

Progressive fronting in Nafaanra: a case study of altruistic movement

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1 Introduction

Nafaanra, like other Senufo languages, is observed to have SOV word order; however, in Nafaanra, word order frequently varies in progressive constructions. Namely, OSV is typically preferred in progressive constructions. This alternation, referred to as *progressive-fronting*, is demonstrated in examples (1) and (2) below:

- (1) Yaa \emptyset Amma gbun
Yaa NFUT Amma hit
'Yaa hit Amma.'
- (2) Maṇa e. \emptyset tinii
Rope 2.PL.NFUT pull.PROG
'You are pulling the rope.'

Though this order is also observed in focus constructions, I will argue that these constructions are not dependent on information structure.

This paper will provide a description of basic word order, focus, and progressive-fronting in Nafaanra to demonstrate that the differing word order exemplified by these sentences is due to movement of the object to the spec-of-CP. Progressive-fronting is in complementary distribution with other types of movement to the spec-of-CP; for instance object movement is not possible with content questions, but is possible with polar questions. Furthermore, the feature on C that induces movement of the object in progressives can be satisfied not only by movement of the object, though object movement is common, but also by movement of verbs and indirect objects. This paper will explore the mechanisms that motivate the pattern of object movement in Nafaanra progressives to offer an analysis of movement in progressive constructions consistent with altruistic movement (Chomsky, 1995, 2000, 2001, 2004, 2008; Lasnik, 1995; McCloskey, 2001; Bošković, 2004; Cable, 2012; Zyman, 2017).

Section 2 describes basic word order in Nafaanra. Section 3 provides an account of progressive-

fronting, with subsections detailing information structure as it relates to progressive-fronting and the structure of progressive-fronting, to demonstrate that the attested word orders in progressive-fronting constructions are consistent with accounts of altruistic movement. Section 4 provides an overview and conclusion of the proposed analysis.

2 S(Aux)OV Word Order in Nafaanra

Nafaanra is a Senúfo language spoken in Ghana, an outlier to the rest of the Senúfo languages, which are spoken in Mali, Burkina Faso, and the Western part of Cote d'Ivoire. Other dominant language families in the area include Kwa and Gur. There are approximately 61,000 speakers of Nafaanra across all dialects of Nafaanra (Simons & Gordon, 2006). Data in this study were collected with speakers of Nafaanra from Banda Ahenkro. Community members estimate that the Banda region has around 20,000 speakers of Nafaanra spread throughout the area with around 6,000 speakers in the Banda Ahenkro proper. Within the Banda Ahenkro community, there are no known monolingual speakers of Nafaanra. Speakers of Nafaanra also speak Twi, a Kwa language, and English. In Banda Ahenkro, Nafaanra is the primary language of communication.

Nafaanra has S(Aux)OV word order, similar to descriptions of Supyire, another Senúfo language, and Mande (Carlson, 1994; Sande, Baier, & Jenks, 2017). In Nafaanra, main verbs occur sentence-finally regardless of whether an overt auxiliary is present, as demonstrated in the following examples. Within the VP, there is strict OV word order in Nafaanra as demonstrated by (3) and (4).

(3) Yaa \emptyset Amma gbun
 Yaa NFUT Amma hit
 'Yaa hit Amma.'

(4) *Yaa \emptyset gbun Amma
 Yaa NFUT hit Amma
 INTENDED: 'Yaa hit Amma.'

In comparison, in the presence of an overt auxiliary, the resulting word order is SAuxOV. Examples with and without an auxiliary are provided in (5) and (6):

(5) Sugbɔ wre \emptyset nyaa li
 goat DET NFUT grass eat
 'The goat ate grass.'

(6) Sugbɔ wre na nyaa li
 goat DET PST grass eat
 'The goat ate grass.'

These examples indicate that the position of the verb is the same with and without an overt

auxiliary, demonstrating two important aspects of word order in Nafaanra. First, the verb remains low rather than moving up to T¹. Second, the subject moves to the spec-of-TP resulting in the order SAux order observed in (6).

In addition to verbs that occur sentence-finally, postpositions, determiners, complementizers all pattern as phrase-final. The following provides examples of postpositions in Nafaanra:

(7) dini yire ∅ wa tebru kre na
 spoon.PL DET.PL NFUT there table DET on
 ‘There are spoons **on the table**.’

(8) *dini yire ∅ wa na tebru kre
 spoon.PL DET.PL NFUT there on table DET
 INTENDED: ‘There are spoons **on the table**.’

As demonstrated, postpositions must follow their object. If the postposition precedes its noun, the result is ungrammatical. Likewise, determiners also follow their noun phrases:

(9) hle kre
 book DET
 ‘the book’

(10) Kofi na hle kre lo
 Kofi PST book DET buy
 ‘Kofi bought the book.’

(11) *kre hle
 DET book
 INTENDED: ‘the book’

As shown in (9) and (10), the determiner follows the noun. If the determiner precedes its noun, the result is ungrammatical, as shown in (11). Genitives precede the noun, as shown in (12) and (13). In Nafaanra, the genitive and determiner can co-occur resulting in the word order exemplified in (16).

(12) o hle
 1.PL.POSS book
 ‘our book’

(13) bichable hle
 girl.POSS book
 ‘a girl’s book’

¹The lack of verb movement discussed here may be due to the presence of a null auxiliary in present tense. Further investigation on headedness is necessary to determine the observed patterns.

- (14) *hlɛ o
 book 1.PL.POSS
 INTENDED: ‘our book’
- (15) *hlɛ bichable
 book girlPOSS
 INTENDED: ‘a girl’s book’
- (16) o hlɛ kre
 1.PL.POSS book DET
 ‘our book’ (definite)
- (17) *kre o hlɛ
 DET 1.PL.POSS book
 INTENDED: ‘our book’

Example (17) demonstrates that if the determiner is moved before the possessed noun, the result is ungrammatical. The same is true of all instances where a determiner precedes its noun. Likewise, the possessor cannot follow the noun, as shown in (14) and (15). The determiner obligatorily follows its noun and the possessor obligatorily precedes the possessum.

Finally, complementizers also occur phrase-finally. Nafaanra has two questions markers: ‘*hin*’, which marks content questions and ‘*ra*’, which marks polar questions. These question markers always occur sentence-finally, as shown in (18), (20) and (22). Additionally, Nafaanra has movement of the WH-element in content questions, resulting in sentence-initial WH-elements, as shown in (20) and (22).

- (18) Mu.∅ kro kre to ra
 2.SG.NFUT door DET close Q
 ‘Did you close the door?’
- (19) *Ra mu.∅ kro kre to
 Q 2.SG.NFUT door DET close
 INTENDED: ‘Did you close the door?’
- (20) ŋgi mu.∅ tɔɔnri hin
 what 2.SG.NFUT read WH.Q
 ‘What did you read?’
- (21) *Hin ŋgi mu.∅ tɔɔnri
 WH.Q what 2.SG.NFUT read
 INTENDED: ‘What do you read?’
- (22) ŋmbi u.∅ Akua nya hin
 who 3.SG.NFUT Akua see WH.Q
 ‘Who saw Akua?’

As demonstrated in (19), it is not possible to move ‘ra’ to the initial position. Similarly, (21) shows that ‘hin’ may not occur sentence initially either. These examples demonstrate that verbs, postpositions, determiners, and complementizers all occur phrase-finally.

Unlike the phrases discussed thus far, which pattern with phrase-final heads, tense appears to be head-initial, as suggested by the word order in example (6), which demonstrates word order in the presence of an overt auxiliary. If the TP were head-final, we would instead expect SOVAux; however, this word order is unattested; an example is shown in (23) and (24).

(23) Yaa na u gbun
 Yaa PST 1.SG hit
 ‘Yaa hit him.’

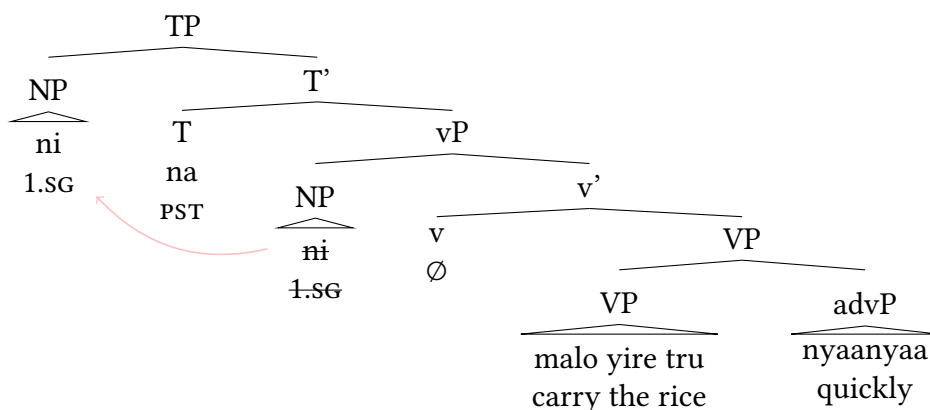
(24) *Yaa u gbun na
 Yaa 3.SG hit PST
 INTENDED: ‘Yaa hit him.’

Thus, the observed S(Aux)OV order suggests that the T’ is right-branching.

Additionally, adjuncts, including verbal adjuncts, and PP indirect objects attach to the right of the verb, as in the following examples:

(25) Ndaa malo yire tru nyaanyaa
 1.SG.PST rice DET.PL carry quickly
 ‘I carried the rice quickly.’

(26) *Ndaa nyaanyaa malo yire tru
 1.SG.PST quickly rice DET.PL carry
 INTENDED: ‘I carried the rice quickly.’



(27)

Thus, verbs appear to occur before the adverbial phrase. According to Dryer (2007), postpositions, genitive-noun word order, and manner adverbs before main verbs all tend to correlate with OV word order. As shown here, this is true in Nafaanra for postpositions and genitive-noun word order, but manner adverbs occur after the verb. In other words, the surface realization

of argument verb phrases (VP and vP), postpositions (PP), determiner phrases (DP), and complementizer phrases (CP) are all head-final, but adjuncts follow verbs and the tense phrase (TP) is head-initial. Though it is rare cross linguistically for OV to pattern with a head-initial TP, S(Aux)OV and S(Aux)OVX are common for languages in the region and is also found in other Senúfo and Mande languages (Sande et al., 2017; Carlson, 1994).

OV word order in Nafaanra can be attributed to either head-finality or obligatory object movement as proposed generally by Kayne (1994) and for Mande languages by Kooopman (1984, 1992). If object-verb order is derived via movement, this movement is obligatory in Nafaanra as verbs always follow their argument. If object-verb order is due to head-finality, then the object is generated as the argument of the verb and remains in this position; because the structure is left-branching, this derives the correct linearization for the VP. Either analysis can account for the attested word order in Nafaanra. Further research to probe the predictions of each structure in Nafaanra is warranted. Following Sande et al. (2017), this analysis assumes a head-final structure for Nafaanra.

3 Progressive Fronting

While, S(Aux)OV word order is preferred in ‘neutral’ contexts, there is also a great deal of variability in Nafaanra word order. In focus constructions, for example, the focused element moves to the initial position in the phrase. Additionally, in progressive constructions, speakers generally prefer OSV (transitive) or VSV (intransitive) word order, termed here *progressive-fronting*.

Nafaanra progressives are marked both with inflection on the main verb and with a progressive auxiliary. The following table provides examples of progressive and non-progressive verb forms.

Table 1: Nafaanra Progressive and Non-progressive verb forms

Non-Progressive	Progressive	Translation
tini	tinii	‘pull’
nyunɔ	nyunɔi	‘push’
gbun	gbuun	‘hit’
kun	kuun	‘cut’
sɛ	shie	‘go’
pe	pini	‘do (s.thg)’
kɔ	koni	‘sing’
jawa	jawai	‘think’
yɔ	yoo	‘dance’
fɛ	feni	‘run’

In addition to inflection on the verb, Nafaanra has two progressive auxiliary markers *wa* and *na* demonstrated in (28) and (29).

- (28) Kofi \emptyset wa na u gbuun
 Kofi NFUT PROG PROG 3.SG hit.PROG
 ‘Kofi is hitting him.’ or ‘Kofi is there hitting him.’
- (29) malo o naa tio
 rice 1.PL PST.PROG carry.PROG
 ‘We were carrying rice.’
- (30) Kofi \emptyset wa na jawa
 Kofi NFUT PROG PROG think.PROG
 ‘Kofi is thinking.’ or ‘Kofi is there thinking.’
- (31) gboo u. \emptyset gboo
 drink 3.SG.NFUT drink.PROG
 ‘He is drinking.’

As demonstrated by (29) and (31), for the progressive construction without ‘wa’, OSV or VSV is preferred, whereas S(Aux)OV or S(Aux)V order is preferred for the construction with ‘wa’ shown in (28) and (30). While the construction demonstrated in (28) and (30) is largely outside the scope of this paper, it is returned to briefly in the analysis of the progressive construction.

Jordan (1978) proposes that aspect and tense particles are phonologically blended with person particles. He goes on to describe that the simple present and present progressive are unmarked, meaning there is no auxiliary for present tense or for progressive aspect in the present tense. He further explains that ‘na’ is the morpheme for past tense and is homophonous with the morpheme ‘na’, which marks progressive aspect. The distribution of these lexical items supports this analysis. For instance, the past tense auxiliary ‘na’ occurs in sentences with no progressive interpretation or inflection on the verb, demonstrated in examples in the previous section, and progressive auxiliary ‘na’ occurs where there is no past tense interpretation, as in (28) and (30). Furthermore, there is consistent lengthening of /na/ where there is a past progressive interpretation, as demonstrated in the table below. The following table demonstrates the process of blending between person, tense, and aspect where there is overt material to be blended:

Table 2: Underlying and surface forms of person, tense, and progressive aspect

	Person Morpheme	Present Morpheme	Present Surface	Past Morpheme	Past Surface	Prog Morpheme	Pres-Prog Surface	Past-Prog Surface
1.sg	ni	\emptyset	ni + \emptyset → ni	na	ni + na → ndaa	na	ni + \emptyset + na → ni	ni + na + na → ndaa
2.sg	mu	\emptyset	mu + \emptyset → mu	na	mu + na → mna	na	mu + \emptyset + na → mu	mu + na + na → mnaa
3.sg	u	\emptyset	u + \emptyset → u	na	u + na → wra	na	u + \emptyset + na → u	u + na + na → wraa
3.sg non-pro	Kofi	\emptyset	Kofi + \emptyset → Kofi	na	Kofi + na → Kofi na	na	Kofi + \emptyset + na → Kofi	Kofi + na + na → Kofi naa
1.pl	o	\emptyset	o + \emptyset → o	na	o + na → o na	na	o + \emptyset + na → o	o + na + na → o naa
2.pl	e	\emptyset	e + \emptyset → e	na	e + na → e na	na	e + \emptyset + na → e	e + na + na → e naa
3.pl	pe	\emptyset	pe + \emptyset → pe	na	pe + na → pra	na	pe + \emptyset + na → pe	pe + na + na → praa

While further investigation into this phonological blending of person, tense, and aspect is warranted, the analysis of these forms are not critical for the analysis of progressive-fronting. As such, following Jordan (1978), this study assumes an analysis where person, tense, and aspect are distinct morphemes that undergo phonological blending resulting in surface forms like those demonstrated in the table.

Finally, though progressive-fronting is preferred in Nafaanra progressive constructions there appears to be some optionality in progressive-fronting as SOV order is also attested in progressive constructions. Thus, the following section provide an overview on the role of information structure in progressive fronting.

3.1 Interpretation of Progressive Fronting

In some constructions in Nafaanra, OSV and VSV order indicate focus on the object or verb, respectively. Thus, a natural conclusion for word order in progressive-fronting in Nafaanra is that it is derived through focus. However, while OSV word order in Nafaanra elicits focus interpretation in some contexts, progressive-fronting does not necessitate a focus interpretation as OSV and VSV order are attested in contexts where the object or verb is not in focus. Evidence for this comes through comparing Nafaanra focus constructions and their usage contexts to progressive-fronting constructions and their usage contexts.

Focus in Nafaanra predominantly involves fronting of the relevant element with few other syntactic or morphological effects. For instance, focus constructions come with no additional morphological marking. However, there is resumption in the case of subject-focus and doubling of the verb in the case of both transitive and intransitive verb-focus, as demonstrated in the examples below:

- (32) Pat na ɲglo chiin pe
 Pat PST chicken soup make
 ‘Pat made chicken soup.’
- (33) Pat wra ɲglo chiin pe
 Pat 3.SG.PST chicken soup make
 Context: Who made chicken soup?
 ‘It’s **Pat** that made chicken soup.’
- (34) Kofi na Kwaku gbun
 Kofi PST Kwaku hit
 ‘Kofi hit Kwaku.’
- (35) Gbun Kofi na Kwaku gbun
 hit Kofi PST Kwaku hit
 Context: What did Kofi do to Kwaku?
 ‘Kofi **hit** Kwaku.’
- (36) Akua na to
 Akua PST fall
 ‘Akua fell.’
- (37) To Akua na to
 fall Akua PST fall

Context: What did Akua do?
'Akua **fell**.'

Comparing (32) and (33), the subject focus construction in (33) has the addition of a pronoun in the typical subject position (fused with tense consistent with discussion of pronoun tense fusion in Section 3). Likewise, the verbs 'gbun' in (35) and 'fe' in (37) occurs both initially and in the typical phrase-final position.

Conversely, object focus, indirect object focus, and postpositional phrase focus, involve no additional marking in Nafaanra, for instance:

(38) Pat na ɲglo chiin pe
Pat PST chicken soup make
'Pat made chicken soup.'

(39) ɲglo chiin Pat na pe
chicken soup Pat PST make
Context: What did Pat make?
'It's **chicken soup** that Pat made.'

(40) Kofi na bichable wre hle tɔɔnri
Kofi PST girl AN.DET book read
'Kofi read the girl a book.'

(41) **Bichable wre** Kofi na hle tɔɔnri
girl AN.DET Kofi PST book read
Context: Who did Kofi read to?
'It's **the girl** Kofi read a book.'

(42) Kofi na se jafa kre na
Kofi PST go market DET to
'Kofi went to the market.'

(43) **Jafa kre na** Kofi na se
market DET to Kofi PST go
Context: Where did Kofi go?
'It's to **the market** that Kofi went.'

Thus, OSV and VSV order are not unique to progressive-fronting as the order is the same for object-focus.

However, usage of OSV and VSV order in progressives is more widespread than OSV and VSV focus contexts. First, for a focus-driven explanation of progressive-fronting, due to something like focus on the progressive, we might expect that either the same element would undergo fronting, i.e., the verb, or that there might be symmetry in transitives vs intransitives. However, the pattern is consistent in that the object is fronted in transitives and the verb is fronted (and doubled)

for intransitives. Furthermore, OSV order in ‘wa’-progressive constructions is not neutrally interpreted and occurs infrequently². For instance, given the context *Yirangi u pini hin?*, ‘What are you doing?’, for a response such as the one demonstrated in (44), participants reported that it sounded like an accusation.

- (44) Bichable u.∅ wa na gbuun
 girl 3.SG.NFUT PROG PROG hit.PROG
 ‘It’s the girl he is hitting.’ or ‘It’s the girl he is there hitting.’

The difference in interpretations between the two constructions suggests that progressive-fronting is due to more than a response to information structure.

Furthermore, where there was no focus context, OSV and VSV are far more common in progressive constructions than in non-progressive constructions. In elicitations of non-progressive constructions, OSV order was unattested. However, in elicitations of progressive construction speakers not only use OSV and VSV order more commonly, but prefer OSV and VSV in progressive over SOV in many cases and will correct SOV usage in progressives.

In one particular task exploring when and how frequently speakers used OSV vs SOV for progressive constructions, participants were shown a picture like the one demonstrated in Figure 1 and were asked to describe the picture answering the question:

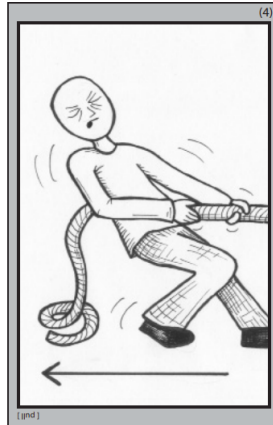
- (45) Yirangi u.∅ pini hin
 What 3.SG.NFUT do.PROG Q.WH
 ‘What is (s)he doing?’

In the task, participants used the OSV construction almost exclusively except where participants used the ‘wa’ progressive construction, with 97% of transitive constructions and 62% of intransitive constructions occurring with progressive-fronting³. This demonstrates that OSV order is strongly preferred in the progressive construction when answering the question ‘Yirangi u pini hin?’.

²This may be because of the function of ‘wa’. Based on its distribution of usage in Nafaanra, ‘wa’ may be an existential marker and thus may be in the spec-of-TP, forcing the subject into a higher position in the structure. More investigation of ‘wa’ constructions is necessary to conclude whether this analysis is correct.

³Participants were shown pictures from Story Builder (Sardinha, 2013). There were a total of 23 participants with a total of 253 transitive responses and intransitive responses. Participants only gave SOV responses in the ‘wa’ progressive construction.

Figure 1: Story Builder Card Example, ‘pull’ (Sardinha, 2013)



Not only are OSV and VSV more common in progressive constructions, SOV order in progressives is often interpreted as subject-focus. For instance, in one task, participants were presented with a sentence like (46) and two questions like those in (47) and (48), and were asked to match the sentence with a question. Speakers tended to chose the subject-information-gap question like in (47).

- (46) Pat sro pini.⁴
‘Pat is making food.’
- (47) ηm̃bi u sro pini hin?
‘Who is making food?’
- (48) Yiraŋgi Pat pini hin?
‘What is Pat making?’

In accordance with SOV progressives eliciting subject-focus interpretation, given a task targeting focus in progressives, participants tended to offer SOV responses for questions targeting subject-focus. In the task, participants were shown a set of pictures like those in figure 2 and asked to respond to questions like those shown in (49) and (51)⁵. For this subject focus task, 100% of responses in the contrastive and information gap context were SOV.

⁴As shown in Table 1, *pini* is the progressive form and *pε* is the non-progressive form of the verb ‘do’.

⁵Task was adapted from QUIS (Skopeteas et al., 2006)

Figure 2: QUIF Focus Question Picture Set Example (Skopteas et al., 2006)



Subject Information Gap Stimuli

- (49) $\eta\text{mbi } u.\emptyset \quad \text{chl}\textcircled{\small\text{b}} \quad \text{wre le} \quad \text{hin}$
 who 3.SG.NFUT woman DET look.PROG Q.WH
 ‘Who is looking at the woman?’

Sample Information Gap Response

- (50) $\text{Bl}\textcircled{\small\text{b}} \quad \text{wre } \emptyset \quad \text{chl}\textcircled{\small\text{b}} \quad \text{wre le}$
 man 3.SG NFUT woman DET look.PROG Q.WH
 ‘The man is looking at the woman.’⁶

Contrastive Subject Stimuli

- (51) $\text{Bl}\textcircled{\small\text{b}} \quad \text{ndee chl}\textcircled{\small\text{b}} \quad \emptyset \quad \text{ch}\textcircled{\small\text{b}} \text{ kre tio} \quad \text{ra}$
 man or woman NFUT pot DET carry.PROG Q
 ‘Is a man or a woman carrying the pot?’

Sample Contrastive Subject Response

- (52) $\text{Bl}\textcircled{\small\text{b}} \quad \emptyset \quad \text{ch}\textcircled{\small\text{b}} \text{ kre tio}$
 man NFUT pot DET carry.PROG
 ‘The man is carrying the pot.’

As suggested by these findings, speakers report that SOV sentences in are used to emphasize the subject or make the subject clear.

However, progressive-fronting is attested even when subject-focus is targeted. For instance, speakers were given a context like the following:

⁶Answers varied between SOV and responses with a resumptive pronoun such as: ‘ $\text{bl}\textcircled{\small\text{b}} \text{ } u \text{ chl}\textcircled{\small\text{b}} \text{ wre le.}$ ’ ‘It’s the man looking at the woman.’ for all subject focus questions

- (53) *You know someone is singing, and you think it's your friend but you aren't sure, you ask: Are you singing?*

Speakers then provided both the preferred question form and their preferred answer form for both a confirmation and a contrastive negation response demonstrated in the following examples⁷:

- (54) Mɛɛ mu.∅_i koni ra
 song 2.SG.NFUT_i sing.PROG Q
 'Are you_i singing?'
- (55) ɛɛhɛɛn, mɛɛ ni.∅_i oni
 yes song 1.SG.NFUT_i sing
 'Yes, I_i am singing.'
- (56) ɔɔnhɔɔ, mɛɛ u.∅_j koni
 No song 3.SG.NFUT_j sing
 'No, she_j is singing.'
- (57) Maɲa mu.∅_i tini ra
 rope 2.SG.NFUT_i pull.PROG Q
 'Are you_i pulling the rope?'
- (58) ɛɛhɛɛn, maɲa ni.∅_i tini
 Yes rope 1.SG.NFUT_i pull.PROG
 'Yes, I_i am pulling the rope.'
- (59) ɔɔnhɔɔ, maɲa u.∅_j tini
 No rope 3.SG.NFUT_j pull.PROG
 'No, she_j is pulling the rope.'

Responses varied across speakers with both OSV and SOV order attested, but progressive-fronting was not only attested, but preferred by some speakers. Additionally, given the context like in (53), some speakers found the SOV order for both the question and the contrastive response to be infelicitous.

Furthermore, question word order does not seem to necessitate a corresponding response word order. For instance, given the confirmation question in (60), the following answer shown in (61) is felicitous and attested:

- (60) U.∅_i tebru tini ra
 3.SG.NFUT_i table pull.PROG Q
 'Is he_i pulling the table?'

⁷Speakers also provided a simple negation response, but OSV order is generally dispreferred in negation

- (61) Tebru bl_i wre tini
 table man_i DET pull.PROG Q
 ‘The man_i is pulling the table.’

Overall, while OSV word order is consistent with object focus in some constructions, it does not always have focus interpretation. Speakers do report that progressive-fronting enhances the sense that an event is ongoing, which may indicate some link to focus. While more investigation of interpretation is necessary for progressive-fronting constructions, it’s clear that the construction is not simply driven by information structure.

In sum, while there may be some relation between focus and progressive constructions in Nafaanra, the pattern of progressive-fronting is incongruent with an object and verb focus interpretation. While OSV order is attested for object-focus and VSV for verb focus, object and verb focus interpretations are not always consistent with the attested data. Furthermore, SOV order suggests subject-focus in progressives. As such, progressive-fronting, while bearing similarities to object-focus and verb-focus with regard to word order, patterns distinctly from focus verb and object focus constructions, warranting a distinct analysis.

3.2 Structure of Progressive Fronting

The attested word order in progressive-fronting constructions is consistent with A’ movement where the object has moved to the spec-of-CP. Primary evidence for this comes from reflexives and complementary distribution in the spec-of-CP.

Looking first to reflexives, the following examples demonstrate that the reflexives can be the object in a progressive-fronting constructions.

- (62) ndaa ni-yε tini
 1.SG.PST 1.SG.REFL pull
 ‘I pulled myself.’
- (63) ni-yε ndaa tini
 1.SG-REFL 1.SG.PST pull.PROG
 ‘I was pulling myself.’
- (64) *ni-yε.∅ ni tini
 1.SG-REFL.NFUT 1.SG pull
 INTENDED: ‘Myself pulls me.’
- (65) *ni ni-yε.∅ tini
 1.SG 1.SG-REFL.NFUT pull.PROG
 INTENDED: ‘Myself is pulling me.’
 GRAMMATICAL AS: ‘I am pulling myself.’

These examples demonstrate restrictions of reflexives, exemplifying that progressive-fronting is

an instance of A' movement. In Nafaanra, 'niye' is a Condition A reflexive, and therefore, must be bound in its clause (Chomsky, 1986). As shown in (62) and (63) reflexive objects can occur either in the low OV position or in a position higher than the subject; however, the the subject cannot be reflexive, regardless of whether the order is SOV or OSV. Example (64) shows for SOV order, the subject cannot be reflexive and example (65) shows that for OSV order, the subject cannot be reflexive; the reflexive can only be interpreted as an object, meaning OSV is ungrammatical but it is possible reinterpret the sentence as SOV with the object as the reflexive. This suggests that in OSV constructions, the object has moved to a position above the subject. Therefore, these reflexive examples illustrate that progressive-fronting cannot be an instance of A movement, and instead provide evidence that progressive-fronting is an instance of A' movement.

The surface location of objects in Nafaanra progressive-fronting is consistent with movement to the spec-of-CP. While other instances of object movement, such as Scandinavian object shift (among others: Bobaljik & Trainsson, 1998), are analyzed as movement of the object to the spec-of-TP, complementary distribution in the spec-of-CP position suggests the surface position of the object is the spec-of-CP.

There is complementary distribution of progressive-fronting and other types of movement to the spec-of-CP in Nafaanra. One example of this is the complementary distribution of WH-movement and progressive fronting. Nafaanra has WH-movement for all content questions. However, in the context of content questions, progressive-fronting is impossible in Nafaanra. The following examples demonstrate the complementarity of WH-movement and progressive-fronting:

- (66) *ɲmbi wraa maɲa kre tiniɪ hin*
 who 3.SG.PST.PROG rope DET pull.PROG Q.WH
 'Who was pulling the rope?'
- (67) **Maɲa kre ɲmbi wraa tiniɪ hin*
 rope DET who 3.SG.PST.PROG pull.PROG Q.WH
 INTENDED: 'Who was pulling the rope?'
- (68) **ɲmbi maɲa kre wraa tiniɪ hin*
 who rope DET 3.SG.PST.PROG pull.PROG Q.WH
 INTENDED: 'Who was pulling the rope?'
- (69) *Maɲa kre ɲmbi wraa ki tiniɪ hin*
 rope DET who 3.SG.PST.PROG it pull.PROG Q.WH
 'The rope-Who was pulling it?'
- (70) *Sena wraa maɲa kre tiniɪ hin*
 where 3.SG.PST.PROG rope DET pull.PROG Q.WH
 'Where was he pulling the rope?'
- (71) **Maɲa kre Sena wraa tiniɪ hin*
 rope DET where 3.SG.PST.PROG pull.PROG Q.WH
 INTENDED: 'Where was he pulling the rope?'

- (72) *Sena maɲa kre wraa tinii hin
 where rope DET 3.SG.PST.PROG pull.PROG Q.WH
 INTENDED: ‘Where was he pulling the rope?’
- (73) Maɲa kre sena wraa ki tinii hin
 rope DET where 3.SG.PST.PROG it pull.PROG Q.WH
 ‘The rope–Where was he pulling it?’
- (74) Nyila ŋgi nu wraa maɲa kre tinii hin
 time what at 3.SG.PST.PROG rope DET pull.PROG Q.WH
 ‘When was he pulling the rope?’
- (75) *Maɲa kre nyila ŋgi nu wraa tinii hin
 rope DET time what at 3.SG.PST.PROG pull.PROG Q.WH
 INTENDED: ‘When was he pulling the rope?’
- (76) *Nyila ŋgi nu maɲa kre wraa tinii hin
 time what at rope DET 3.SG.PST.PROG pull.PROG Q.WH
 INTENDED: ‘When was he pulling the rope?’
- (77) Maɲa kre nyila ŋgi nu wraa ki tinii hin
 rope DET time what at 3.SG.PST.PROG it pull.PROG Q.WH
 ‘The rope–When was he pulling it?’

Examples (66), (70) and (74) demonstrate typical WH-constructions in Nafaanra. Objects cannot move above the position of the WH-word, as shown in (67), (71), and (74), nor can the object move between the WH-word and the subject, as shown in (68), (72), and (76). However, (69), (73), (77) demonstrate that the object can appear in the left periphery if there is an anaphoric pronoun in the object position. This, however, is not progressive-fronting but instead left-dislocation (Rizzi, 1997).

The same blocking pattern observed for content questions does not occur in polar questions, as demonstrated in (78).

- (78) Maɲa kre u.∅ tinii ra
 rope DET 3.SG.NFUT pull.PROG Q
 ‘Was he pulling the rope?’

The progressive-fronting in polar questions demonstrated here rules out the possibility that progressive-fronting is not possible in content questions purely for pragmatic or semantic questions, unlike other potential examples of movement to the spec-of-CP such as English locative inversion where neither content nor polar questions allow for locative inversion (among others, Bruening, 2010). As such, progressive-fronting for polar but not content questions is consistent with the analysis of movement of the object to the spec-of-CP in progressive-fronting. In content questions, movement to the spec-of-CP is blocked as the position is occupied by the WH-item. However, in

polar questions, the spec-of-CP is unoccupied allowing movement of the object to the spec-of-CP. Thus, the complementarity of progressive-fronting and WH-movement in content questions exemplified here is consistent with A' movement of the object to the spec-of-CP.

3.3 Analysis of Progressive-Fronting

Movement to the spec-of-CP in progressive-fronting is consistent with altruistic movement, where movement, e.g. object movement, is driven by features of the head, i.e. C (Chomsky, 1995, 2000, 2001, 2004, 2008; Lasnik, 1995; McCloskey, 2001; Bošković, 2004; Cable, 2012; Zyman, 2017). Motivation for an altruistic movement account comes predominantly from the variability in word order where SOV order is possible in progressives, and verb and indirect object movement are also attested in progressive-fronting. This variability suggests that movement is driven by a higher head, which is in this case C based on the wh-movement evidence. As such, progressive-fronting is derived through a feature on C, similar to that of a EPP feature on T, that induces movement of a given element (Chomsky, 1995). Specifically, for progressive-fronting in Nafaanra, I argue that movement can be captured through a EPP:D feature associated with a C head specific to progressive constructions, inducing movement of a given DP to the spec-of-CP. This C head co-occurs with progressive aspect on T and V, except in the case of 'wa'-progressive constructions, and is referred to here as C_{PROG}. Furthermore, evidence from the complementary distribution of WH-movement and progressive fronting suggests that C_{PROG} cannot co-occur with other types C heads, i.e. C_{WH} and C_{FOCUS}, though further research is necessary to determine the precise nature of competition between these C heads.

While these basic mechanisms are capable of deriving the OSV word order observed in progressive-fronting, the movement must be constrained such that they are able to predict the observed data, where verb, object, and indirect object movement are attested. While OSV and VSV movement appear to be related, the doubling that occurs in the case of verbs suggests perhaps these phenomena are slightly different. Furthermore, the mechanisms that condition movement of nouns and verbs are likely to differ slightly. As such, this analysis will focus on the mechanisms that condition noun movement, i.e. objects and indirect objects⁸.

Evidence from ditransitives suggest that the EPP:D feature on C_{PROG} probes for the highest DP element, excluding the subject. In Nafaanra, there are a variety of surface word orders in ditransitive constructions with some verbs having only a double object construction, some having both a double-object construction and a postpositional phrase construction, and other verbs having only a postpositional phrase construction. Examples are demonstrated below:

- (79) Wra Akua hle tɔɔnri
 3.SG.PST Akua book read
 'She read Akua the book.'

⁸Carlson (1994) argues that in Supyire, the verb form found in progressives is the result of nominalization where the progressive verb is derived through a noun class suffix. Progressive endings in Nafaanra are consistent with this analysis as the progressive suffixes are consistent with nominal suffixes. Further exploration of this pattern may help to align an analysis of verb doubling in progressive-fronting with nominal progressive-fronting.

(80) Wra hɛ tɔɔnri Akua pan
3.SG.PST book read Akua to
'She read the book to Akua.'

(81) Ndaa Yaa ŋga sugbɔ wre
1.SG.PST Yaa give goat DET
'I gave Yaa the goat.'

(82) Ndaa dne kre tɛ tebru na
1.SG.PST stone DET put table on
'I put the stone on the table.'

These examples demonstrate three possible word orders for ditransitives in Nafaanra. Examples (79) and (81) demonstrate two types of double object constructions and (80) and (82) demonstrate ditransitive postpositional phrase constructions. While the verb for *read*, 'tɔɔnri', has both a double object and a postpositional phrase construction available, *give*, 'ŋga', has only a double object construction available and *put*, 'tɛ', has only a postpositional construction.

Patterns in ditransitive progressive-fronting preferences provide evidence that the highest element, excluding the subject, is preferred in progressive-fronting⁹. Examples of progressive-fronting in ditransitives are shown in the following examples¹⁰:

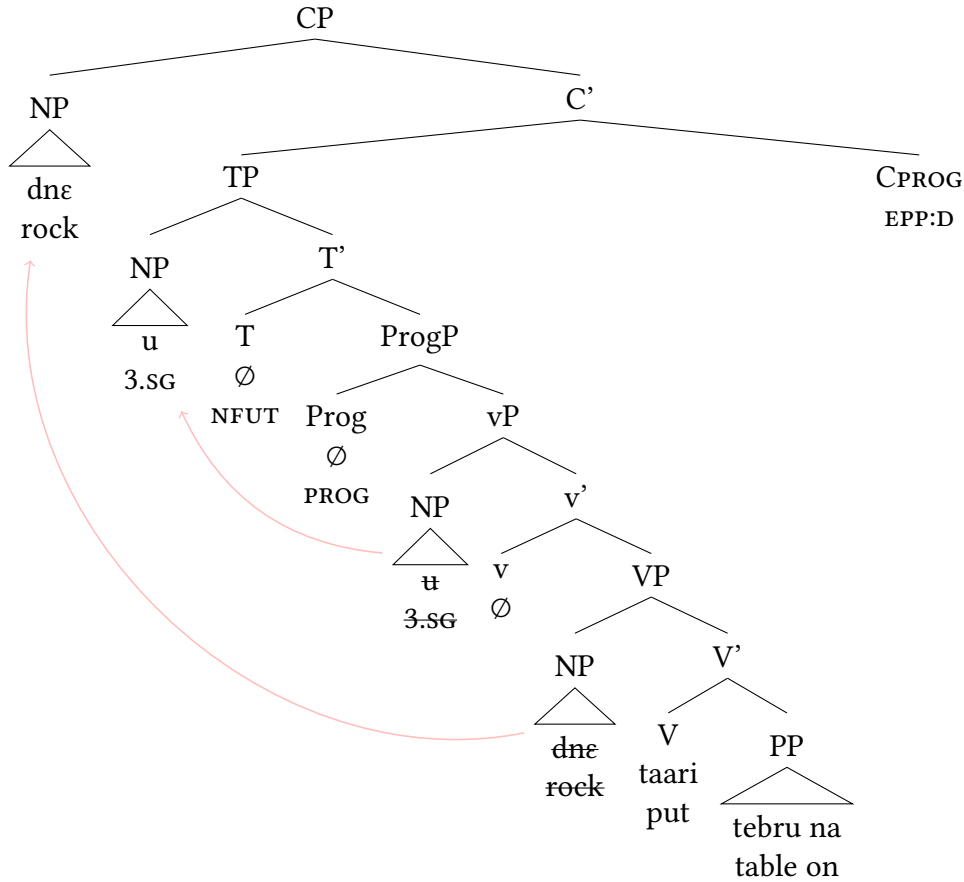
(83) Akua u.∅ hɛ tɔɔnrɪɪ
Akua 3.SG.NFUT book read.PROG
'She is reading Akua the book.'

(84) Yaa ni.∅ ŋgaa sugbɔ wre
Yaa 1.SG.NFUT give.PROG goat DET
'I am giving Yaa the goat.'

(85) Dne u.∅ taari tebru na
stone 3.SG.NFUT put.PROG table on
'He is putting the stone on the table.'

⁹There is some variability among speakers for whether the direct object or indirect object is preferred. The patterns discussed here are preferred in the majority of speakers, variation in order is likely due to the possibility of multiple underlying structures or differences in focus interpretation.

¹⁰C is head final in the tree represented in (86) in accordance with examples (18) (20) (22) that demonstrate that C is head-final.



(86)

In examples (83) and (84), the indirect object is preferred for progressive-fronting. However, in (85), the direct object is preferred for fronting. This alternation in preferred movement can be explained by the internal structure of these verbal phrases where in (83) and (84) the indirect object occurs higher than the direct object. However, in the case of (85), the indirect object is lower than the direct object, assuming a ditransitive structure like that proposed by Larson (1988).

While these mechanisms account for movement of objects and indirect objects, it cannot account for the optionality in progressive-fronting, as SOV order is also attested in progressives. Furthermore, a mechanism that probes for the highest DP should always select for the subject over the object, making the preference for object movement problematic. However, differences in interpretation between progressive-fronting and SOV progressives suggest differences in underlying structure. Specifically, SOV progressives elicit subject-focus interpretation indicating a FOCUS feature rather than the EPP:D feature in progressive-fronting constructions.

Furthermore, asymmetries between subjects and objects are predicted by restrictions on subject extraction such as those proposed by antilocality. Following Erlewine (2016), an element cannot be extracted from TP to CP because the distance is “too close”, as formalized in the following:

(87) *Spec-to-Spec Antilocality (SSAL)*

A'-movement of a phrase from the Specifier of XP must cross a maximal projection other than XP (Erlewine 2016:431).

Asymmetries between A' interactions for subjects and objects in Nafaanra are demonstrated in the following examples, where WH-subjects and subject-focus both result in resumption; however, movement of the object in either case does not result in resumption:

(88) ɲmbi wra hɛ kre tɔɔnrii hin
who 3.SG.PST book the read.PROG WH.Q
'Who was reading the book?'

(89) ɲga wra tɔɔnrii hin
what 3.SG.PST read.PROG WH.Q
'What was she reading?'

(90) Blɔ u.∅ chɔ tio
man 3.SG.NFUT pot carry.PROG
'It's the man carrying the pot.'

(91) Chɔ kre u.∅ tio
pot THE 3.SG.NFUT carry.PROG
'It's the pot he is carrying.'

This data illustrates asymmetries in A' interactions for subjects and objects. In (88) and (90), where the subject is targeted by the C probe, resumption is attested. Furthermore, tense is still valued on the resumptive pronoun, providing support that the pronoun must still move to spec-of-TP. However, extraction of the object, as shown in (89) and (91), does not result in resumption, thus offering support of spec-to-spec antilocality.

In addition to restrictions on spec-to-spec antilocality, an additional mechanism must be employed to account for the data in Nafaanra. Given that subject-focus and subject-WH questions result in resumption, it should be possible for C_{PROG} to target subjects as well, given resumption. However, this does not correctly predict the attested data for progressive-fronting in Nafaanra. Therefore, this study proposes that the C head in focus and WH constructions bears an additional feature, FOCUS and WH, respectively. In the case of focus and WH constructions, agreement can only occur where the target bears a matching FOCUS or WH feature. Thus for subject-focus and WH-subjects, only the subject can satisfy the probe. Since subject movement is unavailable and no other arguments can satisfy the probe, instead the subject is base-generated in the spec-of-CP, binding the resumptive pronoun in the spec-of-TP. Thus, resumption is a last resort to satisfy the probe when no other DPs bear the necessary features and no movement is possible. However, C_{PROG} only bears the EPP:D feature and can therefore be satisfied by any DP. While the probe would encounter the subject first, when movement is unavailable, it simply continues on to the next available DP, either the direct or the indirect object. Together, spec-to-spec antilocality and A' features are sufficient to capture the observed distribution of movement observed in progres-

sive fronting.

While this explanation provides the necessary driving force to motivate object movement in progressives, it does not necessarily motivate the existence of a $EPP:D$ feature. However, there is cross-linguistic evidence suggesting a link between CP and progressives. For instance, there is a similar pattern of object shift to the spec-of-CP in progressives in American Sign Language. Similar to the proposal here, Braze, (2004) also posits that the driving force of movement is the features of the head, i.e. altruistic movement. In progressives, Braze (2004) argues that there is an AspP that is a component of COMP. Asp^0 has a strong D feature that induces movement of the object in progressives. While movement in Nafaanra appears less restricted than that of ASL as indirect object movement is also attested, the pattern in ASL corroborates the analysis proposed here.

Thus, progressive-fronting in Nafaanra is derived through movement of a given element to the spec-of-CP. This movement is motivated by the feature $EPP:D$ on C_{PROG} , which probes for the highest DP, excluding the subject, which cannot be extracted, and results in movement of either the indirect object or the direct object. Though this account is able to predict many of the attested patterns, there remain a number of open questions. Specifically, further investigation on how verb movement is induced in progressives is necessary. Furthermore, it remains unclear why movement does not occur in *wa*-progressive constructions despite sharing the progressive auxiliary and verb inflectional patterns¹¹. As such, these questions are areas for future investigation.

4 Conclusion

Basic word order in Nafaanra can be described as SOV or more specifically as S(Aux)OVX. This pattern can be attributed to either a mix of head-final and head-initial projections with the VP, DP, PP, and CP as head-final and the TP as head-initial with postverbal clausal adjuncts. Alternatively, SOV word order can be accounted for via obligatory movement of arguments into the specifier of their functional head. Ultimately, both accounts are able to derive the attested SAuxOVX word order.

Progressive aspect is marked through an alternating verb form and two auxiliary patters that signify progressive aspect. The first is the locative construction where a combination of ‘*wa*’ and the progressive auxiliary ‘*na*’ signify progressive aspect. In this type of construction, no movement takes place except for in focus constructions. In the second type, only the progressive auxiliary is used. In these constructions, progressive-fronting is common and often preferred, particularly when the subject is a pronoun. Though the order attested in progressive-fronting constructions is the same as many focus constructions, the usage of the progressive-fronting structure is not consistent with an object focus interpretation.

The resulting word order of progressive-fronting can be attributed to movement of a DP from its base position to the spec-of-CP. Consistent with accounts of altruistic movement, progressive-

¹¹One possibility for future investigation is that ‘*wa*’ is the existential marker and occurs in spec-of-TP forcing the subject into a higher position.

fronting movement is motivated by a EPP:D feature on CPROG that targets the highest DP, excluding the subject, resulting in movement of the indirect object or direct object to the spec-of-CP. Subjects are ineligible for movement in these cases due to restrictions on subject extraction. Similar patterns suggesting a connection between C and focus constructions can be found cross-linguistically, for instance ASL. While this analysis provides an account for the attested data, further research on both the range of variation and the interpretation of progressive-fronting will be necessary to fully understand the parameters of this pattern.

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