

Conditions on object drop in Mabia languages: Diagnosing gaps vs. null objects

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1. Introduction

- The Mabia languages (formerly Gur, Northern Ghana) allow null objects (NOs) but not null subjects.
- In this talk, we show that NOs are pervasive in the apparent base-position of long-distance wh-movement constructions.
- Thus, we argue that there actually is no long-distance wh-movement in these languages, as these constructions always involve a pronoun (overt for subjects, null for objects) in the embedded base position of the wh-element.

1.1. Outline

- **Section 2** provides some introduction into the syntax of the Mabia languages as well as the constructions under discussion.
- **Section 3** introduces the data that lead to the observation that there is no long-distance A'-movement in Mabia languages. Evidence comes from imperfective marking, islands, and reconstruction.
- **Section 4** briefly sketches an analysis and discusses open problems.
- **Section 5** concludes.

2. Background on the Mabia languages

General background:

- The Mabia languages (Niger-Congo) are spoken in the Sahelian and Savanna regions of West Africa, namely in Burkina Faso, southern Mali, northeastern Ivory Coast, **the northern halves of Ghana** and Togo, northwestern Benin, and southwestern Niger. Additionally, a single Mabia language, Baatonum, is spoken in the extreme northwest of Nigeria.
- There are about 70 languages belonging to this group.
- In this talk we focus on data from three Mabia languages, as not all of the phenomena occur in the same language:
 - **Dagbani** (1,160,000 speakers, north-east Ghana)
 - **Farefari** (1 million speakers, central-north Ghana), particularly the standard dialect **Gurene**
 - **Sisaali** (250,000 speakers, north-west Ghana), particularly the dialect **Pasaali**
- Each of these languages consists of dialects that differ mainly in lexical material, including lexemes and functional markers.
- The data presented in this talk¹ are representative in their constructions for all dialects of the specific languages, however, in all cases, they are concretely taken out of one dialect of the language.²

Linguistic Background:

- Mabia languages are consistently SVO and allow only little variation in word order.
- Grammatical categories, such as TAM, negation, voice, etc., are mostly marked by independent preverbal particles even though a considerable number of stem alternations and suffixes can also be found in some languages.
- All Mabia languages are tone languages. In the data below, we indicate tone only where we are sure about the tonal patterns, as, at this point, we have not fully processed all of it. Importantly, tone is overwhelmingly lexical. To our knowledge, there are no instances where tone interacts with the syntactic structures we discuss here.
- Some Mabia languages like Likpakpaanl have a noun class system as also known from Bantu languages. However, mostly, the noun class distinction is minimal to non-existent.
- Mabia languages use serial verb constructions productively.

¹If not indicated otherwise, our data have been elicited during field-work in Ghana and Germany in 2022 and 2023. We would like to thank our speakers Fawwziya Issah, Samuel Alhassan Issah, Abdul Bachi Salifu, John Naporo Napari (Dagbani), Theresa Anamolga Salma, Daniel Asom Akologo (Gurene), as well as Irene Basimagan Dumah and Ndongowira Luri (Sisaali).

²For example, the Sisaali data are all taken from the Pasaali-Sisaali dialect. But the standard dialect Tumulung-Sisaali behaves identical with respect to the discussed properties.

2.1. Literature about (the syntax of) the languages

- **Dagbani:** Olawsky (1999); Hudu (2009); Issah (2013); Inusah (2017); Issah (2018, 2020); Bodomo et al. (2020); Issah and Acheampong (2021)
- **Gurene:** Schaefer (1975); Kropp-Dakubu (1991, 1996); Nsoh (1997); Kropp-Dakubu (2000, 2003a,b); Kropp Dakubu (2005); Atintono (2006, 2011, 2013); Bodomo et al. (2020)
- **Sisaali:** Blass (1989a,b, 1990); Samuel Fembeti (1999); Moran (2006); Mustapha (2018)

2.2. Null objects in the Mabilia languages

- As far as we know, all Mabilia languages exhibit optional object drop, but prohibit subject drop as exemplified for Dagbani in (1)-(5).
- When an object of a semantically transitive verb is dropped in a declarative clause, a final marker *ya* (a disjoint marker) follows the verb (for more discussion on *-ya*, see the appendix).

- (1) Nákòhà máa kú-yá \emptyset .
butcher DEF kill.PFV-DJ
'The butcher has killed (it).' (Dagbani)
- (2) A M bi nya-ri sima maa.
1SG NEG see-IPFV groundnut DEF
'I cannot find the groundnuts.'
B Beneeti di-ya \emptyset !
Beneeti eat.PFV-DJ
'Beneeti ate (them)!'
(Dagbani)
- (3) Mma dùyí-rí yún bìndírígù kà Beneeti gbá dùyí-rá \emptyset .
Mma prepare-IPFV night food and Beneeti EMPH prepare-IPFV
'Mma prepares dinner, and Beneeti prepares (it, too).'
- (4) Q Pete dá-rí lá nóonìmdí máa bée ó bì dá-rí lí?
Pete buy-IPFV FOC chicken DEF or 3SG NEG buy-IPFV it
'Is Pete buying the chicken or is he not buying it?'
A Ò dá-rá \emptyset .
3SG buy-IPFV
'He is buying (it).'
- A' * \emptyset dá-rá lí.
buy-IPFV it
int.: '(He) is buying it.' (Dagbani)

(5) Q Á dì zú yílí máa bée á dì bì zú yílí máa?
 2SG PST swipe.PFV house DEF or 2SG PST NEG swipe.PFV house DEF
 ‘Did you swipe the house or did you not swipe the house?’

A1 N̄ dì zú lí.

1SG PST swipe.PFV it

A2 N̄ dì zú Ø mí.

1SG PST swipe.PFV FOC

A3 N̄ dì zú-yá Ø.

1SG PST swipe.PFV-DJ

‘I did swipe (it).’

(Dagbani)

- The data in (2)-(5) show different cases of NO-constructions.
- While most antecedents seem to be definite, indefinite (= unmarked) DP antecedents are possible (3).
- Similarly, animate as well as inanimate antecedents are possible. So far, we lack clear cases of human antecedents.
- As expected, in main clauses, the NOs co-vary with overt pronouns, as clearly shown in (5).

2.3. Wh-questions

- This talk focuses on wh-question and the distribution of NOs vs. gaps in these questions.
- The Mabilia languages are optional wh-fronting languages: wh-questions can be formed in-situ or ex-situ, with ex-situ constructions showing similarities to focus fronting.
- (6) and (7) show ex-situ wh-questions for objects and subjects, respectively, all from Dagbani.
- We assume that these main clause questions are based on wh-movement with a trace in the base position of the wh-element.

(6) Q Bò kà páyà máa dá-rá?
 what FOC woman DEF buy-IPFV

‘What is the woman buying?’

A N̄m̄dí kà páyà máa dá-rá.

meat FOC woman DEF buy-IPFV

‘The woman is buying MEAT.’

(Dagbani)

(7) Q ɲùní n̄ dàà dá búá?

who FOC PST buy.PFV goat

‘Who bought a goat some time ago?’

A **Beninya** **ń** dàà dá búá.
 Beninya FOC PST buy.PFV goat
 ‘BENINYA bought the goat some time ago.’ (Dagbani)

- Non-subject questions can also occur in-situ, as shown in (8), while subject questions can only occur ex-situ, i.e. like shown in (7).

(8) Q Napari dá **lá** **bó**?
 Napari buy.PFV FOC what
 ‘What did Napari buy?’
 A Napari dá **lá** **búá**.
 Napari buy.PFV FOC goat
 ‘Napari bought A GOAT.’ (Dagbani)

- Long distance (LD) wh-questions show another potential asymmetry between subject and object questions.
- Object LD questions show an apparent gap in the base position of the object (9).
- Subject LD questions, however, have an obligatory (resumptive) pronoun in the base position of the wh-element.³

(9) Q **Bo** **ka** Ama b̄hi ni John kuwarigi-ya **∅**?
 what FOC Ama ask COMP John slaughter-DJ
 ‘What did Ama ask that John slaughtered?’
 A **Noo** **ka** Peter ȳli ni John kuwarigi-ya **∅**.
 fowl FOC Peter say COMP John slaughter-DJ
 ‘Peter said that John slaughtered A FOWL.’ (Dagbani)

(10) Q **ɲuni** **ka** Ama b̄hi ni **o** kuwarigi noo?
 who FOC Ama ask COMP 3SG slaughter fowl
 ‘Who did Ama ask slaughtered a fowl?’
 A **John** **ka** Peter ȳli ni **o** kuwarigi noo.
 John FOC Peter say COMP 3SG slaughter fowl
 ‘Peter said that JOHN slaughtered a fowl.’ (Dagbani)

- In the next section, we will argue that the contrast in (9) vs. (10) is just superficial.
- Due to the option of NOs in these languages, LD wh-questions always have a pronoun in the base position of the wh-element, for wh-objects, this pronoun is simply a NO.

³Note that the marker in the LD subject question is *ka*, indicating that the contrast between *n* and *ka* is conditioned by local subject vs. everything else.

3. Evidence against long distance wh-movement

- In this section, we discuss different pieces of data that suggest that there actually is no movement in the embedded clause in long distance wh-questions.

3.1. Imperfective Marking

- In some Mabia languages, the imperfective marker shows an allomorphy with respect to A'-movement: If an object or low adjunct has been moved to the left-periphery, a different marker shows up than with no A'-movement or A'-movement of the subject (see also Himmelreich and Mursell prep).
- Starting with Gurene (Atintono 2013), the language marks imperfective aspect with the verbal suffix *-(r)i*, see (11).

(11) Atiṇa bo'ɔ-**ri**/*-ra la Ania dukɔ.
 Atiṇa give-IPFV LA Ania pot
 'Atiṇa is giving Ania a pot.' (Gurene)

- The morpheme *-(r)i* changes to *-(r)a* with a trace of A'-movement in its c-command domain, thus, with object movement, but not with subject movement, (12), or in situ focus (13).

(12) a. **Ani**_i ti Atiṇa bo'ɔ-**ra**/*-ri **t**_i dukɔ?
 who FOC Atiṇa give-IPFV pot
 'Whom was Atiṇa giving a pot?'
 b. **Ani** n kōrege-**ri** nua?
 who FOC slaughter-IPFV fowl
 'Who is slaughtering fowl?' (Gurene)

(13) a. **Besa**_i ti Adam mɛ-**ta** yire **t**_i?
 where FOC Adam build-IPFV house?
 'Where is Adam building a house?'
 b. Adam mɛ-**ti** yire **la batiṇa**.
 Adam build-IPFV house LA village
 'Adam is building a house in the village.' (Gurene)

- Similarly, in Sisaali, the imperfective marker changes from *aa* (see (14)) to *ki* when a non-subject is A'-moved, see (15)–(16).

(14) Adama **aa** kɔvɔ jimii rɛ.
 Adama IPFV kill fowl FOC
 'Adama is slaughtering a fowl.' (Sisaali)

- (15) a. **Puŋ bee_i** rɛ gelii hu **ki** kpu **t_i**?
 animal which FOC cat DEF IPFV kill
 ‘Which animal is the cat killing?’
 b. **Puŋ bee_i** rɛ **t_i** **aa** kpu gelii hu?
 animal which FOC IPFV kill cat DEF
 ‘Which animal is killing the cat?’ (Sisaali)
- (16) a. **Lee** rɛ Luri **ki** puŋ doo **t_i**?
 where FOC Luri IPFV lie sleep
 ‘Where is Luri sleeping?’
 b. Luri **aa** puŋ doo **v dɪɑ tɪɑŋ** nɛ.
 Luri IPFV lie sleep 3SG house room FOC
 ‘Luri is sleeping in his room.’
 c. **v dɪɑ tɪɑŋ** nɛ, Luri **ki** puŋ doo **t_i**.
 3SG house room FOC Luri IPFV lie sleep
 ‘Luri is sleeping in his room.’ (Sisaali)

3.1.1. No movement in the embedded clause

- In cases of apparent long-distance A'-movement, the lower verb still shows the *-(r)i* or *aa* form respectively, indicating that no A'-trace is present (17) and (18).⁴

- (17) **Beni** ti Ama soke [ti John kōrege-**ri**/*-ra ya **Ø**]?
 what FOC Ama ask COMP John slaughter-IPFV YA
 ‘What did Ama ask that John is slaughtering?’ (Gurene)
- (18) **Bekiŋ** nɛ ɪ fɑ bɑɑ [dɪ John fɑ **aa**/*kɪ kpu **Ø**]?
 what FOC 2SG PST say COMP John PST IPFV kill
 ‘What did you say that John was slaughtering?’ (Sisaali)

- Note that if fronting takes place inside the embedded clause, the embedded verb shows the expected change from *-(r)ilaa* to *-(r)alkɪ*, see (19).
- Again, this shows that the marking does not depend on differences between matrix and embedded clause.

- (19) Ama n soke [ti beni_i ti John kōrege-**ra** t_i].
 Ama FOC ask COMP what FOC John slaughter-IPFV
 ‘Ama asked what John is slaughtering.’ (Gurene)

⁴Note that in example (17), there is also the sentence-final *ya* again that is incompatible with movement. See section A.0.1 for more details.

3.1.2. Movement in the matrix clause

- The matrix clause patterns with movement: If the embedding verb is in the imperfective, it is marked by *-(r)alki* if movement crosses the verb.

(20) **Bekiŋ** nɛ ɪ fα **ku**/*aa liisi [nɪ John fα **aa** kpɔ **Ø**]?
 what FOC 2SG PST IPFV think COMP John PST IPFV kill
 'What were you thinking that John was slaughtering?' (Sisaali)

- If there is no movement across the matrix verb, the non-movement imperfective form shows up.

(21) Ama soke-**ri** la [sela ti John kōrege-**ra** la (yele)].
 Ama ask-IPFV LA something COMP John slaughter-IPFV LA thing
 'Ama is asking what John is slaughtering.' (Gurene)

3.2. Islands

3.2.1. Movement in the matrix clause

- In simple clauses, extraction out of an island is not allowed, see (22-b) for adjunct islands and (23-b) for subject islands. (22-a) and (23-a) provide the baseline.

(22) Adjunct island

- a. Ama layiri sa barigi su'wahla [_{Isl} dama nayiy'ya n sa
 Ama money HEST.PST miss yesterday because thief FOC HEST.PST
 zu **o baagi_i**].
 steal 3SG bag
 'Ama lost money yesterday because a thief stole her bag.'
- b. ***O baagi_i** ka Ama layiri sa barigi su'wahla [_{Isl} dama nayiy'ya
 3SG bag FOC Ama money HEST.PST miss yesterday because thief
 n sa zu **t_i**].
 FOC HEST.PST steal
 int.: 'Her bag, Ama lost money yesterday because a thief stole.' (Dagbani)

(23) Subject island

- a. [_{Isl} Ama ni nyɛ **layiri maa_i**] di suwaŋ la o yij nima.
 Ama COMP get money DEF PST help LA 3SG family
 'Ama receiving money helped her family.'
- b. ***Layiri maa_i** ka [_{Isl} Ama ni nyɛ **t_i**] di suwaŋ la o yij nima.
 money DEF FOC Ama COMP get PST help LA 3SG family
 int.: 'Money, Ama receiving helped her family.' (Dagbani)

3.2.2. No movement in the embedded clause

- An island in the embedded clause does not produce a violation, see (24) for embedded adjunct islands and (25) for embedded subject islands.

(24) Adjunct island

a. Ama ni [o layiri n sa bariga suwah'la [_{Isl} dama nayiy']
 Ama COMP 3SG money FOC HEST.PST miss yesterday because thief
 n sa zu **o baagi_i**]].
 FOC HEST.PST steal 3SG bag

‘Ama said that she lost money yesterday because a thief stole her bag.’

b. ? **O baagi_i** ka Ama ni [o layiri n sa bariga suwah'la [_{Isl}
 3SG bag FOC Ama COMP 3SG money FOC HEST.PST miss yesterday
 dama nayiyi n sa zu **∅_i**]].
 because thief FOC HEST.PST steal

‘Ama said that she lost money yesterday because a thief stole her bag.’

(Dagbani)

(25) Subject island

a. John yeli mi [ni [_{Isl} Ama ni nyε **layiri maa_i**] di suwaŋ o
 John say MI COMP Ama COMP get money DEF PST help 3SG
 yiŋ nima].
 family

‘John said that Ama receiving the money helped her family.’

b. **Layiri maa_i** ka John yeli [ni [_{Isl} Ama ni nyε **∅_i**] di suwaŋ o
 money DEF FOC John say COMP Ama COMP get PST help 3SG
 yiŋ nima].
 family

‘John said that Ama receiving the money helped her family.’

(Dagbani)

3.3. Reconstruction

3.3.1. Adverbs

- Fronted adverbs cannot be interpreted in the embedded clause, see (26) and (27).

(26) a. Ama mali tamha [ni John ni miε yili palli **yom yom**].
 Ama have hope COMP John FUT build house new quickly
 ‘Ama hopes that John will build a new house quickly.’

- b. **Yom** ka Ama mali tamaha [ni John ni miε yili palli].
 quickly FOC Ama have hope COMP John FUT build house new
 ‘Ama is quick to hope that John will build a house.’
 NOT: ‘Ama hopes that John will build a new house quickly.’ (Dagbani)

- (27) **Suwah’la** ka Peter yeli [ni John kuwarigi la noo].
 yesterday FOC Peter say COMP John slaughter LA fowl
 ‘Peter said yesterday that John slaughtered a fowl.’
 NOT: ‘Peter said that John slaughtered a fowl yesterday.’ (Dagbani)

3.3.2. Binding

- In simple clauses, a fronted object containing a pronoun can be bound by the subject, see (28-a).
- However, reconstruction cannot go into the embedded clause (28-b).

- (28) a. **O_{i/?j} nahu_k** ka pukpari kam_j ku **t_k**.
 3SG cow FOC farmer each kill
 ‘His cow, every farmer killed.’
 b. **O_{i/*j} nahu_k** ka a yeli [ni pukpari kam_j ku **Ø_k** ya].
 3SG cow FOC 2SG say COMP farmer each kill YA
 ‘His cow, you said that every farmer killed.’ (Dagbani)

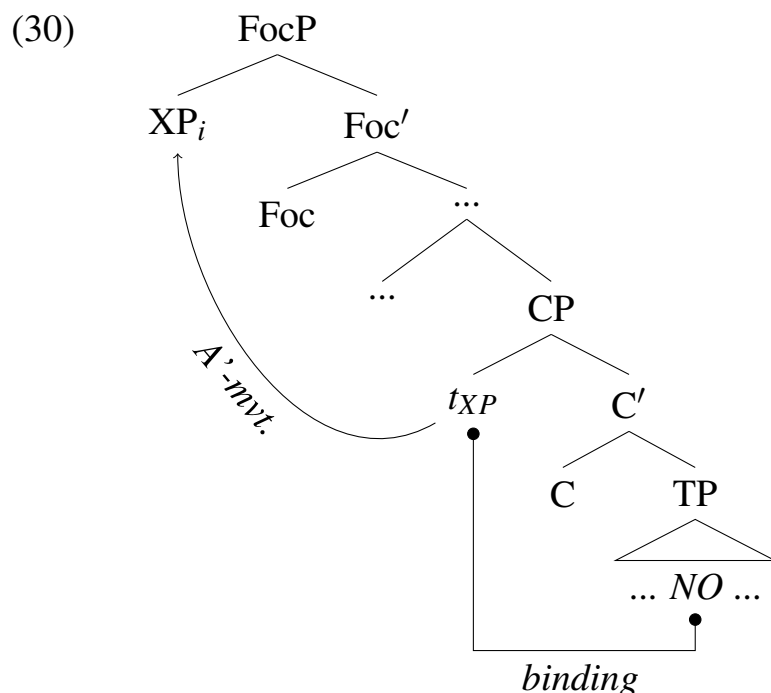
- Reconstruction for binding of elements in the matrix clause is considered better.

- (29) a. Pukpari kam_i yeli **o_i nahu_k** [ni o ni ku o bieyoni].
 farmer each say 3SG cow COMP 3SG FUT kill 3SG tomorrow
 ‘Every farmer told his cow that he will kill it tomorrow.’
 b. **O_{i/?j} nahu_k** ka pukpari kam_j yeli **t_k** [ni o ni ku o bieyoni].
 3SG cow FOC farmer each say COMP 3SG FUT kill 3SG tomorrow
 ‘His cow, every farmer told that he will kill it tomorrow.’ (Dagbani)

4. Towards an analysis

- Given the data in section 3, we assume that all cases of apparent LD movement discussed above do not involve movement in the embedded clauses at all.
- However, we assume that there is movement in the matrix clause.
- Concretely, we assume that the wh/focal elements are merged in the edge of the embedded CP and move from there into the left periphery of the matrix clause.
- Importantly, we assume that the embedded clause contains a null element, which in most cases is a null object, in the respective argument position of the embedded clause.

- This element is bound by the XP in Spec,CP of the embedded clause (cf. Merchant 2004), thereby identifying the XP as the argument of the embedded clause.



Prolepsis

- This analysis takes this phenomenon to be similar (but not equal) to prolepsis.
- Prolepsis concerns cases like (31) from German Salzmänn (2017)

(31) Von **welchem Maler_i** glaubst du, dass Maria **ihn_i** mag?
of which.DAT painter think.2SG you that Maria him like
‘Of which painter do you think that Mary likes him?’

- While (31) seems similar to (30), the analysis in Salzmänn (2017) is actually very different.
- What is similar, though, is an operator in the edge of the embedded CP binding a pronominal variable in the embedded clause.
- This binding relation requires the bound element in the embedded clause to be pronominal, due to Principle C.
- Comparable analyses have been proposed to account for long-distance wh-movement in general (Bošković 2017; den Dikken 2010), but see Georgi (2014) for a critical discussion.

Null Objects in the embedded clause

- As we saw, the Mabia languages have Null Objects (32)–(33) (see also Korsah and Murphy (2019) for Asante Twi), but no Null Subjects (33).

- NOs in matrix clauses vary with overt pronouns (32).

(32) a. N zaŋ buku maa n-pa table zuyu.

1SG put book DEF PRE-on table head
‘I put the book on the table.’

b. N zaŋ \emptyset / li pa table zuyu.

1SG put it on table head
‘I put (it) on the table.’

(Dagbani)

(33) * \emptyset zaŋ li pa table zuyu.

put it on table head

int.: ‘I put it on the table.’

(Dagbani)

- However, an overt object pronoun in the embedded clause is not possible (34), i.e. the optionality visible in the matrix clause disappears in the embedded clause.

(34) **Doo maa_i** ka John ye_ili [ni Ama puhi ***o_i**].

man DEF FOC John say COMP Ama greet 3SG

‘John said that Ama greeted the man.’

(Dagbani)

- Thus, we are left with (at least) two puzzles:

- Why do the Mabia languages allow Null Objects but not Null Subjects in matrix as well as in embedded clauses?
- Why do Null Objects in embedded clauses become obligatory in the base position of long-distance wh-movement?

- We believe the answers to these two questions are related, but can only speculate here.
- First, note that an asymmetry between subjects and non-subjects is very pervasive in the languages, not just for LD-question, but also in matrix question, as well as other A’-constructions like relative clauses.
- In general, the Mabia languages have a strong preference for overt subjects, which might be due to a strong [EPP], possibly in combination with a generally very high subject position.
- Second, we assume that in the embedded clause, Null Pronouns in the base positions of long-distance wh-dependencies are preferred, as overt pronouns in positions where covert ones are possible, often require some contrastive interpretation.
- Thus, the distribution of Null Pronouns in embedded clauses is governed by different conflicting constraints, which could be derived fairly straightforwardly in an optimality-theoretic approach.

5. Conclusion

- The Mabilia languages have Null Objects but not Null Subjects.
- Despite its appearance at first glance, a closer look reveals that the Mabilia languages lack long distance extraction and instead consistently use pronouns in the base positions of the wh-elements in LD-extraction contexts, with the objects being null.
- This is indicated by various morphological diagnostics, island tests and reconstruction.
- In addition to further investigating the conditions for Null Objects in these languages, we believe that this pattern suggests the necessity of a deeper investigation as to whether the Mabilia languages have proper clausal embedding in the first place.

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A. ya-Marking

- Sentence-final perfective verbs in the out-of-focus form need a verbal extension (y)a in Dagbani and Gurene.⁵
- With focus movement – no matter if the subject or the object is focused – the marker is obligatorily absent, as illustrated in the contrast in (35-a)/(36-a) vs. (35-b)/(36-b).

- (35) a. Adam tum-*(ya).
Adam work.PFV-YA
'Adam worked.'
- b. Adam n tum-(*ya).
Adam FOC work.PFV-YA
'ADAM worked.'
- (Dagbani)

- (36) a. Adam tum *(ya).
Adam work.PFV YA
'Adam worked.'
- b. Adam (n) tum (*ya).
Adam FOC work.PFV YA
'Adam worked.'
- (Gurene)

- Also, the marker does not appear with transitive clauses when an object (or an adverbial) follows the verb and prevents the verb from being sentence-final, (37-a) and (38-a).
- Even if the object moves away, (37-b) and (38-b), resulting in a sentence-final verb, -ya does not occur, as if the trace of the object counts for sentence-finality.

- (37) a. Adam korigi-(*ya) (la) noo.
Adam slaughter.PFV-YA LA fowl
'Adam slaughtered fowl.'
- b. Bo_i ka Adam korigi-(*ya) t_i?
what FOC Adam slaughter.PFV-YA
'What did Adam slaughter?'
- (Dagbani)

- (38) a. Adam koregɛ-(*ya) nua.
Adam slaughter.PFV-YA fowl
'Adam slaughtered fowl.'
- b. Beni_i *(ti) Adam koregɛ-(*ya) t_i?
what FOC Adam slaughter.PFV-YA
'What did Adam slaughter?'
- (Gurene)

⁵Hartmann (2022) argues that the imperfective sentence-final marker -a is the same element as the perfective sentence-final-(y)a in Dagbani. Note that -a, unlike -(y)a, occurs sentence-finally independent of subject movement. Hartmann (2022) argues that this is due to additional structure of the imperfective marking. The issue is not discussed here further because it is orthogonal to the present argument.

- Interestingly, the marker does occur with otherwise transitive verbs if the object is dropped, see (39) and (40).

(39) a. N di-***(ya)** **Ø**.

1SG eat.PFV-YA

'I ate.'

b. N di-***(ya)** (la) sakolo.

1SG eat.PFV-YA FOC fufu

'I ate fufu.'

(Dagbani)

(40) a. Ma di ***(ya)** **Ø**

1SG eat.PFV YA

'I ate.'

b. Ma di ***(ya)** la sagekɔra.

1SG eat.PFV YA DET fufu

'I ate the fufu.'

(Gurene)

- More generally, the marker is not just absent with focus movement but in general with all A'-dependencies (e.g. wh-movement in (41) and (42), relativization in (43), negation in (44), and even in coordination in (45)), even if the verb is sentence-final prior to movement because the dependency involves the subject, see (41)-(42).

(41) **ɲuni** n tum-***(ya)**?

who FOC work.PFV-YA

'Who worked?'

(Dagbani)

(42) **Ani** (n) tum ***(ya)**?

who FOC work.PFV YA

'Who worked?'

(Gurene)

(43) a. tiɲa **sheli** n ni yu-***(ya)**

land DET 1SG COMP love.PFV-YA

'a country I loved'

b. bi-puyim-bila **so** ɲun duyi-***(ya)**

child-FEM-DIM DET 3SG cook.PFV-YA

'a girl that cooked'

(Dagbani)

(44) Adam zaam **ka** tuum ***(ya)**.

Adam yesterday NEG work YA

'Adam did not work yesterday.'

(Gurene)

(45) Mma yeli-***(ya)** **ka** Beneeti chaɲ-***(ya)**.

Mma talk.PFV-YA and Beneeti walk.PFV-YA

'Mma talked, and Beneeti walked.'

(Dagbani)

A.0.1. No movement in the embedded clause

- The marker is obligatory again in the embedded clause of LD interrogatives, (46) (Issah 2020: 96), (47), and (48-a).
- This strongly indicates that there is no A'-movement in the embedded clause.

(46) Bu ɲuni ka bihi maa yeli [ni bɛ sa ku-*(ya) ∅]?
 goat which FOC children DEF say-PFV COMP 3PL PST kill.PFV-YA
 'Which goat do the children say they killed yesterday?' (Dagbani)

(47) Beni ti Ama soke [ti John kōrege *(ya) *(la) ∅]⁶.
 what FOC Ama ask COMP John slaughter YA LA
 'What did Ama ask that John slaughtered.' (Gurene)

- Note that *ya* cannot occur if there is local movement in the embedded clause, see (48-b).
- This shows that *ya* is not per se obligatory in embedded clauses.

(48) a. Ani ti fu tĩ'ise [ti a tum *(ya)]?
 who FOC 2SG think COMP 3SG work YA
 'Who did you think worked?'
 b. Fu tĩ'ise [ti ani n tum (*ya)]?
 2SG think COMP who FOC work YA
 'Who did you think worked?' (Gurene)

A.0.2. Movement in the matrix clause

- Whether there is movement in the matrix clause is hard to tell because the matrix verb does not appear sentence finally.
- Still, in some complex examples, the speakers allowed the marker *-ya* following the embedding verbs *yele* ("say") or *bɔhi* ("ask"). This is true for Dagbani, but not for Gurene.
- Whether or not this is the same particle requires further testing.
- Still, we couldn't find any occurrence of the marker together with cross-clausal A'-dependencies.

(49) a. Abdul yeli-ya [ni Dede n korigi noo maa].
 Abdul say-YA COMP Dede FOC slaughter.PFV fowl DET
 'Abdul said that DEDE slaughtered a fowl.'

⁶For some reason, the marker *la* does not count for the sentence-finality of *ya*. We are still unsure of what *la* marks in this specific construction: *la* can mark in-situ focus in Gurene, but is also used as a specificity/definiteness marker for nouns and it occurs at the end of relative clauses. Pending further investigations, we have to leave this issue unsolved at the moment.

- b. Ama **bɔhi-ya** [bɔ ka John korigi].
 Ama ask-YA what FOC John slaughter
 ‘Ama asked what John slaughtered.’ (Dagbani)
- (50) a. **Yuni** ka Ama **bɔhi** [ni o korigi nɔɔ maa]?
 who FOC Ama ask COMP 3SG slaughter fowl DET
 ‘Who did Ama ask slaughtered the fowl?’
- b. **Noo** ka Peter **yɛli** [ni John korigi-ya].
 fowl FOC Peter say COMP John slaughter-PFV
 ‘Fowl, Peter said that John slaughtered.’ (Dagbani)