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 ⌀ Amma gbun
Yaa NFUT Amma hit
‘Yaa hit Amma.’

(2) Maŋa e.∅ 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; Boškovic, 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 in 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 Senufo language spoken in Ghana, an outlier to the rest of the Senufo 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 Senufo 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 ∅ Amma gbun
Yaa NFUT Amma hit
‘Yaa hit Amma.’

(4) *Yaa ∅ 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 ∅ 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 $T^0$. 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 $\emptyset$ wa tebru kre na spoon.pl det.pl nfut there table det on ‘There are spoons on the table.’

(8) *dini yire $\emptyset$ 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 proceeds 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’

The 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.POS.
INTENDED: ‘our book’

(15) *hlɛ bichable
book girl
INTENDED: ‘a girl’s book’

(16) o hlɛ kre
1.PL.POS book DET
‘our book’ (definite)

(17) *kre o hlɛ
DET 1.PL.POS 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.’

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 Senufo 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>
<thead>
<tr>
<th>Non-Progressive</th>
<th>Progressive</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>tini</td>
<td>tinii</td>
<td>‘pull’</td>
</tr>
<tr>
<td>nyunɔ</td>
<td>nyunɔi</td>
<td>‘push’</td>
</tr>
<tr>
<td>gbun</td>
<td>gbun</td>
<td>‘hit’</td>
</tr>
<tr>
<td>kun</td>
<td>kuun</td>
<td>‘cut’</td>
</tr>
<tr>
<td>sɛ</td>
<td>shie</td>
<td>‘go’</td>
</tr>
<tr>
<td>pe</td>
<td>pini</td>
<td>‘do (s.thg)’</td>
</tr>
<tr>
<td>kɔ</td>
<td>koni</td>
<td>‘sing’</td>
</tr>
<tr>
<td>jawa</td>
<td>jawai</td>
<td>‘think’</td>
</tr>
<tr>
<td>yɔ</td>
<td>yoo</td>
<td>‘dance’</td>
</tr>
<tr>
<td>fɛ</td>
<td>feni</td>
<td>‘run’</td>
</tr>
</tbody>
</table>

In addition to inflection on the verb, Nafaanra has two progressive auxiliary markers wa and na demonstrated in (28) and (29).
(28) Kofi ∅ 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 ti o  
rice 1.PL PST.PROG carry.PROG  
‘We were carrying rice.’

(30) Kofi ∅ wa na jawa  
Kofi NFUT PROG PROG think.PROG  
‘Kofi is thinking.’ or ‘Kofi is there thinking.’

(31) gboo u.∅ 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>
<thead>
<tr>
<th>Person</th>
<th>Present Morpheme</th>
<th>Present Surface</th>
<th>Past Morpheme</th>
<th>Past Surface</th>
<th>Frog Morpheme</th>
<th>Pret-Prog Surface</th>
<th>Past-Prog Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.sg</td>
<td>ni</td>
<td>ni</td>
<td>ni + na → ndaa</td>
<td>ni</td>
<td>ni + na + na → ndaa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.pl</td>
<td>Kofi</td>
<td>Kofi + na → Kofi</td>
<td>Kofi + na → Kofi na</td>
<td>Kofi + na → Kofi na</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.sg</td>
<td>u</td>
<td>u + na → u</td>
<td>u + na + na → ndaa</td>
<td>u + na + na + na → ndaa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.pl</td>
<td>pe</td>
<td>pe + na → pe</td>
<td>pe + na + na → ndaa</td>
<td>pe + na + na + na → ndaa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.pl</td>
<td>o</td>
<td>o + na → o</td>
<td>o + na + na → o na</td>
<td>o + na + na → o na</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.pl</td>
<td>e</td>
<td>e + na → e</td>
<td>e + na + na → e na</td>
<td>e + na + na + na → e na</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 ŋglo chiin pe
     Pat pst chicken soup make
     'Pat made chicken soup.'

(33) Pat wra ŋglo 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 ‘fɛ’ 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  nglo  chiin pe
  Pat  PST  chicken soup  make
  ‘Pat made chicken soup.’

(39)  nglo  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  hlɛ  tɔɔnri
  Kofi  PST  girl  AN.DET  book  read
  ‘Kofi read the girl a book.’

(41)  Bichable  wre  Kofi na  hlɛ  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  sɛ  jafa  kre  na
  Kofi  PST  go  market  DET  to
  ‘Kofi went to the market.’

(43)  Jafa  kre  na  Kofi na  sɛ
  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 infrequently.\textsuperscript{2} 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.∅ \text{n} \text{a} na \text{g}buun  
\text{girl} 3.\text{sg.nfut prog prog} \text{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 elicitions 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 \textsuperscript{1} and were asked to describe the picture answering the question:

(45) Yirangi u.∅ \text{p}i\text{n}i \text{h}i\text{n}  
\text{What} 3.\text{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-fronting.\textsuperscript{3} This demonstrates that OSV order is strongly preferred in the progressive construction when answering the question ‘*Yirangi u pini hin?*’.

\textsuperscript{2}This 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.

\textsuperscript{3}Participants 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.
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 choose the subject-information-gap question like in (47).

(46)  Pat sro pini.\(^4\)
     ‘Pat is making food.’

(47)  Ṇmbi 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). For this subject focus task, 100% of responses in the contrastive and information gap context were SOV.

\(^4\)As shown in Table 1, pini is the progressive form and pɛ is the non-progressive form of the verb ‘do’.
\(^5\)Task was adapted from QUIS (Skopeteas et al., 2006)
Subject Information Gap Stimuli

(49) ŋmbi u.∅ chlo wre le hin
who 3.SG.NFUT woman DET look.PROG Q.WH
‘Who is looking at the woman?’

Sample Information Gap Response

(50) Blɔ wre ∅ chlo wre le
man 3.SG NFUT woman DET look.PROG Q.WH
‘The man is looking at the woman.’

Contrastive Subject Stimuli

(51) Blɔ ndee chlo ∅ cho kre tio ra
man or woman NFUT pot DET carry.PROG Q
‘Is a man or a woman carrying the pot?’

Sample Contrastive Subject Response

(52) Blɔ ∅ cho 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: ‘blɔ u chlo 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 examples:

(54) Mɛɛ mu.∅₁ koni ra 
    song 2.sg.nfut₁ sing.prog Q 
    ‘Are you₁ singing?’

(55) ef前所未有, mee ni.∅₁ oni 
    yes song 1.sg.nfut₁ sing 
    ‘Yes, I₁ am singing.’

(56) ɔɔnhɔɔ, mee u.∅₂ koni 
    No song 3.sg.nfut₂ sing 
    ‘No, she₂ is singing.’

(57) Maŋa mu.∅₁ tinii ra 
    rope 2.sg.nfut₁ pull.prog Q 
    ‘Are you₁ pulling the rope?’

(58) ef前所未有, maŋa ni.∅₁ tinii 
    Yes rope 1.sg.nfut₁ pull.prog 
    ‘Yes, I₁ am pulling the rope.’

(59) ɔɔnhɔɔ, maŋa u.∅₂ tinii 
    No rope 3.sg.nfut₂ pull.prog 
    ‘No, she₂ 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.∅₁ tebru tinii ra 
    3.sg.nfut₁ table pull.prog Q 
    ‘Is he₁ pulling the table?’

Speakers also provided a simple negation response, but OSV order is generally dispreferred in negation.
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) \[\text{n\text{d}aa} \text{n\text{i-\text{y\text{e}}} t\text{ini}}\]
\[\text{1.SG.PST} \text{1.SG.REFL pull}\]
\[\text{‘I pulled myself.’}\]

(63) \[\text{n\text{i-\text{y\text{e}}} n\text{d}aa t\text{inii}}\]
\[\text{1.SG-REFL 1.SG.PST pull.PROG}\]
\[\text{‘I was pulling myself.’}\]

(64) \[\text{‘n\text{i-\text{y\text{e}.∅ n\text{i tini}}}\]
\[\text{1.SG-REFL.NFUT 1.SG pull}\]
\[\text{INTENDED: ‘Myself pulls me.’}\]

(65) \[\text{‘n\text{i n\text{i-\text{y\text{e}.∅ tini}}}\]
\[\text{1.SG 1.SG-REFL.NFUT pull.PROG}\]
\[\text{INTENDED: ‘Myself is pulling me.’}\]
\[\text{GRAMMATICAL AS: ‘I am pulling myself.’}\]

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 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) ṇmbi wraa maŋa kre tinii hin
who 3.SG.PST.PROG rope DET pull.PROG Q.WH
‘Who was pulling the rope?’

(67) *Maŋa kre ṇmbi wraa tinii hin
rope DET who 3.SG.PST.PROG pull.PROG Q.WH
intended: ‘Who was pulling the rope?’

(68) *ŋmbi maŋa kre wraa tinii hin
who rope DET 3.SG.PST.PROG pull.PROG Q.WH
intended: ‘Who was pulling the rope?’

(69) Maŋa kre ṇmbi wraa ki tinii hin
rope DET who 3.SG.PST.PROG it pull.PROG Q.WH
intended: ‘The rope—Who was pulling it?’

(70) Sena wraa maŋa kre tinii hin
where 3.SG.PST.PROG rope DET pull.PROG Q.WH
‘Where was he pulling the rope?’

(71) *Maŋa kre Sena wraa tinii hin
rope DET where 3.SG.PST.PROG pull.PROG Q.WH
intended: ‘Where was he pulling the rope?’
(72) *Sena maŋa kre wraa tinii hin
where rope DET 3.SG.PST proq pull.prog Q.WH
INTENDED: ‘Where was he pulling the rope?’

(73) Maŋa kre sena wraa ki tinii hin
rope DET where 3.SG.PST proq it pull.prog Q.WH
‘The rope – Where was he pulling it?’

(74) Nyila ŋgi nu wraa maŋa kre tinii hin
time what at 3.SG.PST proq rope DET pull.prog Q.WH
‘When was he pulling the rope?’

(75) *Maŋa kre nyila ŋgi nu wraa tinii hin
rope DET time what at 3.SG.PST proq pull.prog Q.WH
INTENDED: ‘When was he pulling the rope?’

(76) *Nyila ŋgi nu maŋa kre wraa tinii hin
time what at rope DET 3.SG.PST proq pull.prog Q.WH
INTENDED: ‘When was he pulling the rope?’

(77) Maŋa kre nyila ŋgi nu wraa ki tinii hin
rope DET time what at rope DET 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) Maŋa 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 analy-
sis 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 CPROG. Furthermore, evidence from the complementary distribution of wh-movement and progressive fronting suggests that CPROG cannot co-occur with other types C heads, i.e. CWH and CFOCUS, 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 objects.

Evidence from ditransitives suggest that the EPP:D feature on CPROG 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.’

Carlson (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.
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-fronting.

(80) Wra sticky 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.’

(83) Akua u.∅ sticky tɔɔnrii
Akua 3.sg.nfut book read.prog
‘She is reading Akua the book.’

(84) Yaa ni.∅ ŋga 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.
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:
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) ŋmbi wra hłę kre tɔɔnrii hin
who 3.SG.PST book the read.PROG WH.Q
‘Who was reading the book?’

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

(90) Blɔ u.∅ cho tio
man 3.SG.NFUT pot carry.PROG
‘It’s the man carrying the pot.’

(91) Cho 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 Cprog 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, Cprog 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 simple 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. Asp⁰ 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 patterns. 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 patterns 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-

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1 One 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.

References


