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Agreement in Cinyungwe verb-verb constructions

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Abstract

The leading idea within the Minimalist Program is that there is a relationship between Case and agreement, i.e., the checking of (Φ-)features on a head such as a verb results in simultaneous checking of case features on the NP that triggers the agreement (CHOMSKY, 2000). Carstens (2001), points out that Bantu compound tense structures are a serious problem for Chomsky approach. The aim of this paper is to contribute for the discussion about multiple agreement in Bantu using data from Cinyungwe, a Mozambican Bantu language. We claim that the verbs in Verb-Verb Constructions share a concord relation between them and cannot be considered a problem to Chomsky approach.

Keywords: Agreement; verb-verb constructions; Cinyungwe

1 Introdução

The foremost idea within the Minimalist Program Correlates Case and agreement, i.e., the checking of (Φ-)features on a head such as a verb results in simultaneous checking of case features on the NP that triggers the agreement (CHOMSKY, 2000). The point is that, since it is often the case that a single NP triggers agreement on more than one verb, some conditions are required (HENDERSON, 2006). Chomsky (2000) argues that not all agreement relations can be taken to delete Case, it is only a node which is Φ-complete features that results in case checking. However, Carstens (2001), taking into account Compound Tenses (CTs, henceforth) in Bantu, argues against Chomsky's (1999, 2000) proposal that Case deletion correlates with the Φ-completeness of probes based, for example, on (i) gender omission in subject agreement in Romance languages, and (ii) the inclusion of full Φ-features in subject agreement in Bantu CTs. See the Kiswahili examples presented below extracted from Carstens (2001:150):

1.a) Juma a-li-kuwa a-me-pika chakula.
Juma 3SG-PST-be 3SG-PERF-cook 7food
'Juma had cooked food.'

b) (Mimi) Ni-li-kuwa ni-ngali ni-ki-fanya kazi.
(I) (1SG-PRON) 1SG-PST-be 1SG-still 1SG-PERF-do 9work
'I was still working.'

In (1a, b) each verb displays full agreement with the subject. In (1a) the subject agrees with the verb *-kuw-* 'to be' and with the verb *-pik-* 'to cook', showing that the subject moved more than one time until the [Spec, TP] of the main verb.

Different from Swahili, in Cinyungwe multiple agreement can only be discuss through what we consider as Verb-Verb constructions in this paper. See (2) below.

2.a) Suze a-lim-a a-phik-a ci-mbamba.
Suze 3SG.PERF-cultivate-FV 3SG.PERF-cook-FV 7-beans
'Suze cultivated and cooked beans.'

b) ine nd-a-nemb-a nda-tayir-a mi-bvundzo yentse.
1.I 1SG-PERF-write-FV 1SG. PERF-answer-FV 3.questions all
'I wrote and answered all questions.'

c) Suze a-kha-lim-a a-kha-phik-a ci-mbamba.
Suze 3SG-PST.IMPERF.be-cultivate-FV 3SG-GER.be-cook-FV 7-beans
'Suze was cultivating and cooking beans.'

The examples in (2a, b) show that in Cinyungwe we can have Verb-Verb constructions which displays full agreement with the subject. Just like in Kiswahili

CTs, the subject Suze in (2a, c) and *ine* 'I' in (2b) display a full agreement with the verbs -*lim*- 'to cultivate' and -*phik*- 'to cook' (2.a) and -*nemb*- 'to write' and -*tayir*- 'to answer'.

What is happening in Cinyungwe examples in (2) made Carstens (2001) propose that Bantu subjects are consistently in multiple Φ-agreement. Carstens (2001) proposal is driven from Carstens and Kinyalolo (1989) where they argued that CTs in Swahili, for example, must be analyzed as the failure of aspect-bearing verbs to undergo raising. According to Carstens (2001), aspect-bearing verbs are required to support the tense morpheme, each aspectual category remains *in situ*, and the subject raising Spec-to-Spec to a Case position in [Spec, TP], where its Case feature is checked. Thus, CTs are raising constructions, placing no thematic restrictions on their subjects.

Taking into account this discussion, the question that drives our research is: is multiple agreement in Verb-Verb constructions in Cinyungwe, N43 in Guthrie (1967-71) classification, a real problem to Chomsky's (2000) proposal?

The aim of this study is to contribute to the discussion about multiple agreement in Bantu languages by looking at Cinyungwe data, a Bantu language spoken in Mozambican Tete and Manica Provinces. In this paper we consider as Verb-Verb Constructions as those comprised by two main verbs.

We use Bodomo (1998) unity tests and Henderson (2006a) relative inversion proposal to drive our discussion and propose that Multiple agreement in Cinyungwe should not be seen as a problem to Chomsky (2000) proposal. This proposal is due to adjacency restriction in Verb-Verb constructions.

The data under analysis in this study were collected through an introspective methodology, as one of the researchers is a speaker of the language under study. In some cases, when we were not sure, we spoke to an informant living in Maputo.
The paper is organized as follows: after the Introduction of the study, follows Section 2 which presents our argumentation on why the data analyzed in this paper cannot be considered CTs. Then, we have Section 3. which presents the theoretical assumptions that drives our paper; Section 4 which presents our argumentation on why we use the label Verb-Verb Constructions and not SVC; this is followed by Section 5. Where we discuss Verb-Verb Constructions in Cinyungwe. Finally, in Section 6, we present the concluding remarks.

2 Why Verb-Verb Constructions not Compound Tense?

The complexity of Bantu verb structure is well known, since it typically contains, among other elements, a subject marker, a tense marker, an optional object marker and an obligatory verb stem (GIBSON, 2013).

According to Pietraszko (2017), it is accepted among Bantu scholars that, this verb structure is complex even without an auxiliary verb. This comes from the

hypothesis that, Bantu inflectional prefixes are independent and so are similar to auxiliary verbs. Taking into account this fact, Barrett-Keach (1986) for Swahili and Myers (1987) for Shona, proposed the Inflectional Stem Hypothesis by using the scheme in 3:

3. [INFL/AUX Inflectional prefixes] [VP lexical V-Stem] Pietraszko (2017: 1)

As is seen, the example in (3) suggests that: first, INFL are similar to AUX and so INFL/AUX are independent from the lexical verb. For more clarification see the examples presented in (4) from Pietraszko (2017: 1):

4.a) nd-a-ka-vereng-a. Shona (MYERS, 1987:41)
1SG-PST-REM- read-FV
'I read (yesterday or before)'

b) ni-na-ku-phend-a. Swahili (BARRETT-KEACH, 1986:562)
1SG-PRES-OM-love-FV
'I love you'

c) n-ká-láá-boomb-a. Chibemba (JULIEN, 2002:192)
1SG-FUT-PROG-work-FV
'I will be working'

Looking at the examples in (4a-c), we can see that the prefixes provide information not only about tense, aspect and mood, but also AUX in (4c). Thus, one can say that TAM markers are auxiliary-like in Bantu. This was the claim of some scholars following Inflectional Stem Hypothesis (BUELL, 2005; HYMAN, 1993; MUTAKA, 1994). One consequence of this approach is that, in Bantu, all verbs with inflectional prefixes are complex, just like compound tenses are (see 4c). This assumption is due to the fact that many tense prefixes in Bantu are etymologically verbs. It is important to note that, in some languages, TAM are different from auxiliaries (MBERI, 2002; PIETRASZKO, 2017). Therefore, they deserve a slot of their own in the verb complex. However, there is no distinct boundary between auxiliaries and (main) verbs.

Recent studies in Default periphrasis (COWPER, 2010; BJORKMAN, 2011; ARREGI & KLECHA, 2015) analyze periphrasis as a last-resort mechanism. That is, an auxiliary verb is used always and only when the inflectional feature cannot combine with the main verb. This proposal accounts for situations where V_{AUX} neither projects a VP, nor spells out a functional head, relying on the assumption that inflection must combine with a verb (cf. PIETRASZKO, 2016, for more details).

As is shown in the studies above, auxiliary verbs caught attention of some scholars but none of these studies was made in Cinyungwe or use the data of this language. Now, look at the examples presented below:

5.a) m-wana a-li ku-nemb-a.
1-child 1SG.PRS-be 15-write-FV
'the child is writing'

b) m-wana a-kha-nemb-a.
1-child 1SG-PAST.IMPERF.be-write-FV
'the child was writing'

c) mayi a-ndza-khal-a a-phik-a m'punga.
1.mother 1SG-FUT.IMPERF.be-FV 3SG.PAST.PERF-cook-FV 3.rice
'the mother will have cooked rice'

In (5), we can see that in (5.a), it is clear that we have CTs where the subject agrees with the verb to be and the main verb is in infinitive. That is what happens always when the action described by the verb is in present tense. Different from (5a), in (5b) and (5c), the verb 'to be' occurs as a bound morpheme, and in related languages it is described as an aspectual marker (see NGUNGA 2004, for more about this). This hypothesis shows the fact that TAM markers may be auxiliary-like in Cinyungwe. It is important to note that, different from what happens in Swahili (1a), in Cinyungwe, the verb *-li-* 'to be' is a bound morpheme in some contexts and not in others. This may suggest that, we can parameterize TAM as auxiliary-like verbs in some contexts.

Back to the aim of this paper, looking at the examples presented in (5a-5c), it would be difficult to use this Cinyungwe CTs to discuss multiple agreement in Bantu because, in (5a), although we have two verbs, there is no multiple agreement regarding the fact that the verb agrees only with the auxiliary verb. In (5b, c), we don't have two verbs. The verb 'to be' occurs as a bound morpheme in the main verb making these constructions inappropriate for the discussion proposed by Cartens (2001).

Therefore, the discussion proposed by Cartens (2001) can only be made using the Verb-Verb constructions presented in (2c) copied in (6) below:

6. Suze a-kha-lim-a a-kha-phik-a ci-mbamba.
Suze 3SG-PST.IMPERF.be-cultivate-FV 3SG-GER.be-cook-FV 7-beans
'Suze was cultivating and cooking beans.'

In (6), we illustrate that in Cinyungwe we can have constructions comprising two main verbs which display multiple agreements in terms seen in Kiswahili (1a, b). We argue, in this paper, that multiple agreement in Bantu can also be discussed through Verb-Verb constructions like the one we found in Cinyungwe because these verbs share a concord relation in Henderson (2006a) words.

In sum, our discussion about multiple agreement in Cinyungwe is made through Verb-Verb constructions instead of CTs proposed by Cartens (2001). Moreover, even

using different constructions, we still argue that multiple agreement in Verb-Verb Constructions in languages like Cinyungwe shouldn't be seen as a problem to Chomsky's (1999, 2000) proposal.

Now, we present the theoretical assumption in the next section.

3 Theoretical Assumptions

Chomsky (2000) proposes that uninterpretable Φ-features delete Case through the relation called *Agree*. The Φ-features of an agreeing element a, which are called a *probe*, seek a *goal* element b with interpretable Φ-features and an unchecked structural Case feature. When the search succeeds, the *Agree* relation results, deleting a's Φ-features and b's Case. This is necessary because both Case and the uninterpretable Φ-features of agreement are illicit at LF, owing to their lack of interpretations.

Once its Case is eliminated, b ceases to be a candidate for further *Agree* relations and accordingly for A-movement, which is tied to instances of *Agree*. Therefore, analyzing the Cinyungwe examples in (2) which are copied here, in the framework of Chomsky (2000), we can say that each instance of agreement in a Verb-Verb Constructions must indicate a probe-goal relation that have to delete the uninterpretable Φ-features of the probe. See the example in (6):

7. Suze a-lim-a a-phik-a cimbamba.
   Suze 3SG.PERF-cultivate-FV 3SG.PERF-cook-FV 7-beans
   'Suze cultivated while cooked beans.'

Looking at the example (7), one can see that the Φ-features that appear as an agreement within Verb-Verb constructions are the same on the two verbs, the verb 1 has the same features of the verb 2, we are talking about *alima* 'cultivated' and *aphika* 'cooked'.

In (7), we see a full agreement of the two verbs with the single subject. The Verb-Verb constructions of Cinyungwe appears to involve two *Agree* relations in which only the second relation deletes the subject's Case:

8. SA*Probe* 3SG.PERF-cultivate SA*Probe* 3SG.PERF-cook Suze cimbamba.

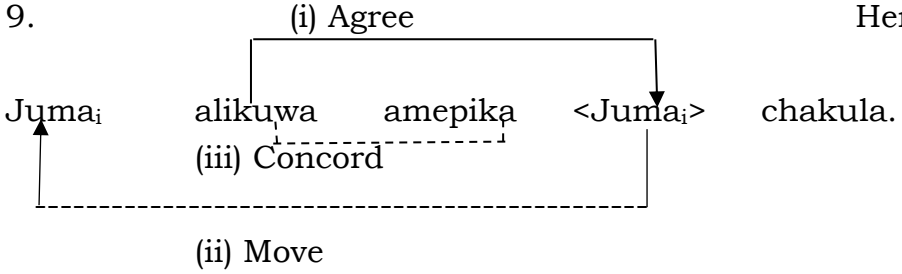
According to Carstens (2001), what is happening in Bantu languages like Cinyungwe is a challenge to Chomsky (2000) theory and suggests that something other than Φ-incompleteness must account for the exceptions that are seen in Bantu languages. Carstens (2001) goes further proposing that a simple solution to this problem lies in the traditional assumption that only certain heads assign Case. For

her, case valuation via an *Agree* relation is what deactivates a goal. In Bantu, the grammatical gender is an infinitely reusable Activity feature. Thus, nominal gender can be seen as an Activity feature that allows syntactic theory to provide a wholly unified treatment of concord and clause-level agreement.

Note that in Bantu, noun class includes the number and grammatical gender (CARSTENS, 1991, 1997, 2001, HENDERSON, 2006). Therefore, each agreeing head in a CTs inflects for all available Φ-features of the surface subject; each agreeing head is Φ-complete.

However, Carstens (2001) proposal does not look at the relation between the two verbs in these constructions. We use the relation between the two verbs in SVCs to propose that, only one verb in SVCs check its Φ-features and deletes NP case feature via agree relation. The other verb acquires all Φ-features due to concord relation between the verbs (using HENDERSON, 2006 proposal) presented below.

9. Henderson (2006a: 61)



After presenting our framework, we move to the discussion of Verb-Verb Constructions in Cinyungwe in the next section.

4 Why Verb-Verb Constructions not Serial Verb Constructions?

Before launching the discussion about Verb-Verb Constructions in Cinyungwe, we start by illustrating that, even sharing some characteristics of Serial Verb Constructions (SVCs), these constructions cannot be considered Serial Verb Constructions because they lack other properties as we will see in this section.

According to Hyman et al (2019: 236 [Ameka 2001]) and Aikhenvald (2018), SVCs are:

a) One clause

Serial verb constructions allow no markers of syntactic dependency on any of their components. Meaning that, SVC form one clause composed by two or more verbs that form one predicate. This characteristic distinguishes SVC from "coordination, consecutivization, complement clauses, subordinate clauses and other multiclausal structures" (AIKHENVALD, 2018:23). This is the case of Taba, an Australian language spoken in Indonesia. See the example in (10) presented below:

10. n=babas welik n=mot do Aikhenvald (2018: 25)
3sg=bit pig 3sg=die REAL
'it bit the pig dead' (bite-die)

According to Aikhenvald (2018), SVC presented in (10) describes one event: the pig was bitten. Its death comes as a direct consequence of the pig's being bitten.
If the same verbs occur as coordinated predicates, the meaning will be different, this is illustrated in (11) with Taba coordinated clauses:

11. n=babas welik n=ha-mot i Aikhenvald (2018: 25)
3sg=bit pig 3sg=CAUS-die 3sg
'it bit the pig and killed it'

According to Aikhenvald (2018), trying to break down the SVC in (11) to a set of independent clauses, the meaning will differ from that of the SVC presented in (10). In (11), the death of the pig could have occurred as an indirect consequence of having been bitten. This means that (11) is a coordinated clause not a SVC because SVC do not have a marker of morphosyntactic dependency, such as coordination, subordination or dependency of any sort-between the verbs.

Now see the Cinyungwe examples presented in (12):

12. ine nda-nemb-a nda-tayir-a mi-bvundzo yentse.
1.I 1SG.PERF-write-FV 1SG.PERF-answer-FV 3-questions 3.all
'I wrote and answered all questions'

In the sentence presented in (12), as it is, relates the two verbs in a way that gives de hearer the idea that answering to the questions was a consequence of me be writing. Meaning that writing and answering are not dissociable verbs in this structure. Similar to what happens in Taba, in Cinyungwe, if the same verbs occur as coordinated predicates, the meaning will be different. The hearer will never have the idea that your writing action had the intention of answering to the questions. The two actions are completely separated.

b) SVC share tense, aspect, modality, reality status, evidentiality, mood, and polarity values

Aikhenvald (2018) argue that, by saying that SVC share the value of a verbal category- such as tense, aspect, and others may imply that the components of a serial verb must have the same marking of that category. This is what happens in the Dyirbal, an Australian Aboriginal language. See the example presented in (13):

13. ba-ŋgu-l nudi-n yugu jayŋu-n Aikhenvald (2018: 28)
there-ERG-masc cut-PAST three finish-off-PAST
'he finished chopping down the trees' (cut finish)

The Dyirbal example presented in (13) illustrates that in this language the components of a SVC share the past tense inflection. Similar situation holds in Fongbe, a language spoken in Benin, one verb in SVC cannot describe actions happening in different time. This is the reason for the ungrammaticality of (14) below Aikhenvald (2018: 29):

14. *Kɔkú sɔ sákì ɔ gàndǫ́kpómɛ yì àxì mɛ gànwèmɛ
Koku take bag DEF one.o'clock go market in two.o'clock

In Cinyungwes Verb-Verb constructions, the verbs cannot describe actions happening in different times. This is illustrated in (15) where the construction is ungrammatical because the V1 is in the future and the V2 in the past and.

15. *Suze a-ndza-lim-a a-phik-a ci-mbamba.
Suze 3SG-FUT-cultivate-FV 3SG.PERF-cook-FV 7-beans
Intd: 'Suze cultivated and cooked beans.'

c) SVC share at least one core argument.

One of the properties of SVC is sharing arguments like subject, object and oblique. This is described in West African languages, including Fongbe and Ewe. In the Fongbe example presented in (16) below in which the verbs take and go share the subject Aikhenvald (2018: 40):

16. Kɔkú **sɔ** kòklô yì àxì mɛ Fongbe: a serial verb
Koku take chicken go market in
'Koku brought the chicken to the market' (Koku took chicken went to market) (take-go)

If instead of SV, we have two coordinated verbs each will get its own subject, as in (17).

17. Kɔkú **sɔ** àsɔn ɔ **bɔ** Àsíbá Fongbe: a serial verb
Koku take crab DEF and Asiba
yi àxì mɛ́
go market in
'Koku took the crab and Asiba went to the market'

In Cinyungwe the verbs –*lim*a 'cultivate' and –*phika* 'cook' share the same subject marker (a-) because, Suze, as a person's name belongs to class 1 as

so, the agreement markers should belong to this class. This is what is happening in (18).

18. Suze a-lim-a a-phik-a ci-mbamba.
Suze 3SG.PERF-cultivate-FV 3SG.PERF-cook-FV 7-beans
'Suze cultivated and cooked beans.'

Although, we can have two coordinated verbs each with its own subject, as in (18) below:

19. Suze a-lim-a ndipo Sara a-phik-a ci-mbamba.
Suze 3SG.PERF-cultivate-FV and Sara 3SG.PERF-cook-FV 7-beans
'Suze cultivated and Sara cooked beans.'

d) SV as one predicate:

According to Aikhenvald (2018), verbs in SVC functions on a par with monoverbal clauses and occupies the predicate functional slot. The verbs in SVC act together as a syntactic whole and cannot take separate markers of syntactic dependency. This is the case of Kambera, an Austronesian language from Indonesia. See (20), presented below in which the as the SV is the predicate, it takes only one relative marker.

20. na pulung jia-ya na Kambera Aikhenvald (2018: 20)
ART word EXIST-3sgA ARTICLE
[pa-laku ngàndi-na]
RELATIVISED.OBJ-go take-3sgGENITIVE
'the gospel (lit. word) is what he brought (go-take)'

The relative diagnostic used here is widely discussed in the next section that's why we will avoid discussing it in this section. Therefore, we move on with another property.

e) Prosodic properties of serial verbs:

Taking into account that SVC are considered monoverbal, and not a sequence of clauses, no intonation break or pause markers should occur between the components of the SVC. Meaning that, intonation or break between sequence of verbs differentiate SVC from a sequence of verbs. This is what happens in Ambae, a dialect of Lolovoli (an Oceanic language from Vanuatu). See the example (21) from Aikhenvald (2018: 27):

21. Gai-rue ra=ru mo vano ra=ru mo rivu talu
NUM-two 3_{nsg}S=du REAL go 3_{nsg}S=du REAL plant garden
'two went to plant the garden' (go plant)

The SVC presented in (21) is different from the sequence of verbs presented in (22) below where there is an intonation break between the verbs, indicated by the comma.

22. [Ra=u hivo,] [ra=mo rivu butete]
3nsg.S=TEL go 3nsgS=REAL plant
'they have gone down to the garden, and they're planting sweet potato'

In Cinyungwe, the idea of unicity of the verbs in Verb-Verb constructions is given by the fact that, as we argued when describing the example in (12), in Verb-Verb constructions, the absence of intonation break or pause markers drives the hear to imagine the actions being realized simultaneously by the subject. We will not repeat the example here.

f) Serial verb constructions as 'one event'

SVC describe what can be conceptualized as a single event: this semantic feature correlates with their status as one single predicate, and their monoclausal character. This can be seen in Yidiñ, an Australian Aboriginal language, where the verb 'go' forms an SVC with 'give'. In this SVC, the verb go is thought of as part of the activity of "giving" (Aikhenvald 2018: 35).

23. ŋayu garu gali:ŋa-l wiwi-ŋali-ŋ
I-SA by.an.by go+COMIT-PRES give-GOING.ASPECT-PRES
'I am taking [the shells] to give [to them] bye-and-bye' (go give)

This diagnostic does not hold in Cinyungwe because you cannot thing of *nemba* 'write' as being part of *tawira* 'answer' or *lima* 'cultivate' as being part *phika* 'cook'.

As we will see in the next section, the constructions analyzed in this paper share some SVC characteristics even not being SVC: a) SV as one clause; b) SV share tense, aspect and polarity values; c) SVC share at least one core argument, and d) Prosodic properties of serial verbs.

Apart from not sharing the all properties described by Aikhenvald (2018) as SVC properties, the Verb-Verb Constructions in Cinyungwe cannot be considered SVCs because they are not used to express exhaustion/completion of a situation, directionals, benefactives, verbal comparison, comitatives, instrumentals, accompanimentals, refusal, abilitatives, consequentials, and event coordination, as Kari (2003) suggested. Although, being used to express simultaneousness.

5 Verb-Verb Constructions in Cinyungwe

In the last section we saw that in a variety of world languages, notions that would elsewhere be expressed through conjunction, complementation or secondary predication are rendered uniformly by means of sequence of verbs, SVC (LARSON, 1991). In this paper, taking into account the discussion about SVC in the world languages, we propose that Verb-Verb constructions, which should be understood as different from SVC can be used to the discussion of multiple agreement in Cinyungwe similar to the one made by Carstens (2001). Our discussion on adjacency restriction in Verb-Verb constructions will be based on Bodomo (1998).

Bodomo (1998) presents helpful tests that can be used to test the unitary and cohesive nature of SVC that are applicable to test the unicity of Cinyungwe's Verb-Verb constructions.

a) Negate SVC;
b) Questioning SVC;
c) Fragment test and
d) adverb test.

The first and clearest test is negation. According to Bodomo (1998), two or more verbs are complex predicates and not separate predicates, if is not possible to negate one verb and not the other(s). That is what happens in Cinyungwe. See the examples in (24) presented below:

24.a) Suze a-lim-a lini a-phik-a ci-mbamba.
Suze 3SG.PERF-cultivate-FV NEG 3SG.PERF-cook-FV 7-beans
'Suze didn't cultivate and cook beans.'

b) *Suze a-lim-a a-phik-a lini ci-mbamba.
Suze 3SG.PERF-cultivate-FV 3SG.PERF-cook-FV NEG 7-beans
'Intd: Suze didn't cultivate and cook beans.'

c) *Suze lini a-lim-a a-phik-a ci-mbamba.
Suze NEG 3SG.PERF-cultivate-FV 3SG.PERF-cook-FV 7-beans
'Intd: Suze didn't cultivate and cook beans.'

In (24a), we illustrate that to negate Verb-Verb constructions both verbs should be within the scope of a negative marker and the unicity of these verbs is tested when the negative morpheme occurs after the V_1 (first verb of the Verb-Verb constructions), negating the two verbs. The result is grammatical construction. Thus, none of these verbs can be negated on their own without the participation of the other, as in (24b). In (24b) only the second verb is negated. The same happens when the negative expression occurs before the two verbs (24c).

The second test is questioning SVC. If SVC form a unity, you cannot question one of the verbs to the exclusion of the other(s). It is only when both or all are questioned that we get a well-formed sentence. This is what we have in Verb-Verb

constructions in Cinyungwe. The following data illustrate the questioning of different parts of a declarative sentence.

25.a) Suze a-lim-a a-phik-a ci-mbamba.
Suze 3SG.PERF-cultivate-FV 3SG.PERF-cook-FV 7-beans
'Suze cultivate and cooked beans.'

b) Mbani a-lim-a a-phik-a ci-mbamba?
who 3SG.PERF-cultivate-FV 3SG.PERF-cook-FV 7-beans
'who did cultivate while cooking beens?'

c) Kodi Suze a-da-cit-a ciyani?
wh- Suze 3SG.PERF-do-FV what
'what does Suze did?'

In the example (25b), we question the subject of the declarative sentence in (25a) and in (25c) the whole VP (VP1 and VP2). Below, see what happens when we question only one verb.

26.a) Suze a-lim-a a-phik-a ci-mbamba.
Suze 3SG.PERF-cultivate-FV 3SG.PERF-cook-FV 7-beans
'Suze cultivate and cooked beans.'

b) *kodi ciyani Suze a-lim-a ci-mbamba?
attention what Suze 3SG.PERF-cultivate-FV 7-beans
'int: what does Suze cultived?'

c) *kodi ciyani Suze a-phik-a ci-mbamba?
attention what Suze 3SG.PERF-cook-FV 7-beans
'int: what does Suze cultived?'

The examples in (26b) and (26c) are ungrammatical because in Verb-Verb constructions one cannot question one of the verbs to the exclusion of the other(s). This is a clear manifestation that the two verbs in the above Verb-Verb constructions do indeed form one cohesive unit, a complex predicate.

The examples presented in (26b) and (26c) are ungrammatical even without the object cimbamba 'beans' in the IAV position if taking into account that you are questioning the sentence in (25a). Meaning that, they cannot be used as a suitable answer to the question.

The third test SVCs is the fragment test. The premise of the test is that there are restrictions on the types of expressions which can (or can't) be used as sentence fragments. Consider the dialogue presented below:

27. Speaker A: Kodi Suze a-da-cit-a ciyani?
wh- Suze 3SG-PERF-do-FV what
'what does Suze did?'

Speaker B: a-lim-a a-phik-a ci-mbamba
3SG.PERF-cultivate-FV 3SG.PERF-cook-FV 7-beans
'cultivate and cooked beans too.'

28. Speaker A: Kodi Suze a-da-cit-a ciyani?
wh- Suze 3SG.PERF-do-FV what
'what does Suze did?'
Speaker B: ??a-phik-a ci-mbamba.
3SG- GER-cook-FV 7-beans

Using the examples in (26) and (27), we are proposing that the verbs *alima* 'cultivated' and *aphika* 'cooked' form a unity. They cannot be used as sentence fragments separately. Meaning that, as they form a cohesive unit, the whole VP should be used as a sentence fragment instead of part of it as in (27). In the example 27, the speaker is questioning the all VP and it is expected the all VP as the answer not a fragment. If there was a third speaker, he could even interview and say something like neye, Suze alima aphika cimbamba 'no, Suze cultivated and cooked beans', showing that the speaker B was not answering the question of the speaker A.

The last test is adverb test "only a string of words which is a constituent can be modified by an adverb (RADFORD, 2009:60).

29.a) Suze pinango a-lim-a a-phik-a ci-mbamba.
Suze probably 3SG.PERF-cultivate-FV 3SG.PERF-cook-FV 7-beans
'Suze probably cultivated and cooked beans.'

b) Suze indedi a-lim-a a-phik-a ci-mbamba.
Suze certainly 3SG.PERF-cultivate-FV 3SG.PERF-cook-FV 7-beans
'Suze certainly cultivated and cooked beans.'

Looking at the examples in (29), the fact that (29a) and (29b) can be modified by the modal adverb probably and certainly, respectively, is consistent with the claim made before that *alima* 'cultivated' and *aphika* 'cooked' form is complex VP constituent.

After demonstrate that Verb-Verb constructions analyzed in this study form a complex predicate, the next step is to discuss the concept adopted in this paper.

According to Gibson (2013), CTs are comprised of an inflected auxiliary form and a main verb. The main verb may be inflected for subject information and tense and/or aspect, or alternatively, appear in the infinitival form. In these constructions, the auxiliary contributes with temporal information and the main verb makes the lexicon-semantic contribution to the clause and is responsible for the introduction of aspectual information. This is the definition we used to discard Cinyungwe CTs for the discussion of multiple agreement in Cinyungwe.

Taking into account the brief discussion about auxiliary verbs in Bantu in 2, and the definition about CTs, we propose that the data presented in this paper form Verb-Verb constructions in which two or more verbs share a common subject within the same clause.

The last term to be discussed is agreement. Agreement in natural languages is traditionally viewed as a cross-referencing device for core arguments such as subjects and (primary) objects (MORIMOTO, 2006). Chomsky in earlier work in linguistic proposed that agreement involves a relation between a Probe and a Goal. However, there are both theoretical and empirical reasons for doubting that and it was proposed the restriction of syntactic relations to c-command relation (RADFORD, 2009).

In a simplest definition, agreement happens when a word changes its form depending on the other words it is relates to (NGUNGA, 2014). This is the definition that we are using in this paper. Linking this definition with the one of SVCs presented in this paper, we are analyzing constructions with a combination of two verbs agreeing with the related subject.

According to Carstens (2011), Bantu agreement differs from that of Indo-European (IE) languages in at least three ways:

First, its features are generally broader than those of IE agreement, reflecting person and number distinctions and noun class.

Secondly, Bantu agreement is more abundant than agreement in Indo-European languages. This can be seen in Verb-Verb constructions presented in this paper.

Thirdly, Bantu "subject" agreement (SA) needs not to reflect the features of the thematic subject (BAKER, 2003; CARSTENS, 2005; HENDERSON, 2006a). When the thematic subject precedes the verb, SA reflects its features in both groups of languages. Nonetheless in an inversion construction such as locative inversion, many Bantu languages show agreement with the preposed expression. In contrast, Indo-European SA generally reflects the features of the logical subject whether or not another constituent precedes the verb.

It is the second way in which Bantu languages differ from the Indo-European languages that is in discussion in this paper, the hyperactivity in Verb-Verb Constructions (CARSTENS, 2005; HENDERSON, 2006a; VAN DER WAL, 2015; SHEEHAN and VAN DER WAL, 2016; DIERCKS, 2012). Consider the Cinyungwe data below:

30. ine nda-nemb-a nda-tayir-a mi-bvundzo yentse.
    1.I 1SG.PERF-write-FV 1SG.PERF-answer-FV 3-questions 3.all
    'I wrote and answered all questions'
31. Suze a-kha-lim-a a-kha-phik-a ci-mbamba.
    Suze 3SG-PST.be-cultivate-FV 3SG-PST.be-cook-FV 7-beans

‘Suze was cultivating and cooking beans’

Our discussion in this paper is centered in constructions where the subject agrees with the two verbs in Verb-Verb Constructions, as in (30, 31).

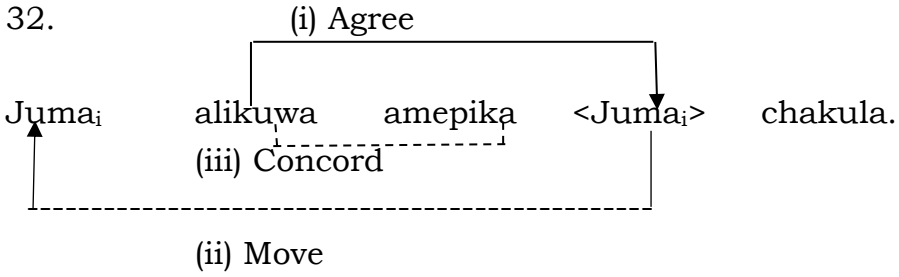
According to our discussion in the theoretical section 3, the SVCs of Cinyungwe presented above can be analyzed in two different ways: two or more identical instances of agreement, one deletes Case and the other does not. According to Chomsky (2000), it is only Φ-complete agreement (the checking of a full set of agreement features) that results in case checking.

The other way is the one given by Carstens (2001), according to which the subject moves first through the specifiers of the lower verbs before reaching its final landing site in the specifier of the highest verb in the sequence, where its Case feature is checked. Therefore, gender is the feature reusable in Bantu.

It is important to note that Carstens (2001) discussion is centered in Probe and Goal relation without looking at the relationship that the verbs bear within Verb-Verb Constructions. That is what we are proposing in this paper. The discussion about multiple agreement should be made not only analyzing Probe vs Goal relation, but also verb-verb relation.

Following Henderson (2006a), we consider that in Cinyungwe Verb-Verb Constructions there is only one Agree between the subject and the highest verb. The lower verb acquires its agreement features through a Concord relation with the highest verb. We also assume that Agree and Case checking are two related operations. See the scheme presented below repeated from 9:

32.



Looking at this scheme, we can understand that Agreement and Concord are two different relations in the grammar. “Agree is a context-sensitive relation that can take place at a distance, in c-command relation, whereas Concord is a context-free relation that can take place only in a strictly local fashion” Henderson (2006a: 61). Thus, taking into account our proposal and unitary tests made here, the example in (30) repeated here the verbs are in a concord relation:

33.	ine	nda-nemb-a	nda-tayir-a	mi-bvundzo	yentse.
	1.I	1SG.PERF-write-FV	1SG.PERF-answer-FV	3-questions	3.all

‘I wrote and answered all questions’

The derivation of (33) proceeds as follows. The verb *tayira* 'answer' merges with its complement the NP *mibvundzo yentse* 'all questions' to form the VP *tayira mibvundzo yentse* 'answer all the questions'. This VP is then merged with the other lexical verb *nemba* 'write' forming a VP *nemba tayira mibvundzo yentse* 'write and answer all the questions'. Then, taking in consideration that, all finite clauses are TPs headed by an overt or null T constituent, the VP constituent is then merged with the T-bar containing tense/person/number/agreement affix (T is the locus of the tense properties of the finite clause whose semantic contribution to the meaning to the overall sentence is that it marks tense). At that point, due to movement restrictions, the features in T attracts the closed verb which it c-commands (namely the verb –-*nemba* 'write') to move to T and attach to the affixes. This movement is explained supposing that finite T is strong in Cinyungwe and so must be filled by a verb. In order to account for the Φ-feature in V2, we can suppose that Affix Hopping (lowering *Af onto* a head H) occur not only with unattached affix but also when a Constituent C share a concord relation with H (being H complement of C and appropriate host for the affix to attach to). Let us also suppose that the pronoun *ine* 'me' is merged directly in Spec-T in order to satisfy the EPP requirement for T to project a nominal specifier. The resulting TP is then merged with a null declarative complementizer marking the declarative force of the sentence.

Now, consider relative inversion in Cinyungwe in SVCs in (34) presented below:

34.a) alendo a-ni-fun-a, a-ni-dy-a ci-manga.
2.visitors 2-FUT-want-FV 2-FUT-eat-FV 7-maize
'the visitors want to eat maize'

b) ci-manga comwe alendo a-ni-fun-a a-ni-dy-a.
7-maize 7.that 2.visitor 2-FUT-want-FV 2-FUT-eat-FV
'the maize that the visitors will want, they will eat'

c) *ci-manga comwe a-ni-fun-a a-lendo a-ni-dy-a.
7.maize 7.that 2-FUT-want-FV 2-visiters 2-FUT-eat-FV
Lit: the maize that will want the visitors will eat.

35.a) Suze a-kha-lim-a a-kha-phik-a ci-mbamba.
Suze 3SG-PST.be-cultivate-FV 3SG-PST.be-cook-FV 7-beans
'Suze was cultivating and cooking beans'

b) ci-mbamba comwe Suze a-kha-lim-a a-kha-phik-a.
7-beans 7.that Suze 3SG-PST.be-cultivate-FV 3SG-PST.be-cook-FV
'those beans that Suze cultivated and cooked'

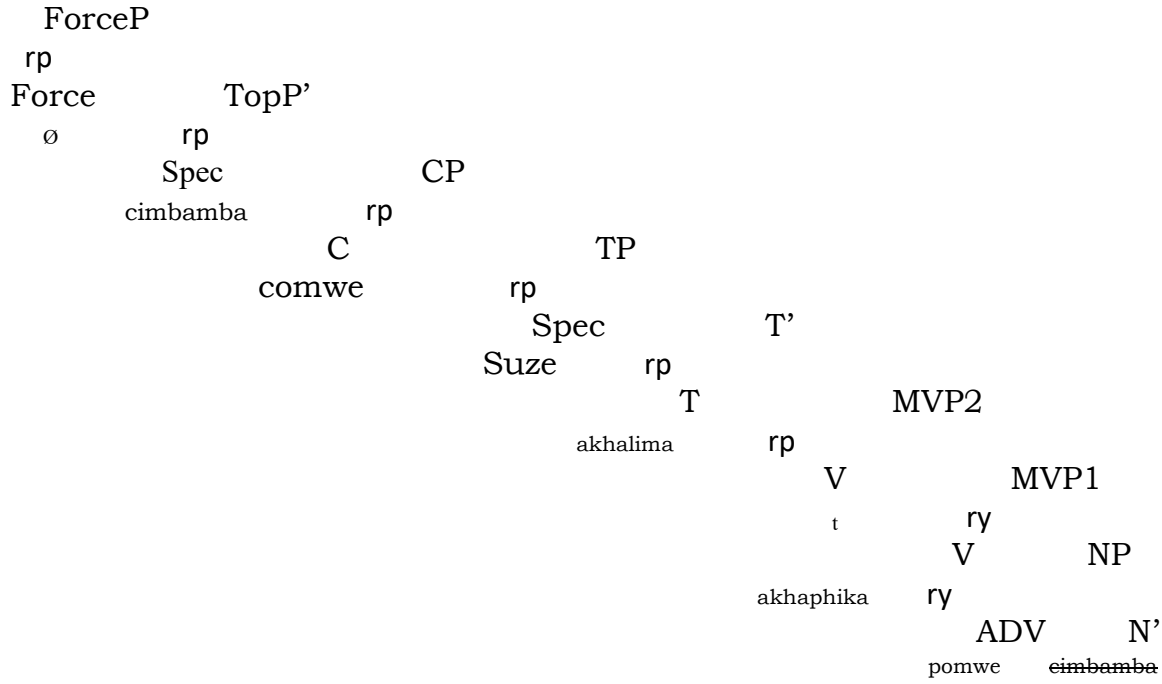
c) *ci-mbamba comwe a-kha-lim-a Suze a-kha-phik-a.
7-beans 7.that 3SG-PST.be-cultivate-FV Suze 3SG-PST.be-cook-FV
Lit: the beans that cultivated Suze cook'

The example in (34a) and (35a) show that, just like in other Bantu languages (Carstens 2001; Kinyalolo 1991), in Cinyungwe, the two verbs -*fun*- 'want' and -*dy*- 'to eat' in the complex tense construction agree with the noun *alendo* 'visitors' (34) and the verbs -*lim*- 'to cultivate' and -*phik*- 'to cook' in (35), carry identical agreement morphology.

In (34b) and (35b), we have a relative inversion and the adjacency of the two verbs in SVCs is demanded so that the construction is grammatical. There is a concord relation between the two verbs, that is why in (34c) and (35c), where a subject intervenes between the two verbs of the SV sequence, the resulting construction is ungrammatical.

If, as we are suggesting, the verbs in SVCs bear a concord relation, (35b) has the structure shown below:

36.



In (36), we assume that the derivation proceeds as follow. The verb -*phika* 'cook' merges with its complement the NP *pomwe cimbamba* 'beans too' to form the VP *phika pomwe cimbamba* 'cook beans too'; this VP is then merged with the other lexical verb -*lima* 'cultivate' forming a VP2 *lima phika pomwe cimbamba* 'cultivate and cook beans too'. Then, the VP is merged with the T-bar containing tense/person/number/agreement affix. The features in T attract the closed verb which it c-commands (the verb -*lima* 'cultivate') to move to T. The T-bar is then merged with TP and the NP Suze is merged in Spec-TP to fulfil EPP requirement.

The movement of the V1 to head T is explained supposing that finite T is strong in Cinyungwe and so must be filled by a verb. For the Φ-feature in V2, we assume that they are attached via Affix Hopping (lowering *Af onto* a head H) occur not only

with unattached affix but also when a Constituent C shares a concord relation with H (being H complement of C and appropriate host for the affix to attach to).

In (36), we assume that the null Force head of ForceP marks the declarative force of the clause; the NP *cimbamba* 'beans' from the object position of the verb -*phika* 'cook' undergone A-bar movement into specifier position within the Topic Phrase- in a position that it is interpreted as the topic of the relevant sentence. The C head hosts the relative pronoun (Henderson 2007 propose that ForceP and FinP can collapse into a single CP projection).

Supposing that, the adjacency restriction in SVCs is true, it is expected that adjacency requirement should not hold in constructions without multiple agreement morphology. That is what happens in Cinyungwe. As we can see below, in the Cinyungwe examples in (37a) the finite verb -*fun*- 'to want' is followed by an infinitive that does not bear agreement.

37.a) a-lendo a-n'-fun-a ku-dy-a ci-manga
2-visitors 2-FUT-want-FV 15-eat-FV 8-maize
'the visitors want to eat maize.'

b) ci-manga comwe a-n'-fun-a a-lendo ku-dy-a
7-maize 7.that 2-FUT-want-FV 8-visitors 15-eat-FV
'the maize that the visitors want to eat.'

The examples in (37a) show that the finite verb *an'funa* 'wants' is followed by the non-finite verb *kudya* 'to eat' and the adjacency doesn't hold on. Meaning that, in this language, we can have SVCs, where the lower verb is an infinitive and the agreement is only with the higher verb.

Conclusions

The aim of this paper was to contribute for the discussion about multiple agreement in Bantu through Verb-Verb constructions in Cinyungwe, a Bantu languages spoken in Mozambique Tete province and in some neighboring countries (NGUNGA and FAQUIR, 2011). Our research question was: is multiple agreement in Verb-Verb constructions in Cinyungwe, N43 in Guthrie (1967-71) classification, a real problem to Chomsky's (2000) proposal?

The discussion of our paper started from separating Verb-Verb Constructions from Compound Tense Constructions and Serial Verb Constructions. The intention with this section was to put clear the data analyzed in this paper was not CTs but Verb-Verb Constructions because in Cinyungwe CTs the verb 'to be' occurs as a bound morpheme in the main verb making these constructions inappropriate for the discussion proposed by Cartens (2001). Secondly, the data cannot be considered SVC because apart from not sharing the all properties described by Aikhenvald (2018) as

SVC properties. As we saw, the Verb-Verb Constructions in Cinyungwe are not used to express exhaustion/completion of a situation, directionals, benefactives, verbal comparison, comitatives, instrumentals, accompanimentals, refusal, abilitatives, consequentials, and event coordination, as Kari (2003) suggested. Although, they are used to express simultaneousness.

The data analyzed in this study suggest that, just like in Kiswahili, in Cinyungwe Verb-Verb Constructions are an expression of local relation between the verbs and not a result of subject movement. This conclusion was raised through adjacency restriction in relative inversion in Cinyungwe and unicity tests. This means that, Verb-Verb Constructions in Cinyungwe cannot be considered a problem to Chomsky's (2000) proposal, as Carstens (2001) argued.

It is important to note that Carstens (2001) discussion is centered in Probe and Goal relation without looking at the relationship the verbs can bear within Verb-Verb Constructions, as we are proposing in this paper. Thus, the discussion of multiple agreement should be made not only analyzing Probe vs Goal relation, but also verb-verb relation in SVCs.

Abbreviations

CTs	compound tenses
CP	Complementizer Phrase
FUT	future
FV	final vowel
GER	gerund
IMPERF	imperfective
INFL/AUX	inflection/auxiliary
MVP1	Main verb phrase 1
MVP2	Main verb phrase 2
NEG	negation marker
NP	Noun Phrase
PERF	perfective
PRS	present
PRON	pronoun
PST	past
SG	singular
SVCs	Serial Verbs Constructions
TAM	Tense, aspect and mood
TP	Tense Phrase
VP	Verb Phrase
V1	verb 1

V2 verb 2

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Concordância em Construções do tipo Verbo-Verbo em Nyungwe

Resumo:

O Programa Minimalista defende que há uma relação entre Caso e Concordância, isto é, a verificação de traços (Φ-) num núcleo como o verbo resulta numa verificação simultânea dos traços de Caso no NP que engatilha essa concordância (CHOMSKY, 2000). Carstens (2001) afirma que as construções complexas das línguas bantu são um problema sério para esta abordagem de Chomsky. O objectivo texto é contribuir para a discussão sobre concordância múltipla nas línguatravés de dados de Nyungwe, uma língua bantu moçambicana. Defendemos que em construções do tipo Verbo-Verbo, os verbos estabelecem, entre si, uma relação de acordo e, por isso, não pode ser considerado um problema para a proposta de Chomsky.

Palavras-chave: Concordância; Construções do tipo Verbo-Verbo, Nyungwe