

Serial verb constructions in Dagaare

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Abstract

Serial verb constructions are a highly frequent feature of the Nandome dialect of the West African language Dagaare. In this paper, I analyse the morphosyntax of such constructions in Dagaare from both a formal and typological perspective, considering what features make it clear that such constructions are indeed monoclausal and single complex predicates. I also examine towards what semantic and discourse purposes they are employed.

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1 Introduction

Dagaare is a language of the Mabia family, which is further classified as part of the Atlantic–Congo family (Hammarström et al., 2021; Bodomo, 2020). Dagaare is spoken in Burkina Faso and Ghana by over 1.1 million people. In this paper, I use data from the Nandome dialect of Dagaare as spoken by a 28-year-old man, who is also fluent in Twi, French, and English.

Dagaare possesses **serial verb constructions** (SVCs), a common feature in West African languages and many other linguistic areas, wherein multiple verbs can chain together to form a complex predicate inside a single clause, without any coordinating or subordinating relations between the verbs (Aikhenvald, 2006). In Dagaare, SVCs serve a variety of purposes, from constructing complex event frames (e.g. causation, resultatives) to indicating manner of motion and adding arguments to the event frame. A simple example of SVCs in Dagaare is the alternation between a single ditransitive verb and an SVC, which are semantically equivalent:

- (1) a. fù kú mì nì dàà
 2SG give 1SG.OBJ FOC stick
 ‘You gave me a stick.’ (2022-03-16: 8)
- b. fù dé ná à-dàà kú mì
 2SG take FOC DEF-stick give 1SG.OBJ
 ‘You gave me the stick.’ (2022-03-16: 9)

SVCs in Dagaare already have a substantial literature describing them (Bodomo, 1993; Bodomo and Van Oostendorp, 1994; Bodomo, 1996, 1997, 1998; Luke and Bodomo, 2000; Hiraiwa and Bodomo, 2008; Bodomo et al., 2018). Nevertheless, previous work is focused on a different dialect with clearly different morphophonology, and plenty of work remains on situating Dagaare SVCs in a typological context and analysing them formally—this paper aims to do exactly that.

2 Background: verbal morphophonology

The Nandome dialect of Dagaare, as spoken by my informant, shows more allomorphy among post-verbal morphemes than other varieties of Dagaare that have been studied by linguists. Making sense of verbal morphology is a necessary step before analysing SVCs; thus, I take up that task first.

The ordering of morphemes in the verb phrase is given in the figure below.

-3	-2	-1	0	1	2	3	4
NEG.tense	HAB	tense	STEM	aspect	FOC	OBJ	NEG

Figure 1: Morpheme ordering of the Dagaare verb phrase.

2.1 Is there a perfective marker?

Dagaare is generally described as having two morphologically-indicated aspects: perfective and imperfective. However, it is said that when the verb has an explicit object the perfective is morphologically not indicated, i.e. there is a null morpheme (Ali et al., 2021). In the case of Nandome however, I did not find any example of a clearly morphologically-indicated perfective. It seems that only the imperfective takes a suffix, while the perfective is always null. The morphemic situation is summarised below.

	Ali et al. (2021)	Nandome
stem	zò	zò
PFV	zò-∅, zò-e	zò-∅
IPFV	zò-ró	zò-ré

Table 1: Aspectual forms of the verb for ‘run’ in different Dagaare dialects.

Nonetheless, there were two instances where I was uncertain about the purpose of a verb ending, that may well be analysed as a perfective marker. The first was a long vowel contour found in an elicitation of *did not V*.

- (2) ì bé tír-á à-gán-èj
 1SG NEG.PRS send-? DEF-letter-NEG
 ‘I did not send the letter.’ (2022-04-27: 28)

This could be a phonologically explained process due to the high tone on the preceding verb, but we do not have evidence to support that idea. There is clearly a long vowel; it cannot be the usual definite marker.

The second had the same phonological feature of a high-tone vowel before the definite marker. We would not expect differing TAM marking here, nor could it be a focus marker since the clause already has one.

- (3) ì dé-ná à-bòl lòb' tʃín-á à-sáá zùù
 1SG take-FOC DEF-ball throw go-? DEF-sky head
 ‘I took the ball and threw it in the sky.’

The perfective could be a marginal morpheme in these contexts, but besides these potential cases it does not show up in the corpus.

2.2 Allomorphy

Nandome further exhibits phonologically-conditioned allomorphy on the imperfective suffix (*rÉ*) and the focus marker (*ná*). This is sufficient to explain all of the verb endings we encountered, none of which need to be explained as marking of the perfective.

1. *Initial consonant assimilation*: following a nasal vowel, the imperfective initial changes from *r* → *n*. Following some consonants, the initial consonant of both can be dropped optionally.

(a) /gá-rÉ-ná/ → [gá-nÉ-ná] (sleep-PROG-FOC)

(b) /lòb-ná/ → [lòb-(n)á] (throw-FOC)

2. *Vowel assimilation*: Preceding a low vowel, the final vowel becomes low as well in the imperfective. Its ATR feature also harmonises with that vowel.

(a) /díg-ná è-ɲǝ́ɲǝ́/ → [díɣ-nɔ́ è-ɲǝ́ɲǝ́] (chase-FOC DEF-cat)

(b) /díḡ-ré ʒ-pǔǔǔpò/ → [díḡ-rʒ ʒ-pǔǔǔpò] (chase-PROG DEF-cat)

3. *Vowel weakening*: The final vowel of the focus marker becomes [ì] (with low tone) preceding a consonant.

(a) /òb-ná nén/ → [òb-ì nén] (chew-FOC meat)

3 Formal properties

The study of serial verbs has matured a great deal recently thanks to data from many different language families showing many shared features, a great improvement on the language-specific analysis of SVCs conducted in the past. A consensus has emerged that SVCs are “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” (Aikhenvald, 2006). In Dagaare, SVCs have been defined similarly in past work, e.g. “complex predicates comprising a sequence of lexical (main, independent) verbs within one clause” (Luke and Bodomo, 2000).

As Haspelmath (2016) notes, a major issue in past work on the typology of SVCs is that attempted cross-linguistic formulations of the definition of the SVC have been too rigid. SVCs are not a ‘universal category’ (inherent to innate human grammar); rather, they are a phenomenon that arise in some languages due to communicative needs and diachronic change, and so they will differ in many aspects according to each language’s individual history. But, that does not mean a coherent analysis of SVCs with respect to typology is impossible. I identified a consensus definition of the prototypical SVC above; now it is feasible to analyse the features of SVCs that are specific to Nandome Dagaare.

Both Aikhenvald (2006) and Haspelmath (2016) describe some typological features of SVCs. I will analyse where Dagaare falls in their categorisations.

3.1 Aikhenvald (2006)

In her analysis of the typology of SVCs, Aikhenvald produces a list of diagnostic features of serial verb constructions based on data collected cross-lingually. I will go through our corpus and present evidence that Dagaare satisfies each of these features, confirming the SVC status of the constructions in question.

SVCs are single predicates. This is evinced by SVCs in Dagaare being enclosed by a single negative tense marker and negative particle (on the NegP level) and because their components cannot be embedded separately (CP).

(4) ì bé [dé-á à-gán tìr]-èj
1SG NEG.PRS take-PFV DEF-letter send-NEG

‘I did not send the letter.’

(2022-04-27: 29)

(5) à-gán-nà nú [ì dé tìr-á à ì sàà]
DEF-letter-this REL 1SG take send-FOC DEF 1SG father

‘This is the letter I sent to my dad.’ (2022-04-27: 24)

In sentences with verbs corresponding to the English verb *give*, Dagaare has an interesting choice between an SVC or a simple predicate, shown in (1).

SVCs are monoclausal. For instance, if one attempts to use explicit coordination in an SVC the second verb obligatorily demands a subject, losing its SVC properties:

(6) kòfí $\widehat{\eta m \acute{e}}\text{-ná}$ à- $\eta \acute{z} \acute{z} \eta \grave{o}$ $\widehat{k p \acute{i}}$
Kofi hit-FOC DEF-cat die
‘Kofi hit the cat and the cat died.’ (2022-04-11: 1)

(7) kòfí $\widehat{\eta m \acute{e}}\text{-ná}$ à- $\eta \acute{z} \acute{z} \eta \grave{o}$ á * (à- $\eta \acute{z} \acute{z} \eta \grave{o}$) $\widehat{k p \acute{i}}$
Kofi hit-FOC DEF-cat and DEF-cat die
‘Kofi hit the cat and the cat died.’ (2022-04-11: 1)

Dagaare also has alternative subordination strategies, including adverbial clauses and clausal complements licensed by certain verbs. These are sometimes indicated with an explicit subordinator and can take subjects of their own, showing they form a clause of their own. They also do not obligatorily share TAM-marking.

(8) ì búù ké [ì dī]
1SG want COMP 1SG eat
‘I want to eat.’ (2022-04-27: 21)

(9) ì $\widehat{t \acute{j} \acute{a} \acute{a}}\text{-ná}$ [dī-ré]
1SG keep-FOC eat-PROG
‘I am still eating.’ (2022-04-27: 19)

SVCs function as prosodic units. I do not have an analysis of the interaction between tone and intonation yet, nor have we transcribed the examples of naturally-spoken stories in our corpus yet. Thus, this point is uncertain.

SVCs share tense/aspect, mood, modality, and polarity value. In Dagaare, every verb in the SVC must share progressive (or lack of progressive) marking.

(10) táà $\widehat{\eta m \grave{a} \acute{a}}\text{-ré}$ zírí kù-rè mè-ì
PROH cut-PROG lie give-PROG 1SG.OBJ-NEG
‘Don’t lie to me.’ (2022-03-16: 14)

(11) ì $\widehat{t \acute{j} \acute{e}}\text{-ré-nè}$ vì-ré ò-jír
1SG go-PROG-FOC go.around-PROG DEF-house
‘I am walking around the house.’ (2022-04-04: 5)

Only the first verb gets the other tense and mood, focus, and polarity markings (see (4)), which are applied to the entire SVC.

(12) ì $\widehat{\eta m \acute{a} \acute{a}}\text{-ná}$ à-gán kú à-dóó
1SG write-FOC DEF-letter give DEF-man
‘I sent the man a letter.’ (2022-04-20: 12)

SVCs function as ‘one event’. While what exactly is a single event is difficult to universally define and perhaps culture-specific, recent work on the macro-event property and SVCs confirms this general idea (Bisang, 2009).

This property is found in Dagaare. For example, the event of *sending a letter* is formulated as an SVC of TAKE + SEND (4) or WRITE + GIVE (12), referring to the single macro-event. We also saw in (1) that *giving* can be formulated as simple GIVE or an SVC TAKE + GIVE, which are semantically equivalent according to our speaker.

Also, there is a somewhat grammaticalised use of FINISH as a completive, a change which is expected when SVCs are treated as a single event.

- (13) ù ʒβ-á à-nén báárì
 3SG chew-FOC DEF-meat finish
 ‘She finished eating the meat.’ (2022-02-28: 5)

SVCs share arguments. In Dagaare, this is a categorical constraint that SVCs must share the surface (not deep-structure) subject. Each verb in the SVC may contribute a single object however; notably, there cannot be two objects on any of the verbs, even though this is permitted with simple mono-verbal predicates.

The reason I say surface is because there was an instance of a resultative SVC where the deep object of the first verb (HIT) is the deep subject of the second verb (DIE): (7). It should also be noted that resultative SVCs in Dagaare have iconic ordering, i.e. the cause verb must be before the effect verb. This is observed in all languages that have this subtype of SVCs.

Causative constructions behave the same way at deep structure, where $O_1 = S_2$. It is not clear whether these should be classified as SVCs or not, since while syntactically they seem identical to SVCs, O_1 has control as subject over V_2 unlike the other SVCs we have seen.

- (14) ì vé-ná à-bàà zì
 1SG allow-FOC DEF-dog sit
 ‘I made the dog sit.’ (2022-04-20: 20)

- (15) tì nà ʔáá-á ù ʔlé à-dààr
 1PL FUT make-FOC 3SG tie DEF-stick.PL
 ‘We will make her tie the ropes.’ (2022-03-16: 21)

To resolve this, we should try eliciting sentences with mixed polarity (e.g. ‘I made him not cry.’ vs. ‘I did not make him cry.’) to see if causatives satisfy the shared polarity requirement of SVCs.

3.1.1 What kind of SVCs does Dagaare have?

Aikhenvald (2006) also suggests some parameters along which to classify SVCs. Based on the analysis above, I found that Dagaare SVCs have these properties:

1. **Composition:** Dagaare SVCs are *symmetrical*, i.e. both V_1 and V_2 are open-class and can be drawn from the entire lexicon of verbs in the language (modulo pragmatic considerations; some combinations will not make sense!)

2. **Contiguity:** Dagaare SVCs are *non-contiguous*; the optional focus marker and any objects intervene in the chain of verbs.
3. **Wordhood of components:** Components of Dagaare SVCs are all independent grammatical words that can serve as mono-verbal simple predicates.
4. **Marking:** The progressive marker (and the perfective, if it exists) has the property of *concordant marking*; every single verb in the SVC must have it indicated. The other tense and mood markers have the property of *single marking*, only being marked once preceding V_1 (and thus probably on a higher projection of the VP than the progressive marker).

3.2 Haspelmath (2016)

Haspelmath (2016) presents 10 generalisations about SVCs based on analyses from descriptive grammars and papers on dozens of languages with SVCs. Based on the examples given above and further corpus data, I found that 9 of them hold for available Nandome Dagaare data and one of them (SVCs form a single intonation contour) needs more analysis to be verified. See table 2.

Generalisation	Dagaare
Same tense value	✓
Same mood value	✓
Shared temporal/locational modifiers	✓
Single intonation contour	?
Cause verb precedes effect verb	✓
Single tense/mood/negation marker is on verb periphery	✓ (precedes V_1)
Verbs share at least one arg	✓ ($S_1 = S_2$ or $O_1 = S_2$)
Shared-subject SVCs must exist	✓
If subject differs, second is intransitive	✓ (except for causatives)
Cannot have two different agents	✓

Table 2: Generalisations from Haspelmath (2016) applied to Dagaare.

Thus, there is not a single property of SVCs claimed by the typological literature that is not upheld in Nandome Dagaare.

4 Pragmatics

Now that we are aware of a wide variety of complex SVCs in Dagaare, the question arises: what purpose do these constructions serve? After all, Dagaare also has subordination and coordination as clause-joining strategies, and many other languages that have these strategies do not need SVCs at all. What is the pragmatic range of SVCs? I labelled the purpose of each SVC found in our data, of which I found 31. These can be grouped into 6 categories:

- **Adding arguments (10):** Many SVCs use the GIVE verb *kù* as V_2 to add indirect objects to the argument structure. There were also a few instances of *tír* ‘send’ to add a recipient and *gáũ* ‘cross’ to add a comparative when the predicate was an adjective.

(16) fù wóómé-nà gáũ mè
 2SG be.tall-FOC cross 1SG.OBJ
 ‘You are taller than me.’ (2022-04-11: 8)

- **Manner of motion (10):** Languages are often divided into *verb-framed* (using verbs) and *satellite-framed* (using adverbs, particles, etc.) based on how they indicate the manner of motion when the predicate is a motion verb. Serialising languages tend to use SVCs to indicate manner of motion, and so do not necessarily easily fall into either category (Ameka and Essegbey, 2013). Dagaare is no different; we find that V_2 can be any of several manner verbs, including *wà* ‘come’, *vìrì* ‘go around’, and *bín* ‘put’.

(17) ì lɔβ-á à-b̀̀l bín-á à-téú
 1SG throw-FOC DEF-ball put-? DEF-table
 ‘I threw the ball on the table.’ (2022-04-20: 7)

(Not the strange morpheme on V_2 , which could be a perfective. Eliciting a version of this sentence with indefinite nouns like *a table* is necessary to check how the verb endings change.)

- **Causatives (4):** Causatives are formed with V_1 as one of a small class of verbs: *vé* ‘allow’, *sáù* ‘permit’, *ɲáú* ‘make’ (only with transitive), etc. As discussed above, it is unclear whether causatives are true SVCs. Causatives with V_2 being a transitive verb also do not satisfy one of Haspelmath’s generalisations: if the subject of the two verbs differs, then the second verb must be intransitive.
- **Consecutive (4):** Semantically tightly-joined consecutive events are commonly expressed with SVCs, including cause-effect relations like HIT→DIE or GET.HURT→FALL. These are iconically ordered, in the order the sub-events actually occur. This is a prototypical SVC in the world’s languages; other languages use converbs or subordination for this.

(18) ù prá-nà l̀̀
 3SG get.hurt-FOC fall
 ‘He got hurt and fell.’ (2022-04-20: 10)

- **Aspect (1):** There is one instance of V_2 modifying the aspectual properties of the event: *báá̀rì* ‘to finish’.

(19) ù ʒβ-á à-nén báá̀rì
 3SG chew-FOC DEF-meat finish
 ‘She finished eating the meat.’ (2022-02-28: 5)

There was an instance that could be proposed to be an SVC: a modal verb serving as V_1 . To check whether this is actually an SVC it should be tested with the progressive, for shared features.

(20) ì kù tús wà-ì
 1SG NEG.FUT be.able come-NEG
 ‘I won’t be able to come.’ (2022-03-16: 15)

- **Lexicalised?** (1): There was one sentence where the speaker could not explain the decomposition of the SVC. It could be a case of an SVC becoming lexicalised, but we are honestly uncertain.

(21) bíb-í tó zàù bé dì-ré bùkà-ì
 child-one send refuse NEG.PRS eat-PROG fatty.food-NEG
 ‘It is the one child that does not eat fatty food.’ (2022-03-30: 1)

5 Conclusion

In conclusion, I showed that Dagaare has a construction that can be, without a doubt, classified under the label serial verb construction (SVC) based on typological considerations. I checked whether the properties claimed by [Aikhenvald \(2006\)](#) and [Haspelmath \(2016\)](#) apply to Dagaare SVCs, and found all to be confirmed except for claims about prosodic unit-hood. I also analysed the pragmatics of SVCs in Dagaare, categorising what purpose each attested SVC in our data serves. And throughout this manuscript, I have offered suggestions for future elicitation wherever a problem arose in the analysis.

Future work needs to focus more on syntactic analysis of Dagaare, looking at least analyses of SVCs in Minimalism (the main formalism in modern syntactic studies, which has undergone changes since Bodomo’s work in the area) and Lexical-Functional Grammar (which has been thoroughly applied to analyse complex predicates). The perfective marker is still a thorny issue in Nandome dialect, and its distribution, and whether it exists at all, needs to be investigated. Finally, the historical development of SVCs is an interesting topic (e.g. [Bowern, 2008](#)) that could be studied across the Mabilia language family. I am also interested in the application of computational methods for such analyses, and creating natural language processing tools (like machine translation software) that could benefit Dagaare speakers.

I enjoyed the class very much, and I hope to continue working on Dagaare and helping resolve some of these questions.

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