Say-clauses in subject position: Observations from Kwa languages

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Topic of this talk

- In languages like English, a *that*-clause can act as the subject of a sentence:

(1) a. [That Emma brings out the recycling] is important.

    b. [That Emma brings out the recycling] makes me happy.

- There are a number of languages where such subject clauses are not possible, e.g., Akan, a Kwa language spoken in Ghana:

(2) *[**sɛ** kofi ye adwuma no] hia.   Akan
      that Kofi do work   the be.important
   'That Kofi does the work is important.'   (Lord 1993: 157)

- In this talk, we will derive the ban on subject clauses by the special status of the complementizer in such languages, i.e., that the complementizer can act as the matrix verb **SAY**.

Outline

Language profiles

The 2 languages belong to the Kwa language family and are spoken in West Africa.

Ewe

- ▶ spoken in Ghana (Volta & Oti regions) and Togo (southern) by about 2.5 million people.
- ▶ data is from the Ewedome dialect
- ▶ SVO language
- ▶ tonal marking is high/low

Akan

- ▶ spoken in Ghana by about 11 million speakers
- ▶ data is from Asante Twi dialect
- ▶ SVO language
- ▶ tonal marking is high/low

Figure: West Africa

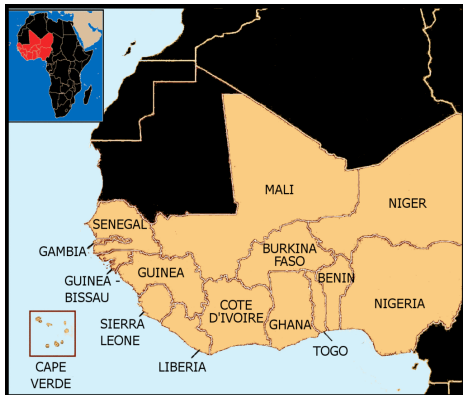# Ban on subject clauses in Kwa

We know about Akan that a clause cannot occur in subject position:

(3) a. ehia   [**sɛ** kofi ye adwuma no].   Akan
     it.be.important   C   Kofi do work   the
     'It is important that Kofi does the work.'

    b. *[**sɛ** kofi ye adwuma no] hia.
      C   Kofi do work   the   be.important
      'That Kofi does the work is important.'   (Lord 1993: 157)

Ban on subject clauses in Kwa

▶ A similar restriction can be observed for Ewe:

(4) a. é   hia   [**be** Kofi a   wɔ dɔ   la].   Ewe
       3SG be.important   C   Kofi POT do work DET
       'It is important that Kofi does the work.'

    b. *[**be** Kofi a   wɔ dɔ   la] hia.
          C   Kofi POT do work DET be.important
       'That Kofi does the work is important.'

Ban on subject clauses in Kwa

- In Akan, we observe that adding a clausal determiner enables clauses to appear in subject position:

(5) [**sɛ́** Kofi túmí sá-àyɛ́ nó] mà-à Kwaku ání
     C   Kofi be.able dance-PST CD cause-PST Kwaku eyes

   gyè-èyɛ̀.
   receive-PST

   'That Kofi was able to dance made Kwaku happy.'   Akan
                                                      (Bombi et al. 2019: 182)

- One recent theory on the emergence of the clausal determiner in subject clauses is provided by Korsah and Murphy (2019) based on the two Kwa languages Akan and Gã:
    - Their idea: *All clauses in Kwa are born with a DP-shell, which is, however, always removed in complement position.*

Ban on subject clauses in Kwa

▶ Unfortunately, this makes the wrong prediction for Ewe (another Kwa language):

(6) *[**be** Kofi teŋu ɖu-ɣe (la)] na   Koku kpɔ dzi-dor.
  C   Kofi able move-IC CD   cause Koku see heart-straight

  'That Kofi was able to dance made Koku happy.'   Ewe

▶ Adding a clausal determiner does not make the subject clause acceptable.

▶ This suggests that at least in Ewe clauses do not come underlyingly with DP-shell.

Ban on subject clauses in Kwa

► So what does Ewe do? The subject clause has to be nominalized:

(7) a. [Kofi ƒe   ɣe-ɖu-ɖu]   na   Koku kpɔ dzi-dor.
       Kofi POSS IC-move-REDU cause Koku see heart-straight
       lit: 'Kofi's dancing makes Koku happy.'

   b. [Kofi ƒe   ɣe-ɖu-ɖu   la]   na   Koku kpɔ
       Kofi POSS IC-move-REDU DEF/TOP cause Koku see
        dzi-dor.
        heart-straight
       lit: 'Kofi's dancing makes Koku happy.'   Ewe

► no complementizer BE
► verb is reduplicated
► subject acts as possessor

Ban on subject clauses in Kwa

- We can approach the occurrence of the clausal determiner in subject clauses from two perspectives:
    1. There is something about the subject position that requires a clausal determiner.
    2. There is something about clauses in Kwa languages that makes them unacceptable in subject position.

- With the second view, we expect potentially different repair strategies of clauses in subject position:
    - In Akan, a clausal determiner is added on top of the clause including the complementizer.
    - In Ewe, the clause itself changes to a nominalized clause without the complementizer.

- What is so special about these clauses in Kwa languages?
    - They involve a complementizer that diachronically relates to the verb 'say'.

Say-based complementizer can act as a main verb

In Ewe, the complementizer can act as the main verb of the sentence (cf. Clements 1975, Lord 1993):

(8) a. Ama **be** Kofi dzó.   Ewe
       Ama BE Kofi leave
       'Ama said Kofi left.'

   b. Ama gblɔ [**be** Kofi ƒlè   te]
      Ama say   BE Kofi buy yam
      'Ama said that Kofi bought yam.'

Such data are the main reason why a reanalysis of BE as a syntactic category V is sometimes entertained.

Say-based complementizer can act as a main verb

The same can be observed for the say-based complementizer in Akan.[1]

(9) a. Kofí **sé** Ama kìtà bàyérɛ́.   Akan
Kofi say Ama hold yam
'Kofi said that Ama is holding yam.'

    b. Kofí kà-à [**sɛ́** Ama kìtà bàyérɛ́].
Kofi say-PST SE Ama hold yam
'Kofi said that Ama is holding yam.'

---

[1]In the Asante dialect, there is a difference in the vowel in the say-based complementizer and as a main verb.

Say-based complementizer can act as a main verb

In the following, we will illustrate detailed properties and an analysis based on Ewe, but keep in mind that, in principle, the same analysis can be developed with Akan as well.

Semantic properties of Ewe BE

Apart from speech verbs, Ewe BE can combine with cognitive predicates and perception verbs:

(10) a. Ama súsú [**be** Kofi ƒlè te].   Ewe
   Ama think   BE Kofi buy yam
   'Ama thinks that Kofi bought yam.'

   b. Ama xɔese [**be** Kofi ƒlè te].
   Ama believe   BE Kofi buy yam
   'Ama believes that Kofi bought yam.'

   c. Ama se   [**be** Kofi ƒlè te].
   Ama hear BE Kofi buy yam
   'Ama heard that Kofi bought yam.'

BE lacks verbal properties

The BE-clause never appears with an overt subject:

(11) *me   gblɔ [me **be** Kofi le aƒe   me].   Ewe
     1SG say   1SG BE Kofi is home at
     'I said that Kofi is at home.'

Ewe BE cannot be inflected for tense:[2]

(12) a.   ma-gblɔ   [**be** Kofi le aƒe   me].   Ewe
          1SG.FUT-say   BE Kofi is home at
          'I will say that Kofi is at home.'

    b. *ma-gblɔ   [ma- **be**   Kofi le aƒe   me].
          1SG.FUT-say   1SG.FUT-BE Kofi is home at
          'I will say that Kofi is at home.'

---

[2]Future is marked with a prefix fused with the subject pronoun.

BE lacks verbal properties

Imperfective is formed via reduplication. But Ewe BE cannot be inflected for aspect:

(13) a. me gblɔ-gblɔ-m   [**be** Kofi le aƒe   me].   Ewe
         1SG RED-say-PROG   BE Kofi is home at
         'I am saying that Kofi is at home.'

     b. *me   gblɔ-gblɔ-m   [**be** -be-m   Kofi le aƒe   me].
         1SG RED-say-PROG   BE-RED-PROG Kofi is home at
         'I am saying that Kofi is at home.'

Interim summary

- SAY-complementizers in Kwa have a dual function: they can act as the main verb but they can also act as the complementizer.
- SAY-complementizers in Kwa have very little verbal properties.
- SAY-clauses are banned in subject position but Kwa languages find different solutions:

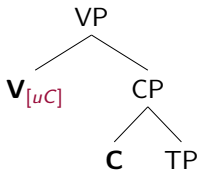   Akan: addition of a clausal determiner
    Ewe: nominalized gerund clause
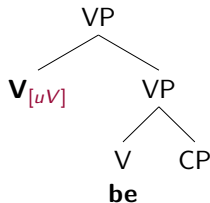
Syntax of SAY-complementation

- ▶ Ewe matrix verbs select for VPs instantiated by BE (whereas English matrix verbs select for CPs).
- ▶ BE is a verbal category, but one that does not project any verbal layers which would make it look syntactically like a verb: no voice layer, no T layer, no Asp layer ...
- ▶ But BE is still a verb and projects a VP since it can be used as a main verb.

(14)   *English:*   *Ewe (and Akan):*

```
        VP                                              VP
       /  \                                            /  \
   V[uC]   CP                                      V[uV]    VP
          /  \                                             /  \
         C    TP                                          V    CP
                                                          be
```

- ▶ The structure for Ewe is potentially independently attested, as it has been argued to be at work in serial verb constructions in Ewe (Collins 1997, Major 2021).

Background on attitude predicates

- Instead of a classic Hintikkan semantics that treats attitude predicates as quantifiers over worlds ...

(15) *Hintikkan semantics*
$[\![\ believe\ ]\!]^{w,g} = \lambda p \lambda x. \forall w' \in \text{DOX}_{x,w} : p(w')$

- ... we will pursue an eventuality-based framework of propositional embedding.[3] This framework combines Davidsonian event semantics (Davidson 1967) with Hintikkan attitude semantics (Hintikka 1969).

- **Key idea:** Certain eventualities have propositional content.

(16) *Contentful eventualities*
$[\![\ believe\ ]\!]^{w,g} = \lambda p \lambda x \lambda e. believe(e) \wedge \text{EXP}(e, x) \wedge \forall w' \in \text{CONT}_{e,w} : p(w')$

- We define a $\text{CONT}(\text{ENT})$ function from eventualities to sets of possible worlds compatible with that eventuality (Hacquard 2006, 2010, Anand and Hacquard 2008).

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[3] See also Kratzer (2006, 2016), Moulton (2009, 2019), Grano (2016).

Background on attitude predicates

- In other work, a full thematic separation of the eventuality argument and the content function is pursued (Kratzer 2006, 2016, Moulton 2009, 2019, Bogal-Allbritten 2015, Grano 2016, Özyıldız et al. 2018, Demirok et al. 2020).
- This move shifts the semantic action from the attitude predicate to the complementizer and/or mood of the embedded clause.
- Attitude predicate and embedded clause combine via predicate modification in most approaches.

(17)   *Neo-Davidsonian semantics*

    a. $[\![\ believe\ ]\!]^{w,g} = \lambda e.believe(e)$

    b. $[\![\ \text{MOOD/COMP/MODAL}\ ]\!]^{w,g} = \lambda p \lambda e. \forall w' \in \text{CONT}_{e,w} : p(w')$

Accounts for fully grammaticalized SAY-based complementizers with (17b):

- Bondarenko (2020) for Buryat converb clauses (Mongolic)
- Banerjee (2023) for Bangla *bole*-clauses (Indo-Aryan)

We will adopt lexical entries like (17a) for all clause embedding verbs in Ewe except be.

The duality of BE

- Observation: In Ewe, all indicative clauses are introduced by BE.[4]
- 1st assumption: BE denotes a SAY-**eventuality and** CONT
  - This assumption derives the semantic duality of BE.
- 2nd assumption: BE **has a unique status**
  - BE is the only verb that introduces the CONT function
  - no other matrix verb can introduce CONT
  - no silent modal to introduce CONT

(18) a. $[\![\,be\,]\!]^{w,g} = \lambda p_{\langle s,t \rangle} \lambda e_v . say(e) \wedge \forall w' \in \text{CONT}(e) : p(w')$

    b. $[\![\,gbl\mathfrak{d}\,]\!]^{w,g} = \lambda e_v . say(e)$

    c. $[\![\,x\mathfrak{d}ese\,]\!]^{w,g} = \lambda e_v . believe(e)$

    d. $[\![\,se\,]\!]^{w,g} = \lambda e_v . hear(e)$

---

[4] This property of BE patterns with SAY-based complementizers in other languages, e.g., in Uyghur (Major 2024) or in Kipsigis (Driemel and Kouneli 2024).

Analysis: BE in main clause

(19) Ama **be** Kofi dzó.
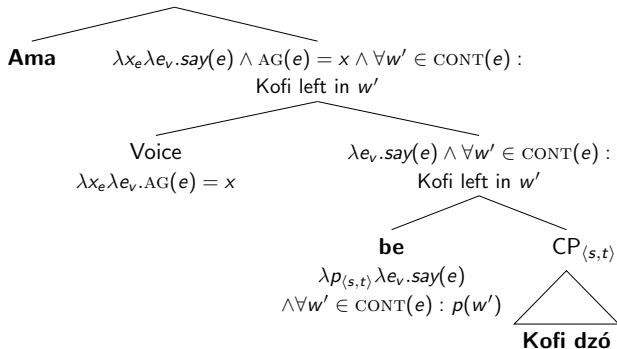Ama BE Kofi leave
'Ama said Kofi left.'

(20)
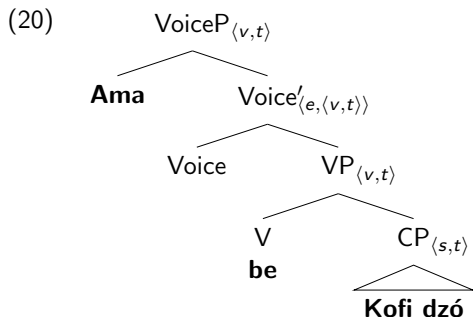
(21) $\llbracket$ *matrix VoiceP* $\rrbracket^{w,g}$
$= \lambda e_v.say(e) \wedge \text{AG}(e) = ama \wedge \forall w' \in \text{CONT}(e) : \text{Kofi left in } w'$

Analysis: BE in main clause

(22) Ama **be** Kofi dzó.
Ama BE Kofi leave
'Ama said Kofi left.'

(23) $\lambda e_v.say(e) \wedge \text{AG}(e) = ama \wedge \forall w' \in \text{CONT}(e):$
Kofi left in w'

Ama $\lambda x_e \lambda e_v.say(e) \wedge \text{AG}(e) = x \wedge \forall w' \in \text{CONT}(e):$
Kofi left in w'

Voice
$\lambda x_e \lambda e_v.\text{AG}(e) = x$

$\lambda e_v.say(e) \wedge \forall w' \in \text{CONT}(e):$
Kofi left in w'

be $\text{CP}_{\langle s,t \rangle}$
$\lambda p_{\langle s,t \rangle} \lambda e_v.say(e)$
$\wedge \forall w' \in \text{CONT}(e): p(w')$

Kofi dzó

Analysis, BE in embedded clause

How do BE and the matrix verb combine?

▶ We assume that the BE-clause and the matrix predicate undergo predicate modification.

(24) Ama gblɔ [be Kofi ƒlè te].   Ewe
     Ama say   BE Kofi buy yam
     'Ama said that Kofi bought yam.'

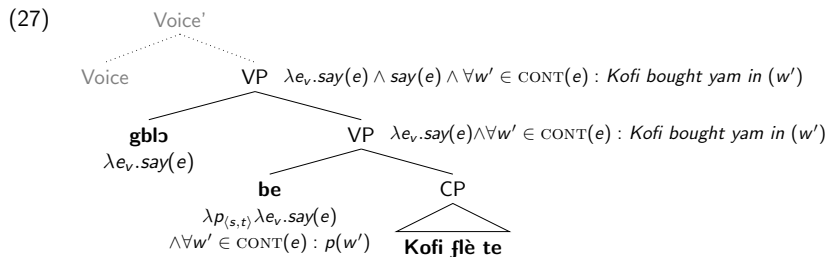   ⤳ *A speech event with Ama as the agent is modified by a contentful* SAY-*property (with the content that Kofi bought yam).*

(25) a. $[\![\, be \,]\!]^{w,g} = \lambda p_{\langle s,t\rangle}\lambda e_v.say(e) \wedge \forall w' \in \text{CONT}(e) : p(w')$

   b. $[\![\, gblɔ \,]\!]^{w,g} = \lambda e_v.say(e)$

Analysis, BE in embedded clause

(26) Ama gblɔ [be Kofi ƒlè te].   Ewe
      Ama say   BE Kofi buy yam
      'Ama said that Kofi bought yam.'

(27)

Voice'

Voice   VP $\lambda e_v.say(e) \wedge say(e) \wedge \forall w' \in \mathrm{CONT}(e) : \textit{Kofi bought yam in } (w')$

gblɔ   VP $\lambda e_v.say(e) \wedge \forall w' \in \mathrm{CONT}(e) : \textit{Kofi bought yam in } (w')$
$\lambda e_v.say(e)$

                be   CP
      $\lambda p_{\langle s,t \rangle} \lambda e_v.say(e)$
      $\wedge \forall w' \in \mathrm{CONT}(e) : p(w')$ **Kofi ƒlè te**

⤳ A speech event is modified by a contentful SAY-property so that Kofi bought
yam is true in all worlds compatible with the saying event.

Analysis, BE in embedded clause

Does the be-clause always denote a speech event?

▶ **No.** BE-clauses can combine with cognitive attitude verbs.

(28) Ama xɔese [be Kofi ƒlè te].
      Ama believe   BE Kofi buy yam
      'Ama believes that Kofi bought yam.' ≈ $say(e)$ is inner speech

   ↝ *A believe state with Ama as the holder is modified by a mental*
   utterance that Kofi bought yam.

▶ There is an increasing body of literature on abstract SAY in a variety
   of languages, which shows that it is involved in complementation
   structures that go beyond speech verbs (e.g., Grimshaw 2015, Kratzer
   2016, Özyıldız et al. 2018, Major 2021)

Back to the ban on subject clauses

- Since we take BE-clauses to constitute predicates of events, they should not be able to appear in subject position.

  - In complement position, BE-clauses can combine with another matrix predicate via predicate modification.
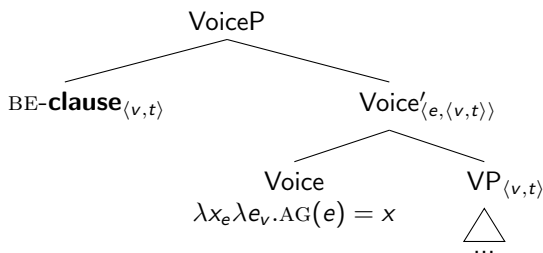 - In subject position, this possibility does not exist due to the voice head selecting for a nominal argument.

(29) *[**be** Kofi a   wɔ dɔ   la] hia.   Ewe
        BE Kofi POT do work DET be-important

    'That Kofi does the work is important.'

(30) *[**be** Kofi teŋu ɖu-ɣe]   na   Koku kpɔ dzi-dor.   Ewe
        BE Kofi able move-IC cause Koku see heart-straight

    'That Kofi was able to dance made Koku happy.'
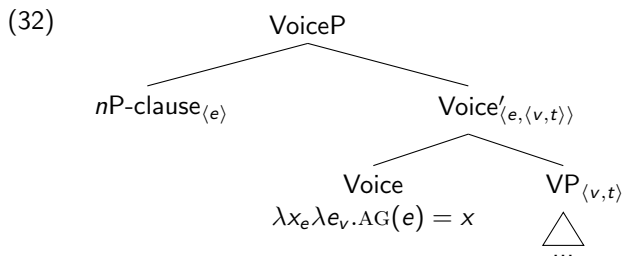
Back to the ban on subject clauses

- Since we take BE-clauses to constitute predicates of events, they should not be able to appear in subject position.
  - In complement position, BE-clauses can combine with another matrix predicate via predicate modification.
  - In subject position, this possibility does not exist due to the voice head selecting for a nominal argument.

(31)

```
                        VoiceP
                   ╱              ╲
    BE-clause⟨v,t⟩               Voice'⟨e,⟨v,t⟩⟩
                              ╱            ╲
                          Voice            VP⟨v,t⟩
                 λxₑλeᵥ.AG(e) = x            △
                                            ...
```

BE-**clause**$_{\langle v,t \rangle}$

Voice$'_{\langle e,\langle v,t \rangle \rangle}$

Voice
$\lambda x_e \lambda e_v.\text{AG}(e) = x$

VP$_{\langle v,t \rangle}$

Back to the ban on subject clauses

▶ A nominalized subject clause, however, is possible in Ewe:

(32)

```
                    VoiceP
                   /      \
                  /        \
        nP-clause⟨e⟩       Voice′⟨e,⟨v,t⟩⟩
                           /          \
                          /            \
                      Voice            VP⟨v,t⟩
              λx_e λe_v.AG(e) = x        △
                                        ...
```

Voice: $\lambda x_e \lambda e_v.\mathrm{AG}(e) = x$
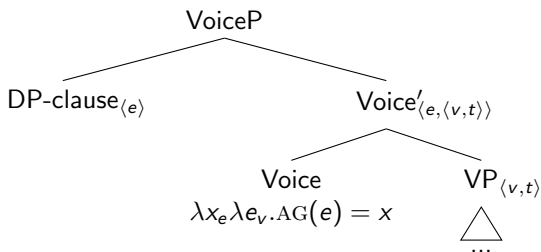
(33) [Kofi ƒe   ɣe-ɖu-ɖu]   na   Koku kpɔ dzi-dɔr.   Ewe
       Kofi POSS IC-move-REDU cause Koku see heart-straight

      lit: 'Kofi's dancing makes Koku happy.'

Back to the ban on subject clauses

▶ Akan seems to adopt a different repair mechanism by adding a DP-shell:

(34)

(35) [**sɛ́** Kofi túmí sá-àyɛ́ nó] mà-à Kwaku ání
       SE Kofi be.able dance-PST CD cause-PST Kwaku eyes
       gyè-èyɛ̀.
       receive-PST

'That Kofi was able to dance made Kwaku happy.'   Akan

A universal prediction

- Our analysis makes the following prediction: If the complementizer is SAY-based, subject clauses should be prohibited.

- Indeed, the ban on subject position is a common trait for SAY-clauses more generally, as e.g., seen in

  - Uyghur >> Turkic (Major 2024)
  - Buryat >> Mongolic (Bondarenko 2020)
  - Kipsigis >> Nilotic (Driemel and Kouneli 2024)

- Grammaticalization from verb to complementizer: Heine and Kuteva (2007) classify the ability for SAY-clauses to occur in subject position as a rather late stage.

Further prediction

Ewe BE and Akan SE select for a clausal complement:

(36) Ewe
   a. *Ama **be** nyà aɖe.
       Ama BE word INDEF
       'Ama told a story.'

   b. Ama gblɔ nyà aɖe.
       Ama say word INDEF
       'Ama told a story.'

(37) Akan
   a. ?*Kofí **sé** ábákɔsɛ́m bí.
       Kofi say story INDEF
       'Kofi told a certain story.'

   b. Kofí ka abakɔsɛm bi.
       Kofi say story INDEF
       'Kofi told a certain story.'

Further prediction

▶ Since say-complementizers always take a propositional argument, we predict it to never combine with a content noun.

(38) $[\![$ BE/SE $]\!]^{w,g} = \lambda p_{\langle s,t \rangle} \lambda e_v.say(e) \wedge \forall w' \in \text{CONT}(e) : p(w')$

▶ The selectional properties pattern with SAY-based complementizers in other languages, e.g. SI in Avatime (Major and Torrence 2021) or LE in Kipsigis (Driemel and Kouneli 2024):

(39) *Kofí **si** li-gab-wɛ.   Avatime
     Kofi SI CL-nonsense-DEF
     'Kofi said nonsense.'

(40) *Kɑ-∅-**leːn**-tʃi-ɑn   Kíbêːt   ɑtiːndɑːɲɑːt.   Kipsigis
     PST-3-LE-APPL-1SG Kibeet.NOM story
     'Kibeet told me a story.'

Conclusion and Outlook

- **Take-home-message:** The ban of clauses in subject position derives from the semantics of the complementizer. This was shown for Ewe.
- It is likely that the SAY-based complementizer SE in Akan has the same syntax/semantics.
- If this is so, we would predict that languages might come up with different repair strategies for clauses in subject position.
    - nominalized clauses in Ewe
    - clausal determiner in Akan
- Open questions:
    - How does the clausal determiner compose with the SAY-based semantics in Akan?
    - Is there an interaction with extraction?
    - Is there an interacton with factivity?

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