most widely cited prototype-based definitions in the literature has been provided by Aikhenvald (2006, 1):

> A serial verb construction (SVC) is a sequence of verbs which act together as a single predicate, without any overt marker of coordination, subordination, or syntactic dependency of any other sort. Serial verb constructions describe what is conceptualized as a single event. They are monoclausal; their intonational properties are the same as those of a monoverbal clause, and they have just one tense, aspect, and polarity value. SVCs may also share core and other arguments. Each component of an SVC must be able to occur on its own. Within an SVC, the individual verbs may have same, or different, transitivity values.

Her definition is undoubtedly useful for providing the reader an intuitive understanding of SVCs, but fails to precisely delimit the category.

Bisang (2009) also gives a survey of the typology of SVCs and various criteria for defining them. Based on the formal and semantic properties of SVCs proposed by Aikhenvald (2006), he deals with the following factors which are associated with a single event: shared grammatical categories, shared arguments, monoclausality, intonational properties, contiguity, wordhood, and marking of grammatical categories. Specifically, he requires objects to be shared. It should be noted that for some scholars "shared objecthood" is a significant feature for distinguishing SVCs from other multi-verb constructions (Stewart, 1963, 2001; Baker, 1989, among others). On the other hand, according to Aikhenvald (1999, 2006), arguments in SVCs need not necessarily be shared (Crowley, 2002, cf.). Bisang expands the criterion of single eventhood by claiming that Bohnemeyer's Macro-Event Property (MEP) may be the only feature that is useable cross-linguistically for testing the single eventhood and, consequently, defining an SVC. The MEP is a semantic property that assesses event representations in terms of their compatibility with temporal modifiers (Bohnemeyer et al., 2007; Bohnemeyer & Van Valin, 2017). Despite this statement, as Westermann (1930) pointed out long before him, he adds that the definition of an SVC is still correlated with the individual serializing language (Bisang, 2009, 811).

Haspelmath (2016, 307–311) observes that the concatenation of two or more verbs in languages is often defined as an SVC even when they have properties different from those of SVCs. Therefore, he investigates an SVC differently as a 'comparative concept', and proposes a 'practical' definition through the key components that he considers as suitable criteria to exclude a number of constructions that have been classified as SVCs in the relevant literature. He elaborates ten cross-

linguistic generalizations on SVCs that are partly reminiscent of some criteria proposed above, such as shared grammatical categories of tense, mood, and polarity value, single intonation contour, shared arguments, and transitivity value. In addition to these, he also suggests iconicity in cause-effect/sequential SVCs (cf. Riccio, 2017, 86–88). Unlike Bisang (2009) and Aikhenvald (2006), he excludes the criteria 'single predicate' and 'single event' that, according to him, are "impractical criteria" (Haspelmath, 2016, 306). He claims that there is no "objective way of identifying a single event", and the notion of 'single predicate' is unclear and ambiguous; furthermore, the lack of shared TAM values and arguments as well as that of the intonational properties of a monoverbal clause (and not of a sequence of clauses) do not exclude verbal constructions from the category of SVCs.

In a most recent study on SVCs, Lovestrand (2021) synthesizes the previous definitions and emphasizes disagreement and misunderstandings in the literature about verbhood, clausehood, and the status of morphosyntactic markers. Although the research on this topic is quite extensive, we are still far from defining agreed-upon formal criteria for the identification of true SVCs as a distinctive construction.

The aim of this paper is to discuss the predicate-argument structures and the logical structures of some Kwa SVCs that have in common with several languages, including those belonging to other language families. The syntactic and semantic analyses of the data are carried out through the syntax-semantics interface developed within Role and Reference Grammar (RRG), with particular attention to the Layered Structure of the Clause, the nexus types, and the Logical Structures of constructions (Van Valin & LaPolla, 1997; Van Valin, 2005). The main goal is to illustrate the usefulness of this theoretical approach for distinguishing SVCs not only from each other but also from other multi-verb constructions, such as covert coordinations (CCs) (Baker & Stewart, 1999; Stewart, 2001).

The paper is organized as follows. After this brief introduction, section 2 provides an overview of the main research topics on West African languages relevant to the current study, with particular attention to the terminological issue that often results in some degree of confusion. Section 3 presents the data investigated in this study. Section 4.1 describes the syntactic representations of SVCs within RRG. Section 4.2 briefly discusses the type of covert coordination (CC). Section 4.3 illustrates the syntax and semantic linking in SVCs. Section 5 concludes this paper.

2 SVCs in West African languages

Serial verb constructions are an areal feature in West Africa (cf. Dimmendaal, 2001; Creissels, 2000). The expression "serial verb(al) construction" was introduced by Balmer & Grant (1929), and later reintroduced by Stewart (1963) in the context of the study of Kwa languages.

Riis (1854, 103) was among the earliest to observe "a connection of sentences without any conjunction" within the same syntactic construction in Twi (Kwa, Akan; Southern and central Ghana), as in (2), and inspired later works on the topic:

(2) *Ẹkañno vo-tyo manso, afeyi vo-yẹ baakoñ*
formerly 3PL-pull variance now 3PL-make one
'Formerly they were at variance, now they agree.'

(Riis, 1854, 104)

The absence of a coordinator or subordinator (more generally a linking element) in SVCs is a feature underlined since the first documentation. Riis's definition is undoubtedly a rather broad definition, compared to the current ones, since it presents SVCs as simple juxtapositions of two independent sentences, or parts of them. The latter feature, along with the functional features, characterizes the coordinative constructions, especially if these are covert coordination constructions.

Among the scholars who deserve our attention in this study, we should mention Zimmermann (1858, 55–56) that observes a series of "verbal separable compounds" and "combinations of verbs with verbs [...] without conjunctions and without forming two sentences" in Ga (Kwa, Ga-Dangme; Southeast coast of Ghana). He classifies them into three different types of serialization. The first type in (3a) is formed by movement verbs, the second in (3b) by the verb 'give' (with a ditransitive function), and the third (3c) by an idiomatic construct:

(3) a. *e-nyĩeo ke-yaã Gã*
3SG-walk move-go Gã
'He walks (over) to Gã.'
b. *Ok wolo ne yahã onyontšo*
take book this go.give 2SG.master
'Give this book to your!'
c. *he noko ye*
have something eat
'to believe something'

(Zimmermann, 1858, 48, 49, 56)

Zimmermann notes that the combination *ke-yaã* 'move-go' in (3a) implies a definite process towards an end point, that is, the moment in which the event necessarily occurs. The verb *ok* 'take' in (3b) increases the verbal valency by adding the theme *wolo* 'book', since the verb does not license two object arguments in Ga. In (3c), the verbal combination *he …ye* 'receive …eat' has an idiomatic value that does not correspond to the sum of its elements.

The other scholar of our interest is Christaller (1875). In his didactic grammar of Twi, the section on coordinative constructions describes two types of verbal sequences. On the one hand, there are constructions formed by a verb from an unrestricted class, and a verb from a restricted class including a specification of the event, such as direction and orientation, valency-increasing, and so on. This first type is called by Christaller "essential combination". It denotes a single event in the sentence, as in (4a). On the other hand, he identifies constructions consisting of two (or more) open-class verb forms, that together designate a sequence of actions or simultaneous actions without linking markers. This second category is labeled as "accidental combinations", as in (4b):

(4) a. *O-guaré baà mpōa nó* [Twi]
3SG-swim come.PST shore DEF
'He swam to the shore.'
b. *Ye-soré-è ntém ko-ò ofie*
1PL-arose-PST quickly go-PST home
'We arose quickly (and) went home.'

(Christaller, 1875, 144, 145)

The series of verbs *oguaré* '3SG-swim' and *baà* 'come.PST' in (4a) conveys a simultaneous action in which *baà* 'come' performs the function that Christaller defines as "auxiliary" (in other cases, the auxiliary introduces a new topic). In these constructions, the auxiliary verb is formally coordinated by asyndesis with the main predicate, but it is semantically subordinate to it. Otherwise, the two predicates *yesoréè …koò* 'raise …go' in (4b) are semantically and formally coordinated without a conjunction (or repetition of the subject). Christaller's distinction is commonly recognized as subordination and coordination by other linguists.

Like his predecessors, Westermann (1907, 1930) defines serialization using the expression "combinations". In the description of Ewe SVCs, he pointed out:

> […] a peculiarity of Ewe is that we often find a row of verbs one after the other. The chief features of this are that all the verbs stand next to each other without being connected, that all have the same tense or mood, and that in the event of their having a common subject and object, these stand with the first, the others remaining bare […]
>
> (Westermann, 1930, 126)

SVCs involve a series of verbs (or verb-like constituents) that stand next to each other without an overt form of linkage. They have the same tense or mood, and have a common subject or object. However, it should also be pointed out that Westermann's description is actually applicable to various verbal constructions that differ from SVCs not so much in the arrangement of their constituents but rather as in the syntactic and semantic relationships they establish with each other and the functions they perform in the construction (such as clause-chaining constructions). He also reflects on other issues, still much discussed in the field of serialization, such as the inclination of serial verbs to become grammatical words. According to him, many verbs that follow one another in the same sentence can lose some typically verbal morphosyntactic properties and take on a prepositional, adverbial function, etc. He also raises a salient point: SVCs are a peculiarity of some languages, and therefore they require their own explanation and comment. This observation clearly contributes to the development of many definitions in the literature, sometimes characterized by incoherence in the use of linguistic terminology, as well as to the adoption of many different theoretical approaches to investigate them.

The systematic study of SVCs begins about a century later in the early 1960s. The focus was mainly on their syntactic features and the application of relevant theories to their syntactic representation (typically, within Chomsky's generative framework; Chomsky, 1957, 1965). Stewart (1963) describes Twi SVCs within the Transformational-Generative paradigm as mono-clauses that involve obligatory transformations deleting shared arguments to sequential verbs, each of which has full set of associated arguments (cf. also Bamgboṣe, 1974). It should be noted, however, that he uses the expression "serial verb construction" to refer to a wide range of constructions as normally occurs in Western Kwa studies, such as consecutive coordinations (cf. van Leynseele, 1975, 193). Boadi (1968) clams that SVs in Twi come from both coordinating and embedding source. He describes SVCs in Akan as a conjoined or an embedded verb phrases forming an internally coherent structure that contains identical tense, aspect, mood and polarity. Bamgboṣe (1974, 18) draws attention to syntactic sources of SVCs within the theoretical model of Transformational Generative Grammar. Unlike Stahlke (1970), he prefers to consider the modifying verb as a verb which acquires different functions when used in SVCs rather than analyzing it as an auxiliary/adverb homophone with verbs. Bamgboṣe (1982)) distinguishes between serial verbal constructions formed by a sequence of two lexical verbs, i.e., "linking" SVCs, and those consisting of concatenated VPs and a modifying verb, i.e., "modifying" SVCs. Only SVCs of the former type are derived from two or more underlying sentences through transformations, whereas those of the latter type are not. Therefore, he derives SVCs from sentences that involve coordinating and embedding structures; it depends on the language being

described. van Leynseele (1975, 196) call them "serializations" and "relational" serial constructions in Anyi, respectively. The latter are commonly qualified as "dative, benefactive, instrumental, comitative, directional" (van Leynseele, 1975, 196).

The terminology that has emerged from these early studies, as well as the different types of SVCs ranged from coordinate-like SVCs (that can be derived from coordinated clauses; cf. Osam, 1994) to modifying type SVCs, undoubtedly gave rise to issues that continue to be controversial over the years: we move from the distinction between "accidental combinations" vs "essential combinations" (Christaller, 1875), "serialization" vs "relational serial construction" (van Leynseele, 1975), "linking (coordinate)" vs "modifying (subordinate)" (Bamgboše, 1982) to the more recent distinction between "clause-chaining serialization" (or coordinate SVCs) vs "integrated SVCs" (Hellan et al., 2003).

The former express sequential events/chronological events, while each verb in integrated SVC expresses a part of this event. Most of the studies on West African languages, in particular the Kwa group, refer to these distinctions. Among the recent studies, we cite Abunya (2018) (Kaakye), Agyepong (2017) (Asante Twi), Defina (2016b,a) (Avatime), Caesar (2016) (Dangme), Agyeman (2016) (Efutu), Delalorm (2016) (Sɛkpɛlé), Fenuku & Šluinskij (2015) (Ewe), d'Almeida (2014) (Ewe), Bobuafor (2013) (Tafi), Morley (2010) (Ajagbe), Abubakari (2018) (Kusaal), Ameka (2009) (Likpe), Aboh (2009) (Gungbe, Igbo), Harley (2005, 2009) (Tuwuli), Dakubu & Esther (2006) (Gă), Larson (2003) (Baulè), Lefebvre & Brousseau (2002) (Fongbe); some of the SVCs in these languages are subjected to specific analysis in the next sections. Among these studies on Kwa languages, we may mention the analysis of SVCs within the RRG framework by d'Almeida (2014) in Ewe, Defina (2016b) in Avatime, and Caesar (2016) in Dangme. Agyeman (2016) also proposes the RRG framework as theoretical approach for future research on the Efutu SVCs. These studies are complemented by this volume's introduction and Agbo's work presented in this volume.

Despite various attempts to identify and classify the defining properties of SVCs, the considerable differences among languages belonging even to the same family, such as Kwa, make it difficult to identify a common West African type, as well as to constitute an adequate description to delimit any particular construction within languages, and also to recognize any cross-linguistically valid construction type. Ameka (2005, 2006), for instance, includes the following features in his definition of SVCs: no marker of syntactic dependency, VPs occur within the same temporal frame, VPs share the same mood, VPs can be formally marked for different aspect and modality categories, SVs can function as independent verbs in simple clauses (in the same form), all VPs in the series share the same syntactic subject with variation on its expression across the languages, VPs cannot be

formally independently negated, SVs can be individually focused or questioned, and SVs together with their arguments and adjuncts constitute a monoclausal construction. To this long list of parameters, he adds that some multi-verb constructions, especially overlapping clauses and consecutive constructions, may share common features with SVCs, such as absence of any marker of syntactic dependency, at least one argument sharing in a sequence, relationship among the VPs, or independent verb status of Vs in simple clauses (in the same form).

3 The data

The SVCs illustrated in this section are taken from Kwa languages. They are symmetrical constructions with SVs chosen from a semantically and grammatically unrestricted class. Their order may match the temporal succession of actions they denote. This iconic ordering is almost universal in SVCs expressing a sequence of actions and cause-effect relation; both of these types are examined in this study. The former may acquire purpose reading, and the latter a resultative one (cf. Aikhenvald, 1999, 2006). Their structural and semantic interdependence is described within the RRG framework in the sections 4.1 to 4.3. The following are some examples.

The SVCs in (5) are taken from Kaakye (Kwa, North Guang; Ghana's Lake Volta). Their structure and general features are similar to those listed in previous sections:

(5) a. *tìmù! ǹtɛ́ fé-mìkìdá wù*
INTJ then 2SG.SUBJ.HAB-fall_down die
'Tim! Then you fall down (and) die.'

b. *Ama ɛ́kà-dìká àgyìbí wʊ́ gyì*
Ama PERF-cook food DET eat
'Ama has cooked the food (and) has eaten (it).'

(Abunya, 2018, 252, 268)

Both constructions are monoclausal structures in which two independent predicates form a single unit. The monoclausality is a defining characteristic of SVCs. In (5a), V1 *mìkìdá* 'fall down' and V2 *wù* 'die' are adjacent and contiguous unaccusative verbs, semantically ordered: the second verb denotes the result of performing the action of the first one. The SVC designates a cause-effect relationship with a resultative reading between an active V1 and a stative V2. Each verb bears its own transitivity value: both are intransitive verbs. They share the same subject pronoun *fé-* '2SG.SUBJ.HAB' (same-subject sharing) and the habitual aspect.

Both are expressed once in the construction and have scope over the entire sequence of verbs. In Kaakye SVCs, aspect, negation and tense are expressed only once on V1, and have scope over the whole SVC (Abunya, 2018, 290). In the SVC in (5b), V1 *dɪ̀ká* 'cook' and V2 *gyì* 'eat' lexicalise actions representing common different salient events in serializing languages: [VP cook food] and [VP eat food]. The SVC denotes a natural sequence of events expressed by two verbs temporarily ordered in a precedence-consequence iconic relation (Gruber, 1992), and interpreted as a single culturally relevant and cohesive conceptual event (cf. Defina, 2016b). Generally, they imply an overarching goal "cooking for eating", that is, the actions required for achieving a task such as cooking a meal. Stewart (1998, 2001) calls this type of SVC "consequential SVC". The action of V2 is not a result directly caused by that of V1, but rather a more indirect consequence, the second step of an overall plan on the part of the agent (Stewart, 1998, 17). Each verb bears its own transitivity value, but both are transitive forms. The verbal components share the same subject *Ama* (same-subject sharing). Unlike the SVs in (5a), the SVs are non-contigous. They are interrupted by the presence of the shared direct object *àgyìbí* 'food' (same-object sharing). In Kaakye SVCs, when the verbal components share the same object, it is expressed only once as a full NP on V1 or as a resumptive object pronoun on the V2 (Abunya, 2018, 263). Again, the aspectual marker *ɛ́kà-* is expressed once and has scope over the entire SVC.

The examples in (6) are taken from Efutu:

(6) a. *mʊ̀-fɛ́ èkùtú ŋá ɕìká*
3SG-sell oranges get money
's/he sold oranges (to) get money.'

b. *mù-sṹ àtòbí ǹ wɪ̃̀ àɕɛ̀*
3SG-push child DET fall down
's/he pushed the child (and the child) fell down.'

(Agyeman, 2016, 261, 255)

Both SVCs in (6a) and (6b) are construed as signifying a sequential relation between the sub-events within an overall single event. Agyeman (2016) classifies (6a) as a sequential SVC. V1 *fɛ́* 'sell' and V2 *ŋá* 'get' basically involve a description of related subevents where the construction may acquire a purpose reading (cf. Aikhenvald, 2006). Sequential SVCs usually share at least one argument in common. The verbal components in (6a) share the same subject represented by the agreement marker *mʊ̀-* '3SG' which occurs with the V1. The SVs are independent lexical verbs, and non-contiguous. The object argument *èkùtú* 'oranges' interrupts the series of verbs. There is no object sharing, but multiple objects: the V1 *fɛ́* 'sell' has the object *èkùtú* 'oranges' which occurs after it, whereas the V2 *ŋá* 'get' has

the object *ɕìká* 'money' occurring after it. Multiple objects SVCs occur in other related Kwa languages (cf. Ameka, 2006). (6b) is a cause-effect SVC with a resultative value: the child falls down as a result of the pushing (Agyeman, 2016, 276). The construction involves a switch function with argument sharing: the subject of the intransitive V2 *wɨ̀ àɕè* 'fall down' is identical to the non-subject of the transitive V1 *sû* 'push'.[1] In all Efutu symmetrical SVCs, the following pattern occurs: verbal markers, including subject agreement, tense, aspect, mood and negation have been found to occur with initial component (Agyeman, 2016, 281). Consider example (7) that represents the negative counterpart of the SVC in (6b):

(7) *mù-ń-sû* *àtòbí ǹ* *wɨ̀* *àɕè* [Efutu]
3SG-PST.NEG-push child DET fall down
's/he did not push the child (and the child) did not fall down'
(Agyeman, 2016, 277)

The negation marker *ń-* 'PST.NEG' is prefixed to the verb-stem V1 *sû* 'push', and it takes the whole sentence in its scope, like the North Guang language group (cf. Schneider, 2018).

The following examples in (8) are from Sɛkpɛlé (Kwa, Na-Togo; Central Volta Region of Ghana):

(8) a. *bá-wɜ̂* *à-dí* *sá ɔ́* *bá-kpé*
3PL.NOM.PST-cook NCLL6 eat thing CL6.DEF 3PL.NOM.PST-put
'[...] they cooked (and) put (it) in the meals.'
b. *à-bó-sɔ* *à-bá* *kéŋké*
2SG.NOM.FUT-beat 2SG.NOM-break completely
'[...] you will beat (and) break (it) into pieces.'
(Delalorm, 2016, 451, 474)

Both SVCs in (8) constitute a resultant event. V2 *kpé* 'put' in (8a) indicates the result (or indirect consequence, as in (5b)) of the cooking action expressed by V1 *wɜ̂* 'cook'. In (8b), the act of beating something results in you breaking it completely (Delalorm, 2016, 474). In (8a), each transitive verb carries past tense marking. In Sɛkpɛlé, subject pronominals are marked concordantly on each verb, aspect, modality and negation are marked on the first verb, but each verb can have different aspect and/or modal marking (Delalorm, 2016, 451). The SVC is

1 This type of SVC is also defined as a switch-function directional SVC involving an initial transitive verb in V1 position followed by an intransitive directional verb in V2. In (6b), the (agent) argument of V1 moves the V1 (patient) argument, and V2 specifies the direction in which the V1 (patient) argument is moved (cf. Barbour, 2012, 349).

non-contiguous. The series of Vs is interrupted by the presence of the shared direct object *à-dísá* 'NCL6-eat_thing' (same-object sharing). Both SVs also share the same subject pronoun *bá-* '3PL.NOM.PST' (same-subject sharing). Example (8b) is a resultative SVC. Unlike (8a), there is a strong cause-effect relationship between the two contiguous verbs without time lapse between the eventualities that they express (Stewart, 1998, 17). Usually, in an SVC expressing result, if V1 is transitive, V2 will almost always be unaccusative, as in (8b). Both SVs share the same subject pronoun *à-* '2SG.NOM' (same-subject sharing). According to Delalorm (2016), resultative SVCs in Sɛkpɛlé do not involve a subject switch-function, as the Efutu SVC in (5b). The switch-function characterizes a bi-clausal construction and not an SVC, since the subjects of the latter must be identical. This remark seems to deviate from the typological classification of SVCs proposed by Aikhenvald (2006). The future/potential is marked once on V1 and it covers the entire scope of the clause.

Examples (9a) and (9b) are taken from Tuwuli (Kwa, Ka-Togo; Central Volta Region of Ghana) SVCs. Harley (2005) describes them as coordinate SVCs, by following Bamgbośe (1982):

(9) a. *o-du foe fɔ-tɔ*
2SG-push 3SG 3SG.REF-fall
'you pushed it (and) it fell'

b. *y-a-ya kafɔabi ka-tɔ ka-nya*
3SG-PRES.IMPV-buy fish IMPV-cook IMPV-eat
'he buys fish, cooks and eats (them)'

(Harley, 2005, 283, 439)

The SVs in (9a) express a cause-effect relationship (with resultative reading), and those in (9b) the culturally cohesive consequential action [VP buy fish] [VP cook fish] and [VP eat fish]. The construction in (9a) involves a switch function with argument sharing: the subject of the intransitive V2 *tɔ* 'fall' is identical to the non-subject of the transitive V1 *du* 'push', as in the Efutu SVC in (6b). The series of V1 *ya* 'buy' and V2 *tɔ* 'cook' in (9b) is interrupted by the shared direct argument *kafɔabi* 'fish' (same-object sharing). Harley (2005, 343) points out that a crucial property of SVCs in Tuwuli is the absence of an anaphoric pronoun as object of V2 referring to the object of V1. If it occurs, the construction is not an SVC. This is also one of the properties of the Anyi and Akan SVCs (van Leynseele, 1975). For instance, Stewart (2001)claims that the presence of a pronoun coreferential with NP2 of V1 after V2 in Edo SVCs distinguishes SVCs from covert coordinations (CCs) section 4.2.

Some of the previous SVCs will be analyzed within the RRG framework in section 4.1 and section 4.3.

4 Role and Reference Grammar framework

This section is concerned with only the elements from RRG theory which are relevant in the current analysis, such as the linking system from syntax to semantics (i.e., the syntax-to-semantics mapping). For a more detailed description of RRG, I refer to the volume's Introduction. Section 4.1 describes the Kwa SVCs syntactically, while section 4.3 look at them semantically, by carrying out them through the syntax-semantics interface. The RRG framework may also explain and highlight the difference between SVCs and non-SVCs, as illustrated in section 4.2.

4.1 Syntactic representation of SVCs

RRG syntactically represents constructions in terms of constructional schemas, including syntactic, morphological, semantic and pragmatic information. The constructional schemas are captured through the linking algorithms, e.g. the Layered Structure of the Clause, the Actor-Undergoer Hierarchy, and the Privileged Syntactic Argument.

The SVCs described in section 3 involve two levels of juncture, i.e. nuclear juncture and core juncture. In the first type, the nuclei combine to form a nuclear juncture with a single set of arguments expressing a single, complex event. Otherwise, a core juncture combines two or more cores within a single clause. The syntactic relations between nuclei or cores in these SVCs are cosubordinate. The cosubordination nexus involves constructions that are structurally coordinate but have a syntactic operator dependency occurring between the constructions (i.e., dependent coordination; Olson, 1981; Foley & Van Valin, 1984; Foley & Olson, 1985; Van Valin, 2000, 2005). In a cosubordinate construction, two of the same unit are joined together, but share an operator (Van Valin, 2005; Pavey, 2010).

Consider example (5a), repeated below for your convenience in (10):

(10) *tìmù*! *ǹtɛ́* *fé-mìkìdá* *wù* [Kaayke]
INTJ then 2SG.SUBJ.HAB-fall_down die
'Tim! Then you fall down (and) die.'

(Abunya, 2018, 252, 268)

The SVC in (10) is a monoclausal construction involving two lexical verbs with no linking element and a single core argument. The involved verbs *mìkìdá wù* 'fall down die' form a single predicate and create a new nucleus in terms of the layered structure in RRG, such that it functions as a single verb in terms of the overall argument structure. Both SVs share the same subject pronoun *fé-* '2SG.SUBJ.HAB'. A syntactic template of example (10) is given in figure 1 (on page 64).

As shown by the operator projection, the two nuclei *mìkìdá* 'fall down' and *wù* 'die' share the same aspect operator that is marked only once in V1, but it is interpreted equivalently for both (Van Valin, 2005, 9). Since both SVs share the same argument and the habitual aspect, the SVC represents a cosubordination structure, and given that this sharing occurs at the level of the nucleus, the cosubordination is nuclear.

Consider now the result-state construction in (7), repeated below in (11):

(11) *mù-ń-sṹ̂* *àtòbí ǹ* *wɩ̃̀* *àɛ̀* [Efutu]
3SG-PST.NEG-push child DET fall down
's/he did not push the child (and the child) did not fall down'
(Agyeman, 2016, 277)

Unlike (10), the cause-effect relationship is expressed by a switch-subject core-serialization with partial argument-sharing, that is, the object argument *àtòbí* 'child' of the transitive V1 *sṹ̂* 'push' functions as the subject of the intransitive V2 *wɩ̃̀ àɛ̀* 'fall down'. The same-subject sharing parameter does not apply in this construction. Since example (11) differs syntactically from the SVC in (10), in terms of the types and arrangements of the SVs and the nature of their shared arguments, a different syntactic template follows, as shown in figure 2 (on page 65).

Figure 2 illustrates a cosubordination at the core level, given that the SVs share the core negation operator. In (11), V1 and V2 have partly independent argument structures, but they are linked via the same-subject sharing *àtòbí* 'child' in their syntactic argument structures. Jarkey (2010, 118) calls this type of core cosubordination, in which the object argument of the first verb is simultaneously the subject argument of the second, "pivotal SVC". The intentional action of the Actor *mù-* '3SG-PST.NEG' directly resulting in some change in the undergoer *àtòbí* 'child'. Pivotal SVCs are found in various West African serializing languages, such as Yoruba (Bamgboṣe, 1974)). The other SVCs examined in this study that show the pattern [A V1 O=S V2] are in (6b) and (9a). Otherwise, examples (10) and (8b) represent "attainment SVCs", such as [S V1 V2]. In these constructions, V1 is a telic verb with an intrinsic goal, and V2 is a punctual and semelfactive event, or an achievement coerced into a durative predicate (see section 4.3). The subject *fé-* '2SG.SUBJ.HAB' in (10) not just falls, but "falls died". The remaining examples in (5b), (8a) and

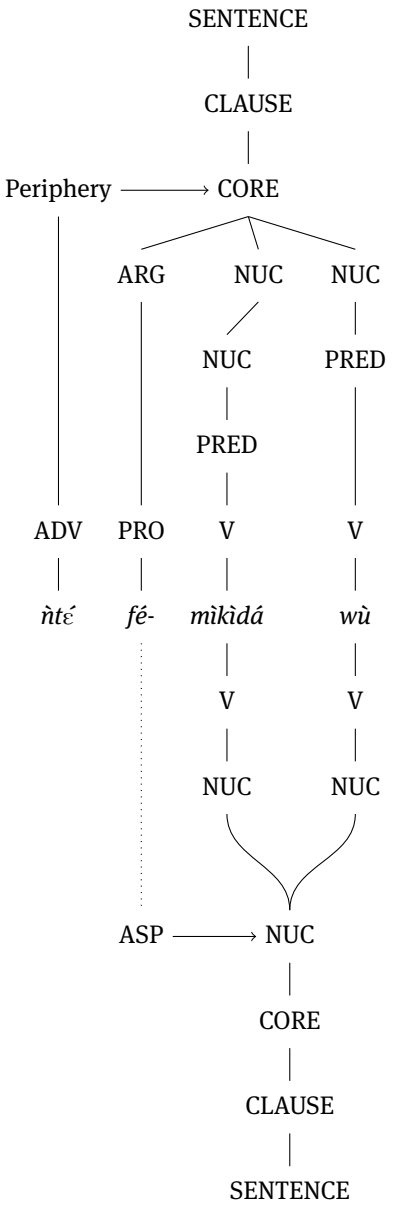

Fig. 1: Nuclear cosubordination of (10).

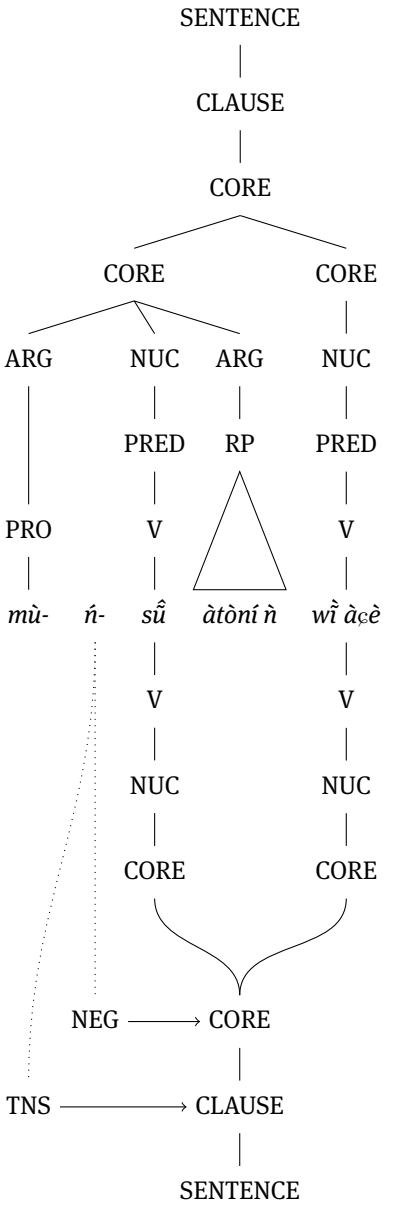

Fig. 2: Core cosubordination of (11).

(9b) are classified as "disposal SVCs", such as [A V1 O V2 (V3)]. All SVs are syntactically transitive, with both A and O arguments shared. The A argument occurs initially, and the O argument intervenes between the first two verbs (cf. Jarkey, 2010).

4.2 Syntactic representation of non-SVCs

In this section, we briefly discuss a particular type of multi-verb construction apparently similar to an SVC, viz. covert coordination (CC). CCs are a very common phenomenon in African languages (Sebba, 1987; Déchaine, 1993; Collins, 1997; Stewart, 2001, and recently, Naumann & Gamerschlag, 2020). They are interpreted as complex event structures without using overt coordination or subordination, like SVCs. However, they differ from the latter for their semantic relationship between verbs. CCs are expected to be fully compositional and to be applicable to any elements of a particular constituent type, while SVCs may involve several restrictions including the exact types of verbs that may form part of a series or their linear order. Consider examples (12a) and (12b):

(12) a. *òkpété a aa-pi bakobi ə-ba be* [Tuwuli]
dog ID FUT-catch chicks 3SG-chew NC:them
'the dog will catch chicks (and) eat them'

b. *òkpété a a-pi bakobi ka-ba*
dog ID PRES.IMPV-catch chicks IMPV-chew
'the dog catches chicks (and) eats (them).'

(Harley, 2005, 434, 196)

V1 and V2 in (12a) denote two events in which the beginning point of the second event *ba* 'chew' weakly succeeds the end point of the first event *pi* 'catch'. The first event in V1 is a kind of an essential prerequisite for the second event so that the former is done on purpose to facilitate bringing about an event denoted by V2. However, the interpretation that the dog catches chicks with the intention of eating them afterwards but changes its mind later is possible (cf. Stewart, 2001). Therefore, from a semantic point of view, example (12a) is a non-SVC, unlike the SVC in (12b). This construction has the interpretation of a dog that will catch chicks with the intention to eat them afterwards, and, in effect, eat them.

Furthermore, as mentioned in section 3, SVCs in Tuwuli do not have an anaphoric pronoun as object of V2 referring to the object of V1. It follows that the presence of *be* 'NC:them' in (12b) syntactically instantiates a non-SVC. In fact, the object pronoun supports a concatenation of two o more clauses under a clause node. Consider another example from Tuwuli in (13):

(13) *n-ta odabɔ n-ta-kɔ ye*
1SG-shoot antelope 1SG-NEG-kill it
'I shot an antelope, (but) I didn't kill it.'
(Harley, 2005, 490))

Example (13) is a covert coordination involving the simple juxtaposition of clauses in which the second clause adds a contrastive information with respect to the first clause. Figure 3 (on page 68) shows the syntactic template representing a possible syntactic structure of (13). The represents a coordinate bi-clausal construction enclosing two separate events without coordination marker. Unlike SVCs, the events are not perceived as a single event (cf. Baker, 1989). The covert coordinate structure involves two transitive verbs *ta* 'shoot' and *kɔ* 'kill', each with its own object. Unlike example (11) in section 4.1, there is a distinct negation marker in each conjunct. The grammatical marker of negation *ta* 'NEG' appears on V2, and has no scope over the whole construction. Such constructions therefore generally lack the MEP (Bohnemeyer & Van Valin, 2017) (see section 1).

4.3 Linking syntax and semantics in SVCs

The semantic representation in RRG is based on the lexical features of predicates in the nuclei, which is an Aktionsart-based decompositional representation (Van Valin, 2013), and semantic roles. Consider example (10), repeated here in (14):

(14) *tìmù! ǹtɛ́ fé-mìkìdá wù* [Kaakye]
INTJ then 2SG.SUBJ.HAB-fall_down die
'Tim! Then you fall down (and) die.' (Abunya, 2018, 252, 268)

The SVC in (14) is a double unaccusative involving two changes of state, or transitions, that can occur as a single macro-event (cf. Pi & Stewart, 1998, 206). None of the verbs includes CAUSE in its meaning, but there is a strong causative meaning between them: 'you fell (and as a result of the falling you) died'. We can assume that CAUSE is inferred from coherence between the two micro-events: the second conjunct (*wù* 'die') is caused by the first one (*mìkìdá* 'fall down'), or it is the natural expected consequential action of it (Gamerschlag, 2005).

The logical structures of the complex event structure describe the semantic and argument structure of predicates using a system that combines features from Vendler's (1967) Aktionsart classes (i.e., states, activities, achievements, and accomplishments), and Dowty's (1979) decompositional system (Van Valin & LaPolla, 1997; Van Valin, 2005, 2008). The LS of the SVC in (14) under the RRG system of lexical decomposition may be the following in (15):

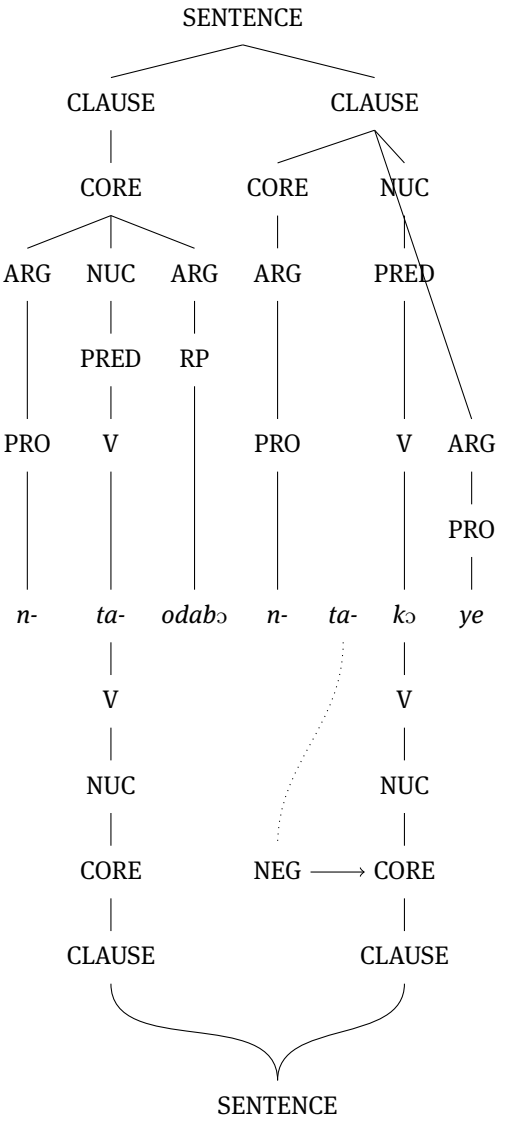

Fig. 3: Clausal (covert) coordination of (13).

(15) a. *mìkìdá* 'fall down': INGR **fallen'** (x)
b. *wù* 'die': BECOME **dead'** (x)
c. *mìkìdá wù* 'fallen down – die': [INGR **fallen'** (x)] CAUSE [BECOME **dead'** (x)]

The CAUSE operator captures the concept of cause-and-result semantics, that is, the two sub-events are bound in a resultative relationship. V1 is an achievement verb with an intrinsic goal, and V2 is a culmination-achievement with a natural progressive interpretation that is true during its preliminary process (Bach, 1986; Moens & Steedman, 1988; Rothstein, 2004; Martin, 2011).

The syntax-to-semantics mapping in figure 4 is based on three main steps. The first step is to determine the Macrorole(s) and other core argument(s) in the clause, i.e., which argument is Actor and which is Undergoer, how many arguments each verb takes in the SVC (e.g., transitive and intransitive), and whether the arguments from two different verbs denote the same entity. This selection is governed by the Actor-Undergoer Hierarchy, proposed by Van Valin (2005, 61). The second step is to retrieve from the lexicon the logical structure of the predicate(s) in the nucleus of the clause and then replace the variables in it with referring expressions. The third step is to map the arguments into semantics relations and select the Privileged Syntactic Argument (cf. Riccio, 2017). Figure 4 (on page 70) illustrates the syntax-to-semantics mapping for example (14).

The Undergoer *fé-* '2SG.SUBJ.HAB' is identical with the argument of V2: he is the one who falls and dies.

Consider now the Efutu resultative SVC in (11), repeated here as (16):

(16) *mù-ń-sȗ̂ àtòbí ǹ wȉ̃ àɕè*
3SG-PST.NEG-push child DET fall down
's/he did not push the child (and the child) did not fall down'
(Agyeman, 2016, 277)

Its corresponding logical structure may be lexically decomposed as in (17):

(17) a. *sȗ̂* 'push': [**do'** (x, ∅)] CAUSE [BECOME **be-LOC'** (z, y)]
b. *wȉ̃ àɕè* 'fall down': INGR **fallen'**(x)
c. *sȗ̂ wȉ̃ àɕè* 'push – fallen down': [**do'** (x, **push'** (x, y)])] CAUSE [INGR **fallen'** (y)]

The two verbs are causally related: a state of change, or Process, is realized as V1, and a change of state, or Transition, is expressed by V2. The **do'** operator, that is structurally higher than the INGR operator, dictates the order of Process before

Transition (cf. Pi & Stewart, 1998). Moreover, since (16) is a negative sentence, the logical structure is preceded by negation NEG that has scope over the SVC.

Figure 5 (on page 71) represents the syntax-to-semantics mapping for example (16). The transitive verb *sû* 'push' and the intransitive verb *wǐ àɛè* 'fall down' form a core-level serialization. The Actor *mù-* '3SG' is selected as the privileged syntactic argument that participates in the initiation of the pushing event (that doesn't actually happen, as indicated by NEG). The direct argument *àtòbí* 'child' of V1 is the Undergoer_1, as well as the subject Undergoer_2 of V2. When two macroroles refer to the same entity in logical structure, the macrorole in a higher hierarchy is syntactically expressed, i.e., Undergoer_1, while the other is not (∅), i.e., Undergoer_2.

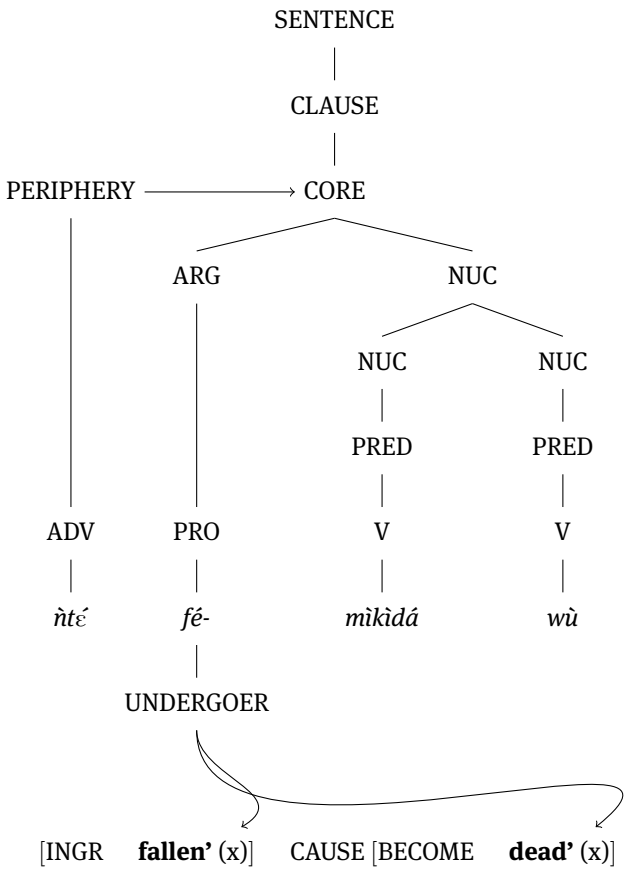

Fig. 4: From syntax to semantics for example (14).

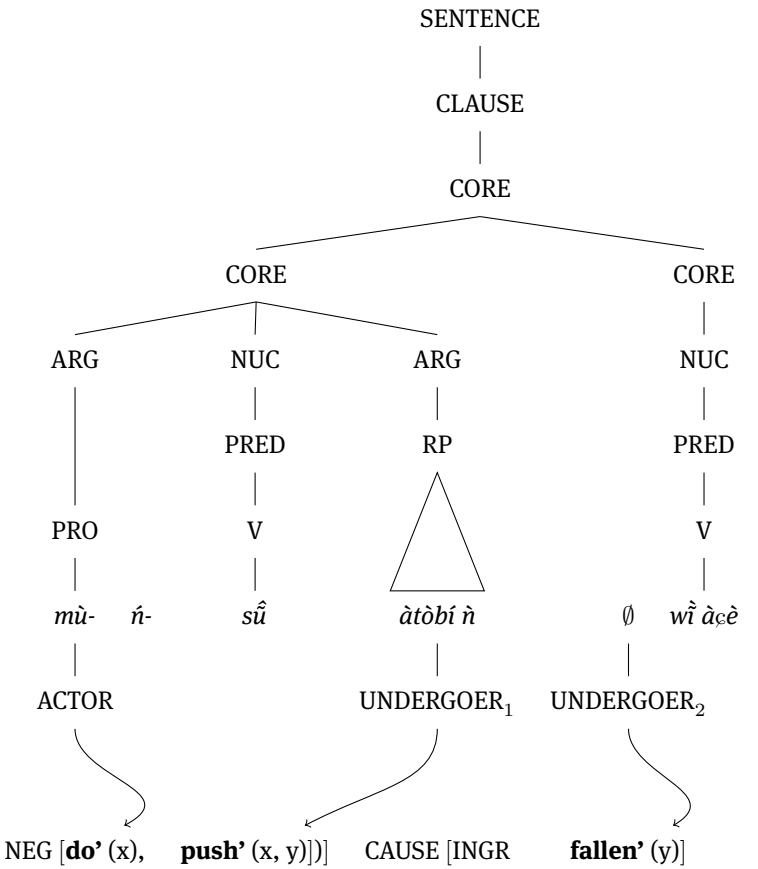

Fig. 5: From syntax to semantics for example (16).

5 Concluding remarks

This study has provided a brief outline of the concept of SVC from the oldest to the most recent studies on West African languages, especially of the Kwa group. Section 2 has pointed out several interesting descriptions and definitions in the linguistic literature. The data described in section 3 show symmetrical SVCs with a sequence of two interdependent subevents acquiring a purpose or resultative reading within a single macro-event. The syntactic analysis of SVCs within the RRG theory in section 4.1 has revealed instances of nuclear and core junctures with a cosubordinate nexus that together behave like single cores (or nuclei), shar-

ing operators (see figure 1 and figure 2). In section 4.2, RRG has also allowed us to illustrate the different constituent projections that characterize SVCs and CCs (see figure 3). The nexus and juncture types of SVCs are analyzed in terms of the RRG system of lexical decomposition in section 4.3. in order to represent their event schema (see examples (15) and (17)). The syntax and semantics linking has shown that SVCs involve semantics macroroles playing a crucial role in the linking system; see figure 4 and figure 5. The result of this study leads us to the conclusion that the application of the theoretical RRG framework shows distinctive syntactic and semantic features of SVCs in Kwa languages that serve to elucidate their own status clearly.

Abbreviations

ADV adverb
ARG argument
ASP aspect
CC covert coordination
CL class
DEF definite article
DET determiner
FUT future
HAB habitual
IMPV imperfective
INTJ interjection
NCL noun class
NEG negation
NOM nominative
PERF perfect
PL plural
PRES present
PST past
REF referential
SG singular
SUBJ subject
TNS tense

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Ronald Schaefer and Francis Egbokhare

Postverbal Qualifiers and Constraints on Contrastive Focus

1 Introduction

Focus constructions of various sorts are identified and discussed within Role and Reference Grammar (RRG). These include two types: narrow, where the focus domain extends over a single constituent, and broad, where the focus domain is either a predicate phrase or an entire sentence and thus broader than a single constituent. Within the narrow type, two subtypes occur: contrastive focus, which concerns choice among alternative referents, and completive focus, which deals with responses to interrogatives. Less often discussed are focus limitations on verb arguments imposed by presence within a clause of non-obligatory grammatical qualifiers.

Here we explore constraints on contrastive focus as applied to verb arguments in a language of south-central Nigeria. Emai is a partially analyzed member of the Edoid group within West Benue Congo (Schaefer & Egbokhare, 1999, 2007, 2017). It is basic SVO with minimal segmental morphology. Tone functions both lexically and grammatically, with subject pronouns and verbs being lexically toneless and receiving tone from their interaction with right-adjacent grammatical categories, as happens across the Edoid group (Amayo, 1975; Elugbe, 1989). Emai manifests simple predicates with intransitive, transitive, and ditransitive verbs as well as complex predicates. The latter construct as verb plus particle or verb plus verb in series. We present our Emai data in orthographic form, where vowels [ɔ] and [ɛ] are represented as o and e, respectively, and tones are represented as acute [´] for high, grave [`] for low, and raised exclamation mark [ꜜ] for high downstep.

Emai manifests various postverbal grammatical forms. One class licenses verb arguments; another is non-licensing. The latter class is aspectual in character, differing from viewpoint aspect and verb actionality or Aktionsart (Declés & Guentchéva, 2012). Forms in this class represent a tertiary kind of aspect. Within Emai's clausal template, tertiary aspectual qualifiers follow a verb and its arguments but precede sentence adverbials of time, place, manner, etc. Our primary interest falls on postverbal tertiary aspectual qualifiers, their structural relation

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https://doi.org/10.1515/9783110795295-004

to a preceding verb and its arguments, and their constraining effect on adjustments to information structure. Within the framework of Role and Reference Grammar (Van Valin, 1993, 2008, 2021; Van Valin & LaPolla, 1997), our structural interpretation centers on juncture at the core layer and nexus as a condition of cosubordination.

2 Valency postverbal forms

For the sake of perspective, we briefly illustrate postverbal forms that license construction arguments and augment the valency of a verb. Three postverbal forms take a following nominal complement; only one is marked by locative preposition *vbi*. Respectively, the valency changing forms are applicative *li*, locative change *o̲*, and projected adherence *e̲*. Their functions abbreviate as APPL, CL, and PAD.

Each valency form appears with verbs that manifest a transitive condition. In constructions the valency form expresses a third argument. In three argument constructions, the tone assigned to each valency form harmonizes with tone of the preceding matrix verb.

(1) a. *òjè shé̲n émà lí ó̲lì ò̲nwìmè.*
Oje:PRX PST:sell:PFV yam APP ART farmer
'Oje has sold yam to the farmer.'

b. *òjè nwú émà ó̲ vbí úkpódè̲.*
Oje:PRX PST:take:PFV yam CL LOC road
'Oje has put yam onto the road.'

c. *òjè óhó ó̲lí úshé̲n[!] kú é̲ ègè.*
Oje:PRX PST:blow:PFV ART powder extend PAD Ege
'Oje has blown the powder onto Ege.'

An additional property of three-argument constructions pertains to focus potential. When a verb argument occupies a non-canonical position, its shift from the canonical signals a change in information status (Lambrecht, 1994; Van Valin & LaPolla, 1997). For the case at hand, the non-canonical position is that of contrastive focus. When a verb argument occupies contrastive focus position, it signals that the information status of its referent across speaker and hearer is not uniform. It is then generally assumed that the speaker intends to bring new information to the attention of the hearer. The verb argument is treated as new information by the speaker and as unknown information by the hearer.

In three argument constructions in Emai, each argument (subject, direct object, oblique object) can occupy contrastive focus position in clause left periphery.

Contrastive focus is designated by positive cleft particle (PCL) *li*/*ni*. Illustration of its potential is evident in examples (2), (3), and (4), where subject, direct object, and oblique object, in turn, occupy contrastive focus position.

(2) a. *òjè lí ó shén*! *émà lí ònwìmè*.
Oje PCL 3SG:DST PST:sell:PFV yam APP farmer
'It was Oje who sold yam to a farmer.'

b. *émà lí ójé shén*! *lí ònwìmè*.
yam PCL Oje:DST PST:sell:PFV APP farmer
'It was yam that Oje sold to a farmer.'

c. *ònwìmè lí ójé shén*! *émà ní*.
farmer PCL Oje:DST PST:sell:PFV yam APP
'It was a farmer that Oje sold yam to.'

(3) a. *òjè lí ó nwú*! *ólí émà ó vbí úkpódè*.
Oje PCL 3SG:DST PST:take:PFV ART yam CL LOC road
'It was Oje who put the yam onto the road.'

b. *ólí émà áìn lí ójé nwú*! *ó vbí úkpódè*.
ART yam DEM.DST PCL Oje:DST PST:take:PFV CL LOC road
'It was that yam that Oje put onto the road.'

c. *úkpódè nà* lí *ójé nwú*! *ólí émà ó*.
road DEM.PRX PCL Oje:DST PST:take:PFV ART yam CL
'It was this road that Oje put the yam on.'

(4) a. *òjè lí ó óhó*! *ólí úshén*! *kú é ègè*.
Oje PCL 3SG:DST PST:blow:PFV ART powder extent PAD Ege
'It was Oje who blew the powder onto Ege.'

b. *úshén*! *lí ójé óhó*! *kù é ègè*.
powder PCL Oje:DST PST:blow:PFV extend PAD Ege
'It was powder that Ege blew onto Oje.'

c. *ègè lí ójé óhó*! *ólí úshén*! *kú é*.
Ege PCL Oje:DST PST:blow:PFV ART powder extend PAD
'It was Ege that Oje blew the powder onto.'

As these constructions make evident, the assignment of construction arguments to contrastive focus position is not constrained. For valency enhancing forms, there is no limitation on contrastive focus, although individual matrix verbs may impose idiosyncratic constraints. In the next section we illustrate how postverbal tertiary aspectual forms constrain construction argument potential to undergo contrastive focus.

As a rule, postverbal aspectual qualifiers are compatible with valency augmenting forms. Relative to linear order, aspectual qualifiers follow valency forms. For instance, tertiary aspectual form *le* 'already' occupies a position following

each of the valency forms (APP *li*, CL *o̲*, and PAD *e̲*) and their oblique objects. *le* follows, never precedes *li/ni*, *o̲*, and *e̲* in their prototypic functions. Word order relations for other aspectual qualifiers are similar.

(5) a. *àlèkè shé̲n úkpìhíákpà lí èg̀è lé.*
Aleke:PRX PST:sell:PFV ring APP Ege already
'Aleke has sold a ring to Ege already.'
b. *àlèkè fí úkpìhíákpà ó̲ vbí óbò̲ lé.*
Aleke:PRX PST:insert:PFV ring CL LOC hand already
'Aleke has inserted a ring onto her finger already.'
c. *àlèkè sán ó̲lì èkhò̲ì fí é̲ èg̀è lé.*
Aleke:PRX PST:flick:PFV ART worm extend PAD Ege already
'Aleke has already flicked the worm onto Ege.'

3 Postverbal tertiary aspectual qualifiers

Postverbal forms in Emai express tertiary aspectual qualifications of different kinds. The general nature of these qualifications is suggested in Nuyts (2011, 2005, 2006, 2016). Although he emphasizes pre-verbal qualifications of the type found in Indo-European, his overall framework has applicability to languages outside the I-E area. Emai has eight postverbal aspectual qualifiers: *le* 'already,' *ba kun* 'unsuccessfully/in vain,' *fe̲e̲ ghoo* 'try,' *gbe* 'too much,' *se̲* 'enough,' *kho̲o̲n* 'sufficient,' *a* 'away from deictic center' (itive), and *re* 'toward deictic center' (venitive). They fall into three subclasses, viz. phasal, quantitative, and direction of spatial deixis. Each subclass has two or three members. In the following subsections we consider each subclass.

3.1 Phasal tertiary aspect

Phasal aspect qualifiers total three: *le*, *ba kun*, and *fe̲e̲ ghoo*. In English translation they are rendered, respectively, as 'already,' 'in vain,' and 'try.' Each directs attention to an event phase or edge property, assuming thereby an entire event. Relative to an otherwise canonical clausal unit, each phasal qualifier occurs in final position. In addition, phasal qualifiers do not co-occur. They are mutually exclusive, as shown in (6).

(6) a. **òjè é ó̲lí émàè lé fé̲é̲ ghòò.*
Oje:PRX PST:eat:PFV ART food already try
'Oje has tried to finish eating the food.'

b. *òjè é ólí émàè lé bá kùn.
Oje:PRX PST:eat:PFV ART food already in.vain
'Oje has unsuccessfully finished eating the food.'

With respect to a canonical clause (where no arguments are in a contrastive focus position), each phasal aspectual qualifier constrains appearance of a verb argument in focus position. For example, transitive verb *e* 'eat' shows arguments in subject and direct object position in a canonical construction with no contrastive focus (7).

(7) òjè é ólí émà.
Oje:PRX PST:eat:PFV ART yam
'Oje has eaten the yam.'

Under contrastive focus, each argument of verb *e* can in turn appear in the left periphery of a clause, where its information status is signaled by positive cleft particle (PCL) *li*, as in (8).

(8) a. òjè lí ó é$^{!}$ ólí émà
Oje PCL 3SG:DST PST:eat:PFV ART yam
'It is Oje that ate the yam.'
b. ólí émà lí ójé é$^{!}$-ì
ART yam PCL Oje:DST PST:eat:PFV
'It is the yam that Oje ate.'

When a phasal qualifier is present, argument repositioning under a condition of contrastive focus is constrained absolutely. A similar limitation is imposed by each postverbal qualifier of the phasal subclass.

Postverbal *le* is concerned with phases that pertain to event onset or event completion. Others have referred to these different functions of 'already' forms as inchoative and completive (Östen Dahl & Wälchli, 2016). Tonal realization of each function co-varies with the tense value assigned to matrix verb. When clausal tense is past (PST), phasal qualifier *lé* with high tone manifests a completive function (9a). When clausal tense is present (PRS) the function of *lě* is inchoative and pertains only to event onset (9b). It then shows additive low high tone.

(9) a. òjè é ólí émà lé.
Oje:PRX PST:eat:PFV ART yam already
'Oje has eaten the yam already.'
b. òjè ò ó è ólí émáé lě.
Oje:PRX SC:PRX PRS.PROG eat:IPFV ART food already
'Oje is eating the food already.'

Regardless of tense within a clause, qualifier *le* restricts verb arguments that function as either subject or direct object from appearing in contrastive focus position (10).

(10) a. *òjè é ólí émà lé.*
Oje:PRX PST:eat:PFV ART yam already
'Oje has eaten the yam already.'
b. **òjè lí ó é*$^{!}$ *ólí émà lé.*
Oje PCL 3SG:DST PST:eat:PFV ART yam already
'It is Oje that ate the yam already.'
c. **ólí émà lí ójé é*$^{!}$ *lé.*
ART yam PCL Oje:DST PST:eat:PFV already
'It is the yam that Oje ate already.'

The remaining phasal qualifiers impose a similar constraint on verb arguments, although they do not manifest *le*'s functional split. Postverbal *ba kun* highlights a phase that pertains to event completion. Essentially, it expresses that although a change of state event has occurred, it has not achieved its assumed end state. It has not been successful. For example, in (11), the default sense of the verb *hoo* 'wash' implies that its direct object underwent a change of state from state^{x} to state^{y}, e.g. non-clean to clean. When this default sense is not tenable, the qualifier *ba kun* occurs (11a). Moreover, when postverbal *ba kun* occurs in a clause, neither subject nor direct object argument can occupy contrastive focus position (11b–c).

(11) a. *òjè hóó ólí úkpùn bá kùn.*
Oje:PRX PST:wash:PFV ART cloth in.vain
'Oje has washed the cloth in vain / without success.'
b. **òjè òkpá lí ó hóó*$^{!}$ *ólí úkpùn bá kùn.*
Oje alone PCL 3SG:DST PST:wash:PFV ART cloth in.vain
'It was Oje alone who washed the cloth in vain.'
c. **ólí úkpún nà lí ójé hóó*$^{!}$ *bà kún.*
ART cloth DEM.PRX PCL Oje:DST PST:wash:PFV in.vain
'It was this cloth that Oje washed in vain.'

Postverbal *fee ghoo* brings into focus both edges of an event, its onset and termination. In effect the entirety of an event is in view. Postverbal *fee ghoo* conveys that although an event was attempted, the event itself was not realized. It never occurred.

For example, default use of verb *khuae* 'raise' in (12) denotes activation of a particular kind of relation between subject and direct object, in the instance at hand a change of state from state^{x} to state^{y}, e.g. non-elevated to elevated. When the totality of this event is not actualized, the qualifier *fee ghoo* occurs (12a). For

constructions that show a *fee ghoo* qualifier, repositioning of verb arguments is prohibited. As (12b–c) with *fee ghoo* reveal, neither grammatical subject nor direct object can appear in contrastive focus position.

(12) a. *òjè khúáé ólì ùkòdò fée ghòò.*
Oje:PRX PST:raise:PFV ART pot try
'Oje has tried to raise the pot.'
b. **òjè òkpá lí ó khúáé[i] ólì ùkòdò fée ghòò.*
Oje alone PCL 3SG:DST PST:raise:PFV ART pot try
'It was Oje alone who tried to raise the pot.'
c. **ólì úkódó nà lí òjè khúáé[i] fèè ghóó.*
ART pot DEM.PRX PCL Oje:DST PST:raise:PFV try
'It was this pot that the man tried to raise.'

3.2 Quantitative tertiary aspect

Postverbal qualifiers expressing quantitative aspect are *gbe*, *se*, and *khoon*. In English translation they are rendered, respectively, as 'too many/much,' 'enough/sufficient,' and 'satisfied.' With respect to the action of a matrix verb, each quantitative qualifier directs attention to the terminal edge of an action and its quantitative character, rather than to the action itself or to its temporal qualities. Compared to phasal aspect, quantitative tertiary aspect refers to a feature of an action that accumulates over the temporal contour of an event until the point of termination. Quantitative qualifiers assume a domain of scalar quantification with respect to which there are potential boundary points. Each quantitative qualifier conveys speaker judgment that a culturally determined boundary has been achieved or exceeded or that a boundary individually determined by the grammatical subject has been achieved.

(13) a. *òjè é émà gbé.*
Oje:PRX PST:eat:PFV yam much
'Oje has eaten too much yam.'
b. *òjè dá ényò sé.*
Oje:PRX PST:drink:PFV wine sufficient
'Oje has drunk enough / sufficient wine.'
c. *òjè é émà khóón.*
Oje:PRX PST:eat:PFV yam satisfied
'Oje has eaten yam to his satisfaction.'

Despite these semantic differences, quantitative qualifiers, like phasal ones, immediately follow the final argument of their matrix verb. Relative to an otherwise

canonical clause, each qualifier occurs in final position. As well, quantitative aspect forms fail to co-occur. They are mutually exclusive, as shown in (14).

(14) a. *òjè é ólí émà gbé khòòn.
Oje:PRX PST:eat:PFV ART yam much satisfied
'Oje has eaten yam to too much satisfaction.'
b. *òjè é émà sé khòòn.
Oje:PRX PST:eat:PFV yam enough satisfied
'Oje has eaten yam to enough satisfaction.'

When a quantitative aspectual qualifier is present, arguments of a main verb are constrained from occurring in contrastive focus position. Each postverbal form of the quantitative subclass imposes a similar constraint.

Postverbal *gbe* expresses a judgment by the speaker that a culturally determined boundary on a scale of quantification represented by preceding clausal constituents has been exceeded. In a general way the meaning of *gbe* concerns event completion, not onset, and its characterization in quantitative terms.

As already mentioned, the basic sense of verb *e* 'eat' denotes consumption of a referent expressed by its direct object, i.e. a reduction in referent substance and a corresponding increase in object substance intake. The resulting change in condition can be expressed in quantitative terms, in particular whether the culturally determined boundary on referent intake has been exceeded. When this boundary has been overtaken, qualifier *gbe* occurs (15a). Nonetheless, when *gbe* is present in a clause, contrastive focus of verb arguments is not permitted (15b–c).

(15) a. òjè é émà gbé.
Oje:PRX PST:eat:PFV yam much
'Oje has eaten too much yam.'
b. *òjè òkpá lí ó é! émà gbé.
Oje alone PCL 3SG.DST PST:eat:PFV yam much
'It was Oje alone who ate too much yam.'
c. *émá mè lí ójé é! gbè.
yam 1SG.POSS PCL Oje:DST PST:eat:PFV much
'It was my yam that Oje ate too much of.'

Postverbal *se* expresses a judgment by the speaker that a culturally determined boundary on a scale of quantification represented by preceding clausal constituents has been achieved. It, too, is concerned with event completion, not onset, and its characterization in quantitative terms.

As already seen with verb *e* 'eat,' the basic sense of verb *da* 'drink' denotes consumption of a referent expressed by the direct object, i.e. a reduction in referent substance and a corresponding increase in substance intake. The resulting

change in both conditions can be expressed in quantitative terms that stipulate whether the culturally determined boundary on referent intake has been achieved. When this boundary has been met, the qualifier *se* occurs (16a). As with *gbe*, presence of *sé* in a clause precludes contrastive focus of any verb argument (16b–c).

(16) a. *òjè dá ényò sé.*
Oje:PRX PST:drink:PFV wine sufficient
'Oje has drunk enough / sufficient wine.'
b. **òjè lí ó dá*$^{!}$ *ényò sé.*
Oje PCL 3SG:DST PST:drink:PFV wine sufficient
'It was Oje who drank enough wine.'
c. **ényó mè lí ójé dá*$^{!}$ *sè.*
wine 1SG.POSS PCL Oje:DST PST:drink:PFV sufficient
'It was my wine that Oje drank enough of.'

Postverbal *khoon* expresses a judgment by the speaker about a boundary determined individually by the grammatical subject. This boundary is realized on a scale of quantification represented by preceding clausal constituents. As with the meaning of other quantitative qualifiers, *khoon* is concerned with event completion, not onset, and its characterization in quantitative terms.

Continuing with verb *e* 'eat,' its basic sense denotes consumption of a referent expressed by the direct object, i.e. a reduction in referent substance and a corresponding increase in its intake. The resulting change in condition can be expressed in quantitative terms that specify whether the boundary on referent intake determined by the grammatical subject has been met. When this boundary is achieved, qualifier *khoon* occurs (17a). As with *se* and *gbe*, the presence of *khoon* in a clause constrains the placement of verb arguments in contrastive focus position (17b–c).

(17) a. *òjè é émà khóón.*
Oje:PRX PST:eat:PFV yam satisfied
'Oje has eaten yam to his satisfaction.'
b. **òjè òkpá lí ó é*$^{!}$ *émà khóón.*
Oje alone PCL 3SG:DST PST:eat:PFV yam satisfied
'It was Oje alone who ate yam to his satisfaction.'
c. **émá mè lí ójé é*$^{!}$ *khòòn.*
yam 1SG.POSS PCL Oje:DST PST:eat:PFV satisfied
'It was my yam that Oje ate to his satisfaction.'

3.3 Directional tertiary aspect

Postverbal qualifiers expressing directional aspect relative to the domain of spatial deixis are itive *á* and venitive *ré*. In English they are translated, respectively, as 'away from deictic center,' and 'toward deictic center.' Relative to a matrix verb, each directional qualifier casts attention on the terminal edge of an action and its directional character. Compared to phasal and quantitative tertiary aspect, directional qualifiers assume a domain of deictic direction for event arguments that is toward or away from the deictic center. Each qualifier conveys speaker judgment that a deictically defined direction has been initiated or achieved.

Directional aspect qualifiers accompany verbs that are transitive or intransitive. In (18), transitive and intransitive verbs combine with itive *a*. Similarly, transitive and intransitive verbs appear with venitive *re* in (19). There are even some verbs, such as cognitive *ee* 'be anxious,' that occur with itive *á* or venitive *ré* and manifest corresponding contrastive meanings (20), viz. 'remember' vs 'forget.'

(18) a. *òjè fénáá áàhiènn á.*
Oje:PRX PST:pass:PFV urine ITV
'Oje has passed his urine out / away.'

b. *òjè lá fì á.*
Oje:PRX PST:run:PFV extend ITV
'Oje has run away.'

(19) a. *òjè shíé ólí úì ré.*
Oje:PRX PST:coil:PFV ART rope VEN
'Oje has wound / coiled up the rope.'

b. *údúkpù dé ré!.*
coconut:PRX PST:fall:PFV VEN
'A coconut has fallen down.'

(20) a. *òjè éé ólí úkpùn á.*
Oje:PRX PST:become.anxious:PFV ART cloth ITV
'Oje has forgotten the cloth.'

b. *òjè éé ólí úkpùn ré.*
Oje:PRX PST:become.anxious:PFV ART cloth VEN
'Oje has remembered the cloth.'

Despite their semantic differences, directional qualifiers, like quantitative and phasal forms, immediately follow the final argument of their matrix verb. Relative to an otherwise canonical clause, each tertiary directional occurs in final position: (21a), (22a) (23a) and (24a). As well, directional aspect forms fail to co-occur. They are mutually exclusive.

When a directional qualifier is present, subject and direct object argument of the main verb are constrained from appearing in contrastive focus position: (21b–c), (22b–c), (23b–c) an (24b–c). A similar constraint is imposed by each postverbal form of the directional subclass.

(21) a. *òjè fénáá áàhìèn á.*
Oje:PRX PST:pass:PFV urine ITV
'Oje has passed his urine away.'

b. **òjè lí ó fénáá áàhìèn á.*
Oje PCL 3PL.DST PST:pass:PFV urine ITV
'It was Oje who passed his urine away.'

c. **áàhìèn lí ójé fénáá à.*
urine PCL Oje:DST PST:pass:PFV ITV
'It was urine that Oje passed away.'

(22) a. *òjè shíé ólí úì ré.*
Oje:PRX PST:coil:PFV ART rope VEN
'Oje has wound / coiled up the rope.'

b. **òjè lí ó shíé ólí úì ré.*
Oje PCL 3PL.DST PST:coil:PFV ART rope VEN
'It was Oje who coiled up the rope.'

c. **ólí úí nà lí ójé shíé rè.*
ART rope DEM.PRX PCL Oje:DST PST:coil:PFV VEN
'It was this rope that Oje coiled up.'

(23) a. *òjè éé ólí úkpùn á.*
Oje:PRX PST:become.anxious:PFV ART cloth ITV
'Oje has forgotten the cloth.'

b. **òjè lí ó éé ólí úkpùn á.*
Oje PCL 3PL.DST PST:become.anxious:PFV ART cloth ITV
'It was Oje who forgot the cloth.'

c. **ólí úkpún nà lí ójé éé à.*
ART cloth DEM.PRX PCL Oje:DST PST:become.anxious:PFV ITV
'It was this cloth that Oje forgot.'

(24) a. *òjè éé ólí úkpùn ré.*
Oje:PRX PST:become.anxious:PFV ART cloth VEN
'Oje has remembered the cloth.'

b. **òjè lí ó éé ólí úkpùn ré.*
Oje PCL 3PL.DST PST:become.anxious:PFV ART cloth VEN
'It was Oje who remembered the cloth.'

c. **ólí úkpún nà lí ójé éé rè.*
ART cloth DEM.PRX PCL Oje:DST PST:become.anxious:PFV VEN
'It was this cloth that Oje remembered.'

4 Discussion

In preceding sections, we reviewed select properties of verb argument constructions in the Edoid language Emai. Our interest centered on dual component predications framed by a verb and a qualifier form. The qualifiers as a class expressed tertiary aspectual meanings that concentrated attention on phasal, quantitative, or directional character of an event. Compared to canonical non-aspectual predications, those with tertiary aspectual forms limited verb arguments to their normative position: subjects immediately preceding the verb and direct objects immediately following. Verb arguments in these dual component predications were prohibited from occupying contrastive focus position in clause left periphery. We tentatively concluded that presence of a tertiary qualifier in postverbal position triggered this constraint on clausal form.

We now undertake two follow up tasks. First, we re-examine our initial conclusion that aspectual qualifiers are sources of the constraint on verb arguments in contrastive focus position. Second, using skeletal representations reflective of Role and Reference Grammar we examine additional properties of postverbal tertiary aspectual forms for possible hypotheses concerning their relational and category nature.

To begin, we consider whether the exclusive focus on tertiary aspectual qualifiers as constraint source is too narrow. It may be that dual component predications consisting of verbs in series constrains argument occurrence in contrastive focus position. The evidence, as we will see, does not favor such a re-interpretation.

Emai exhibits one type of resultative construction. Relative to a corresponding canonical form (25a), it manifests a dual component predication (25b). The latter precludes its direct object argument from occupying contrastive focus position (25d), whereas the grammatical subject argument is not similarly delimited (25c). This asymmetrical effect on arguments suggests that a dual component structure may not be the source of the contrastive focus constraint on all verb arguments in aspectual qualifier predications. To be sure, single component predications such as (25a) allow verb arguments to appear in contrastive focus position.

(25) a. *òjè khúáé ólì ùkòdò.*
Oje:PRX PST:raise:PFV ART pot
'Oje has raised the pot.'

b. *òjè nwú ólì ùkòdò khúáé.*
Oje:PRX PST:take:PFV ART pot raise
'Oje got the pot raised up (at arm's length).'

c. *òjè lí ọ́ nwú! ọ́lì ùkòdò khúáé.*
Oje PCL 3SG:DST PST:take:PFV ART pot raise
'It was Oje who got the pot raised up (at arm's length).'

d. **ọ́lí úkódó nà lí ójé nwú! khùàè.*
ART pot DEM.PRX PCL Oje:DST PST:take:PFV raise
'It was this pot that Oje got raised up (at arm's length).'

An even stronger argument showing that dual component structure is not source of the constraint on contrastive focus arises from serial verb constructions, particularly those of the cause-effect type. The relevance of the latter is twofold. Firstly, both components in such a predication are synchronic verbs; Emai manifests verbs in series. Secondly, aspectual qualifiers except for phasal *le* and directional *a* have a verb heritage, as judged by available contemporary usage. That is tertiary aspectual forms tend to have concurrent synchronic standing as sole element of a single component predication and as qualifier alongside a main verb in a dual component predication. If the constraint on verb argument positioning were due to the dual component factor alone, serial verb constructions should restrain argument occurrence uniformly.

Despite this last contention, dual component predications that fail to include an aspectual qualifier do not delimit argument occurrence in contrastive focus position. Each of the forms *fuan, ku gbe* and *so* appears as a synchronic verb element in a single component predication. They reflect, respectively, a change of state, change of position, or change with contact, as shown in (26)–(28).

(26) *ọ́lí úkpùn fúán.*
ART cloth:PRX PST:become.clean:PFV
'The cloth has become clean.'

(27) *élí éwè kú gbè.*
ART goats:PRX PST:reposition:PFV tie
'The goats have gotten mixed together.'

(28) a. *ójé só! ùdékẹ̀n.*
Oje.DST PST.join:PFV wall
'Oje crashed into a wall / collided with a wall.'

b. *òjè só áléké óbò.*
Oje.PRX PST.join:PFV Aleke hands
'Oje has shaken Aleke's hand / shaken hands with Aleke.'

c. *ójé ọ́ ò sò úgùà.*
Oje.DST SC.DST PRS.HAB join:IPFV bone.joint
'Oje joins bones / sets bones.'

These same forms also appear as second element in dual component predications: (29a), (30a) and (31a). Importantly, the latter do not constrain the appearance of either subject or direct object arguments in contrastive focus position: (29b–c), (30b–c) and (31b–c).

(29) a. *òjè hóó ólí úkpùn fúán.*
Oje:PRX PST:wash:PFV ART cloth clean
'Oje has washed the cloth clean.'
b. *òjè òkpá lí ó hóó! ólí úkpùn fúán.*
Oje alone PCL 3SG:DST PST:wash:PFV ART cloth clean
'It was Oje alone who washed the cloth clean.'
c. *ólí úkpún nà òkpá lí ójé hóó! fùàn.*
ART cloth DEM.PRX alone PCL Oje:DST PST:wash:PFV clean
'It was this cloth alone that Oje washed clean.'

(30) a. *òjè dín élí éwè kú gbè.*
Oje:PRX PST:tie:PFV ART goats together
'Oje has tied the goats together.'
b. *òjè lí ó dín! élí éwè kú gbè.*
Oje PCL 3SG:DST PST:tie:PFV ART goats together
'It was Oje who tied the goats together.'
c. *élí éwé áìn lí ójé dín! kú gbè.*
ART goats DEM.DST PCL Oje:DST PST:tie:PFV together
'It was those goats that Oje tied together.'

(31) a. *òjè héén ólí óràn só.*
Oje:PRX PST:climb:PFV ART tree to.end
'Oje has climbed to the top of the tree.'
b. *òjè òkpá lí ó héén! ólí óràn só.*
Oje alone PCL 3SG:DST PST:climb:PFV ART tree to.end
'It was Oje alone who climbed to the top of the tree.'
c. *ólí órán nà òkpá lí ójé héén! sò.*
ART tree DEM.PRX alone PCL Oje:DST PST:climb:PFV to.end
'It was this tree alone that Oje climbed to the top of.'

We will assume therefore that a dual component structure itself is not source of the constraint on verb arguments in contrastive focus position when tertiary aspectual qualifiers are present. We note here an additional fact about the forms that appear as aspectual qualifiers. In single component predications, they allow their arguments to occur in contrastive focus position, as shown by an example form from each tertiary aspect type (32)–(34).

(32) a. *ólí áwà bá ólí ófè kún.*
ART dog.PRX PST:stalk:PFV ART rat in.vain
'The dog has stalked / pursued the rat without success.'
b. *ólí áwà òkpá lí ó bá[!] ólí ófè kún.*
ART dog alone PCL 3SG:DST PST:stalk:PFV ART rat in.vain
'It was the dog alone that stalked the rat without success.'
c. *ólí ófè òkpá lí ólí áwá bá[!] kùn.*
ART rat alone PCL ART dog:DST PST:stalk:PFV in.vain
'It was the rat alone that the dog stalked without success.'

(33) a. *ólì òmì sé-ì.*
ART soup.PRX PST:be.sufficient:PFV
'The soup is sufficient / enough.'
b. *ólì òmì òkpá lí ó sé[!]-ì.*
ART soup alone PCL 3SG:DST PST:be.sufficient:PFV
'It was only the soup that was sufficient.'

(34) a. *égúáí ísì òjè ré-ì.*
court ASS Oje.PRX PST:arrive:PFV
'The court of Oje has arrived.'
b. *égúáí ísì òjè òkpá lí ó ré[!]-ì.*
court ASS Oje alone PCL 3SG:DST PST:arrive:PFV
'It was the court of Oje alone that arrived.'

As (32)–(34) demonstrate, forms that otherwise express tertiary aspectual qualifications in dual component predications behave differently in single component predications. In the latter they do not restrict verb arguments from appearing in contrastive focus position. This being so, we move on to assess the relational and category nature of aspectual qualifiers by employing representational skeletons from Role and Reference Grammar. These representations view sentence structure in terms of layers identified by the juncture types nucleus, core, and clause as well as the nexus types coordination, subordination, and cosubordination.

First of all, we consider the hypothesis that tertiary aspectual forms, due to their position in a clause, may be adverbs. Tertiary qualifiers are concerned with the internal temporal constituency of an event. They assume the existence of an event and call attention to some feature of that event. For instance, *ba kun* specifies that the terminal edge of an event, its completion, has not been achieved, despite the intention of the subject argument to make it so. In contrast, *fee ghoo* specifies that the onset edge of an event, its initiation, has not been achieved, despite the intention of the subject. In this respect, one can view tertiary qualifiers as aspectual counterparts of tense-related adverbials such as 'yesterday,' 'tomorrow,' etc. Both tense-related adverbials and postverbal aspectual qualifiers (PAQs) ex-

hibit properties of scope with respect to their associated proposition. Within RRG, propositional adverbials articulate at the CORE layer (composed of a verb and its arguments) as a projection at its periphery. Were PAQ forms indeed adverbial, one would then expect a representation along the lines shown in figure 1.

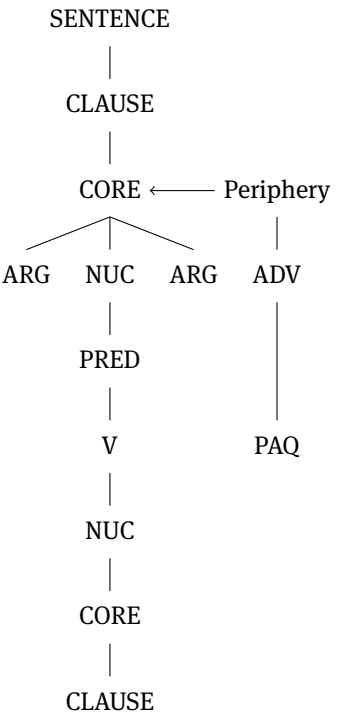

Fig. 1: Representation of PAQ form as core adverbial.

Initial support for an adverbial category assignment of PAQ forms appears consistent with the diachronic relationship in Emai between verbs and adverbs. Emai shows various adverbs (e.g. *rùrùrúrú* 'foolishly') that derive from an extant synchronic verb (*ruru* 'be foolish'). If forms with tertiary aspectual meanings were in fact adverbial modifiers, one would expect them to behave accordingly. Specifically, like adverbials, they should induce a tonal change on preceding nominal forms. In Emai, direct object nouns in clause final position show lexical tone, as shown by the high low form of *émà* 'yam' in (35a) and (36a). When such nouns are not clause final due to a following adverbial, they undergo a tonal change such that lexically low tones of the noun are replaced by high tones. The effect of

such a tonal change is evident in the high high tone sequence on *émá* in (35b) and (36b).

(35) a. *ó dúmé*[!] *émà*.
3SG:DST PST:pound:PFV yam
'She pounded yam.'

b. *ó dúmé*[!] *émá òdè*.
3SG:DST PST:pound:PFV yam yesterday
'She pounded yam yesterday.'

(36) a. *ò dúmé émà*.
3SG:PRX PST:pound:PFV yam
'She has pounded yam.'

b. *ò dúmé émá èghéènà*.
3SG:PRX PST:pound:PFV yam recently
'She has pounded yam recently.'

The nature of PAQs is becoming clearer, if only through rejection of alternative grammatical candidates. One can conclude from (32) through (36) that forms expressing tertiary aspectual qualifications in Emai are neither synchronic adverbs nor verbs. If neither is feasible, what is their category status? We offer two further hypotheses, each articulated within representations aligned with Role and Reference Grammar.

The most straightforward hypothesis, and for many the most obvious, is to assume that tertiary aspectual qualifiers are operators. Operators are generally considered to be grammatical function words of a closed class (Hengeveld, 1989). The functional effect of tertiary aspectual forms appears aligned with the core layer, which is composed of the verb and its arguments, not the layer of the nucleus, which specifies only the verb. From their position as a postulated operator at the core layer they would be able to exercise their scopal properties over verb arguments, restricting them from appearing in contrastive focus position. Postverbal qualifiers limit verb arguments to their canonical positions, thereby interacting with information structure and its modulation of clause meaning. Contrastive focus and its obligatory repositioning of arguments would be disallowed. From an operator position, PAQs would interact with other operators like tense, as shown by the modulation of tone on tertiary aspectual forms like 'already' *le*, whose tone alternates between the high of past tense and the low high of present tense (recall *lě* in section 3.1). Within RRG, PAQ forms as operators would be assigned a representation such as figure 2.

There is something about this interpretation that seems unsatisfactory, however. What seems most unsatisfying is that speakers of Emai know that nearly every tertiary aspectual qualifier form can function as a verb and that the meaning of

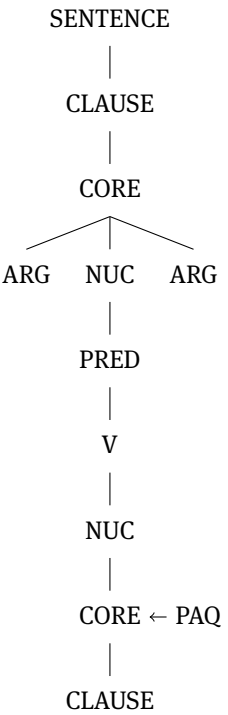

Fig. 2: Representation of PAQ form as core operator.

this verb is related in some way to the meaning of the tertiary aspectual form. PAQ forms can serve as verbs or quasi-verbs. This knowledge is not captured by the representation in figure 2. Essentially figure 2 claims that PAQ forms are of the same general type as tense, viewpoint aspect, and modality forms, all from the closed class type. Compared to tense and viewpoint aspect, PAQ forms seem quite different. For example, some tense and viewpoint aspect values in Emai are expressed exclusively by tone, past/present/future tense and perfective/imperfective aspect being instances. It is difficult to imagine any meaning now assigned to a PAQ form being expressed solely by a modulation in tone. And although every declarative clause requires expression of tense and viewpoint aspect, the same cannot be said of the relation between declaratives and PAQ forms.

Is there any linguistic evidence that would support the quasi-verb character of PAQs? We believe there is. An easily overlooked non-segmental feature of postverbal directional forms venitive *re* and itive *a* is their tonal patterning. They manifest a downstep high (ˈ) under particular morphosyntactic conditions. Four are perti-

nent. First, the PAQ forms involved must be monosyllabic. Second, the monosyllabic PAQ forms and their main verb must be adjacent to one another, i.e. the PAQ form must occur to the immediate right of its verb. There can be no nominal, for instance, that intervenes between the main verb and the PAQ form. Third, the PAQ form must be sentence final. And fourth, the monosyllabic PAQ form and its immediately preceding verb must be in construction with proximal past tense and perfective aspect. No other tense-aspect combination, linear order condition, or syllabic status leads to downstep high tone on directional PAQs.

These conditions are met by intransitive (37b–c) and (38b–c). Note that the downstep high tone representation, i.e. ˝, occurs on PAQ forms itive *a* and venitive *re*. Corresponding constructions that are transitive (37a) or ambitransitive (38a), respectively, fail to meet these conditions. Nor are they met by intransitives marked for distal past tense; (37d) and (38d). In both example sets high tone on the verb results from high tone of the perfective suffix that spreads leftward on each verb and subsequently abides realization conditions for metatony (Hyman & Lionnet, 2012; Schaefer & Egbokhare, 2021). As well, the final low tone on the subject in (37b–c) and (38b–c) derives from a floating low tone that signals proximal past tense in contrast to distal past, which relies on a floating high and ultimately shows as high tones on the lexical subject of a main verb.

(37) a. *òjè gúóghó ólí úkpóràn á.*
Oje:PRX PST:break:PFV ART stick ITV
'Oje has broken up the stick (in pieces).'

b. *ólí úkpóràn gúóghó á$^{!}$.*
ART stick:PRX PST:break:PFV ITV
'The stick has broken up (in pieces).'

c. *ólí éànmì áá á$^{!}$.*
ART meat:PRX PST:rot:PFV ITV
'The meat has rotted away.'

d. *ólí éánmí áá$^{!}$ à.*
ART meat:DST PST:rot:PFV ITV
'The meat had rotted away.'

(38) a. *òjè shóó vbí ómèhèn ré.*
Oje:PRX PST:wake:PFV LOC sleep VEN
'Oje has wakened up from sleep.'

b. *òjè shóó ré$^{!}$.*
Oje:PRX PST:wake:PFV VEN
'Oje has wakened up.'

c. *ólí ókà zé ré*$^{!}$.
ART maize:PRX PST:grow:PFV VEN
'The maize has sprouted up / developed its first shoots.'

d. *ólí ókà zé*$^{!}$ *rè*.
ART maize:DST PST.grow:PFV VEN
'The maize had sprouted up.'

Since the source of high tone on each directional PAQ or quasi-verb is perfective aspect, it is the source of the low tone that we must identify. This low tone merges with perfective high to become downstep high on the single syllable of a directional PAQ. Our hypothesis is that the low tone we have highlighted is a reflex or remnant of the low tone associated with proximal past tense. Further, we postulate that at an earlier diachronic stage this low tone was overt on a segmental unit (an anaphor) that marked proximal past tense in harmony with the same expression of proximal past on the main verb. Synchronically, such a floating low tone arises only when there is no surface level noun phrase (a potential logical subject) that immediately precedes the quasi-verb predicative element, as happens when a directional PAQ combines with an intransitive verb. In (37b–c) there was no noun phrase that immediately preceded the PAQ form. In the corresponding transitive situation, an object-subject switch function obtains at the surface level (Dixon, 2010; Aikhenvald, 2018) in which the direct object of V-1 also functions as the logical subject of V-2 (the PAQ form).

As a quasi-verb or particle, PAQ forms would assume the representational format in figure 3 (on page 97). The PAQ form would have scope over the verb and its arguments. It would also be neither an adverb nor a verb. Hence the term particle in figure 3. Importantly, PAQ forms in this representation would satisfy the unease noted regarding their quasi-verb character.

In this final interpretation postverbal tertiary aspectual qualifiers have three key properties. As one element in their predication, they require a preceding main verb and its arguments. They are syntactically and semantically dependent on the predication expressed by the main verb and its arguments. At the same time, there is no overt expression of dependency. Synchronically, tertiary aspectual qualifier meanings do not define a single component predication, although their counterpart verb forms do. In addition, verb arguments in a dual component predication with an aspectual qualifier must maintain their canonical position. Aspectual qualifiers require absolute scope over verb arguments, allowing no adjustments to argument information value. With respect to these essential properties, we view tertiary aspectual qualifiers in Emai as existing in a structure of cosubordination at the core layer that tolerates no change in the default information value of its predication elements. They must retain their canonical arrangement.

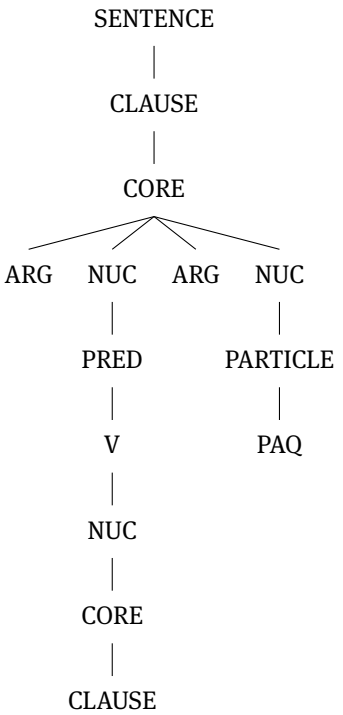

Fig. 3: Representation of PAQ form as particle.

Acknowledgements

Data incorporated in this paper derive from fieldwork that involved narrative texts, dictionary, and grammar construction (Schaefer & Egbokhare, 1999, 2007, 2017). These activities were sponsored by the U.S. National Science Foundation, (BNS #9011338 and SBR #9409552), U.S. Department of State (CUAP ASJY 1333), and the U.S. National Endowment for the Humanities (PD-50004-06).

Abbreviations

APP applicative
ART article
ASS associative
CL change of location
DEM demonstrative
DST distal
HAB habitual
IPFV imperfective
ITV itive
LOC locative
PAD projected adherence
PCL positive cleft
POSS possessive
PFV perfective
PL plural
PROG progressive
PRS present tense
PRX proximal
PST past tense
SG singular
VEN ventive

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Ciara Anderson

A Case for the Antipassive in Babungo

1 Introduction

Babungo is a Southern Ring language of the Grassfields family within Bantoid and is a close neighbour of the Bantu family (Eberhard et al., 2022; Blench, 2015; Schadeberg, 2003). The Ethnologue (Eberhard et al., 2022) classifies Babungo (or Vengo) as follows: Niger-Congo, Atlantic-Congo, Volta-Congo, Benue-Congo, Bantoid, Southern, Wide Grassfields, Narrow Grassfields, Ring, South. This analysis will examine the potentially polysemous nature of the morphological causative *-sə* suffix in Babungo, illustrated in (1a–b), with regard to an antipassive or depatientizing functionality in particular. We see an illustration of the addition of the morphological suffix to the base form *fèe* 'fear' in (1a) and (1b). As noted by Schaub (1985, 211), the original undergoer can appear optionally as we see in (1b) or be removed altogether.

(1) a. *ŋwɔ́ fèe zɔ̀*
3SG fear.PFV snake
'He was afraid of a snake.'

b. *ŋwɔ́ fè-sə̀ ŋwɔ́ (nè zɔ̀)*
1SG frighten.PFV-CAUS 3SG (with snake)
'I frightened him with a snake.'

(Schaub, 1985, 211)

As outlined in Section 3, the demotion or complete omission of the O argument is a key feature of antipassivization (Dixon & Aikhenvald, 2000, 9) and the original A takes on the S argument in an antipassive construction. Furthermore, both Song (2001, 266) and Dixon (2000, 43) highlight cross-linguistic challenges related to causativization of transitive verbs with the latter noting that one approach is to "[...] *first detransitivize the verb*, and then apply the causative derivation (emphasis mine)". Research suggests that there may be a grammaticalization path linking the causative function to the antipassive function with a mutual source in verbs with the meaning of 'do, make' (Creissels, 2021, 312), while in Bantu specifically, the notion of plurality can play a role as regards the semantic underpinnings of antipassive functionality (Bostoen et al., 2015).

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https://doi.org/10.1515/9783110795295-005

Bostoen et al. (2015) point to the polysemous nature of the associative / reciprocal *-an-* affix in Bantu, a near neighbor of Grassfields Bantu, as it relates to an additional antipassive-like function. In particular, they examine the semantic notion of plurality as paving the way for an antipassive meaning relating to a reduction in the plurality semantics of participants and a focus on the plurality of events in a more generic/habitual sense. In contrasting canonical or central Bantu (CB) with Bantoid, Hyman (2018, 173, 178, 179) points to the polysemous nature of a number of verbal extensions in Bantoid which are reminiscent, semantically speaking, of those expressed by Bostoen et al. (2015) with regard to the *-an-* affix, notably, pluractional meanings such as repetitive, frequentative and iterative.

Beyond Bantoid and Bantu, Juárez & Alvarez Gonzalez (2021, 315–316) point to the polyfunctional nature of the valency marker *-agan* in Mocoví (Guaycuruan) as permitting a usage that is synchronically both antipassive and causative. They draw on Song's (1996) notion of constraints on Noun Phrase (NP) density as the syntactic source of restriction driving this polysemous usage of *-agan* and highlight the need to first detransitivize a Mocoví transitive verb before it can be causativized. Examples (2a–d) illustrate the necessity of first detransitivizing a transitive verb before valence increasing causative marking can be applied.

(2) a. *so yale i-alat a-so l-wa.*
DET man 3.II-leave F-DET 3POSS.I-partner
'The man left/abandoned his wife.' [Transitive]

b. *so yale ɾ-alat-aɢan*
DET man 3INTR.II-leave-ANTIP
'The man divorced.' [Antipassive]

c. **so yale ɾ-alat-aɢan a-so l-wa*
DET man 3INTR.II-leave-ANTIP F-DET 3POSS.I-partner
'The man divorced his wife.' *or*
'The man left/abandoned his wife.' [Antipassive + P noun phrase]

d. *so l-taʔa i-alat-aɢan-aɢan l-yaːle-∅*
DET 3POSS.I-father 3.II-leave-ANTIP-CAUS 3POSS.I-descendant-F
'His father made his daughter divorce.' [Causative]
(Juárez & Alvarez Gonzalez, 2021, 328)

The pluractional semantic underpinnings of *-sə* in Babungo have not been examined with regard to their potential antipassive functionality. Boston et al's (2015) findings on a link between plurality semantics and the antipassive affix in Bantu will similarly be explored in Babungo, though with reference to causative rather than associative or reciprocal markers. The notion of detransitivization of transitive constructions prior to causation with roots in Song's (1996; 2001) notion of NP density will be also be examined in this study.

This paper will begin an overview of literature on causative and antipassive functionality along with with connection between the two in section 2. Section 3 will examine verbal classes in Babungo with a particular emphasis on what Schaub (1985, 57–58) deems as the 'semi-transitive' verbal subclass and its potential to understood as a complex predicate in light of Goldberg (2016). This will be followed by an examination of instantiations of the Babungo causative marker along with evidence for an extended functionality as an antipassive or detransitivizing marker in Section 4, drawing on the functionalist framework of Role and Reference Grammar (RRG; Van Valin, 2005, 2008; Van Valin & LaPolla, 1997; Pavey, 2010). This proposal will be supported by evidence from related Bantoid and Bantu languages, examining notions of the semantic underpinnings of plurality as they relate to polysemous functionality in antipassivization and constraints around NP density in section 5. The application of these notions of pluractionality and NP density will be applied to Babungo in particular in section 6.

2 Causation and Antipassivization

An overview of some key characteristics of the causative and antipassive construction will provide a basis for the analysis of such in Babungo and related languages. A number of typological observations have been made with regard to the introduction of a causer argument into predicative constructions with evidence of consistent patterning in relation to lexical, morphological and syntactic causation (Song, 1996, 2001; Dixon & Aikhenvald, 2000). While not an exhaustive outline, Dixon & Aikhenvald (2000, 13) outline some typical characteristics of causatives as follows:

(3) a. Causative applies to an underlying intransitive clause and forms a derived transitive.
b. The argument in underlying S function (the cause) goes into O function in the causative.
c. A new argument (the causer) is introduced, in A function.
d. There is some explicit formal marking of the causative construction.

The following illustration from K'iche' demonstrates the derivation of a transitive from an intransitive via morphological causation.

(4) a. *š-e:-kam-ik*
ASP-3PL.ABS-die-INTR
'They died.'

b. *š-e:-qa-kam-isa:-x*
ASP-3PL.ABS-1PL.ERG-die-CAUS-TR
'We killed them.'

(Campbell, 2000, 277)

Dixon & Aikhenvald (2000, 13) note that some, but not all, languages do permit causativization of transitives. Song (2001, 266–267) further highlights that while certain languages, such as Basque, will tolerate causativization of transitives, there are difficulties in applying morphological causatives to transitive and ditransitive verbs in a number of languages – "[...] transitive verbs are more difficult to causativize morphologically than intransitive verbs; and ditransitive verbs are more difficult to causativize morphologically than transitive verbs". This may be due to language-specific constraints on the maximum number of core NPs per clause (MCNP) and 'extended demotion' of the causee to an oblique position may be required (Song, 2001). Dixon (2000, 43) also notes that several languages do not permit the direct causativization of transitive verbs and that before the application of the causative form, detransitivization of the verb must occur.

Payne (2006, 255–257) outlines antipassive functionality as it relates to the downplaying of object arguments by omitting or demoting the object itself. Payne distinguishes between an antipassive which requires explicit marking and object omission or demotion which do not, however, he highlights that they serve "[...] essentially the same function" (Payne, 2006, 255). Dixon & Aikhenvald (2000, 9) outline the following characteristics for a prototypical antipassive:

(5) a. Antipassive applies to an underlying transitive clause and forms a derived intransitive.
b. The underlying A becomes S of the antipassive.
c. The underlying O argument goes into peripheral function, being marked by a non-core case, adposition, etc.; this argument can be omitted, although there is always an option of including it.
d. There is some explicit formal marking of an antipassive construction (same basic possibilities as for passive).

See an illustration from Mocoví in which the transitive form of the verb is shown in (6a) and an antipassive marker is used in (6b) resulting in omission of the P argument and intransitive indexing of the subject (Juárez & Alvarez Gonzalez, 2021, 326).

(6) a. *so pyoq i-ta-tak so yale*
DET dog 3.II-sniff-PROG DET man
'The dog is sniffing the man.'

b. *so pyoq* ɾ*-ta-a*ɢ*an*
DET dog 3INTR.II-sniff-ANTIP
'The dog sniffs.'

(Juárez & Alvarez Gonzalez, 2021, 326)

In terms of the causative/antipassive connection, Creissels (2021, 312) points to a mutual semantic source of causative and antipassive markers in Soninke stemming from the Proto-West-Mande root **tin* 'do' while Bostoen et al. (2015) underline semantic notions relating to plurality as key semantic bases for the usage of an antipassive marker in Bantu.

As was illustrated in examples (2a–d), Juárez & Alvarez Gonzalez (2021) have highlighted the dual functionality of the *-agan* marker in Mocoví as it relates to the process of first intransitivizing transitive verbs via the antipassive function of the marker and then retransitivizing them drawing on its causative function. As mentioned, they draw on Song's (1996) work relating to a limitation of the number of core NPs permitted in a given clause which will similarly be referenced in the present study.

Building on such previous research on the antipassive/causative connection, we will now examine a selection of verbal classes in Babungo as they relate to the topics of causation and antipassivization.

3 Verbal Sub-Categories in Babungo

Babungo is an SVO language with a robust system of noun class agreement and makes extensive use of verbal extensions including valency and aspect marking (Schaub, 1985, 62, 171, 209–233). In terms of verbal classes, Schaub (1985, 59) points to the existence of intransitive, semi-transitive, transitive and bi-transitive categories. The 'semi-transitive' and 'bi-transitive' sub-categories contain unique characteristics, particularly when it comes to what Schaub (1985, 56–58) describes as prepositional and adverbial constituents respectively. Within the scope of this study, semi-transitive verbs will be examined in light of their connection to our understanding of the *-s*ə suffix in Babungo in terms of causation and antipassivization.

3.1 Semi-transitive verbs in Babungo

Semi-transitive verbs are those which require what Schaub describes as a locative adverbial and largely appear to be motion verbs such as gə̌ 'go', *kó*' 'climb'

and *zí* 'arrive' (Schaub, 1985, 57). These obligatory elements are perhaps better categorized as an obligatory goal prepositional phrase in certain cases as seen in examples (7a) and (7b).

(7) a. *Ndùlá gə̀ táa yìwìŋ*
Ndùlá go.PFV in/to market
'Ndula has gone to the market.'
b. *fə̀shīa kò' fúu tì*
squirrel climb.PFV on tree
'A squirrel climbed on a tree.'

(Schaub, 1985, 57)

The necessity of positioning the locational PP directly after the verb in these cases, suggests that the preposition carries a semantic dependence on the nature of the verb in question. We see an example of a PP that can be interrupted in (8a) and (8b) and one that cannot when used with a 'semi-transitive' verb in (8c) and (8d).

(8) a. *ŋwə́ fá' táa bīisə̄ tɨ́ Làmbí*
3SG work.IMPF in farm for Lambi
'He is working in the farm for Lambi.'
b. *ŋwə́ fá' tɨ́ Làmbí táa bīisə̄*
3SG work.IMPF for Lambi in farm
'He is working for Lambi in the farm.'
c. *ŋwə́ gə̀ táa yìwìŋ tɨ́ tɨ̌i wī*
3SG go.PFV in/to market for father NP_3.3SG.POSS
'He has gone to the market for his father.'
d. **ŋwə́ gə̀ tɨ́ tɨ̌i wī táa yìwìŋ*
3SG go.PFV for father $NP_3$3SG.POSS in/to market
'He has gone for his father to the market.' (author's paraphrase)

(Schaub, 1985, 57, 58)

What appears to be a goal PP *táa yìwìŋ* 'in/to market', along with related obligatory locational PPs in 'semi-transitive' constructions, will be evaluated in this study in light of the notion of complex predicates consisting of a predicate and obligatory particle (Goldberg, 2016). Firstly, because of their semantic dependence on the verb used, such locative PPs are obligatory with certain verbs pointing to a core RP argument function of *yìwìŋ* 'market', for example. This approach is strengthened by the fact that such PPs can occur with other verbs, but on an optional basis, i.e., they have the liberty to be positioned after other intervening elements as seen in (8b), which is not the case with semi-transitive verbs (Schaub, 1985, 57). Their obligatory occurrence in immediate post-verbal position in the latter case

suggests a close semantic and syntactic relationship with the predicate and particle in question.

Additional evidence for the semantic tightness of these goal PPs with 'semi-transitive' verbs relates to their unique behavior with echo questions. Schaub (1985, 18) outlines this situation in Babungo as follows – most locational PPs can be echo-questioned with the simple use of *ɨ́fə̄* 'where' as illustrated in (9a) and (9b). However, with semi-transitive verbs *ɨ́fə̄* cannot be used in isolation, a full sentence must be used, see (10a) and (10b). If a full sentence is not used, the question takes on a different meaning, as seen in (10c) and *ɨ́fə̄* refers to a different location, not the location referred to in the obligatory PP.

(9) a. *mə̀ fá'* *táa yìwìŋ* *ndée*
1SG work.IMPF in market today
'I am working in the market today.'
b. *ɨ́fə̄*
where
'Where? (i.e. you are working where today?)'

(Schaub, 1985, 18)

(10) a. *mə̀ gə́* *táa yìwìŋ*
1SG go.IMPF to market
'I am going to the market.'
b. *à gə́* *fə̄*
2SG go.IMPF where
'Where are you going?'
c. *ɨ́fə̄*
where
'Where? (i.e. you are going to the market of where? – but not 'where are you going?')'

(Schaub, 1985, 18)

Again, we see the distinct semantic tightness of semi-transitive verbs with their locational components even when echo-questioned, as illustrated in the contrasting usage of verbs that appear syntactically similar on the surface. With semi-transitives, not only can the goal PP not be interrupted by other objects, it cannot be questioned in isolation in the same manner as goal PPs when they are used with other verbs.

Thirdly, Schaub (1985, 154) includes what he deems to be "locational nouns" in their usage with such semi-transitive verbs. These are nouns in which the preposition is not expressly mentioned but the concept of location remains, semantically speaking, as we see in the case of *fú* 'compound' in (11).

(11) *ŋwɔ́ gə̀ fú Làmbí*
3SG go.PFV compound Lambi
'He has gone to Lambi's compound.'

(Schaub, 1985, 154)

Thus, we see evidence that a 'semi-transitive' verb like *gə̌* 'go' is inherently transitive. They require a direct object of sorts that is semantically locational in nature. With certain locational nouns these transitive semantics are explicitly realized, but with obligatory prepositional phrases it is seen in the obligatory positioning of the prepositional phrase and inability to separate the goal constituent. As mentioned, other verbs do not require this strict bond between the PP with the verb in question and can be interrupted by other elements as seen in examples (8a–d).

3.2 Semi-transitive Verbs as Complex Predicates

The obligatory role and semantic dependence of such prepositions of 'semi-transitive' verbs suggests a tight connection between form and function. This calls to mind Goldberg's (2016, 110) outline of complex verb particle constructions in English – "The English verb-particle construction involves a verb and preposition (aka "particle") that combine to form a *single semantic predication* (emphasis mine)." Further to this, she asserts that there is a dependence of the verb and particle on the other and that they are not permitted to be present outside the bounds of the verb phrase (Goldberg, 2016, 114). Goldberg (2016, 113) also highlights that "unlike other complements of verbs, with few exceptions, the particle cannot generally appear as an answer fragment [...]". We saw a similar situation in (10c) in which the PP with semi-transitive verbs cannot be echo-questioned in isolation without altering the meaning of the construction. Schaub (1985, 57) asserts that "[...] the obligatory locative cannot be echo-questioned by an isolated question, as is possible with marginal locative adverbials".

Babungo somewhat diverges from Goldberg's (2016, 111, 114) outline of complex predicates in that 'semi-transitives' appear to occur with a particular category of particles – locative prepositions. Additionally, the notion of a "default inheritance network" is beyond the scope of this study. However, the analysis in Section 3.1 points to the existence of a subset of semantically and syntactically bound predicates and prepositions. It may be the case that we are dealing with a set of complex predicates in Babungo in the form of a transitive verb-particle. Goldberg (2016, 110) uses the terms "particle" and "preposition" interchangeably regarding instances of English verb-particle constructions and this terminology

will similarly be followed in this analysis. The following illustration from English verb-particle constructions demonstrates a similar notion.

(12) a. *She **picked** the paper **up**.*
b. *She **picked up** the paper.*

(Goldberg, 2016, 117)

3.2.1 Transitive Verb-Particle Constructions in Babungo

When dealing with verb-particle constructions in English Goldberg (2016, 123) outlines a form and function construction for the English transitive verb-particle construction. A modified version can be applied to the so-called 'semi-transitive' verb-particle constructions in question in Babungo figure 1. Unlike English, however, the word order in Babungo is strict and the particle cannot be separated from the verb. Goldberg (2016, 123) utilizes curly brackets { } to indicate that the word order of the P, NP is underspecified. As such, parentheses rather than curly brackets are used surrounding the P, NP to indicate a specified word order.

Transitive Babungo V-P Construction
Form: $[\text{V (P, NP)}]_{VP}$
Function: PREDICATION; V-P(NP)

Fig. 1: Transitive Babungo VP Construction; Adapted from Goldberg (2016, 123).

As highlighted in examples (8b) and (8d) with additional evidence from locational nouns in (11), it appears that these goal elements are in fact arguments of the semi-transitive verb itself. In some places the preposition is expressed explicitly as in (8c) whereas in others the prepositional element is semantically implied through the locational noun. This is an alternative approach to viewing these as semi-transitive verbs which take a prepositional argument. Instead, they will be viewed as complex predicates containing a verb and particle followed by an RP argument from an RRG perspective (Van Valin, 2008). We can thus consider them as transitive complex predicates in the lexicon. The notion of representing verb-particle constructions as an extension to the existing lexicon, as per Goldberg (2016, 111), ties in well with the RRG concept of constructional schemas in which generalized principles which apply to the language are captured while retaining language-specific nuances (Van Valin, 2005, 131, 132).

4 The Morphological Causative and Antipassive Connection

Having reinterpreted a selection of semi-transitive verbs along with their particles in Babungo as transitive complex predicates, we will now examine the impact of this on our understanding of the morphological causative suffix *-sə* in the context of its use with more typical syntactic constructions in Babungo.

4.1 Morphological Causatives in Babungo

While lexical and syntactic means of applying causation may be observed in Babungo (Schaub, 1985, 223, 212), this study focuses on the morphological causative. The suffix *-sə* has a causative function in Babungo as seen in (1b) and according to Schaub (1985, 210, 211) can occur with intransitive, semi-transitive and transitive roots. This analysis will treat the semi-transitive verbs in question as transitive complex predicates based on the reanalysis above. Schaub (1985, 211) highlights that, in his terms, the 'subject' of underlying sentence takes on the position of the direct object of the causative construction and that the 'direct object' of the underlying transitive construction either does not appear in the causative construction or can follow optionally as an adverbial. These points will be important in our investigation into the morphological causative as carrying some dual functionality of detransitivization.

In examples (13a–b) and figures 2 to 3 (on page 112f.), we see what appears to be a case of the initial undergoer *yíməŋ* 'breast' disappearing completely when the causative form of the verb is used; thus, it is marked as ∅ in the active accomplishment logical structure since it is absent but implied. This is reminiscent of Dixon and Aikhenvald's (2000) note that the antipassive can result in omission of the original O argument . Low tone marking on *nyɔ̀ŋ* 'suck' points to a perfective aspect describing a completed event with terminal point in mind hence the choice of an active accomplishment as opposed to activity based logical structure due to the contextual usage of the predicate (Schaub, 1985, 215; Van Valin, 2005, 37, 47).

(13) a. *wèe nyɔ̀ŋ yíməŋ́*
child suck.PFV breast
'The child sucked the breast.'

b. *wəzwì nyɔ̀ŋ-sə́ wèe*
woman suckle.PFV-CAUS child
'The woman suckled the child.'

(Schaub, 1985, 211)

We see an illustration of the addition of the causative affix to a complex transitive predicate (formerly 'semi-transitive') in (14a) and (14b) along with figures 4 to 5 (on page 114f.). The re-examination of such verb-particles as complex predicates in light of Goldberg's (2016) is also expressed in their logical structures.

(14) a. *ŋwə́ ŋ̀ìi táa ŋ̀ìi*
3SG enter.PFV in house
'He entered the house.'
b. *mə̀ ŋ̀ìi-sə́ ŋwə́ táa ŋ̀ìi*
1SG enter.PFV-CAUS 3SG in house
'I made him enter the house.'

(Schaub, 1985, 211)

The apparent goal PP, *táa ŋ̀ìi* 'in house', has been re-examined in this study as part of a complex verb-particle construction taking a direct core RP argument (Van Valin, 2005, 2008). The obligatory presence of the verb and PP with semi-transitives points us to a core RP argument function of *ŋ̀ìi* 'house'. As mentioned, such PPs can occur with other verbs on an optional basis, as outlined in examples (8a) and (8b). This is not permitted in the case of (14a). The obligatory post-verbal positioning of the PP with semi-transitives points to a tight semantic and syntactic relationship with the predicate and particle in question resulting in its framing as a complex predicate.

Notably, with the introduction of the causative affix, the previously obligatory positioning of the goal PP is now separated from the verb and placed as part of a peripheral prepositional phrase. It is no longer in the obligatory postverbal condition which partially identifies its location as a core argument in other cases. It can now be interrupted by another constituent as it is in other non-'semi-transitive' verbs. To use Dixon & Aikhenvalds's (2000, 9, 13) terms, the "underlying S function (the causee) goes into O function in the causative", but similar to the pattern of an antipassive function, the initial "O argument goes into peripheral function, being marked by a non-core case, adposition, etc.; *this argument can be omitted, although there is always the option of including it* (emphasis mine)". As mentioned, Dixon (2000, 43) notes that detransitivization of the verb in question is one way of addressing limitations around the causativization of transitive verbs.

This raises the question as to whether the causative suffix *-sə* has the additional function of detransitivizing the complex verb-particle construction so that it behaves as an intransitive verb similar to the case illustrated in Mocoví in (2d). We see a case of an additional causer argument being added and the original undergoer demoted to an adjunct position. Not only that, but the tight semantic and syntactic connection between predicate and particle has been loosened.

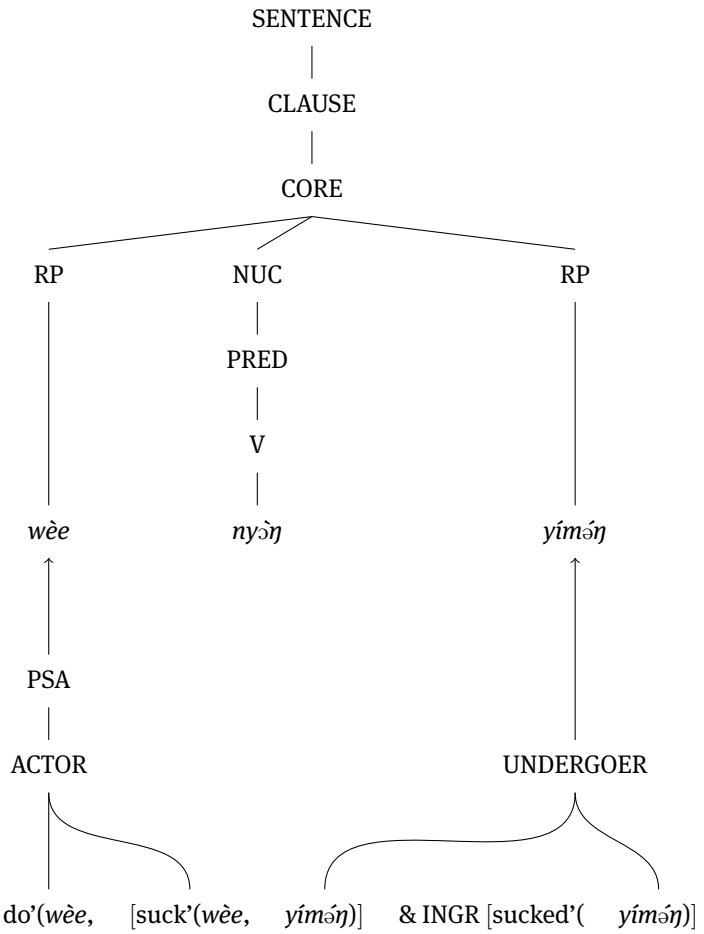

Fig. 2: Transitive verb in Babungo.

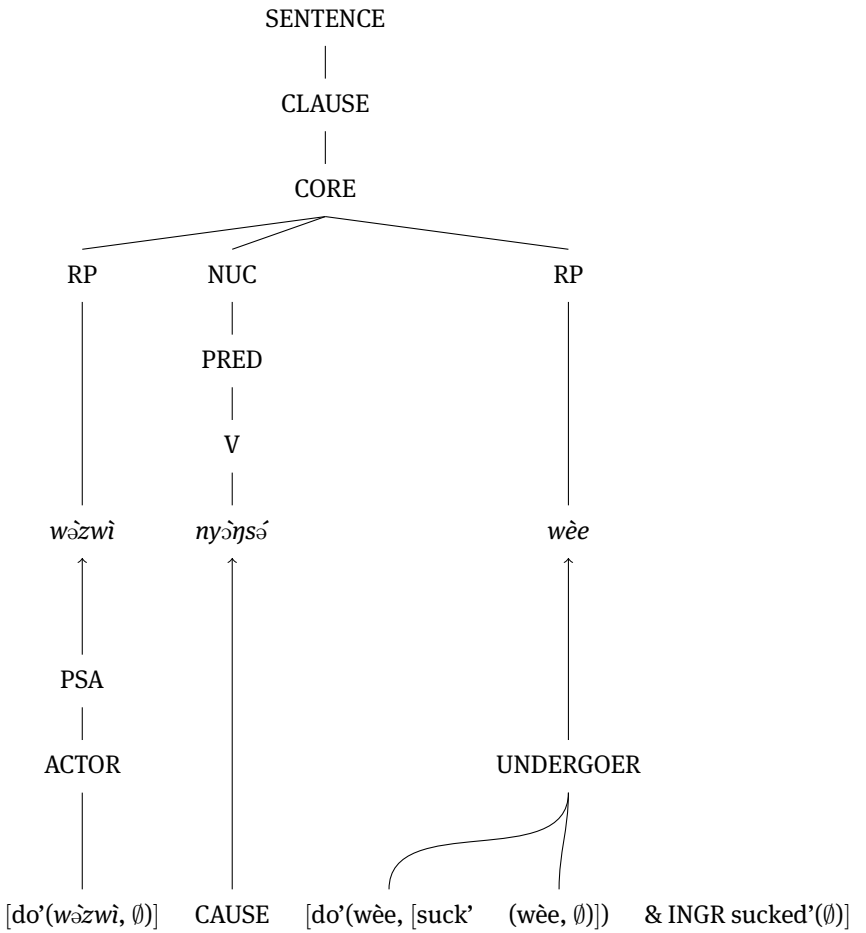

Fig. 3: Causative with Transitive Verb in Babungo.

Van Valin (2005, 21–23) makes a distinction between predicative adpositions and non-predicative adpositions. He highlights that locative adpositions, for instance, provide substantial semantic detail to a clause and are thus placed in a peripheral adjunct position which applies to example (14b).

We will now examine causation in verbs that take a single argument before applying the causative marker. The examples in (15a) and (15b) and figures 6 to 7 (on page 116f.) demonstrate an increase of arguments in the core from one to two with the addition of the causative suffix.

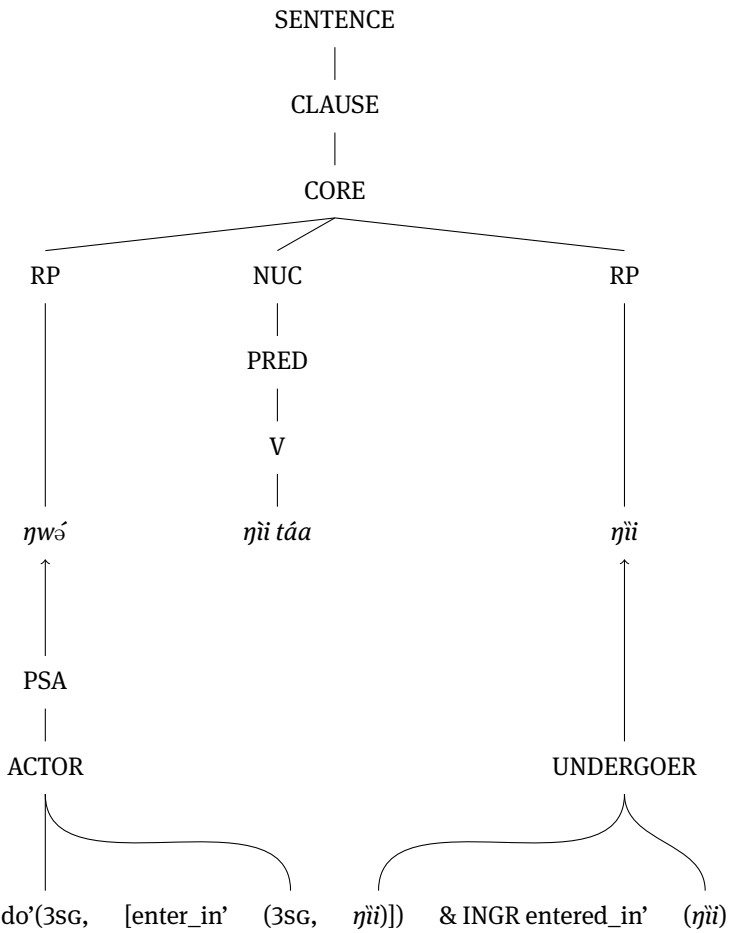

Fig. 4: Complex Transitive Construction in Babungo.

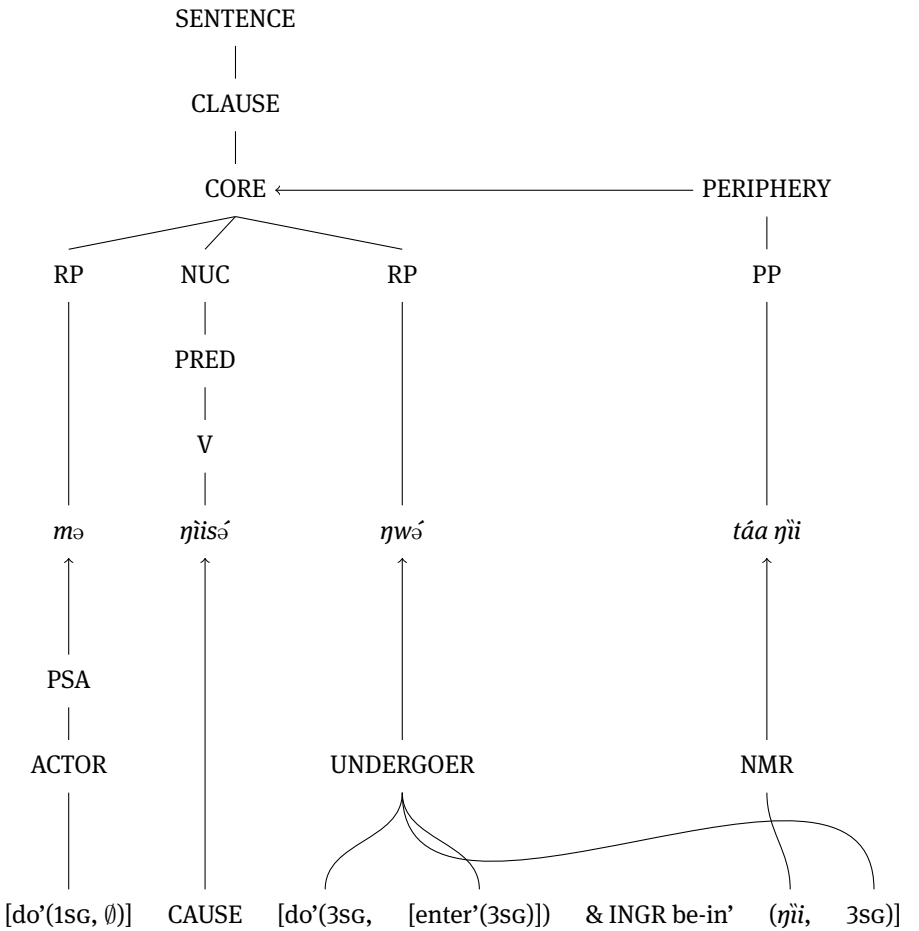

Fig. 5: Causative with Complex Transitive Construction in Babungo.

(15) a. *múu ndɔ̀ŋ*
water be.hot.PFV
'The water was hot.'

b. *mə̀ ndɔ̀ŋ-sə̀ múu*
1SG heat.PFV-CAUS water
'I heated water.'

(Schaub, 1985, 211)

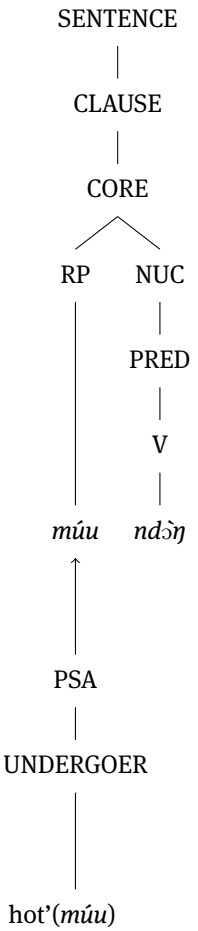

Fig. 6: Single Argument Verb in Babungo.

Here we see the causative suffix increasing both semantic and syntactic valency of the predicate with the introduction of a causer and a core RP undergoer which is characteristic of prototypical causation.

We will now examine the literature on an antipassive/causative connection to provide a basis for the proposed dual functionality of the *-sə* suffix.

5 Support for an Antipassive and Causative Connection

5.1 Song on Causatives and the MCNP

In support of the need for detransitivization in Babungo's transitive predicates we refer back to Song's (2001) observation on the challenges in causativizing transitive verbs in certain cases. As mentioned, Song (2001, 266–267) uses the terminol-

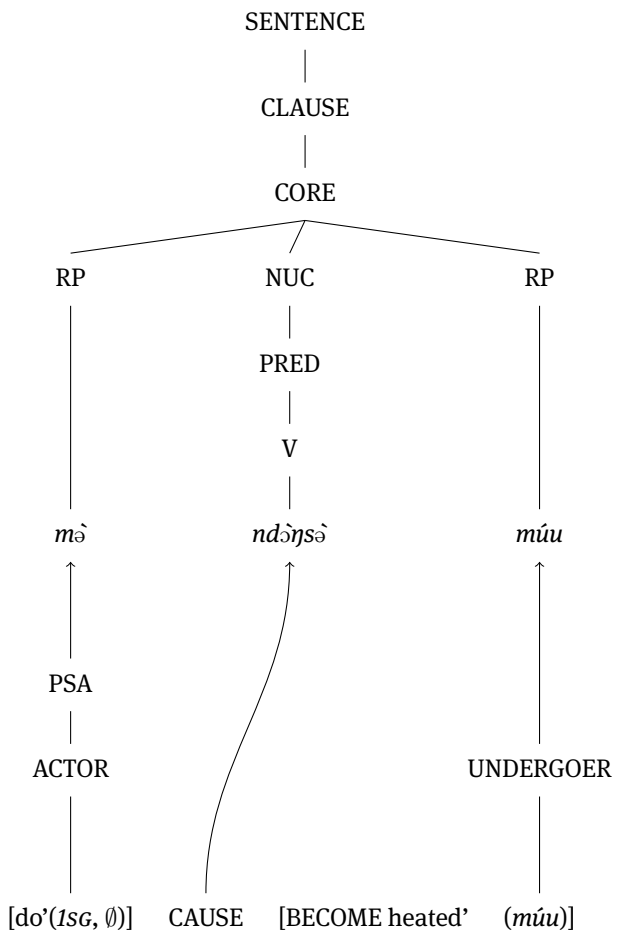

Fig. 7: Causative with Single Argument Verb in Babungo.

ogy of "maximum number of core NPs per clause" or MCNPs to conclude that a limitation on such may lead to the need to demote the causee when a transitive clause has a morphological causative applied. In such an instance, the number of core NP arguments rises to three, and thus, a tool like "extended demotion" can ensure a language maintains its core structure of two NPS (Song, 2001). The need to first detransitivize via the antipassive and then retransitivize via the causative using a polysemous marker was illustrated in Mocoví in example (2d). It appears that two NPs may be permitted in the case of Babungo as we see in (13a), but when this is extended to three, some kind of demotion of an argument to a peripheral position must take place as in (14b). As seen in section 3, ditransitive predicates have not been identified in Babungo.

5.2 Support from Babanki – A Related Ring Language

We see further evidence of the depatientizing use of the causative suffix -sə in Babanki, a neighbouring Ring language (Akumbu & Chibaka, 2012). In terms of transitivity, verbs in Babanki can be intransitive or carry dual functionality of intransitive / transitive (Akumbu & Chibaka, 2012, 141). The introduction of a third argument in stative or intransitive/transitive verbs with the causative suffix means that the initial O must occur in the form of a PP (Akumbu & Chibaka, 2012, 132–135). As the presence of an object is not necessary, verbs cannot be defined as strictly transitive in Babanki (Akumbu & Chibaka, 2012, 134, 142). When used with intransitive verbs, the causative suffix can denote meanings such as assistive, causative and permission and can denote the sense of 'help someone to do something' (Akumbu & Chibaka, 2012, 133). See an example of the causative expression of such in (16).

(16) *wù yì chə́'-sə́ mò nó nàntó*
2SG P2 laugh-CAUS 1SG very much
'You caused me to laugh too much.'

(Akumbu & Chibaka, 2012, 133)

In examples (17a–c) we see the introduction of a third argument to an intransitive predicate via causation. Again, the third argument must occur in an oblique position.

(17) a. *ɣə̀ tə̀ kúʔ*
3SG P3 climb
'He climbed.'

b. *mà tə̀ kúʔ-sə́ wɛ́n*
1SG P3 climb-CAUS 3SG

'I made him climb.'

c. *mà tə̀ kúʔ-sə́ wɛ́n á fə̄-kɔ̃ʔ*
1SG P3 climb-CAUS 3SG PREP C19.tree
'I made him climb the tree.'

(Akumbu 2022, p.c.)

Interestingly, when used with an intransitive/transitive verb, the third argument becomes optional and, if used, must be expressed using a prepositional phrase (Akumbu & Chibaka, 2012, 134–135) as illustrated in (18a) and (18b).

(18) a. *nyàm-sə́ tə̀ nyʉ̀ múū myì*
animal-C10 P3 drink C6A.water C6A.DET
'The cattle drank the water.'

b. *w-ân yì tə̀ nyʉ̀-sə́ nyàm shì (nə̀*
C1-child C1.that P3 drink-CAUS animal.C10 C1.those (with
múū myì)
C6A.water C6A.DET
'The child helped the cattle to drink the water.'

(Akumbu & Chibaka, 2012, 135)

Akumbu (2022, p.c.) provides the following additional paraphrases of (18b) – "the child provided the water for the cattle to drink", "the child led the cattle to the water to drink by themselves" and "the child makes it possible for the cattle to drink water".

The ability to omit the initial undergoer completely, evidence of using a predicate with dual functionality in its intransitive sense and a likelihood of a similar restriction relating to an MCNP of two in Babanki (Akumbu & Chibaka, 2012, 141), sets the stage for further research on the detransitivizing function of the causative suffix throughout the Ring languages. Perhaps the morphological causative utilizes the patient-blocking/demotion functions of the antipassive in order to maintain the MCNP when used with an underlying construction that is potentially transitive in its usage. Furthermore, as highlighted by Song (2001, 267), extended demotion of an object to an oblique position does not tend to occur when the verb is intransitive but can occur with transitive verbs in order to maintain the MCNP.

5.3 The Antipassive in Bantu and Accusative Languages

The claim for an antipassive in accusative and more specifically in the Bantu language family, finds support in Bostoen et al's (2015, 732) proposal that the Bantu reciprocal or associative affix *-an-* also serves a depatientizing or antipassive func-

tion in a number of Bantu languages. Bostoen et al's study highlights that the antipassive occurs in geographically distinct areas but always has "the same semantic origin" (Bostoen et al., 2015, 732). Bostoen et al. (2015) point to Lichtenberk's (2000, 32–34) notion of a "plurality of relations" which relates to a "low elaboration of situations", thereby permitting the usage of an antipassive meaning of the reciprocal/associative marker *-an-* in Bantu.

As has been noted, the difference between antipassivization and object demotion is that the former takes a verbal marker while the latter does not. If this derivational suffix is correctly identified as demoting or removing the patient in a given context it would indeed formally qualify as an antipassive construction marker.

Additional support has been found for the presence of antipassive constructions in accusative languages. Polinsky (2013) notes that while there is debate surrounding the antipassive's connection with ergativity, the WALS sample of languages "shows no principled correlation between ergativity and the antipassive." Heath (1976) proposes the existence of the antipassive form in nominative-accusative languages, such as English and several Uto-Aztecan languages. He concludes that, while less common in languages containing an accusative morphology, the antipassive is not limited to morphologically ergative languages (Heath, 1976, 210). Other examples from the literature include Say (2005) in his analysis of *sja*-verbs in Russian, Masullo (1992) and Mejéas-Bikandi (1999) in their work on the presence of an antipassive construction in Spanish and Postal (1977) on the possibility of an antipassive in French.

5.4 Pluractionality and The Antipassive in Bantu

Bostoen et al. (2015) provide an overview of various occurrences of the antipassive throughout Bantu. They point out that Kirundi allows antipassive/reciprocal ambiguity. Kirundi reciprocals having a plural subject are ambiguous in terms of a reciprocal versus generic / quantificational reading as in (19a), but when used with a singular subject, as in (19b), this ambiguity is removed to produce an antipassive (Bostoen et al., 2015, 735, Ndayiragije, 2006, 275). We see the shift in arguments from an A of a transitive construction to S of an intransitive one. Perhaps it is best explained in the lexicalised form of a student who 'people -insulted'. Bostoen et al. (2015, 735) note that the Ndayiragije's (2006) 'ARB' gloss in the examples below refers to an arbitrary depatientized object.

(19) a. *a-ba-nyéeshuúle ba-a-tuk-an-ye*
AUG$_2$-NP$_2$-student SC$_2$-PST-insult-RECP/ANTIP-PFV
(i) 'Students insulted each other.'
(ii) 'Students insulted people(arb)'[1]
b. *u-mu-nyéeshuúle a-a-tuk-an-ye*
AUG$_1$-NP$_1$-students SC$_1$-PST-insult-ANTIP-PFV
'A student insulted people(arb).'

(Ndayiragije, 2006, 275–276)

In Kisongye, the core meaning of *-an-* completely shifted to the antipassive, while the reciprocal/associative function was adopted by another marker (Bostoen et al., 2015, 741–742). Example (20a) illustrates the productive use of *-an-* in contrast with the base form of the verb seen in (20b).

(20) a. *bà-mpùlushì abà-yip-an-a bi-kìle bu-ùfu*
NP$_2$-police SC$_2$-kill-ANTIP-FV NP$_8$-much NP$_{14}$-night
'The police often kill at night.'
b. *bà-mpùlushì abà-yip-a ba-ngìfi bi-kìle ku-kùfu*
NP$_2$-police SC$_2$-kill-FV NP$_2$-thief NP$_8$-much NP$_{14}$-night
'The police often kill thieves at night.'

(Bostoen et al., 2015, 742)

While in Cilubà, Dom et al. (2015, 355) note that the antipassive reading is distributed in a complementary fashion with the reciprocal/associative meaning. They highlight that, when used with a singular noun, the verbal suffix *-angan-* denotes an antipassive meaning, but when used with a plural noun, denotes a reciprocal meaning. Thus, Bostoen et al. (2015) and Dom et al. (2015) have contended for the existence of the antipassive in Bantu.

As noted, Bostoen et al. (2015) point to Lichtenberk's (2000) work on plurality as central to our understanding of the polysemous feaures of *-an-* in Bantu. Lichtenberk (2000, 33–34) points to the notion of "plurality of relations" as encompassing the semantic underpinnings of reciprocals and associated markers:

> There is plurality of relations in an overall situation (event, state, etc.) if what can be considered to be basically one and the same relation holds more than once either between one or more participants and the event/state they are involved in, or between the relevant entities.

The semantic notions of a plurality of events and plurality of participants are a key feature in Bostoen et al's (2015) account of the development of antipassive mark-

1 Gloss adapted from Bostoen et al. (2015, 735).

ing in Bantu. It is posited that the notion of "plurality of relations" accounts for the semantic extension from prototypical associative meanings of the marker which involve both plurality of participants and events to meanings that relate to plurality of events only, such as iterative, intensive and habitual (Bostoen et al., 2015, 750, 758). Some key features that Bostoen et al. (2015) point to as the basis for the *-an-* affix having an additional antipassive functionality include (a) its polysemous nature (Bostoen et al., 2015, 747), (b) the root of its polysemous meanings as being derived from the notion of plurality (Bostoen et al., 2015, 746–753), (c) a semantic shift from plurality of participants and events to a plurality of events leading to iterative, intensive and even habitual interpretations (Bostoen et al., 2015, 750, 758) *and* (d) the semantic notions of event plurality expressed in intensive or habitual markers translating well to the expression of antipassive functionality in that the latter denotes actions or events that are general in nature and express habitual notions through the removal of the direct object (Bostoen et al., 2015, 758).

Dom et al. (2015, 355) point to Cooreman (1994, 57–58) for an overview of the iterative and habitual characteristics of antipassive expressions. Speaking on ergative languages, Cooreman (1994, 57–58) points out that, in a number of languages, the antipassive expression of events differs aspectually from the ergative in that the "[...] event or state-of-affairs is described as incomplete, or non-punctual." As a result, iterative, distributive or habitual meanings may also be expressed in conjunction with the antipassive. She points to the following example from West Greenlandic as an example in which Fortescue (1984, 86) highlights that the construction in (21b) "[...] sometimes has a nuance of repeated/habitual action as opposed to the punctual meaning of the transitive equivalent". In (21a) we see the ergative form while in (21b) we see the antipassive. Note, following Cooreman (1994, 58) the antipassive gloss is used in (21b) rather than Fortescue's (1984, 86) '1/2-TRANS.'

(21) a. *inuit tuqup-pai*
people kill-3SG.3PL.IND
'He killed the people.'

b. *inun-nik tuqut-si-vuq*
people.INS kill-ANTIP-3SG.IND
'He killed people.'

(Fortescue, 1984, 86)

Thus, we see a semantic connection relating to plurality of relations tying together polysemous meanings of the antipassive, iterative, intensive and habitual meanings.

We will now examine the causative suffix in Babungo with a view to iterative, intensive and/or habitual meanings that would permit a semantically pluraс-

tional basis for its use as an antipassive marker denoting a low distinguishability of participants and a stronger focus on the ongoing or repeated activity itself.

6 The Polysemous Nature of and Pluractional Semantics of *-sə*

We have seen evidence of the demotion and omission of arguments in Babungo in relation to the *-sə* suffix, and its unique ability to decouple complex transitive predicates from their previously bound goal PPs. But do we see evidence for a semantic underpinning regarding a 'plurality of relations' as we have seen with the Bantu *-an-* marker that would provide further legitimacy to an additional antipassive-like usage? While not identical, we indeed see a number of polysemous features of the Babungo suffix *-sə* pointing to a plurality of participants and events that may give insights into a semantic justification for a dual function as antipassive marker. Key areas to examine include (a) whether the suffix may be polysemous in nature as we saw in Bantu antipassive markers, (b) whether the notion of 'plurality of relations' is a notable semantic feature in any such polyfunctional usages of *-sə* in order to give rise to a downplaying of participants and generic/habitual-like focus on the event, in line with the antipassive usage, and (c) whether the notion of MCNP could indeed constrain Babungo in terms of causativizing transitive verbs.

6.1 Polysemy in Bantoid Verb Extensions

Speaking on the Bantoid languages of which Babungo is a member, in contrast with central Bantu, Hyman (2018, 179, 182) highlights that; verbal extensions may indeed be polysemous, Grassfields languages are considerably so and the function of such Bantoid extensions may be contradictory. Relevant to this study, Hyman (2018, 190) highlights a tendency for Bantoid extensions to move from valence-based functions to aspectual functions and that pluractionality is a key feature of these aspectual meanings, pointing to Bangwa (Bamileke), for instance, he observes that "[...] the repetitive suffix *-sɨ*, clearly cognate with the causative extension found throughout Bantu, marks "une action ou une situation qui se répète plusieurs fois" in this language." That is to say, the action or situation is denoted as being repeated several times as illustrated by the examples in (22a) and (22b) provided by (Hyman, 2018).

(22) a. *sò*
wash
'wash'
b. *sò-sə̀*
wash-IT
'wash several times'

(Nguendjio, 1989, 243; glosses mine)

Hyman (2018, 192) highlights that the **s* causative affix widespread in Bantoid to which the Babungo causative suffix is related "[...] is mostly restricted to intransitive verbs. That is, while it can make an intransitive transitive, it cannot make a transitive verb ditransitive." He points to the types of argument restructuring we've seen in Babungo (1a) and (1b) as being a necessity in cases where it is used with a transitive verb. He further notes that "[...] although Bantu languages typically allow more than one extension in sequence, many of the Bantoid languages allow only one extension per verb root" (Hyman, 2018, 179). Indeed, in Babungo, more than one verbal extension is not typically observed with a given predicate. Thus, in contrast to the Mocoví example in (2d) where *-aɢan-aɢan* was repeated to express first an antipassive function for detransitivization and then a causative function, the limitations in Bantoid may necessitate the single usage of the morpheme *-sə* in Babungo to express both antipassive and causative functions for detransitvization and retransitivization.

We will now examine whether the Babungo *-sə* causative suffix is in fact polysemous and if any of those additional usages have pluractional meanings relating to events which would support an antipassive usage.

6.2 The Distributive Aspect in Babungo

Schaub (1985, 221) points out that the distributive aspect in Babungo refers to "[...] an event that occurs more than once, when *several actors* do the same action, when one actor does it *more than once* or a combination of these (emphasis mine)." Five verbal suffixes in Babungo are used to mark the distributive aspect one of which is *-sə* which occurs with transitive verbs as seen in (23a) and (23b) (Schaub, 1985, 221–222). In (23b), we see the same actor carrying out the same action more than once which is expressed though the use of the *-sə́* suffix. This outline strongly calls to mind Lichtenberk's (2000) definition of plurality of relations above as it applies to reciprocals and related markers. Thus, we see that the Babungo distributive aspect may refer to a plurality of participants or events with multiple events in particular being illustrated in (23b). Schaub's (1985, 222) assertion that the distributive *-sə* marker has "[...] some causative element" sug-

gests that we are dealing with the same Babungo marker having a polysemous function just as we have seen with the Bantu *-an-* reciprocal.

(23) a. *ŋwə́ zə̌ bí*
3SG feed.PFV goat
'He fed the goat.'
b. *ŋwə́ zə̌-sə́ bí-sə̄*
3SG feed.PFV-DISTR goat-NP_{10}.PL
'He fed the goats.' (Schaub, 1985, 223)

When we look at some of the features of associative and reciprocal constructions that allows them to grammaticalize into an antipassive marker, such as a generalization of the event in a habitual or ongoing sense and a lessened focus on particular participants, we see a number of similarities here. Both the *-an-* affix and the *-sə* suffix can be used to denote a plurality of events in a particular scenarios. The associative interpretation of *-an-* can denote meanings associated with acting together, collectively (Bostoen et al., 2015, 747). These semantics appears similar to the definition provided by Schaub above of the Babungo distributive in which several actors do the same action.

6.3 The Excessive Aspect in Babungo

Bostoen et al. (2015, 750–751) describe how plurality of participants can shift in meaning to plurality of events in the *-an-* affix which allows for the expression of intensive or repetitive actions. In Lomongo (Mongo-Nkundo), for example, *-sá-* 'to complain' can be contrasted with *-sá-an-* 'to complain (intensively)' (Bostoen et al., 2015, 751, Hulstaert, 1965, 254). Thus, the extension *-an-* can ultimately detransitivize a verb leading to polysemous meanings of reciprocal, associative and extensive, with extensive expressing an extension in space or time (Bostoen et al., 2015, 750). We see a similar semantic usage in the ability of the *-sə* suffix to denote an event that is intensive in nature. What Schaub (1985, 223) calls an "excessive" aspect, denoting the notion of 'strongly', appears quite similar to the semantics of what Bostoen et al. (2015, 751) refers to as "intensive". This is comparable with the expression excessive form in Babungo outlined in (24a) and (24b):

(24) a. *mə̀ tɨ̌ ŋwə́ nə̀ nû*
1SG advise.PFV 3SG with thing
'I advised him on something.'
b. *mə̀ tì-sə́ ŋwə́ nə̀ nû*
1SG advise.PFV-EXC 3SG with thing
'I advised him strongly on something.' (Schaub, 1985, 223)

The above semantic parallels relating to the ability of the *-sə* suffix to denote a plurality of events in Babungo strengthen the assertion that the polysemous causative marker may have a detransitivizing function. Illustrations from "intensive" and "excessive" uses provide a basis for typological comparison and some further rationale as to how an antipassive usage of the Babungo causative suffix *-sə* could have arisen. Furthermore, in Schadeberg's (Schadeberg, 2003, 73–74) overview of Proto-Bantu causative affixes **-i-* and **-ici-*, he notes that "intensive" is an additional meaning of this causative affix. In support of the Ring family of Grassfields Bantu's *-sə* being derived from Proto-Bantu, Hyman (2018, 184) points out that that "[...] there is no question, then, that Babanki *-sə* is related to PB **-ic-i*."

All of this points to a level of polysemy in the *-sə* affix in Babungo, which provides a legitimate basis for an understanding that could extend to an additional antipassive functionality in a similar vein described by that of Bostoen et al. (2015) in connection with a semantic underpinning of plurality of relations.

6.4 The Restraints MCNP in Babungo

A process of detransitivization through antipassive marking and retransitivization through causative marking using the same affix was earlier illustrated in Mocoví in (2d). As we have seen, Juárez & Alvarez Gonzalez (2021, 315–316) point to the notion of MCNP or NP density as necessitating this process, "The NP density control constraint does not allow morphological causatives to be formed from a transitive base construction; thus transitive predicates first need to be intransitivized by *-aɢan* in order to be *-aɢan* causativized." We have similarly seen a toleration for no more than two core NPs in Babungo and a lack of evidence for the presence of ditransitive verbs. A restraint of two core NPs thus appears to apply in Babungo. As a result, the detransitivization of a complex predicate as in (14a), for example, would be necessary before adding morphological causation. However, rather than repeat the *-sə* marker twice, as in Mocoví, Babungo appears to express the dual functionality in a single marker. This may be due to the less agglutinative nature of Bantoid languages when compared with canonical Bantu and as Hyman (2018, 179) notes, "many of the Bantoid languages allow only one extension per verb root". Restrictions as to the number of affixes permitted with a given predicate with falls in line with the typical patterning of using a single verbal extension with a given predicate in Babungo.

7 Conclusion

An analysis of the -*sə* suffix in Babungo revealed a number of features suggesting it may serve a dual depatienizing or antipassive functionality. When used with transitive verbs, we saw the omission of the underlying O altogether. When used with complex transitives, Schaub's (1985) 'semi-transitives', we see demotion of the O to an adjunct position and, interestingly, the formerly obligatorily positioned goal PPs being separated from the verb. This raised the question as to whether the -*sə* affix simultaneously detransitivizes the complex particle while introducing a new causer argument due to limitations on NP density. Whereas in Mocoví, the marker is expressed twice to express antipassive and causative functionality, as seen in (2d), this study argues that causative/antipassive syncrestism is captured in a single marker in Babungo. This is due to limitations on the number of such markers permitted in Bantoid languages and a strong tendency towards polysemy of markers in the same, in contrast to their more agglutinative canonical Bantu neighbors (Hyman, 2018).

Just as Bostoen et al. (2015) point to a plurality of events in reciprocal/associative markers in Bantu as permitting an antipassive usage, a similar argument could be made in Babungo. The additional distributive and excessive of the -*sə* suffix point to pluractional underpinnings which could pave the way for an antipassive functionality under Lichtenberk's (2000) notion of a plurality or relations.

Further research into the plurality semantics of the causative suffix across additional Grassfields Bantu and Bantoid languages would prove insightful into our understanding of potential antipassive functionality. A deeper dive into Babungo's 'semi-transitives' and indeed 'bi-transitives' in light of Goldberg's (2016) work on complex predicates and inheritance networks would prove valuable in assessing the appropriateness or otherwise of approaching these as complex predicates. Furthermore, research into comparable syntactic structures in Grassfields Bantu with the discontinuous reciprocal constructions outlined by Bostoen et al. (2015, 760–766) as they relate to a reduction in the semantic notion of plurality of participants in the evolution of the Bantu antipassive would prove insightful to our understanding of the antipassive in Grassfields languages.

Acknowledgements

I would like to thank Jens Fleischhauer and Claudius P. Kihara for their helpful feedback on this paper. I would also like to thank Dr. Pius Akumbu for his valuable insights on Babanki. Any outstanding errors are my own.

Abbreviations

A transitive subject
ABS absolutive
ANTIP antipassive
ASP aspect
AUG augment
C noun class marker
CAUS causative
DET determiner
DISTR distributive
ERG ergative
EXC excessive
F feminine
FV final vowel
I, II set I/II bound person form
IMPF imperfective
IND indicative
INS instrumental
INTR intransitive
IT iterative
NP$_1$ nominal prefix class 1
O transitive object
P past tense
PFV perfective
PL plural
POSS possessive
PREP preposition
PROG progressive
RECP reciprocal
S intransitive subject
SC subject concord
SG singular
TR transitive

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The Morphosyntax of the Gĩkũyũ Complex Reference Phrase

1 Introduction

The chapter[1] focuses on the relative morphosyntactic order of lexical, phrasal and clausal modifiers in the complex Gĩkũyũ noun phrase (reference phrase). Lexical modifiers include demonstratives, adjectives, nouns; phrasal units include the associative phrase (e.g. possession, material, source, etc.) and relative clauses. Gĩkũyũ is a Bantu language spoken in central Kenya. Gĩkũyũ (also Kikuyu) belongs to zone E50 (Kikuyu-Kamba group), Gĩkũyũ is E51 (Guthrie, 1967). The language is spoken by about 8.2 million people based on 2019 population census.[2]

While the syntax of Bantu languages has been considerably researched, there is little work on the morphosyntax of noun phrases in Bantu languages, especially nominal modification. Welmers (1973, 249) had long observed "a lack of linguistic sophistication" when explaining noun modifiers in African languages, a challenge that has not been fully taken over the years. Rijkhoff (2004) notes the unavailability of studies of noun modification in Nilotic languages. Mugane (1998) contends that there was minimal literature on the structure of Bantu noun phrases. Working on the morphosyntax of the Bafut Determiner Phrase, Tamanji (2006) pointed out scarcity of works describing noun phrases in Bantu languages, a claim echoed by van de Velde (2019). Studies concentrate on the Bantu noun classes, with little concern for nominal syntax and its modification (Rugemalira, 2007; van de Velde, 2019). Nonetheless, there are a few theoretical studies on the structure of noun phrases for some Bantu languages such as Limbum (Mpoche, 1993);

1 This chapter is a revised section contained in my doctoral dissertation presented at Heinrich-Heine-Universität Düsseldorf in 2017.

2 Gĩkũyũ bears all other features of Bantu languages such as SVO word order, noun class markers system, etc. The language has received considerable linguistic attention. Early Gĩkũyũ grammars (e.g. Barlow, 1960; Gecaga, 1955, and Armstrong, 1967) recognized two main Gĩkũyũ dialects: the northern dialect (spoken in Ndia, Mathĩra, Gĩchũgũ and Nyeri) and the southern dialect (spoken in Kĩambu, Lĩmuru, Kikuyu, Nairobi and parts of Murang'a). The dialects have some phonological and lexical differences, but very few grammatical differences. The above grammars are based on the southern dialect and so is the data used in this study.

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https://doi.org/10.1515/9783110795295-006

Ikalanga (Letsholo, 2006); Nyakyusa (Lusekelo, 2009); Kiswahili (Carstens, 1993; Lusekelo, 2009) ; Setswana (Letsholo & Keneilwe, 2014); Medumba (Kuoankem, 2015); Gĩkũyũ (Njage, 1997; Mugane, 1998; Iribemwangi & Kihara, 2011). Rugemalira (2007) described the structure of noun phrases of Mashami, Kiswahili, Nyakyusa, Ha, Nyambo, Safwa and Sukuma, all are Tanzanian Bantu languages. From a Role and Reference Grammar perspective, Anderson (2021) described the non-iconic word order in Bamunke simple reference phrase.

Based on the Government and Binding framework, Njage (1997) argued that the simple Gĩkũyũ NP conforms to Abney's (1987) Determiner Phrase hypothesis. Determiners as understood in Indo-European languages may not suffice in Bantu languages, a fact antedated in Carstens (1993). In Gĩkũyũ, a demonstrative (one that Njage labels 'determiner') may pre- or post-modify a nominal, which weakens the headship claim. Indeed, shortcomings of the X-bar syntax in the analysis are highlighted by Hawkins (1983, 198–199).

The present chapter deals with the morphosyntax of the complex noun phrase in Gĩkũyũ based on the Role and Reference Grammar [RRG] theoretical framework (Van Valin & LaPolla, 1997; Van Valin, 2005, 2008). The noun phrase is called the Reference Phrase [RP] in RRG.[3] A complex RP is one that contains lexical, phrasal and clausal (relative or an infinitive clause) modifiers whether embedded, coordinated or otherwise. The paper aims to answer the following main questions: what is the order of the possible modifiers in the complex Gĩkũyũ RP?, and how can the RRG's Layered Structure of the Reference Phrase [LSRP] account for the iconic and non-iconic order of modifiers in a complex Gĩkũyũ RP?

The Gĩkũyũ noun phrase is interesting especially because of the different orders of the modifiers. Example (1a) is the unmarked order of a simple noun phrase with a noun (N), a demonstrative (DEM), number/quantity (QNT), and a descriptive adjective (ADJ).

(1) a. *mbori i-ci ci-ɔthɛ nɔru*
9.goats 9-DEM 9-all 9.fat
'all these fat goats' (N DEM QNT ADJ)

b. *i-ci mbori ci-ɔthɛ nɔru* (DEM N QNT ADJ)

c. *mbori ci-ɔthɛ i-ci nɔru* (N QNT DEM ADJ)

d. *ici mbori nɔru ci-ɔthɛ* (DEM N ADJ QNT)

e. *mbori i-ci nɔru ci-ɔthɛ* (N DEM ADJ QNT)

f. *ci-ɔthɛ ici mbori nɔru* (QNT DEM N ADJ)

3 In RRG , the 'noun phrase' [NP] label is replaced with 'Reference Phrase' [RP] (Van Valin, 2008). This is because nouns refer, and also in some cases a noun phrase need not be headed by nominal element, though it remains referential. In short, the idea of endocentricity is not favoured in RRG.

Examples (1b–f) illustrate the possible non-iconic word order of the same modifiers in the simple RP. The permutations in (1b–f) do not allow an adjective to precede the head noun. The 'fluid word order' in (1) needs to be accounted for.

A bit confusing is Mugane's two different 'pragmatically neutral orders of modifiers' in Gĩkũyũ : noun, demonstrative, possessive pronoun, quantifier, adjective (Mugane, 1997, 38) and noun, demonstrative, quantifier, adjective, and associative phrase (possessive) (Mugane, 1998, 239). Example (2) is from Mugane (1997, 39).

(2) *nyũngũ ici ciake ciothe ndune*
10.pot 10.DEM 10-ciake 10-all 10-red
'all these red pots of hers/his' (N DEM ASSOC QNT ADJ)

Nevertheless, there are many possible permutations of the order of the modifiers of (2):

(3) a. *ici nyũngũ ciake ciothe ndune* (DEM N ASSOC QNT ADJ)
b. *ici nyũngũ ciothe ciake*, *ndune* (DEM N QNT ASSOC ADJ)
c. *nyũngũ ici ciothe ndune*, *ciake* (N DEM QNT ADJ ASSOC)
d. *ici nyũngũ ndune*, *ciothe ciake* (DEM N ADJ QNT ASSOC)
e. *nyũngũ ici ciake ndune*, *ciothe* (N DEM ADJ QNT ASSOC)

Mugane (1997, 39) says that "should a modifier that occurs to the left of another modifier ...be permuted to the right of it ..., then a comma intonation must be employed". This generalization applies to (3c) and (3e). However this does not work with all the examples. For instance, in (3b) the adjective presents some slight intonational break, yet it has not moved, but other modifiers have moved. Mugane suggests that the prosodic boundary indicates "appositiveness" and that whatever is cut off by the comma is "outside the noun phrase" (Mugane, 1997, 39–40). In RRG terms, the constituents preceding the nominal, and those assumed to be 'outside" the RP are structurally catered for in the LSRP.

According to Andrews (2007, 142), such fluidity indicates pragmatic functions. The claim here is that the variant ordering of the modifiers has information structure ramifications in the RP, and indeed Rijkhoff (2015) asserts that a language's modifier patterns is used to structure discourse in languages.

In reference to Rijkhoff's (2004, 175) prediction of eight iconic order of modifiers, only one (DEM N ADJ NUM) holds in Gĩkũyũ . Orders differing from those given predicted by Rijkhoff are described as non-iconic. Therefore, the orders in (1) are assumed to be non-iconic, and this non-iconicity is thought of as resulting from information structure needs.

Gĩkũyũ deviates from the expected order of modifiers. Greenberg (1966, 87) says that Gĩkũyũ speakers prefer the 'less popular alternative' order of modifiers "'houses these five large', instead of the more popular 'houses large five these'". Indeed, a simple random check, no speaker agreed with the order: *nyomba nene ithano ici* 'houses large five these'. The most acceptable order was *nyomba ici ithano nene* 'house these five large' N DEM NUM ADJ). The 'more popular' alternative is certainly not acceptable to Gĩkũyũ speakers. Greenberg goes on to devise Universal 20:

> Universal 20. When any or all of the items (demonstrative, numeral, and descriptive adjective) precede the noun, they are always found in that order. If they follow, the order is either the same or its exact opposite.
>
> (Greenberg, 1966, 87)

Based on evidence from Aghem and Noni by Hyman (1979, 1981), Hawkins (1983, 119) concluded that the two languages exhibited non-iconic NP modifier orders. Aghem has: N ADJ DEM NUM and Noni has N DEM NUM ADJ and N DEM ADJ NUM orders. These discoveries led Hawkins to revise Greenberg's Universal 20 as Universal 20' below:

> When any or all of the modifiers (demonstrative, numeral, and descriptive adjective) precede the noun, they (i.e., those that do precede) are always found in that order. For those that follow, no predictions are made, though the most frequent order is the mirror-image of the order for preceding modifiers. In no case does the adjective precede the head when the demonstrative or numeral follow.
>
> (Hawkins, 1983, 119-120)

The order of modifiers in Aghem and Noni also reflect those of Gĩkũyũ in (1), which supports Hawkins' revised universal. At least in Gĩkũyũ , at no time does the adjective precede the nominal, although it can replace the nominal in function as shown later. According to the Mobility Principle of Hawkins (1983, 93), ADJ, DEM and NUM are more mobile than the genitive and the relative clause. However, there is ample evidence in Gĩkũyũ that a genitive is as mobile as any of the other modifiers. Nonetheless, the relative clause is always static.

2 Theoretical Framework : Role and Reference Grammar [RRG]

The analysis is based on the RRG theoretical framework. RRG is a typological theory of language that focuses on the syntax-semantics –pragmatics interface. It

is regarded as a structural-functional theory of language (Van Valin, 1993). RRG does not posit an exact parallel similarity between clauses and complex derived noun phrases. Nonetheless, the theory acknowledges that clauses and derived nominals have a layered structure and operators modifying the layers. Hence the theory has a model for representing clauses called the layered structure of the clause [LSC] and the layered structure of the reference phrase [LSRP] to cater for the structure of RPs. This is a brief introduction to RRG, relevant to the present work. Detailed and comprehensive explanation of the theory is found in Van Valin (1993, 2005), and Van Valin & LaPolla (1997). The LSC is semantically-motivated model that contains three fundamental units: (i) the nucleus (contains the predicate), (ii) the core (contains the nucleus and the arguments of the predicate in the nucleus), and (iii) a periphery for each layer (e.g., a core periphery houses spatial and temporal adjuncts). The LSC has relational units e.g. Pre-core slot [PrCS] and post core slot [PoCS]. The former is the position occupied by ex-situ WH-words in English and Gĩkũyũ. There is the extra core slot [ECS] contains constituents that are outside of the core but inside the clause layer. Next is the 'Pre-Detached Position' [PrDP] (formerly Left detached Position [LDP]) and 'Post-Detached Position' [PoDP] (formerly right detached position [RDP], Van Valin personal communication). These detached positions are for units that are outside clause, and usually, though not always, separated by a prosodic phrase boundary. Figure 1 (on page 136) shows the constituent projection of an English sentence. The WH-word sits in the PrCS, the core has two arguments: a direct RP *Peter* and an oblique argument marked by preposition *to Jane*. In the periphery is a locative preposition phrase *in class*.[4]

Other than the constituent projection, the LSC has an operator projection that mirrors the constituent projection from below. The operator projection contains grammatical operators e.g., tense, aspect, negation, illocutionary force, evidentials, etc., that modify different layers of the LSC. For instance, although not shown, auxiliary *did* is both the tense and illocutionary force operator in the operator projection. The operators have a crucial role in the analysis of complex sentences in RRG. RRG identifies three clause linkage types: coordination (the abstract joining of equivalent units, with or without a coordinating conjunction), subordination and cosubordination (the nexus type that has subordination and coordination features, and one that solely depends on shared operators at a specific layer). The LSC also has a focus projection, which captures the morphosyntactic expression of the discourse-pragmatic (information structure) status of elements in a sentence.

4 See Kihara (2019) for an RRG's representation of clauses in Bantu.

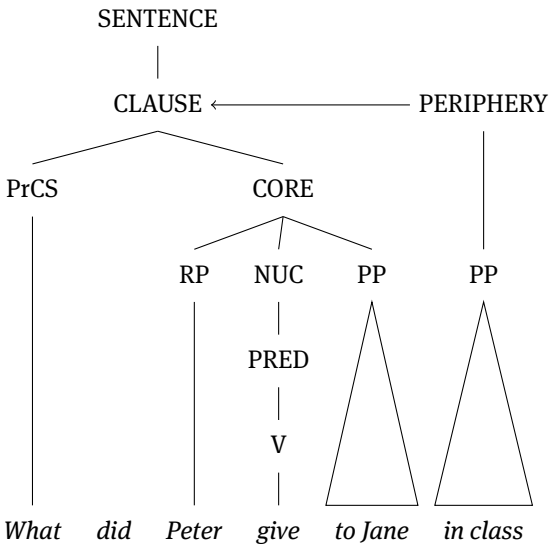

Fig. 1: The LSC of an English clause.

The LSRP also has a constituent and an operator projection. The RP layer is the ultimate layer in the constituent projection; below it is a core layer and then a nucleus layer. The LSRP constituent projection may have a Reference Phrase Initial Position (RPIP), a daughter of the RP node. The RPIP is occupied by different elements in different languages, such as WH-words, demonstratives, possessive pronouns in English, or articles and possessor phrase in Swahili and Portuguese (Van Valin, 2005, 26). In languages where a demonstrative is the last element in a RP, it occupies the Reference Phrase Final Position (RPFP) e.g., Lakhota. The LSRP's constituent projection has three layers: the maximal layer RP, the CORE_{RP} and the NUC_{RP}. The RP periphery takes non-restrictive modifiers e.g., non-restrictive relative clauses. There is a modifier phrase [MP] that may modify the RP and NUC_{RP} levels depending on whether the modifiers in it are restrictive or non-restrictive (Van Valin, 2008). The CORE_{RP} periphery is occupied by adjunct PPs and adverbials, while adjunct restrictive modifiers e.g., adjectives, nominal modifiers and restrictive relative clauses sit in the NUC_{RP} periphery.

In the operator projection, RP operators are definiteness, deixis; RP core operators are number (singular/plural), quantification (numerals, quantifiers) and negation, and RP nucleus operators are nominal aspect e.g., mass/count distinction and nominal classifiers. The RP operators are responsible for the realization of the different nexus types in the RP. Nominal aspect incorporates noun clas-

sifiers in languages such as Mandarin Chinese. For languages such as English, nominal aspect is indicated by quantified mass nouns e.g., *one sheet of paper* vs. *one ream of paper* (Van Valin & LaPolla, 1997, 58). Since Gĩkũyũ lacks morphologically marked nominal aspect, it is similar to English. Nominal negation can be expressed by forms such as no in English e.g., *no time* or *kein* in German e.g. *kein Buch* 'no book' (Pavey, 2010, 194). Nominal negation in Gĩkũyũ is only found in a relative clause modifier but not on the RP nucleus. Figure 2 shows the LSRP constituent and operator projections; specific operators modify respective layers as shown.

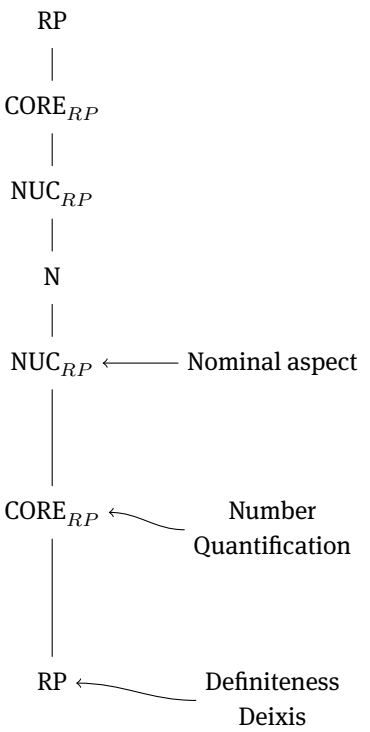

Fig. 2: The constituent and operator projections of the LSRP.

3 Modifiers in the Gĩkũyũ Reference Phrase

The basic word order of an unmarked complex Gĩkũyũ RP may have the following order: noun, demonstrative, quantifier, number, adjective, associative (genitive), and a relative clause (4).

(4) *me-te e-nɔ y-ɔthɛ e-tato me-raihu ya mo-thuuri o-rea*
3-tree 3-DEM 3-all 3-three 3-tall ASSOC 1-man 1-RLPRN
tu-ɔn-ir-ɛ.
2-die-ASP-FV
'all these three tall trees of the man that we saw'

However, this unmarked order is violable. For example the demonstrative can precede the RP, which is motivated by information structuring (focus), a phenomenon identified across Bantu e.g., Mugane (1998); Letsholo & Keneilwe (2014), and others. This phenomenon is accounted for in the LSRP model.[5] Unlike the generative theories, RRG does not explain the mobility of the constituents by way of movement transformations; it is a monostratal theory, recognizing a single level of syntactic representation.

3.1 Nominals in Gĩkũyũ

As is common in Bantu, Gĩkũyũ nouns have noun classes. The language has 17 noun classes. Gĩkũyũ has both underived and derivative nouns. Derived nouns are from other nouns e.g., *okea* 'poverty', *ngea* 'poor person'; from verbs (the highest source of nominals) e.g. *rɔga* 'bewitch' – *mo-rɔgi* 'witch/wizard', *o-rɔgi* 'witchcraft', *morɔgɛerɛ* 'way of bewitching', *mo-rɔgwɔ* 'one who is bewitched'. Nouns are also derived from adjectives, e.g., *thaka* 'beautiful', *o-thaka* 'beauty', *mo-thakarerɛ* 'way of being beautiful'. Whether derived or underived RPs, there are restrictions as far medication is concerned.

RRG does not assume the X-bar notion of endocentricity. That is why the notion of reference phrase (RP) is favoured considering that not all referential phrases are headed by a noun. Dryer (2004) analyzed noun phrases without

5 The order N DEM ASSOC QNT NUM ADJ is also possible as in the example below:

(i) *Me-te e-no y-akɛ y-ɔɔthɛ e-na me-raihu*
4-trees 4-DEM 4-his 4-all 4-four 4-tall
'All these four tall trees of his'

nouns in different languages, which led him to question the idea of heads in Noun phrases. He wrote, "Noun phrases without nouns are "noun phrases that do not contain a noun or pronoun, but only words that otherwise occur as modifiers of nouns" (Dryer, 2004, 43). Mugane (1998) noted that the morphosyntax of Gĩkũyũ noun phrases poses a challenge to X-bar theoretic principle of endocentricity considering that Gĩkũyũ reference phrase may not have a noun at all, as well the fact that the demonstrative may either precede or follow the nominal element.

In response to the challenges such as the above, RRG uses the notion of referential phrase (RP) to refer to any phrase that has referential function although not necessarily containing a noun but that which has a nominal element with a referential function. Indeed Gĩkũyũ has referential elements that are not nominal e.g., adjectives in: *nɛnɛ ne ya-kwa* 9.ADJ COP 9-mine 'the big one is mine'. Note that the modifier that takes up the referential role bears the noun class [NC] of the noun it is modifying (9.dog). In such cases, the NUC_{RP} of the RP is the ADJ bearing relevant NC marking, but not a noun.

Nouns can also pre- or post-modify other nouns in apposition. Example (5) illustrates pre-modification (5a) and post- modification (5b).

(5) a. *Mw-arimo Kamau a-a-ikar-ag-a go-ko.*
2-teacher Kamau 1-PRS-live-ASP-FV 17-here
'Teacher Kamau lives here.'

b. *Kamau mw-arimo a-a-ikar-ag-a go-ko.*
Kamau 2-teacher 1-PRS-live-ASP-FV 17-here
'Kamau the teacher lives here.'

In (5a) noun *mwarimo* 'teacher' premodifies the proper noun *Kamau*. In (5b) *mwarimo* post-modifies *Kamau*, which makes it more definite. According to Elson & Pickett (1988, 86), an appositive noun makes the head noun "more definite or explicit the meaning of the other, rather than modifying it in the usual sense". In fact, the appositive nominal *mwarimo* is more like a defining element similar to a relative clause. Indeed, a relative pronoun *orea* 'who' may be added to get *Kamau orea mwa-rimo* 'Kamau who is the teacher'. Note that the noun can pre-modify common nouns e.g., *mwarimo muthuuri* 'a male teacher' or *muthuuri mwarimo* 'a teacher who is a man'. For a nominal such as *mwarimo* in (5b) presenting like a restrictive relative clause, it is positioned in the NUC periphery of the RP nucleus.

3.2 Demonstratives

Gĩkũyũ, like many other Bantu languages, lacks both definite and indefinite articles such as those of English. To show definiteness, speakers factor in the context or they use demonstratives. This use of demonstratives is common in Bantu. Krifka (1985, 24) showed that a demonstrative marks definiteness in Kiswahili when it precedes the head noun.

Demonstratives like all other modifiers of RPs in Gĩkũyũ take up the noun class marker of the RP noun it modifies. Like other Bantu languages, Gĩkũyũ makes a distinction of deixis: proximal (*oyo* 'this one'), distal (*ociↄ* 'that one'), and yonder (*oorea* 'that one over there'). As usual in Bantu, all demonstratives will agree with the noun class of the noun they are modifying. The distal yonder involves vowel lengthening, i.e. *oorea* is nearer to the speaker, than *ooooorea* 'that one over there yonder'. Example (6) shows the concordance of noun class markers in the modifiers. NC2 (*a-*) is replicated on the demonstrative, quantity (number) and on the adjective.

(6) a. *a-iretu aa-rea a-tato a-thaka*
2-girls 2-DEM 2-three 2-beautiful
'those three beautiful girls'
b. *aa-rea a-iretu a-tato a-thaka*
2-DEM 2-girls 2-three 2-beautiful
'those three beautiful girls'

The DEM occupies the unmarked canonical post-nominal position in (6a). However the order can be changed as in (6b), where the DEM precedes the RP. Still, DEM may follow the NUM and precedes the ADJ e.g., *a-iretu a-tato aa-rea, a-thaaka* 'those three girls that are beautiful'. However, there is a prosodic boundary after the DEM, which makes the ADJ be additional (afterthought) information, and that makes it a candidate for the RP final position (RPFP).

Krifka's (1985, 24) argument that a demonstrative preceding a head noun marks definiteness in Kiswahili, may be borrowed into Gĩkũyũ. I add that the demonstrative has information structure function in that position. It is the constituent that identifies the nominal and directs all saliency to the RP *airetu* 'girls'. Mugane (1998) asserts that the placement of the DEM initially is all about focus, adding that when this happens there is a comma intonation, which encodes "topicality and prominence" (p.239). The Gĩkũyũ example lacks noticeable prosodic boundary of any kind. In his detailed corpus study of the demonstrative in Kiswahili, Mwamzandi (2014) argues that prenominal demonstratives indicate definiteness due to "physical copresence", that is, "the presence in conversational presence" (p.421). Mwamzandi (2014) observed in Kiswahili, the prenomi-

nal DEM (DEM N) and adnominal DEM (N DEM) has both syntactic and pragmatic ramifications. This can also be borrowed into Gĩkũyũ prenominal and adnominal placement of the DEM. The adnominal/post nominal DEM marks an active constituent in the speaker-hearer's common ground.

3.3 The Associative Phrase

According to Tamanji (1991) cited in Mpoche (1993, 47), "the associative expresses possession, time of use, material, content, origin, quality, quantity, function, place of use, etc.". The Gĩkũyũ associative phrase contains an initial (head) noun and a second (dependent) noun e.g., *mbori* and *baba* in (7a), which are linked by associative meaning *ya* 'of'. The linker agrees in number and noun class of the first noun. Example (7a) illustrates possession, (7b) function / purpose and (7c) material, which is also functions as an adjective.

(7) a. *mbori ya baba*
9.goat ASSOC 1.father
'father's goat'
b. *mbori ya igɔngɔna*
9.goat ASSOC 5-ritual
'a goat for a ritual'
c. *ke-rato ke-a ngɔthi*
7-shoe 7-ASSOC 9.leather
'a leather shoe'

Associative phrases that show possession may be stacked together to capture the different ASSOC expressions. For example (8a) shows possession (of child) in the first and second phrase, and location /place in the last one.

(8) a. *nyina wa Wambũi wa Ngũgĩ wa Nairobi*
9.mother ASSOC Wambui ASSOC Ngugi ASSOC Nairobi
'Wambui's mother, wife of Ngugi of/from Nairobi'
b. *mw-ɛndia wa mbɛrɛ wa iriɔ cia ngɔmbɛ wa go-ko*
1-seller ASSOC first ASSOC food ASSOC 10.cows ASSOC 17-here
'the first seller of animal feed from here'

Example (8b) shows stacking of several ASSOC phrases with different meaning. The first one (*wa mbɛrɛ*) is adjectival, the next one (*iriɔcia ngɔmbɛ*) is a patient/theme argument that shows a purpose association, and finally an association of origin/location (*wa go-ko*). In an RRG analysis, the dependent nouns are core arguments of the RP, analogous to the core arguments of the predicate in

the LSC.[6] In an associative phrase RP, the post-modified nominal is the NUC_{RP}, while the post modifier associative phrases are in the periphery.

Further dynamism of modifiers in the Gĩkũyũ RP is seen in (9b) in which the possessive pronoun *wakwa* 'mine' premodifies *motumia* 'wife' unlike how it post-modifies the noun in (9a). When the pronoun premodifies the nominal, it introduces a contrastive kind of reading e.g., *my wife cooks well as opposed to others*. The realignment of the possessor modifier in (9b) necessitates the RPIP, a discourse motivated position occupied by *wakwa*.

(9) a. *Mo-tumia w-akwa a-a-rug-ag-a wɛga.*
1-wife 1-mine 1-PRS-cook-ASP-FV well
'My wife cooks well.'

b. *W-akwa mo-tumia a-a-rug-ag-a wɛga.*
1-mine 1-wife 1-PRS-cook-ASP-FV well
'As for my wife, she cooks well.'

c. *A-ndo a kuma rogoro ne ɛga.*
2-people 2.POSS-PL from west COP 2.good
'People from the west are good./western people are good.'

An associative phrase may contain possession and origin e.g., (9c) which contains plural possession a 'of/belonging to' and a preposition *kuma* 'from' indicating origin.

Another different type of possession is that of kinship terms, that are either inherently possessive or take affixes. The inherently possessive nouns include: *guka* 'my grandfather', *coco* 'my grandmother', *ithɛ* 'his father', *moka* 'his wife', *moromɛ* 'her husband', etc. Other kinship nouns addressed to second person add a possessive suffix *-gwɔ* e.g., *mokagwɔ* 'your wife', *thɔguɔ* 'your father', *gukagwɔ* 'your grandfather', *mothurigwɔ* 'your husband', etc. To these nominals adding a possessive pronoun is ungrammatical e.g., **thɔguɔ waku* 'your father', except that it is it is not usual to hear things such as *mokagwɔ ocio waaku* 1-wife-POSS 1-DEM 1-yours 'that wife of yours', but such constructions are attitude-laden.

The Gĩkũyũ associative phrase uses a 'linker' (for the notion of linker in English, Thai and French, see Den Dikken & Singhapreecha, 2004, 2) to link the nominal to other modifying units. The root of this linker is *–a*, and it conforms to the NC agreement of the head noun. Den Dikken & Singhapreecha (2004) describe

6 The Gĩkũyũ associative phrase has an additional meaning of recentness (Barlow, 1960, 99), e.g., *nyama ya mothinjano* 'fresh meat' (lit. meat of which has just been slaughtered).

nominal linkers in English, Thai and French as 'meaningless'. In Gĩkũyũ these linkers seem to have a bearing on the interpretation of the nominals involved.[7]

3.4 Adjectives

Gĩkũyũ has "few true adjectives" (Barlow, 1960, 63) and for this the language utilizes several means to use adjectives as nominal modifiers e.g., associative phrases *mondo we hinya* (1.person 1.have 14.strength) 'a strong person', *mae ma kunyua* (9.water 9.of drinking) 'drinking water'. Other adjectives are derived from verbs: *kora* 'grow' –- *koro* 'old', *henja* 'be thin' – *henju* 'thin', *kima* 'smash' – *ngimɛ* 'smashed'. Adjectives of colour include: *-ɛro* 'white/new', *-iro* 'black', *-unɛ* 'red', (there are roots which are modified by the by the noun classes of nouns they modify), e.g., *mbori njɛro/ njiro* 'a white/black goat'. However, some colour adjectives that cannot be described by single adjectives are realized by associative phrases e.g., *nguo ya geteeri* 9.dress ASSOC brown 'a brown dress'. In Gĩkũyũ, an adjective takes on the nominal inflections of number and noun class.

In an unmarked RP, the adjective is preceded by the nominal and quantity (10a), although the adjective can precede the number modifier (10b). When this happens, there is a noticeable prosodic break between the adjective and the quantity modifier, which is an indication that number is an adjunct. In such a case the NUM modifier is in the RPFP, as an antitopic or an afterthought.

(10) a. *To-ko-gor-a ma-rigo ma-tatu m-ɛɛru.*
2-FUT-buy-FV 6-banana 3-three 6-ripe
'We will buy three ripe bananas.'

b. *To-ko-gor-a ma-rigo m-ɛɛru ma-tatu*
2-FUT-buy-FV 6-banana 6-ripe 3-three
'We will buy three ripe bananas.'

c. *Ma-ya ma-nɛnɛ ne ma-a-kwa.*
6-DEM 6-big COP 6-1OM-mine
'The big ones are mine.'

In some languages, adjectives are sub-classes of verbs or nominals (Van Valin, 2008, 161–165). Indeed adjectives in Gĩkũyũ also serve as clausal RP subjects in

7 Den Dikken & Singhapreecha (2004, 2) have an English example: 'that idiot of a doctor' with linker 'of'. In Gĩkũyũ, a similar construction is possible e.g., *ke-rimo ke-a mo-tumia* 7-fool 7-ASSOC 1-wife 'a foolish wife'. However the associative linker *kea* does not reflect any of the associative meanings mentioned by Tamanji (1991). In the interim, we may say that it supports their claim that such linkers are meaningless.

the absence of a noun referent e.g., (10c). The adjective bears the noun class (NC 6) of the nominal *ma-rigo* 'bananas', which helps it serves as a nominal representative of the head noun, *ma-rigo* 'bananas', which is understood in the conversation context. Like a nominal, the adjective is modified by a demonstrative, a RP operator showing definiteness. However, unlike a noun that can be pre-or post-modified by a DEM, the DEM in (10b) cannot post-modify the adjective unit, specifically for adjective with the root *-nɛnɛ* 'big'.[8] It can only be pre-modified. This can be explained on the basis of an observation by Payne (2011, 191) that "determined noun phrases "anchor" discourse world referents in "pragmatic space," while undetermined noun phrases do not". The determined ADJ subject phrase is definite, with the modified nominal, though missing, understood. For the adjective to carry NC marking, a nominal quality, it is at a better position to also be the subject phrase of the clause. In any case, according to Van Valin (2008, 168), "...operators, e.g., definiteness, deixis, quantification and number, are properties of referring expressions in general, not just of phrases with a nominal nucleus". The fact that an adjective has a nominal function is additional evidence that the RP nucleus need not be a noun, which challenges the endocentricity claim.

Gĩkũyũ adjectives also bear some verbal aspects. Adjectives such as *henju* 'thin' from verb *heja* 'become thin', the final *–u* in *henju* is sort of some perfective (completive) aspect, which is a verbal quality.

Adjectives were earlier considered as nuclear operators in RRG in Van Valin & LaPolla (1997), but this was revised in Van Valin (2005). Now they are they are in the NUC_{RP} periphery, together with nominal modifiers and restrictive RCs in the constituent projection.

3.5 Quantity

Quantity modifiers subsume number (singular/plural distinction) and quantity (numerals, quantity, etc.). Numerals one to ten show agreement with the nominal except for seven (*mogwanja*), nine (*kɛnda*) and ten (*ikumi*). For decades, Gĩkũyũ uses 'ten' *ikumi* e.g., *ikumi na imwɛ* lit. ten and one, 'eleven'. From twenty it is *merɔngɔ ere* 'twenty', *merɔngɔ etato* 'thirty', etc. In these ones, there is no noun class agreement e.g., *a-iretu merɔngɔ ere* 2-girls twenty two 'twenty girls'. One hun-

8 Speakers of northern Gĩkũyũ refer to bananas as *m-ɛɛru* e.g., *N-da-gor-a meeru ma-tato* 1-PST-buy 6.ripe 6-three 'I have bought three bananas.' This shows the preference of using adjectives as nominals. For other adjectives e.g., *meeru* 'ripe', when proceeded by a DEM, *maya meeru* 'these ripe ones/ these bananas'. When the DEM follows the adjective e.g., *meeru maya* it can only mean 'these bananas'.

dred is *igana* 'hundred' and a thousand is *ngiri*, e.g., *ngiri emwe* 'one thousand', *ngiri igere* 'two thousand'. In all cases, nouns obligatorily precede numerals.

The NUM modifier *atato* 'three' in (11a) sits in its canonical position and therefore unmarked. In (11b) the modifier sits in the final position, whereby it is separated by a prosodic boundary from the rest of the constituents. This places the NUM modifier in the RPFP, as a detached unit.

(11) a. *Mo-n-jar-e-ri-*ɛ *a-ireto a-tato a-thaka*
2-1.OM-look-APPL-ASP-FV 2-girls 2-three 2-beautiful
'Look for me three beautiful girls.'
b. *Mo-n-jar-er-i-*ɛ *a-ireto a-thaka*, *a-tato*
2-1.OM-look-APPL-DC-FV 2-girls 2-beautiful 2-three
'Look for me beautiful girls, three of them.'

Example (12) contains both a QNT modifier ɔ-ɔ*th*ɛ 'all' preceding the NUM modifier *atato* 'three'. The quantifier can change position to the prenominal position.

(12) (ɔ-ɔ*th*ɛ) *a-ireto* (ɔ-ɔ*th*ɛ) *a-tato a-thaka*
2-all 2-girls 2-all 2-three 2-beautiful
'all the three beautiful girls'

So far I have discussed modifiers found and their possible linear order in simple RPs in Gĩkũyũ. Modifiers include nominals, demonstratives, associative phases, adjectives, quantity Notable is the variant ordering of the modifiers. All the modifiers are subject to displacement relative to head RP and that displacement has information structure ramifications. The relative clause is regarded as part of complex RP and it will be discussed in the next section.

Following the RRG model of representing the RP, figure 3 shows the structure of the simple RP on the LSRP in (13a) and figure 4 (on page 148 below) shows (13b) noting the different positions that the demonstrative occupies in the two examples.

(13) a. *a-iretu aa-rea* ɔ-ɔ*th*ɛ *a-tato a-thaka*
2-girls 2-DEM 2-all 2-three 2-beautiful
'all those three beautiful girls'
b. *aa-rea a-iretu* ɔ-ɔ*th*ɛ *a-tato a-thaka a Nairobi*
2-girls 2-DEM 2-all 2-three 2-beautiful of/from Nairobi
'all those three beautiful girls from /of Nairobi'

Note the Modifying Phrase (MP) whose nucleus is the adjective *athaka* 'beautiful' in figure 3. For nouns modifying other nouns e.g., *mothuri ge-tɔnga* 'rich person', noun *ge-tɔnga* 'rich person' (*motɔngu* is the adjective 'rich'), that modifies *moth-*

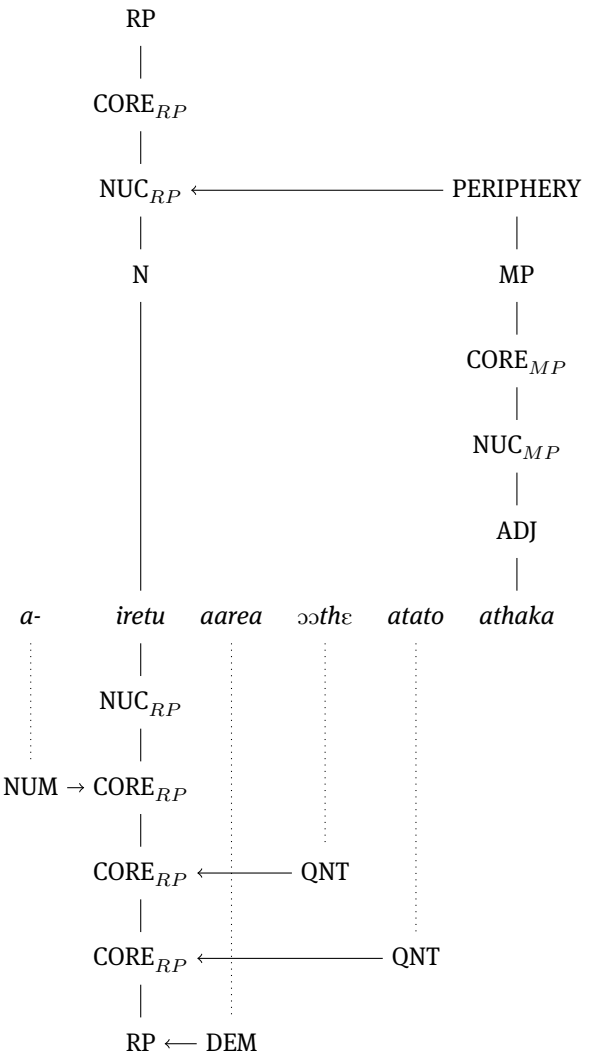

Fig. 3: The Constituent and Operator Projections of a Gĩkũyũ LSRP; representation of the example in (13a).

uri 'man' will be the nucleus. Note that the operator projection in figure 3 does not have a NUC operator, the position for nominal aspect, subsuming the mass-count distinction and nominal classifiers in languages such as Mandarin Chinese. The noun classifiers indicate the nature of a referent, e.g., its nature or shape. In lan-

guages such as English and also Gĩkũyũ, such distinction is made indicated by quantified mass nouns as earlier stated.

There are three Core RP operators: number, quantification (quantifiers), and negation. In Bantu, noun classes indicate singular/plural distinction; that is why number marked against the plural NC prefix *a-*. The two quantifiers ɔ-ɔ*th*ɛ 'all' and *a-tato* 'three'. As previously noted, negation in Gĩkũyũ RPs shows up in the relative clause. However, the language can use a lexical particle from the verbal root *-aga* 'fail', is for the same as in a derived RP: *kw-aga go-thie thukuru* 15-fail 15-go 9-school 'failure to go to school'. In Kiswahili core negation in deverbal RP e.g., *ku-to-lim-a kwa-ke* 15-NEG-dig-FV 15-his 'his failure to dig' (lit. 'his not digging') is shown by prefix *kuto-*.

RP operators anchor the RP in discourse. These operators include definiteness and deixis. The latter is marked against *aarea* the DEM in figure 3. Definiteness in Bantu, for lack of (in-) definite articles, is indicated by demonstratives or relative pronouns and it is also context-dependent.

When a DEM is the initial position, it is in the RPIP position (See figure 4). This is a focal position akin to the clausal PrCS, the position for focal clausal units e.g., WH-words. In the RP, the RPIP is also the position for WH-words and other focal units, thus it is a discourse–pragmatic position. In the post-nuclear position, a DEM is only active in the operator projection as in figure 3. However, when the DEM takes up RP pre-nuclear (initial) position, it becomes pragmatically marked and therefore active in both the constituent and operator projections hence marked against DEM and DEIC on the operator projection in figure 4 representing (13b). The adnominal PP showing possession /source is a Core periphery unit.

This far, I have discussed the modifiers and their order in a simple Gĩkũyũ RP, and how they are represented in the RRG's LSRP. Next, I discuss the morphosyntax of complex RPs in Gĩkũyũ based on the RRG's theory of complex RPs.

4 Juncture and Nexus in Gĩkũyũ Complex RP

RRG has a theory of complex sentences and complex RPs. The similarities between the LSC and the LSRP is strengthened by the RRG's theory of clause linkage, especially the sub-theory of juncture and nexus, which is also considered in the analysis of complex RPs. The application of the theory on the analysis of complex RPs reflects that of complex sentences. The RRG theory of complex sentences has sentential, clausal, core and nuclear juncture levels. Combinations will involve these junctures e.g., a clause + clause = clausal juncture, and so forth. Other than the juncture levels, RRG posits three nexus types: coordination, subordination and

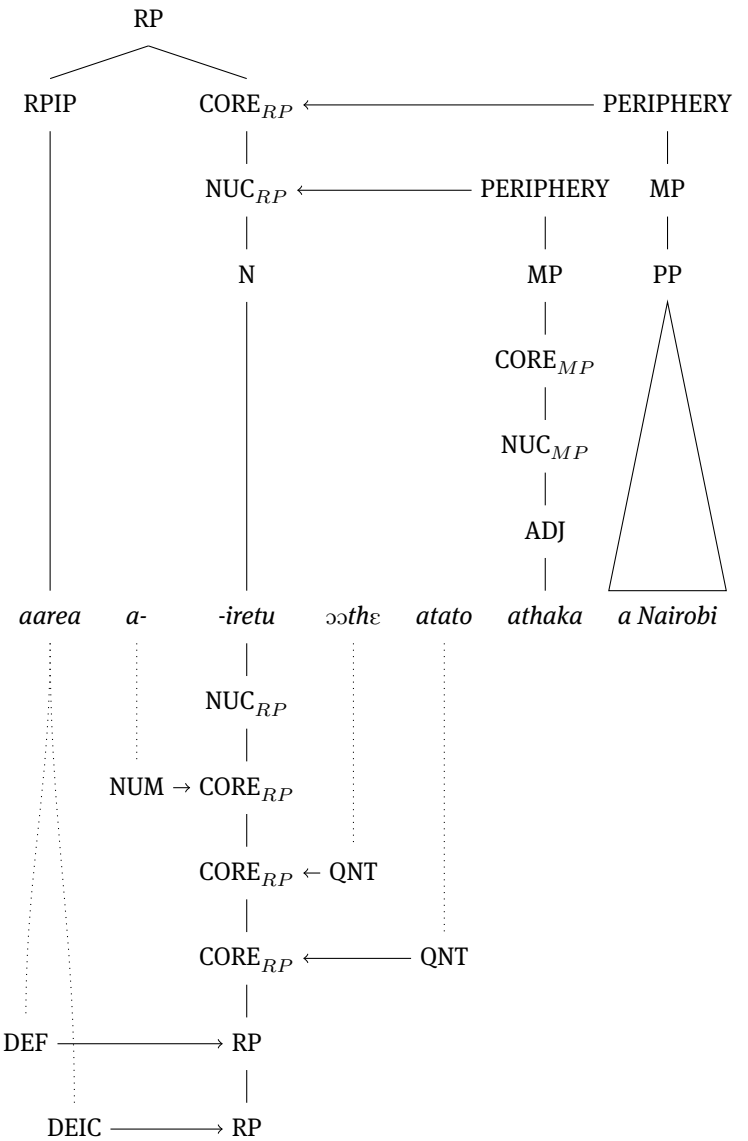

Fig. 4: The constituent and operator projections of the LSRP; representation of the example in (13b).

cosubordination. Whereas coordination and subordination are generally known in the analysis of clause combinations, cosubordination, which has characteris-

tics of both coordination and subordination, is an RRG unique nexus type. These nexus types are also found in complex RPs. As for the junctures, the RP has RP layer as the highest, instead of the sentence/clause, a core RP ($CORE_{RP}$) layer, and a nuclear RP (NUC_{RP}) layer in both the constituent and operator projections.

Complex RPs may contain clauses, infinitives and complex modifiers such as genitives, possessives, and relative clauses as part of modification (Dryer, 2004, 151, Van Valin & LaPolla, 1997, 492). These complex modifiers co-occur with simple modifiers in RPs.

4.1 RP juncture-nexus types

Compared to clausal junctures, there are fewer junctures in the RP because the layers are also few. The RP has the RP level juncture, the $CORE_{RP}$ juncture, and the NUC_{RP} juncture. Depending on the language, the nexus relations are applicable to the different layers in a complex RP. For instance in Gĩkũyũ, the RP layer is compatible with all the three juncture-nexus types: coordination (14a), subordination (14b) and cosubordination (14c).

(14) a. *mo-thuuri o-mwɛ mo-koro na mo-tumia o-mwɛ mo-kuhe*
1-man 1-one 1-old and 1-woman 1-one 1-short
'one old man and one short woman'

b. *Maina o-rea w-ɛnd-ag-i-a ma-kara ne a-go-ok-a.*
Maina RLPRN 1.RSP-sell-HAB-DC-FV 6-charcoal AM 1-FUT-come-FV
'Maina, who sells charcoal, will come.'

c. *to-iretu na to-hee to-to tu-ɔthɛ*
12-girls and 12-boys 12pl-DEM 12pl-all
'all these (small) girls and boys'

Example (14a) contains two equal RP units joined by a coordinating conjunction *na* 'and', which makes it a coordinate RP juncture-nexus type, whose constituent projection is represented in figure 5 (on page 150).

Example (14b) contains a non-restrictive relative clause, modifying proper noun *Maina*. Because of the dependent modifying clause, it is a subordinate RP construction, and its representation is shown in figure 6 (on page 151). Since proper nouns do not have a layered structure, they cannot be in the periphery of the nucleus; they are adjuncts at the RP level. The RC in this case is a sentence (not a clause) since it has its own IF, unlike a restrictive RC that would have a clause and be a periphery of the nucleus periphery (Van Valin, 2005, 222–223).

Example (14c) is a cosubordinate RP nexus type, in which a definite/deixis operator *toto* 'these' is shared between two RPs, *toiretu* 'small girls' and *tohee*

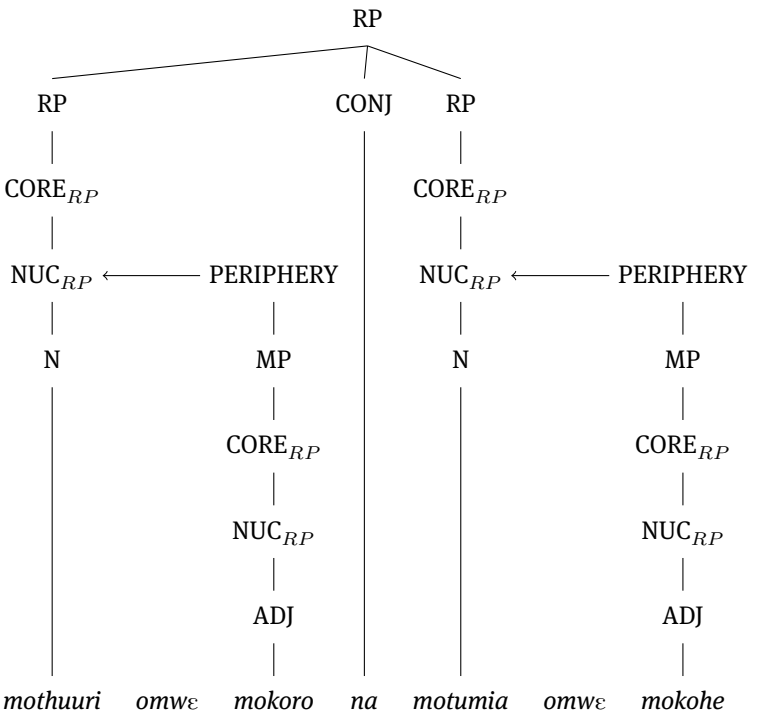

Fig. 5: RP coordination; representation of the example in (14a).

'small boys'. It can also be RP core cosubordination, considering that *tuɔthɛ* 'all' is CORE$_{RP}$ operator. What should be borne in mind is that in a cosubordinate nexus, at least one operator must be shared by a layer.

Note that DEIC *toto* 'these' in the operator projection in figure 7 (on page 152) is a RP operator that has scope over the two RPs: *toiretu* 'girls' and *tohee* 'boys', and therefore the operator is shared between them, rather than have *tohee toto* 'these boys' and *toiretu toto* 'these girls'. The fact that DEIC, is the lowest (and outer-most) shared operator, makes (14c) a RP cosubordinate construction. The quantifier, though shared by the two cores, is not the outer-most and therefore it cannot be construed as a core cosubordinate unit.

Cosubordination differs from subordination in that none of the units is embedded, they are in fact conjoined by a conjunction. However, one of the RPs that does not have the DEM depends on the other RP for the expression of deixis. These examples show that the RP layer can have the three nexus types: coordination, subordination and cosubordination.

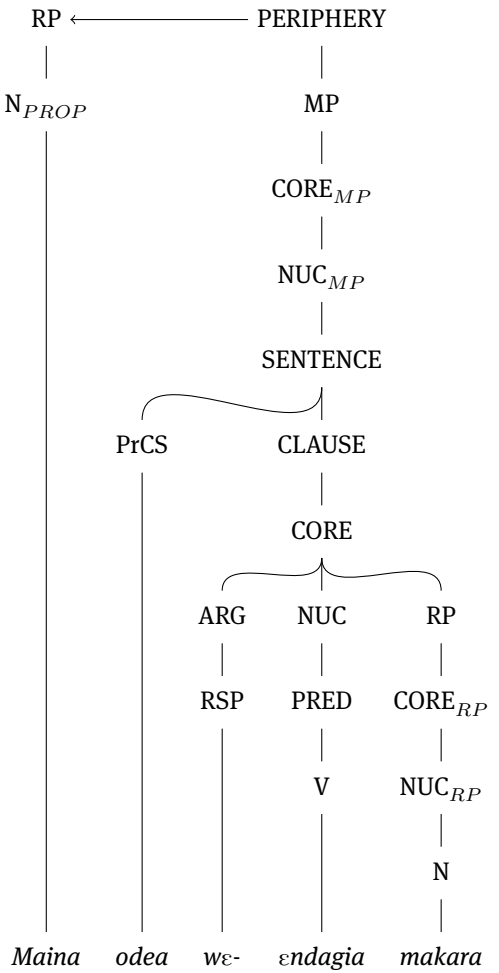

Fig. 6: RP subordination; partial representation of the example in (14b).

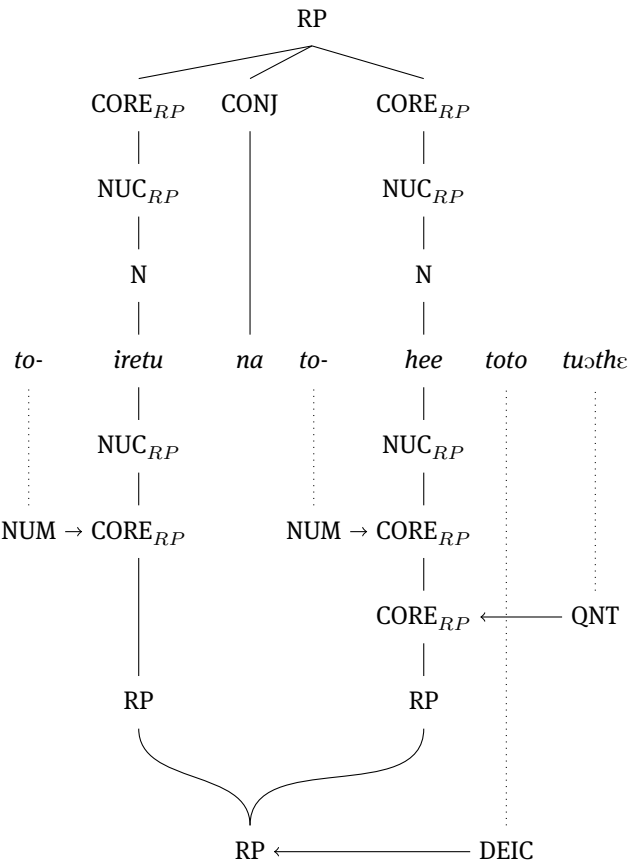

Fig. 7: RP Cosubordination; representing the example in (14c).

4.2 CORE juncture-nexus types

The Core is the layer involved in the core juncture-nexus. There are two nexus types in the core layer: subordinate and cosubordinate nexus. Core RP subordination involves complement clauses that are arguments of the core RP. For example in (15), Core RP *ribɔti* 'news' has a that-clause for an argument. A cosubordinate Core RP involves infinitival complement to a noun e.g., infinitival unit *to defraud the bank* is the complement of the RP *the intention* in the RP: *the intention to defraud the bank*. Here the core argument is shared between the nominal and the infinitive. Core RP operators are quantification and number, and they will have

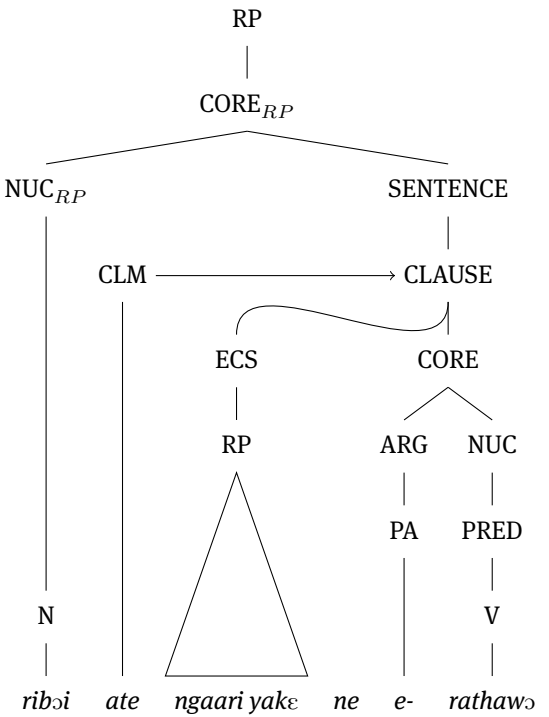

Fig. 8: CORE$_{RP}$ Subordination; representation of the example in (16a).

scope over both the deverbal nominal and the infinitive complement, and therefore cosubordinate.

(15) a. *ribɔti ate ngaari y-akɛ ne e-ra-tah-wɔ*
9-report CLM 9-car 9-ASSOC COP 9-PRS-fetch-PASS
'the news that his car is to be repossessed (by auctioneers)'

b. *ma-gɛria ma-ɔ ma-inge ma ko-iy-a mbɛca*
6-attempts 6-their 6-many ASSOC 15-steal-FV 9.money
'their many attempts to steal money'

In the subordinate nexus, the core allows an embedded element e.g., (15a) in which there is complementizer *ate* 'that' links the RP to a complement clause resulting into CORE$_{RP}$ subordination represented in figure 8. Note that the complement cause is a direct daughter of the CORE$_{RP}$ node, acting as the argument of the nominal nucleus *ribɔti* 'report'.

Example (15b) has a deverbal noun *ma-gɛria* 'attempts' and modified by a possessive pronoun *maɔ* 'their' and quantifier *mainge* 'many'. As shown in earlier examples the genitive pronoun *maɔ* occupies the RPFP. As in other non-subordinate core junctures, the deverbal noun and the infinitive core share an argument *magɛria*. Furthermore, the core operator *mainge* 'many', a quantifier, has scope over the two cores, which renders the construction as a core cosubordination construction as shown in figure 9 (on page 155).

RRG allows crossings of branches hence it is not a problem for the second Core containing the infinitive to cross the RPFP. The associative *ma* 'of' is the links the two cores, unlike in English where to- is considered a clause linkage marker (CLM) in RRG. In the absence of *ma*, prefix *ku-* on the predicate for example in infinite clauses is the CLM. However, in (15b), the associative is one that links the two cores.

As part of core cosubordination, consider also an RP such as *to-iretu na to-hee tu-ɔthɛ* 12-girls and 12-boys 12-all 'all the (small) boys and girls'. This RP has two core RPs that share a common quantity operator 'all'. Because of the shared operator, it is a cosubordinate construction; recall that cosubordination has a co-ordination feature (conjunction *na* 'and' here), and (operator) dependence (the quantity operator *tu-ɔthɛ* 'all').

4.3 Nuclear juncture-nexus types

Nuclear level operators modifying the NUC_{RP} level of a noun modify the "'quality' of the referent" (Pavey, 2010, 194). Operators at this level are referred to as 'nominal aspect', since they are to do with the internal structure of the referent. As a nuclear operator, nominal aspect include mass/count distinction and nominal classifiers in nouns. Noun classifiers are part of nominal aspect, and they indicate the shape and nature of a referent. Mandarin Chinese is one that has grammatical nominal classifiers. Languages without grammatical nominal aspect markers e.g., English and Gĩkũyũ indicate mass/count distinction with quantified nominals e.g., *one sheet of paper* vs. *one ream of paper*, *two glasses of beer*, etc. (Van Valin & LaPolla, 1997, 58). Gĩkũyũ has, for instance, *i-konia rea waru* 7-sack 7.of 9.potatoes 'a sack of potatoes' , *mbɛmbɛ irɛbɛ re-mwɛ* 9.maize 7-bucket 7-one 'one bucket of maize'.

There are two possible juncture-nexus types at the nuclear level of the RP namely subordinate and cosubordinate (Van Valin, 2005). NUC_{RP} cosubordination in English is realized by syntactic noun compounding such as 'N + *hunter*' pattern e.g., *duck hunter*, *lion hunter*, etc. (Van Valin & LaPolla, 1997, 496). The

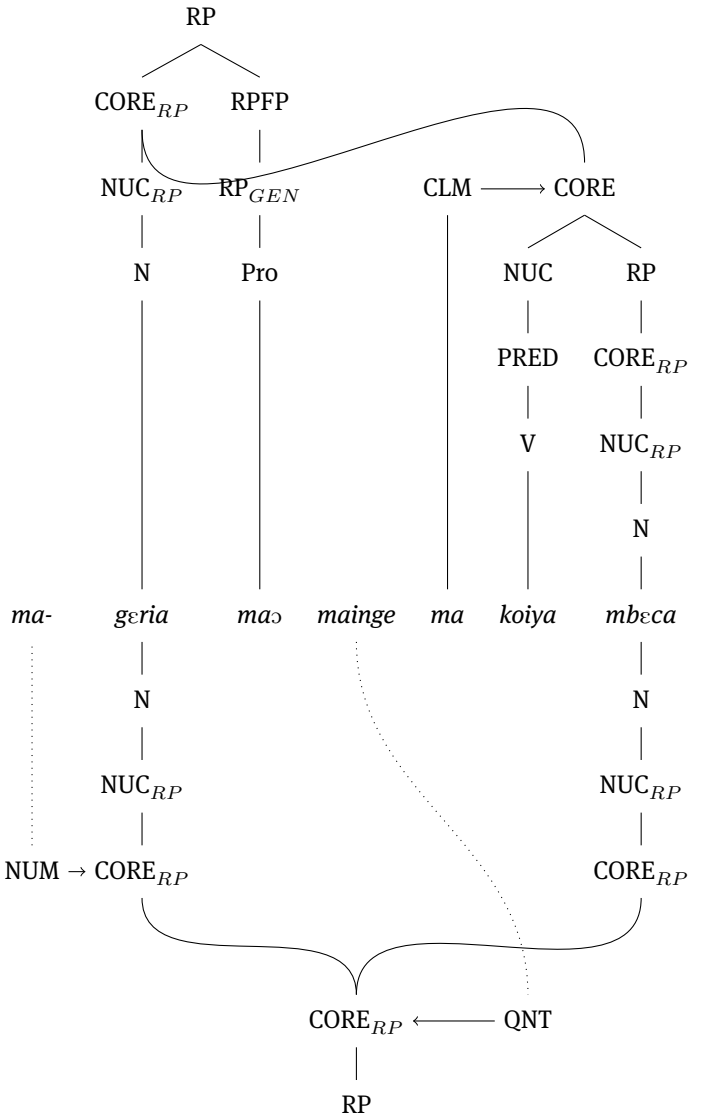

Fig. 9: Gĩkũyũ CORE$_{RP}$ cosubordination, representation of the example in (16b).

operators, for instance DEF and NUM, that occur with the resulting compound nominal have scope over the two nouns e.g., *the three short lion hunters*.

NUC_{RP} subordination involves restrictive relative clauses. Restrictive and non-restrictive relative clauses differ as to how they relate to the head noun. In English, the former are set of by a pause while the latter are not. Non–restrictive relative clauses provide additional information about the head noun. Lastly, unlike restrictive relative clauses, non-restrictive relative clauses occur with proper nouns (14b). Restrictive relative clauses are examples of nuclear subordination, while non-restrictive relative clauses belong to RP subordination.

Assuming the compound nominals posited by Van Valin & LaPolla (1997), the same is here proposed for Gĩkũyũ. Gĩkũyũ RPs exhibit the two nuclear juncture-nexus are illustrated in (16). (16a), represented in figure 10 (on page 157), has two nouns *mothenji* 'slaughterer' and *mbori* 'goat'. DEM *ociↄ* 'that' and the adjective *mokuhe* 'short' modify the two nouns as a single unit, although the DEM is an operator projection entity and the adjective a constituent projection one.

(16) a. *mo-thenj-i mbori o-ciↄ mo-kuhe*
1-slaughter-NZR 9.goat 1-DEM 1-short
'that short goat slaughterer'
b. *mbuku i-ria njɛga n-gor-ir-ɛ.*
10.books 10-RLPRN 10-good 1SG-buy-ASP-FV
'the good books which I bought'

In (16b) the nuclear nominal is modified by an adjective and a restrictive relative clause in the peripheral Modifier Phrase. Gĩkũyũ, like other Bantu languages such as Luganda (Walusimbi, 1976) and CiNcenga (Simango, 2006), does not use the English comma-intonation strategy to distinguish restrictive relative clauses from non-restrictive ones.

The adjective *njɛga* 'good' can switch places with the relative pronoun *iria* 'which' to become *mbuku iria njɛga ngorirɛ* 'the good books which I bought'. The effect of the latter word order is that the relative clause increases the degree of restrictiveness, i.e., when the relative pronoun precedes the adjective, the head noun is more defined. (16b) is represented in figure 11 (on page 158).

In figure 11, the periphery modifying the nominal at the NUC layer has two modifier phrases, one that carries the adjective and the other the relative clause. The idea behind this is both modify the NUC_{RP}. Note also the crossing of the PrCS and the ADJ in the tree. This is allowed in the LSRP and also the LSC. It happens in figure 11 because the ADJ follows the relative pronoun, otherwise, when the ADJ precedes the relative pronoun, there will be no crossing.

Gĩkũyũ also uses nouns to modify other nouns in what is generally known as nominal apposition. This is illustrated in (17).

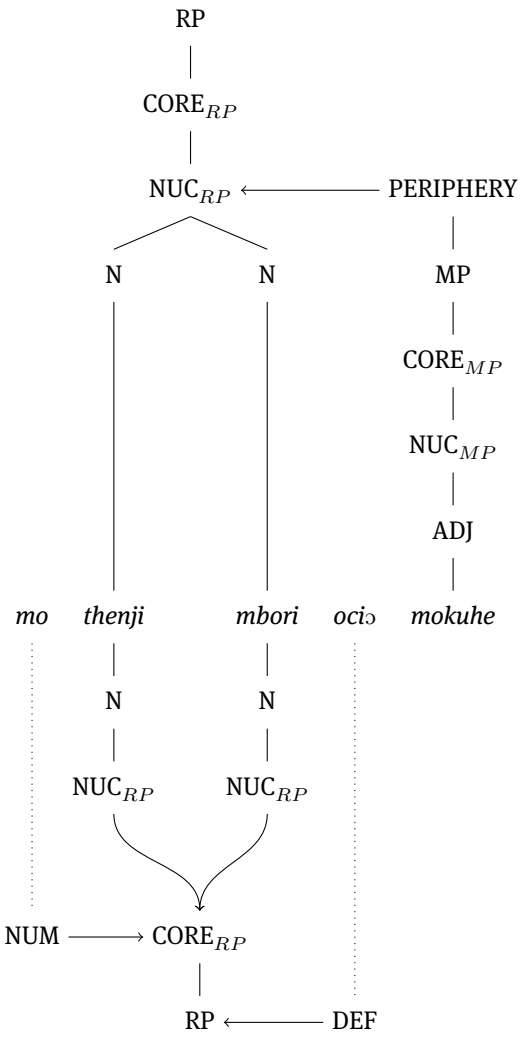

Fig. 10: Gĩkũyũ NUC$_{RP}$ cosubordination, representation of the example in (16a).

(17) *Mo-ndo mu-ic-i*
1-person 1-come-NZR
'a thieving person / a person who is a thief ' (lit. person thief)

The noun *mondo* 'person' is modified by another noun *moici* 'thief'. The modifier has an adjectival sense if it is interpreted as a gerund 'thieving'. It has a restric-

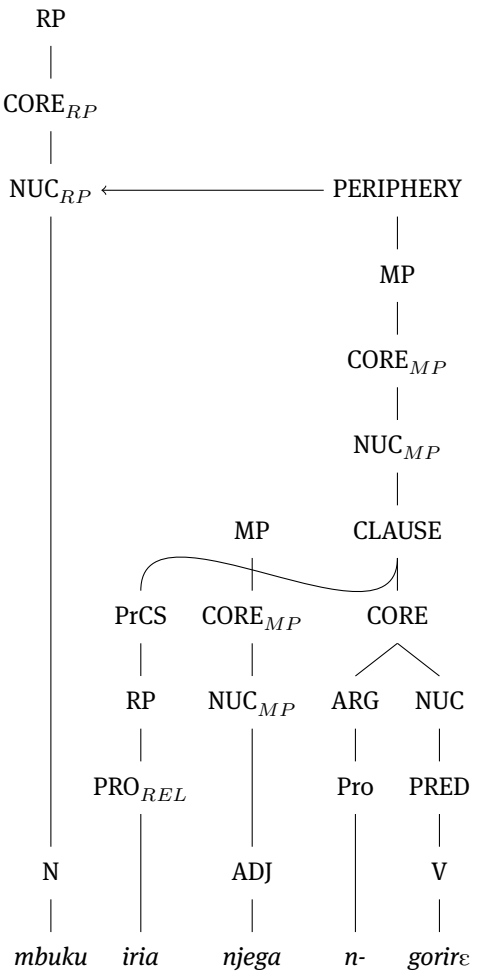

Fig. 11: NUC$_{RP}$ subordination: Restrictive relative clause, representation of the example in (16b).

tive relative clause meaning 'a person who is a thief', although this sense is not represented in figure 12 (on page 159).

In figure 12, the modifying nominal is NUC$_{RP}$ periphery within which is MP, the same position that is occupied by adjectives and restrictive relative clauses, which renders appositive modifying nominals in the class of relative clauses. It is a relativized RP that uses a relativized nominal but without a relativizer. This is not unusual since in Gĩkũyũ, relative clauses can appear without a relative pronoun.

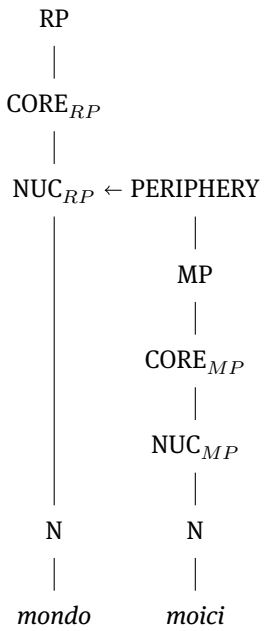

Fig. 12: NUC$_{RP}$ subordination, representation of the example in (17).

5 Summary and Conclusion

This paper set out to answer the following two main questions: (1) what are the possible modifiers of a complex Gĩkũyũ RP and their order in the modification of the complex Gĩkũyũ RP? and (2) how can the RRG''s layered structure of the Reference Phrase [LSRP] account for the morphosyntax of the Gĩkũyũ complex RP?

As for the first question, the unmarked order of modifiers in a complex Gĩkũyũ RP is the noun, demonstrative, quantity, number, adjective, associative/possessive and relative clause. Nouns can also post modified by other nouns, while adjectives are nominal in that they can be the RP nucleus. The order of modifiers is dynamic partly due to information structure factors. For instance the demonstrative can precede the nominal or follow it, just like the variant positions of the quantifiers and adjectives. In addition, the data from Gĩkũyũ further cements the notion of reference phrase as proposed in RRG, considering that endocentricity is not key in determining the head of an RP in Gĩkũyũ, for example when an adjective is the RP nucleus.

For question two, it is evident that the LSRP model accounts for the constituent order of the RP modifiers in the Gĩkũyũ RP. Furthermore, the RRG theory of complex sentences and phrases adequately describes the morphosyntax of the Gĩkũyũ complex RP. It is demonstrated that Gĩkũyũ RPs exhibit the following juncture-nexus relations. There is evidence for NUC_{RP} cosubordination and subordination, CORE_{RP} cosubordination and subordination, and RP coordination, cosubordination and subordination in Gĩkũyũ complex RPs. In conclusion, the RRG theoretical tools are able to account for the morphosyntax of Gĩkũyũ complex RPs.

Abbreviations

ADJ adjective
AM assertive marker
APPL applicative
ASP aspect
ASSOC associative
CLM clause linkage marker
CONJ conjunction
COP copula
DC discontinuous
DEM demonstrative
FUT future tense
FV final vowel
HAB habitual
N noun
NMZ nominalizer
NUM number
OM object marker
QNT quantity
PASS passive
PL plural
POSS possession
PRS present tense
PST past tense
RLPRN relative pronoun
SG singular

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Jens Fleischhauer

Argument doubling and right-dislocation – An RRG analysis of head-marking in isiZulu

1 Introduction

From its very beginning, Role and Reference Grammar has been a typologically-oriented syntactic theory. Nevertheless, various parts of the RRG framework have been worked out on the basis of data from a limited set of languages. The RRG approach to head-marking is, for example, more or less exclusively based on data from the Siouan language Lakhota (Van Valin 2013). This raises the question of how well this analysis fits for other head-marking languages.

The Bantu languages are mostly head-marking (at the clausal as well as the phrasal level) and show a lot of microvariation when it comes to argument realization (e.g., Beaudoin-Lietz et al., 2004; Marten et al., 2007; Marten & Kula, 2012; Marlo, 2015; van der Wal, 2022).[1] Whereas some languages, e.g., Swahili, license bound non-actor markers to co-occur with an independent RP – referential phrase – (1), others such as Gĩkũyũ do not.[2] To refer to the co-occurrence of a bound argument marker with a coreferential independent RP as in (1), I adopt the term 'argument doubling' used in the literature (e.g., van der Wal, 2022).

(1) *M-sichana a-li-m-pat-i-a ki-jana ki-tabu.*
1-girl 1-PST-1-give-CAUS-FV 1-boy 7-book
'The girl gave the boy a book.'

One especially interesting case in this regard is isiZulu, a language of South Africa belonging to the Nguni subgroup of Bantu languages. This language has been

1 An exception is Nzadi (B865), which does not have any bound argument markers at all (Crane et al., 2011). The numbers in brackets refer to the (geographical) classification of Bantu languages done by Guthrie (1948).

2 The bound non-actor marker is usually glossed OM – object marker – in the literature. Since 'object' is not a theoretically relevant term within RRG, I deviate from this tradition. Instead, I only indicate noun classes in the glosses. Whether the bound argument marker represents the highest macrorole argument is indicated by its linear position. The highest macrorole argument usually precedes the other macrorole and non-macrorole arguments.

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https://doi.org/10.1515/9783110795295-007

the subject of analysis from the perspective of generative grammar (e.g., van der Spuy, 1993; Zeller, 2012) but not from an RRG perspective. The example in (2) suggests that 'argument doubling' is possible in isiZulu. Both arguments of the verb meaning 'wash' are indicated at the verb by verbal prefixes (*zi-* and *yi-*) and, at the same time, are realized by independent RPs (*iintombi* 'girl' and *ingubo* 'blanket'). Zeller (2012), however, expresses a different view and states that the bound undergoer marker cannot co-occur with an independent undergoer RP. Apparent argument doubling is only possible if the independent undergoer RP is right-dislocated. Thus, *ingubo* in (2) is, according to his analysis, realized in a right-detached position.

(2) *Umama u-cel-a ukuba iintombi zi-yi-hlamb-e ingubo.*
1.mother 1-request-FV that 10.girl 10-9-wash-SUB 9.blanket
'Mother requests (the) girls to wash the/a blanket.'
(Visser, 2008, 14)

A second claim by Zeller is that under specific conditions both non-actor arguments – the undergoer and the non-macrorole core argument – are right-dislocated. This view is, from the perspective of RRG, highly controversial as RRG only proposes one right-detached position. Thus, Zeller's analysis (also not formulated within the framework of RRG) contradicts a basic assumption concerning RRG's constituent structure.

The central aim of the current paper is to question Zeller's analysis of isiZulu. To achieve this aim, the paper is split into two parts. In the first part, I extend the RRG analysis of head-marking languages (developed in Van Valin, 2013) to Bantu languages. Although this analysis has been applied in previous work (Kihara, 2016) to the Bantu language Gĩkũyũ, a systematic treatment of head-marking in Bantu languages is still lacking. In the second part, I present a reanalysis of the isiZulu language data discussed in the previous (mainly) generative literature. The essential results of the (re)analysis are: First, there is no evidence supporting a right-dislocation analysis. Second, isiZulu is very similar to Swahili and shows argument doubling. Third, the RRG analysis of head-marking provides a straightforward analysis for the isiZulu language data.

The structure of the chapter is as follows: In section 2, the RRG analysis of head-marking languages is introduced and applied to the Bantu languages in section 3. In section 4, I turn to a discussion of the South African Bantu language isiZulu. In this section, I start by briefly summarizing previous analyses within the framework of minimalist syntax. A critical analysis of the isiZulu language data from the perspective of RRG is provided in section 5. In this section, I will argue – contra, e.g., Zeller (2012, 2015) – that isiZulu is a doubling language as there is no

evidence for a right-dislocation analysis of the doubled non-actor argument. The chapter ends with a conclusion which points out some typological consequences of the proposed analysis.

2 Head-marking in Bantu

In her paper on head- and dependent-marking languages, Nichols (1986) distinguishes two primary strategies for encoding the relation between the head of a construction and its dependent elements. At the clause level, the verb functions as the head. The dependent elements are the verb's arguments. In a dependent-marking language like Kunama (Nilo-Saharan), the relation between the head and its dependents is marked at the dependent elements (3). Case marking distinguishes who (nominative) is speaking to whom (accusative). The form of the verb is not affected if the two arguments change their role.

(3) a. *Deda anda-dem unu-si udake.*
child big-NOM he-ACC spoke
'A big child spoke to him.'
b. *Unu-dem ded(a) anda-si udake.*
he-NOM child big-ACC spoke
'He spoke to a big child.'
(Thompson, 2008, 298 quoted from König, 2008, 66)

Head-marking (at the clausal level) is exemplified by, for instance, the North American language Lakhota (Sioux). The examples in (4) show that all arguments are marked at the verb; there is no distinct marking at the RPs. The verbal affixes indicating the arguments are referred to as 'bound arguments markers' within RRG (Van Valin, 2013). As (4b) reveals, the RPs are not necessary for instantiating the arguments.

(4) a. *Wičhaša ki hená wówapi ki ∅-wičhá-wa-k'u.*
man DEF those book DEF INAN-3PL.ANIM.U-1SG.A-give
'I gave the book to those men.'
b. *∅-wičhá-wa-k'u.*
INAN-3PL.ANIM.U-1SG.A-give
'I gave it to them.'
(Van Valin, 2013, 92–93).

Bantu languages are head-marking as well but differ in significant respects from languages such as Lakhota. In Lakhota, all arguments of a ditransitive predicate

are obligatorily realized at the verb. Fwe (K402), a Bantu language spoken in Namibia and Zambia, is similar to Lakhota in having bound argument markers for all verbal arguments. As (5b) shows, the language even allows the realization of three non-actor arguments in an applicative construction.

(5) a. *Ndi-a-cí-ba-ha-i.*
1SG-PST-7-2-give-NPST.PF
'I've given it to them.'
b. *Ci$_H$-mu-ndi-su$_H$ni-ír-e.*
7-1-1SG-show-APPL-SUB
'Show it to him/her for me.'

(Gunnink, 2018, 268)

In a number of Bantu languages, e.g., Gĩkũyũ (E51) and Swahili (G42), maximally two arguments – the actor and a non-actor argument – can be realized at the verb. An example from Gĩkũyũ is shown in (6). In (6a), only the actor argument is marked at the verb. A second argument is realized at the verb in (6b) and (6c), the recipient in the first example and the given that was given in the other. Gĩkũyũ is a 'symmetric object' language as either one of the two non-actor arguments can become the undergoer macrorole argument.

(6) a. *A-a-hɛ-ir-ɛ mw-anakɛ i-buku.*
1-PST-give-ASP-FV 1-boy 5-book
'S/he gave the boy a book.'
b. *Mo-iretu a-a-mo-hɛ-ir-ɛ i-buku.*
1-girl 1-PST-1-give-ASP-FV 5-book
'The girl gave him/her a book.'
c. *Mo-iretu a-a-re-hɛ-ir-ɛ mw-anakɛ.*
1-girl 1-PST-5-give-ASP-FV 1-boy.
'The girl gave it to the boy.'

A further difference between Lakhota and some Bantu languages concerns the co-occurrence of bound argument markers and independent RPs. Whereas Lakhota licenses the co-occurrence of the two (4), this is different for Gĩkũyũ. In this language, only the PSA – the privileged syntactic argument – can be expressed by a bound argument marker co-occurring with an independent RP.

As the examples in (7) indicate, the bound argument marker can occur without an independent RP (7a), and the independent RP can occur without a bound argument marker (7b), but the two cannot occur together (7c).

(7) a. *Wamboi a-ra-hɛ-ir-ɛ Kamau ka-ramu ira.*
Wamboi 1-RCPST-give-PF-FV Kamau 12-pen yesterday
'Wamboi gave Kamau a pen yesterday.'
b. *Wamboi a-ra-ka-hɛ-ir-ɛ Kamau ira.*
Wamboi 1-RCPST-give-12-PF-FV Kamau yesterday
'Wamboi gave it to Kamau yesterday.'
c. **Wamboi a-ra-ka-hɛ-ir-ɛ Kamau ka-ramu ira.*
Wamboi 1-RCPST-give-12-PF-FV Kamau 12-pen yesterday
'Wamboi gave Kamau a pen yesterday.'

(Kihara, 2016, 55)

However, the undergoer argument of a ditransitive verb can be doubled, i.e., realized by a bound argument marker and a coreferential RP, if it becomes the PSA in a passive construction (8).

(8) *Ka-ramu ka-ra-hɛ-ir-wɔ Kamau* (*ne Wamboi*).
12-pen 12-RCPST-give-PF-PASS Kamau by Wamboi
'The pencil was given to Kamau (by Wamboi).'

(Kihara, 2016, 55)

The restriction concerning the co-occurrence of a bound argument marker and a coreferential independent RP has to be formulated with respect to the PSA in Gĩkũyũ:

(9) Restriction concerning the co-occurrence of independent RPs and bound argument markers in Gĩkũyũ: Only the independent RP representing the PSA can co-occur with a bound argument marker.

In other Bantu languages, for instance Swahili (10), any bound argument marker can co-occur with an independent RP. Swahili is an 'asymmetric object language': only the recipient but not the theme argument can be realized by a bound argument marker. In the example, the bound non-actor marker is doubled by the independent RP *kijana*. However, realizing the theme argument rather than the recipient by a bound argument marker would result in ungrammaticality.

(10) *M-sichana a-li-m-pat-i-a ki-jana ki-tabu.*
1-girl 1-PST-1-give-CAUS-FV 1-boy 7-book
'The girl gave the boy a book.'

The restrictions on the co-occurrence of a bound argument marker and an independent RP are different for Swahili and Gĩkũyũ. However, further factors, for instance animacy, affect the realization of bound non-actor argument markers in Swahili (e.g., Morimoto, 2002). The formulation of the exact restrictions on the

co-occurrence of bound argument markers and independent RPs within the RRG-framework remains the subject of future work. I turn next to the theoretical analysis of head-marking within Role and Reference Grammar.

3 The RRG analysis of head-marking languages

The RRG analysis of head-marking is based on Van Valin's work on the Siouan language Lakhota (Van Valin, 1977, 1985, 1987, 2013). In his analysis, Van Valin treats the affixes indicating the (non-)macrorole arguments as bound argument markers rather than as agreement affixes (the latter view is often adopted in generative analyses; see, for instance, Watters, 2000 and Zeller, 2012 on this issue). There is a crucial difference between the two analyses. The bound argument marker analysis treats the verbal affix as the argument. The agreement analysis, on the other hand, treats the independent RP as the argument and the verbal affix as merely agreeing with the RP in some features (gender and number). The evidence for the bound argument marker analysis will be discussed in section 3.1. In section 3.2, I turn to the syntactic analysis of the doubled argument RPs. I discuss these two issues in detail since the RRG analysis of head-marking is primarily based on Lakhota language data. One of the aims of the current section therefore consists in proving that the analysis can be fruitfully extended to Bantu languages as well.

3.1 Status of the bound argument markers

There exists theory-internal as well as independent syntactic evidence for the bound argument marker analysis. I start with the theory-internal evidence. In languages like Lakhota, the bound argument marker is obligatory, whereas the independent RP is not. An analysis in terms of agreement would require postulating null pronouns – or similar invisible elements – to agree with if no independent RPs are present, as in the Gĩkũyũ example in (11).

(11) *Ne a-mo-mumuny-ag-a.*
AM 1-1-kiss-HAB-FV
'S/he kisses him/her.'

Role and Reference Grammar is confined to the languages' surface structure and therefore does not postulate null elements. This rules out an agreement analysis for examples like in (11).

On various occasions, Van Valin (1977, 1985, 1987, 2013) demonstrates that in head-marking languages syntactic operations target the bound argument markers rather than the independent RPs. This can be clearly seen by looking at control constructions.[3] As I starting point, I take the English subject control construction in (12). In an English sentence like *I stole the book*, the verb *steal* takes two arguments. The first-person pronoun represents the actor argument, which is the one who is stealing. The stolen thing, the undergoer argument, is expressed by *the book*. If one wants to express that s/he just tried to steal the book, s/he can use a control construction like in (12).

(12) *I tried to steal the book.*

In this sentence, we have two verbs – *try* and *steal* – and two argument expressions (*I* and *the book*). The verb *try* takes one actor argument and it requires an infinitival construction (*to steal something*) as its second argument. There is no realization of the actor of *steal*; nevertheless, we understand the sentence as meaning that the actor of *try* is identical with the actor of the embedded infinitive. It is not possible to have an explicit realization of the actor of *steal* – a sentence like **I tried I steal the book* is ungrammatical. Thus, the actor of the infinitive is obligatorily missing and interpreted as being coreferential with the actor of *try*.

An example of an obligatory subject control construction in Lakhota is shown in (13). The first example (13a) shows that also there is no free pronoun; the missing actor argument of the verb meaning 'steal' is interpreted as being coreferential with the actor of the verb meaning 'try'. Thus, the bound argument marker controls the missing argument. Crucially, the actor argument cannot be realized at the embedded verb; this results in an ungrammatical structure (13b). This is similar to the ungrammatical English sentence **I tried I steal the book*.

(13) a. *Wówapi ki ma-∅-nú i-bl-úthe.*
book DEF stem-INAN-steal stem-1SG.A-try
'I tried to steal the book.'

b. *(*Wówapi ki*) *ma-∅-wá-nu i-bl-úthe.*
book DEF stem-INAN-1SG.A-steal stem-1SG.A-try
Intended: 'I tried to steal the book.'

(Van Valin, 2013, 95)

Van Valin (2013, 96) concludes by saying: "in the syntax of head-marking languages, the instantiations of arguments that are relevant for constructions such

3 For reasons of space, I only discuss so-called 'subject control constructions' and leave 'object control constructions' aside.

as these [i.e., control constructions] are the bound argument markers, not independent RPs."

If the Bantu languages are really head-marking, they should behave similarly to Lakhota. In fact, this is true of (at least) Gĩkũyũ (14a) and Swahili (14b). The embedded verb meaning 'steal' is realized as an infinitive which is indicated by noun class prefix 15. The actor is only expressed on the embedding verb. If the actor were be expressed at the embedded verb, the resulting sentences would be ungrammatical, as indicated by the examples in (14c) for Gĩkũyũ and (14d) for Swahili.

(14) a. *Nd-a-gɛr-iri-ɛ ko-iy-a i-buku.*
1SG.PST-try-PF-FV 15-steal-FV 5-book
'I tried to steal a book.'

b. *Ni-li-jaribu ku-iba ki-tabu.*
1SG-PST-try 15-steal 7-book
'I tried to steal a book.'

c. **Nd-a-gɛr-iri-ɛ nj-iy-a i-buku.*
1SG.PST-try-PF-FV 1SG-steal-FV 5-book
'I tried to steal a book.'

d. **Ni-li-jaribu n-iba ki-tabu.*
1SG-PST-try 1SG-steal 7-book
'I tried to steal a book.'

The data show that in Gĩkũyũ and Swahili the bound argument markers are targeted by syntactic processes and therefore, like in Lakhota, have to be analyzed as morphosyntactic realizations of the verb's arguments.

To conclude: First, the conception of RRG speaks against postulating zero elements, which rules out an agreement analysis in cases like (11). Second, syntactic rules target the bound argument markers, indicating that they function as the verb's arguments. But if the bound argument marker represents the argument, was is the syntactic status of a doubled RP?

3.2 Syntactic analysis of the bound argument markers

In head-marking languages, the core arguments are realized by bound argument markers rather than by independent RPs. Since every argument can only be realized once within a single clause, this rules out that an argument can be realized by a bound argument marker and a coreferential RP at the same time.

For a Gĩkũyũ sentence without independent RPs like in (11) (repeated below for convenience), the constituent structure representation looks like in figure 1.[4]

(11) *Ne a-mo-mumuny-ag-a*.
AM 1-1-kiss-HAB-FV
'S/he kisses him/her.'

If the undergoer argument is not realized by a bound argument marker but by an independent RP (15), the RP can instantiate the argument expression. According to the completeness constraint, "all of the arguments explicitly specified in the semantic representation of a sentence must be realized syntactically in the sentence" (Van Valin, 2005, 129). Thus, if an undergoer argument is not realized by a bound argument marker, it has to be expressed by an independent RP. This yields the constituent structure representation in figure 2 for the sentence in (15).

(15) *Ne a-mumuny-ag-a ka-iretu*.
AM 1-kiss-HAB-IND 12-girl
'S/he kisses the girl.'

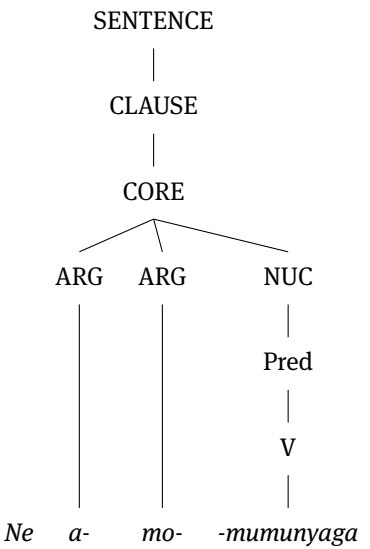

Fig. 1: Constituent structure representation of example (11).

4 *Ne* is an assertion marker and is not represented within the constituent structure representation of the clause.

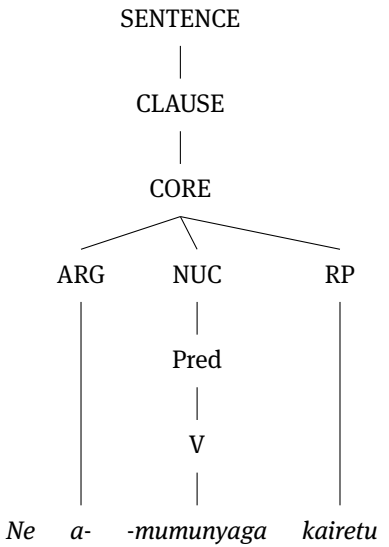

Fig. 2: Constituent structure representation of example (15).

Thus, core arguments are either instantiated by bound argument markers (if present) or by independent RPs (if no bound argument marker is present). In (16), the actor argument is expressed by the bound argument marker *ka-* but there is a coreferential RP *kahee* 'boy' present in the sentence. *Kahee* cannot be contained within the core, as 'kiss' is a transitive predicate and three expressions compete to instantiate the argument expressions syntactically. If a bound argument marker is present, it wins as instantiating the argument. Thus, if *kahee* does not instantiate the actor argument, it has to be realized core-externally.

(16) *Ka-hee ka-mumuny-ag-a ka-iretu*.
12-boy 12-kiss-HAB-IND 12-girl
'The boy kisses the girl.'

As *kahee* precedes the core, it could either be realized in the left-detached position or in the precore slot. There are several reasons why *kahee* cannot be located within one of these two positions. First, Gĩkũyũ obligatorily requires the topic clitic *=re* if the actor is realized in the left-detached position (17). Since there is no topic clitic in (16), the RP is not left-detached.

(17) *Mo-iretu=re, ne a-a-goth-ir-ɛ mw-ana.*
1-girl=TM AM 1-RMPST-hit-PF-FV 1-child
'The girl, she hit the child.'

(Kihara, 2016, 67)

Second, since the left-detached position (LDP) is located outside the clause, clausal operators (e.g., question operators) cannot scope over the LDP. If *kahee* were be hosted in the LDP, it should not be replaceable by a WH-word. But in fact, it can be, as example (18) shows. *Noo* is a fused expression consisting of the focus marker *ne* and the question word *o* 'who'. The actor prefix changes from *ka-* to *w-*, which is a resumptive marker; crucially, the actor is still marked at the verb.

(18) *Noo w-a-mumuny-ir-ɛ ka-iretu?*
FM.who 1.-PST-kissPERF-FV 12-girl
'Who kissed the girl?'

The example shows that *kahee* has to be realized clause-internally, which makes the precore slot an option. There exists only one precore slot per clause, but Bantu languages which permit argument doubling require more than one slot for the positioning of the arguments. In the Swahili example in (19), both arguments are realized by bound argument markers in the verb. In addition, there are two independent RPs which are coreferential with the bound argument markers.

(19) *Simba a-li-m-shtua m-vulana sana.*
1.lion 1-PST-1-fright 1-boy very
'The lion frightened the boy a lot.'

One might propose that *simba* 'lion' is located in the precore slot but *mvulana* 'boy' is placed in the postcore slot since it is realized postverbially. But this runs into trouble with languages like Sambaa, which allows doubling of two non-actor arguments (20). If the doubled RP were dislocated, the two RPs *ng'wana* 'child' and *kitabu* 'book' would be realized in the postcore slot. Since there is only one such position in RRG, such an analysis is ruled out for theory-internal reasons.

(20) *Stella a-i-chi-m-nk-iye ng'wana kitabu.*
1.Stella 1-PF.DJ-7-1-give-PF.DJ 1.child 7.book
'Stella gave the child the book.'

(Riedel, 2009, 102)

Furthermore, WH-words which do not remain *in situ* are positioned in the precore slot (Van Valin, 2005, 5). Given that only one precore slot position exists, a

WH-word in the precore slot should rule out the realization of an independent RP preceding the core. But, as (21) shows, such sentences exist in Gĩkũyũ.

(21) *Ne kee Kamau a-ra-ak-ir-ɛ*?
FM QM Kamau 1-RCPST-build-PF-FV
'What it is that Kamau built?'

The independent (doubled) RPs are neither in a left detached position nor in the precore slot (PrCS). Nevertheless, we have seen evidence that they should be located clause-internally. Van Valin (2013, 104) introduces a new core-external but sentence-internal position which is termed the 'Extra-Core Slot' (ECS). As he states, the ECS is structurally analogous to the two core-external positions in being a direct daughter of the sentence node. At the same time, it differs from these slots in several important respects which are summarized in table 1.

Tab. 1: Comparison of the different types of core-external positions (Van Valin, 2013, 105).

	PrCS / PoCS	ECS
(i) Special discourse pragmatic function	**Yes**	**No**
(ii) Restricted to single instantiation	**Yes**	**No**
(iii) Positionally restricted	**Yes**	**No**
(iv) Hosts arguments and adjuncts	**Yes**	**No**
(vi) Restricted primarily to main clauses	**Yes**	**No**
(vii) Occurs both in HD and DM languages	**Yes**	**No**

First, the postcore slot (PoCS) is a pragmatically motivated position which means that the constituent placed there has a specific pragmatic function. However, it is not associated with a unique pragmatic function. Second, as a functional position, it can only be instantiated once within a single sentence. The ECS, on the other hand, is not pragmatically motivated and therefore it is not restricted to a single instantiation.

Third, the PoCs is positionally restricted as it has to follow the core. No such structural restriction obtains for the ECS. This is especially true of the Bantu languages, which have an SVO word order. In the Swahili example in (22), the ECS hosting the RP that is coreferential with the actor argument precedes the verb, whereas the one that is coreferential with the undergoer RP follows the verb.

(22) *Ki-jana a-li-m-bus-u m-sichana*.
1-boy 1-PST-1-kiss-FV 1-girl
'The boy kissed the girl.'

Fourth, dislocation is not restricted to argument expressions: adjuncts can be right- or left-dislocated as well. In the Gĩkũyũ example in (23b), the precore slot contains the locational adverbial *iremaine* 'in the mountains'. In (23a), taken from Kihara (2016, 66), the temporal adverbial *jana* 'yesterday' is right-dislocated. An intonation break separates the adverbial from the preceding part of the clause. The ECS, on the other hand, only licenses argument expressions.

(23) a. *Ni-li end a soko=ni, jana.*
1-put go for 9.market=LOC yesterday
'I went to the market, yesterday.'
b. *Ne i-rema-ine ma-a-koragi-a kahoa.*
FM 5-mountain-LOC 2-PRS-grow-FV 10.coffee
'It is in the mountains that they grow coffee.'

Fifth, dislocation is mainly restricted to main clauses and is absent from subordinated clauses. There exists no similar restriction with respect to the ECS as argument doubling is found in subordinate clauses as well. The Swahili examples in (24a–b) show that the bound argument marker *m-* and its coreferential RP (*Hadija*) can co-occur in a main clause as well as in a subordinated clause (24b).

(24) a. *Ali a-li-m-saidia Hadija.*
Ali 1-PST-1-help Hadija
'Ali (had) helped Hadija.'
b. *Ali a-li-kusundia ku-m-saidia Hadija.*
Ali 1-PST-intend 15-1-help Hadija
'Ali (had) intended to help Hadija.'
(Heine, 2009, 33; glossing slightly changed)

Sixth, the precore slot and postcore slot are found in head-marking (HD) as well as dependent-marking languages (DM), while the ECS is restricted to head-marking languages only.

Having introduced the ECS, we can finally present the constituent structure representation of the Gĩkũyũ example in (16). The syntactic structure is shown in figure 3 (on page 176).

The analysis now provides a partial explanation of the typological variation encountered among the Bantu languages. The languages vary with respect to whether they license a non-actor bound argument marker co-occurring with a coreferential independent RP or not. This type of variation can be described as a constraint on the number of ECSs per clause. Gĩkũyũ, which only allows the bound actor marker to co-occur with an independent RP, only licenses one ECS per clause. Swahili, which allows the bound undergoer marker to co-occur with an independent RP, licenses up to two ECSs per clause. Sambaa, finally, allows

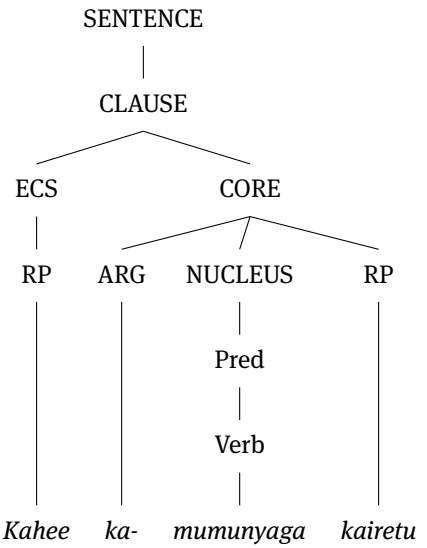

Fig. 3: Constituent structure representation of example (16).

more than two ECSs per clause. These differences can be captured in the syntactic inventory, which provides different syntactic schemata for the different languages. For Gĩkũyũ, the syntactic inventory only contains syntactic schemata with maximally one ECS. Swahili and Sambaa, on the other hand, have syntactic schemata in their syntactic inventories with a higher number of ECSs. It is sufficient to specify the constraints on the number of ECSs within the syntactic inventory of the individual languages.

4 Head-marking in isiZulu

isiZulu (S42) is a Bantu language of the Nguni branch. Closely related languages are Xhosa (S41), Ndebele (S44), and Swati (S43). Within generative linguistics, there is an extensive discussion of argument realization in isiZulu. Concentrating on Zeller (2012, 2015), I will introduce a generative analysis of isiZulu in this section. In the next section, I will evaluate this analysis from an RRG perspective.

In some regards, isiZulu is similar to Gĩkũyũ in being a symmetric object language which licenses up to two bound argument markers at the verb. As the ex-

amples in (25) show, either the theme argument (25a) or the recipient argument (25b) can be realized by a bound argument marker.[5]

(25) a. *Ngi-m-theng-el-a u-bisi* (*u-Sipho*).
1-1-buy-APPL-FV AUG-11.milk AUG-1a.Sipho
'I'm buying him (Sipho) some milk.'
b. *Ngi-lu-theng-el-a u-Sipho* (*u-bisi*).
1-11-buy-APPL-FV AUG-1a.Sipho AUG-11.milk
'I'm buying it (the milk) for Sipho.'

(Zeller, 2015, 18)

The bound argument marker instantiating the non-actor argument immediately precedes the verb stem, and the marker instantiating the actor argument is realized further to the left (Doke, 1960, 126). The two bound argument markers can be separated by further inflectional markers like the disjoint marker in (26).

(26) *Ngi-ya-m-theng-el-a u-bisi* *u-Sipho*.
1-DIS-1-buy-APPL-FV AUG-11.milk AUG-1a.Sipho
'I *am* buying milk for Sipho.'

(Zeller, 2015, 18)

The sentence in (26) contains the bound non-actor argument marker *-m-* and the coreferential RP *uShipo*. In the generative literature dealing with isiZulu, there is consensus that the coreferential RP is right-dislocated (e.g., Adams, 2010; Buell, 2005, 2006; Cheng & Downing, 2009; Halpert, 2012, 2018; van der Spuy, 1993; Zeller, 2012, 2015; Zeller et al., 2018).[6] Technically, it is proposed that the argument expression moves out of vP and is added somewhere higher in the structure via right adjunction. This analysis is sketched in the syntactic tree in figure 4 (on page 178). This movement analysis is compatible with the view that the bound argument marker functions as an agreement affix. Within the generative tradition, it is proposed that a bound argument marker and an independent RP co-occur if they are realized within vP. Thus, argument doubling refers in this framework to a doubled realization of an argument by a bound argument marker and an RP within the same vP (Zeller & Ngoboka, 2015, 208). isiZulu is, under this view, a non-doubling language as the RP is not realized within vP but is adjoined to it.

5 The augment (AUG) is a vowel preceding the noun class prefix. It is attested in a number of Bantu languages (De Blois, 1970). For a discussion of the augment in Zulu, see, for example, Carstens & Mletshe (2016).

6 Similar analyses have been proposed for other Bantu languages as well, e.g., Kinande (Baker, 2003), Chichêwa (Bresnan & Mchombo, 1987) and Fwe (Gunnink, 2018, 267, 420).

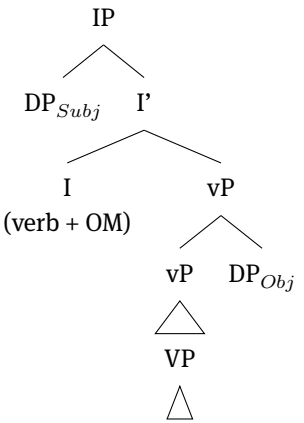

Fig. 4: Sketch of the right dislocation analysis taken from Zeller (2012, 224).

Two pieces of evidence are usually presented to support a right-dislocation analysis of argument RPs. First, right adjunction affects the linearization of the two non-actor arguments of a ditransitive predicate. Usually, the RP realizing the non-macrorole core argument precedes the RP expressing the undergoer argument (27a). If the non-macrorole core argument is expressed by a bound argument marker, the coreferential RP has to follow the undergoer RP (27b–c). This word order change is interpreted as a direct consequence of *abantwana* 'child' being right-dislocated.

(27) a. *U-John u-nik-a a-ba-ntwana i-mali.*
AUG-John 1-give-FV AUG-2-child AUG-9.money
'John is giving the children money.'

b. **U-John u-ba-nik-a a-ba-ntwana i-mali.*
AUG-John 1-2-give-FV AUG-2-child AUG-9.money
'John is giving the children money.'

c. *U-John u-ba-nik-a i-mali a-ba-ntwana.*
AUG-John 1-2-give-FV AUG-9.money AUG-2-child
'John is giving the children money.'

(Zeller, 2012, 222)

Second, a prosodic break is present between the verb and the undergoer RP, if the undergoer is realized by a bound argument marker. No such prosodic break, realized by lengthening of the verb's penultimate vowel, occurs if the undergoer argument is only expressed by a referential phrase (Zeller, 2012, 222). Cheng &

Downing (2009) propose that syntactic phrase boundaries coincide with phonological phrase boundaries and that vowel lengthening indicates the right edge of a phonological phrase, which coincides in (27c) with the right edge of the vP (Zeller, 2015, 19). A similar effect is observed in Bembe (D54) as reported by Iorio (2015). The intonation break is indicated by the comma in the Bembe example in (28).

(28) *Mwana a-a-ya-yak-a, ngyoʔa.*
1.child 1.-N.PST-9-kill-FV 9.snake
'The child has killed it, the snake (that is).'
(Iorio, 2015, 207, slightly changed)

The situation in isiZulu and Bemba contrasts with argument doubling in Sambaa. Riedel (2009) argues that the presence of a bound argument marker does not require the independent coreferential RP to be right-dislocated. He explicitly states that there is no intonation break between the verb and the independent RP in (29a), which contrasts with clear instances of right-dislocation like in (29b).

(29) a. *N-zà-í-óná ng'ómbè.*
1SG-PF.DJ-9-see 9.cow
'I saw the cow.'
b. *N-zà-í-óná, ng'ómbè.*
1SG-PF.DJ-9-see 9.cow
'I saw it, the cow.'
(Riedel, 2009, 66)

The case is similar in Swahili, which does not have an intonation break between the preverbal RP and the verb, as in (22). Although Gunnink (2018, 420) mentions that there is not necessarily an intonation break between the verb and a 'doubled' perverbal RP which, in her view, raises doubts on the right-dislocation analysis for doubled non-actor RP in Fwe.

(22) *Ki-jana a-li-m-bus-u m-sichana.*
1-boy 1-PST-1-kiss-FV 1-girl
'The boy kissed the girl.'

This suggests that there are two types of languages with respect to argument doubling. The first type, represented by isiZulu and Bemba, requires dislocation of a doubled argument, whereas the second type, illustrated by Sambaa, Swahili and possibly Fwe, allows doubling without dislocating the argument RP. Rather than accepting this distinction, I argue that isiZulu is like Swahili, Sambaa and possibly Fwe and does not require that a doubled argument be right-dislocated.

5 Evaluating the right-dislocation analysis from an RRG perspective

As already stated in section 3.2, RRG proposes the existence of two types of core-external positions. Dislocated arguments – but also adjuncts – are located in the pre- or postcore slot, depending on whether they are left-dislocated (preceding the core) or right-dislocated (following the core). The extra-core slot only exists in head-marking languages and hosts independent RPs in the case of argument doubling.

In section 3.2, I mentioned that the PrCs/PoCs and the ECS have different properties. The current section is aimed at demonstrating that the doubled RP in isiZulu shows the properties of an argument realized in ECS rather than of a left-dislocated argument expression. In the remainder of this chapter, I will concentrate on the postcore slot although the precore slot has the same properties. Four properties matter in this discussion: (i) dislocated elements have a special discourse pragmatic function, (ii) the PoCs is restricted to a single instantiation, (iii) the PoCs is positionally restricted, and (iv) dislocation is restricted to main clauses.

Special discourse pragmatic function

If the doubled RP is right-dislocated, argument doubling should be associated with a special discourse pragmatic function. A number of Bantu languages – including isiZulu – display a morphological asymmetry which is called the conjoint/disjoint alternation. The conjoint form is usually unmarked (30a), while the disjoint form is (in certain tenses and moods) segmentally marked. In isiZulu, the disjoint form is expressed by the prefix *ya-* in the affirmative past (30b) – realized between the two bound argument markers – or by the suffix *-ile* in the affirmative recent past. According to Zeller et al. (2018), the alternation is marked prosodically in other tenses.

(30) a. *uMlungisi u-pheka iqa:nda*
AUG.1.Mlungisi 1-cook AUG.5.egg
'Mlungisi is cooking an egg.'

b. *uMlungisi u-ya-li-pheka iqa:nda*
AUG.1.Mlungisi 1-DIS-5-cook AUG.5.egg
'Mlungisi is cooking the egg.'

(Halpert, 2018, 333, 331)

There exists variation concerning the conjoint/disjoint alternation among the Bantu languages. A central feature of variation concerns the trigger of the alternation. In some languages, the alternation is triggered by information structure, while in others, it is conditioned by constituent structure (see, for details, van der Wal, 2018). In some languages, the disjoint form shows strong association with focus marking. Odden (1996), for instance, states that in Kimatuumbi (P13) the conjoint form is 'noun-focal' (31a), whereas the disjoint form is 'verb-focal' (31b).

(31) a. *Ni-kata kaámba*.
1SG-cut rope
'I am cutting ROPE (not something else).'
b. *Eendá-kaatá kaámba*.
1SG.PROG.DIS-cut
'He is CUTTING rope (not doing something else to it).'
(Odden, 1996, 60, 61; quoted from van der Wal, 2018, 43)

With respect to isiZulu, Zeller (2015) proposes that disjoint marking is not driven by information structure but is syntactically motivated. He argues that the conjoint form is only possible if "there is at least one postverbal constituent inside the vP" (Zeller, 2015, 19). Halpert (2018, 331) proposes that the disjoint form is used "when vP does not contain material (after movement)." In (30a), the undergoer RP is located inside vP. The presence of the bound non-actor marker *li-* in (30b) is taken as evidence that *iqa:nda* 'egg' is realized outside of vP. As the examples in (32) show, it is not necessary for the verb to be followed by an argument expression to be non-final. A manner adverb (VP-adjunct) is sufficient to prevent the verb from being the final element in the phrase.

(32) a. *Bá-ya-giijma*.
2-DIS-run
'They run.'
b. *Bá-giijma nge-jubane*.
2-run with.AUG-5.speed
'They run fast.'
(Buell, 2005, 67–68)

Focus on the postverbal constituent requires the conjoint form as (33) shows. The focus item *kuphela* 'only' cannot occur with a disjoint verb form. However, the conjoint form is not tied to a focus reading, as resumptive pronouns, which cannot be focused, also follow after a conjoint verb form (cf. Buell, 2006, 18).

(33) a. *Ngi-bon-e u-Sipho kuphela.*
1SG-see-PST AUF-1.Sipho only
'I saw only Sipho.'
b. **Ngi-m-bon-ile*] *u-Sipho kuphela.*
1SG-1-see-PST.DIS AUG-1.Sipho only

(Buell, 2008, 41)

Since the conjoint/disjoint alternation is deeply related to argument doubling and the alternation is, as the literature proposes, not conditioned by information structure, I conclude that the doubled RP has no dedicated discourse pragmatic function. This, however, does not rule out that it might have a discourse pragmatic function in one sentence or another; it just seems that there is no such function associated with every occurrence of a doubled RP.

The idea that the conjoint/disjoint alternation is triggered by constituent structure does not necessarily entail that the doubled RP has to be right-dislocated.

Restriction to a single instantiation

An interesting claim concerning isiZulu is that the two non-actor arguments of a ditransitive verb can be right-dislocated (Adams, 2010; Zeller, 2015). This is, for instance, claimed for the example in (34). The argumentation goes as follows: the recipient is realized by a bound argument marker at the verb; the coreferential RP *uMfundo* therefore has to be right-dislocated. Since the theme argument *iqanda* 'egg' is realized to the right of the right-dislocated argument, it has to be right-dislocated as well. But note that the theme argument is not realized by a bound argument marker at the verb.[7]

(34) *uSipho u-ya-m-phek-ela uMfundo iqanda.*
AUG.1.Sipho 1-DIS-1-cook-APPL AUG.1.Mfundo AUG.5.egg
'Sipho did cook Mfundo an egg.'

(Halpert, 2018, 334)

The right-dislocation analysis faces two problems. First, only one constituent can be right-dislocated. If the two RPs are not conjoined – and there is no evidence for this – just one RP can be right-dislocated. This problem can be solved by saying

7 This claim is true as long as one is not postulating the existence of zero argument markers. Since there is no evidence for overt realization of more than one non-actor bound argument marker in isiZulu, the postulation of a zero theme argument marker cannot be independently justified. Its postulation would just be for theory-internal reasons.

that right-dislocation is a purely syntactic notion, but this makes it very similar to the RRG extra-core slot analysis. Second, the only evidence for the view that *iqanda* 'egg' is right-dislocated is the linear order of the two RPs. Within RRG, the linear order of constituents does not necessarily represent syntactic boundaries. Thus, *iqanda* can be realized core-internally although *uMfundo* is core-external. I will come back to this issue at the end of this section.

Positional restriction

Dislocated arguments are positionally restricted. A right-dislocated argument is realized to the right of other constituents. If (34) does not represent an instance of double dislocation – as I argued above – it shows that the putative dislocated RP is positionally not restricted but can either precede or follow another argument RP. However, it does seem that there is a clear preference for doubled RPs to follow the core-internal RP.

Restriction to main clauses

Dislocation is primarily restricted to main clauses. I have already shown for Swahili that argument doubling also occurs in subordinated sentences, which speaks against an analysis in terms of right-dislocation. The same can be demonstrated for isiZulu. As the example in (35) shows, the verb in the subordinated sentence bears an actor as well as a non-actor bound argument marker. The RP *uJohn* doubles the undergoer argument.

(35) *Uthisha wa-khe u-cabang-a ukuthi le ntombi i-ya-m-thand-a*
1.teacher 1.POSS-1 1-think-FV that 9.DEM 9.girl 9-DIS-1-like-FV
uJohn.
1.John
'His teacher thinks that this girl loves John.'
(Jochen Zeller, personal communication)

The discussion has revealed that the notion of 'right-dislocation' has different interpretations in different syntactic frameworks. In the generative literature discussed in this chapter, 'right-dislocation' refers to adjoined RPs which have moved out of vP. Within RRG, right-dislocation is associated with specific pragmatic functions. However, the discussion has shown that from the perspective of RRG doubled RPs are clearly not right-dislocated constituents. The linguistic

evidence speaks in favor of an analysis of doubled RPs as being realized in the ECS rather than in the PoCs. This claim does not rule out that instances of right-dislocation of an argument RP exist in isiZulu; it is only claimed that the typical doubled argument RPs are not regularly right-dislocated.

Going back to the examples in (30), I propose the syntactic trees in figures 5 to 6 for the two sentences. The two structures only differ with respect to the realization of the undergoer argument. The undergoer is realized by a bound argument marker in (30b), which requires the coreferential RP *iqa:nda* 'egg' to be realized within the postverbal ECS. In (30a), there is no bound argument marker instantiation of the undergoer argument. Instead, it is realized by an independent RP, which is therefore realized within the core.

On the basis of the sketched analysis, it is also possible to provide a syntactic analysis for the sentence in (34) (repeated below for convenience).

(34) *uSipho u-ya-m-phek-ela uMfundo iqanda.*
AUG.1.Sipho 1-DIS-1-cook-APPL AUG.1.Mfundo AUG.5.egg
'Sipho did cook Mfundo an egg.'

The constituent structure representation of the example is presented in figure 7. As in the previous examples, bound argument markers are treated as instantiations of the argument expressions. Doubled RPs – *uSipho* and *uMfundo* in the example –

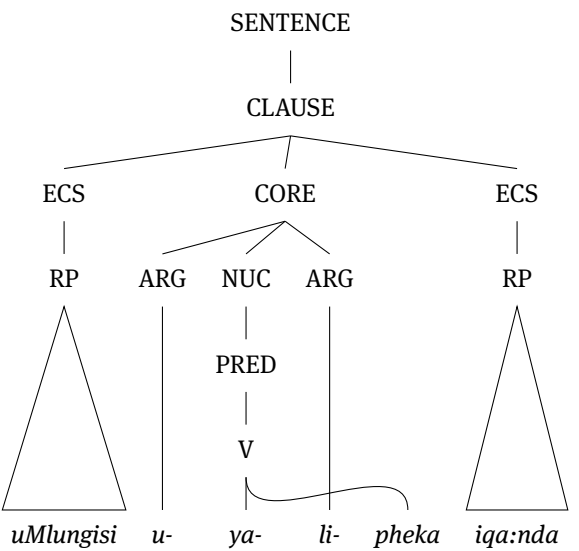

Fig. 5: Constituent structure representation of the isiZulu example in (30b).

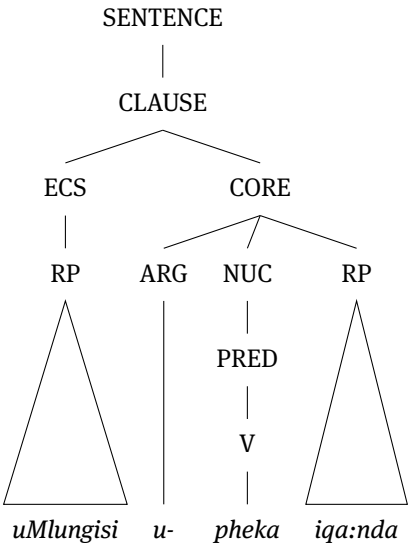

Fig. 6: Constituent structure representation of the isiZulu example in (30a).

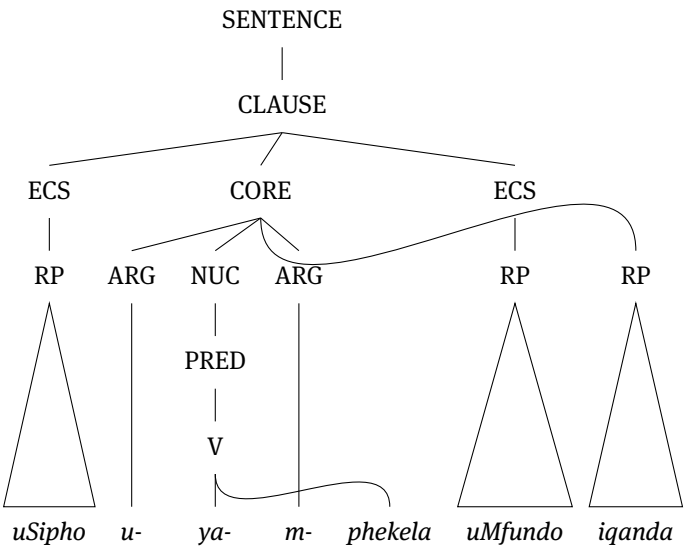

Fig. 7: Constituent structure representation of the isiZulu sentence in (34).

are located in the ECS. The theme argument *iqanda* is not represented by a bound argument marker but is instantiated by an RP only. As the noun represents a core argument, it is realized core-internally. This results in crossing branches, which is not forbidden in RRG. Rather than proposing that the two non-actor arguments are both right-dislocated, RRG accounts for (34) in a straightforward manner, locating doubled argument RPs core-externally (in an extra-core position) and non-doubled ones inside the core. As already stated above, the boundaries of the core do not coincide with the linear position of the RPs.

Before I conclude this chapter, I would like to point out two issues which definitely require future investigation. First, I mentioned an intonation break in isiZulu between the verb and a 'detached' RP. The intonation break is seen as evidence in favor of a right-dislocation analysis of the coreferential RP. Second, argument doubling triggers (at least in some tenses and moods) a disjoint verb form.

The intonation break and the disjoint verb form are interrelated as there is always an intonation break between a disjoint verb and the following postverbal constituent. Cheng & Downing (2009) argue that phonological phrase boundaries coincide with syntactic phrase boundaries. The disjoint marker indicates that the postverbal constituent is located outside vP. Halpert (2018) proposes that prosody and syntax do not always line up in isiZulu and concludes that the conjoint/disjoint alternation should be treated as a purely syntactical phenomenon. This raises questions about the exact function – and therefore syntactic relevance – of the intonation break.

A constituent-based analysis of disjoint marking, as proposed by, for example, Zeller (2012, 2015), does not work well within RRG as there exists no equivalent of vP in RRG. I am not able to provide an analysis of this topic within the scope of the current paper, but it definitely requires a future treatment from a functional syntactic perspective.

6 Conclusion

In this chapter, I applied the RRG analysis of clausal head-marking to different Bantu languages. Although the Bantu languages show a lot of microvariation, the analysis provides a uniform analysis for such diverse languages as Gĩkũyĩ, Swahili, and isiZulu. The central claim defended in the paper is: if a language allows argument doubling, the doubled RP is not dislocated but realized in the extra-core slot. Two advantages of this analysis are: First, it provides a uniform analysis of all bound argument markers as argument expressions. Second, is al-

lows a uniform analysis of all types of doubled RPs, irrespective of whether they are coreferential with a non-actor argument or with the actor argument.[8]

The analysis has consequences for the distinction between doubling and non-doubling Bantu languages. Van der Wal (2022) calls languages such as Swahili doubling as the bound argument marker can co-occur (within the same phrase) with a coreferential RP. isiZulu and Gĩkũyũ are both treated as non-doubling languages. However, the two languages differ significantly. Whereas isiZulu licenses the co-occurrence of a bound argument marker and a coreferential RP under certain conditions, the two can never co-occur in Gĩkũyũ. The reason isiZulu is treated as non-doubling by van der Wal is that the doubled RP is not located inside vP. This view is biased by the theoretical considerations and driven by the choice of syntactic framework. I restrict the notion of 'non-doubling languages' to languages in which a bound non-actor argument marker and a coreferential RP are in clear complementary distribution. This is, according to my analysis, not true of isiZulu, which therefore qualifies as a doubling language.

Based on the generative analysis of 'argument doubling,' van der Wal (2022, 256) states that the non-doubling languages are located in the north and south of the Bantu-speaking area. The doubling languages, on the other hand, are located in the central area. Based on the geographical distribution of (non-)doubling languages, van der Wal (2022, 257) concludes that argument doubling is an innovative feature among the Bantu languages. My analysis raises doubts concerning this claim. I treat isiZulu as a clear instance of a doubling language; therefore, it cannot be claimed that argument doubling is restricted to the central area as it is found in the south of the Bantu-speaking area as well. To be clear, I am not arguing against the proposed direction of development. I am only stating that the geographical distribution of languages does not really support this view since there does not seem to be such a clear geographical split between doubling and non-doubling languages as van der Wal suggests. Unfortunately, I am lacking relevant data on other languages which are supposed to be non-doubling, like, for instance, Bemba. However, it is a promising future task to look at a larger range of Bantu languages.

A number of issues have not been adequately addressed within the current paper. The conjoint/disjoint alternation in particular requires a future analysis as it seems to be connected to the issue of argument doubling in isiZulu. However, a

8 To the best of my knowledge, it is not claimed in generative linguistics that a preverbal actor RP is left-dislocated; instead, a bound actor marker usually seems to be analyzed as an agreement marker.

future analysis from an RRG perspective should elucidate what the exact relation between argument doubling and the disjoint marking is.

Given the huge number of Bantu languages, more family-internal variation concerning argument realization is expected. The proposed analysis has to be checked against a broader range of Bantu languages to yield an adequate picture of clausal head-marking in Bantu from the perspective of Role and Reference Grammar.

Acknowledgments

I like expressing my deepest thanks to Claudius P. Kihara for providing me with language data from Gĩkũyũ and Swahili and answering the huge number of questions I had (and still have). I also like expressing my thanks to Jochen Zeller for answering my questions on isiZulu.

Abbreviations

A actor
ACC accusative
AM assertion marker
ANIM animate
APPL applicative
ASP aspect
AUG augment
CAUS causative
DEF definite
DEM demonstrative
DJ disjoint
FM focus marker
FV final vowel
HAB habitual
INAN inanimate
IND indicative
LOC locative
NOM nominative
NPST near past tense
PASS passive
PERF perfect
PF perfective
PL plural
POSS possession
PROG progressive
PRS present tense
PST past tense
QM question marker
RSPST recent past tense
RMPST remote past tense
SG singular
SUB subjunctive
TM topic marker
U undergoer

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https://doi.org/10.1515/9783110795295-008

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https://doi.org/10.1515/9783110795295-009