

Summary: This poster explores the temporal interpretation of attitude reports in the Asante Twi dialect of Akan (Kwa, Niger Congo), with a focus on deriving the (past) simultaneous (*SIM*) reading in *X*-under-Past embeddings. *SIM*-readings in Asante arise when *X* = (i) the bare form, (ii) the distal deictic tense *ná* or (marginally) (iii) the perfective past marker *LEN* - with a decreasing speakers' preference in that order from (i) to (iii). Based on empirical findings, accounts postulating deletion or binding of the embedded tense are ruled out for (ii) and (iii). It is proposed that while the bare form is associated with a *de Se* binding construal, both *ná* and *LEN* involve only a *de Re* mechanism. Speakers' choices in embedding are guided by the two pragmatic principles *Prefer de Se!* and *Prefer unbounded structures!*

Sequence of Tense and Variability

When expressing simultaneity (*SIM*) in (past) attitude contexts, languages differ as to which tense form they embed under a past-tensed attitude verb.

- Languages like English utilize an optionally vacuous past tense under agreement (+*Vac*). Japanese-like languages resort to a relative present, as the past tense is always semantically interpreted (-*Vac*).

- (1) *SIM*-Context: Jerry (speaking two years ago): 'Elaine is upset.'
- a. Jerry said that Elaine {~~#~~is/was} upset. (SIM)
[*CP* PAST... J-say [λ_0 PAST... t₀ E-be-upset]]
- b. Jerry-wa Elaine-ga okotte-~~{iru/#ita}~~ to itteimash-ita. (Jap)
Jerry-TOP Elaine-NOM upset-PRES/PAST COMP say-PAST
[*CP* [J [E-okotte-t₀ λ_0] itteimash- PAST]] (SIM)
- c. Jerry-wa Elaine-ga okotte-**ita** to itteimash-ita. (BACK)
[*CP* [J [E-okotte-PAST] itteimash- PAST]]

- Third group: no tense deletion, but *SIM* possible via *de Re* (i.e., relative to the utterance time)

- (2) *Žénja* skazal čto *Lena* byla (togda) beremenna. (Russian)
Zhenya say.PAST.PFV COMP Lena be.PAST then pregnant. (SIM)
'Zhenya said that Lena was pregnant then.'

Research Questions

- What's the status of Asante Twi with respect to the *Vac*-parameter?
- How does Asante contribute to the cross-linguistic picture?

The case of Asante Twi

Direct elicitations (mostly acceptability judgement tasks, some translation tasks) (Matthewson 2004) with four native speakers of Asante Twi

Matrix Clauses

- Asante Twi has a rich TAM inventory (Boadi 2008; Osam 2008)
 - Focus on the bare form, the clausal particle *ná* and the perfective past *LEN* (cf. Armenante and Lecavelier 2024)
- (3) [...] (ná) Awusi yare.
NA Awusi sick
NA: 'Awusi {was/will be/#is} sick (then/#now).'
Bare: 'Awusi is sick (now/usually)'
- (4) Kofi di-~~ĩ~~ akoko. (5) Kofi (re-)di akoko.
Kofi eat-LEN chicken. Kofi PROG-eat chicken
'Kofi {ate/#was eating} chicken.' 'Kofi (was eating)/used to eat
(PFV) chicken (then).' (PROG/HAB)

Semantic assumptions

- **Semantics of bare clauses:** semantically tenseless
- (6) a. Bare LF: [*CP* t* [*TP* - [*AspP* STAT/HAB [*VP* p]]]] (t* = Utt.Time)
b. [*STAT*] = $\lambda p_{(v,t)}. \lambda t_{(i)}. \exists s[\tau(s) \supseteq t \ \& \ p(s)]$
- **Semantics of *ná*:** temporal pronoun with anti-UT restriction
- (7) a. [*ná*_T] = g(T): $\neg g(T) \circ t^*$ (o = overlap)
b. *ná*-LF: [*TP* *na*_T [*AspP* STAT [*VP* Awusi-yare]]]
c. [(7-b)] defined iff $\neg g(T) \circ t^*$
When defined, [(7-b)] = 1 iff $\exists s[\tau(s) \supseteq g(T) \ \& \ \text{sick}(s)(A)]$
- **Semantics of *LEN*:** temporal pronoun with past restriction and pfv aspect
- (8) a. [(PFV)](_(v,t))(_(i)) defined iff g(2) < g(3)
When defined, [(PFV)](_(v,t))(_(i)) = 1 iff $\exists e[\tau(e) \subseteq g(2) \ \& \ p(e)]$
b. *LEN*-LF: [*TP* past_{2,3} [*AspP* PFV [*VP* Kofi-di-aduane]]]
c. [(8-b)] defined iff g(2) < t*
When defined, [(8-b)] = 1 iff $\exists e[\tau(e) \subseteq g(2) \ \& \ \text{cook}(e)(\text{food})(K)]$

Outlook

- Asante Twi displays more than one compositional pathway to simultaneity: *de Se* via zero marking and *de Re* via overt pronominal tenses
- This work reinforces earlier findings that languages exhibit differences in the extent to which they allow for temporal *de Re* (Bochnak et al. 2019)
⇒ Asante Twi completes Bochnak et al.'s map with an obligatorily *de Re* tense!
- Further support for cross-linguistic preferences for bound variable and aspectually unbounded structures in expressing temporal overlap

Complement clauses

- (9) **SIM-Context:** *You and Aba were supposed to watch a movie last Friday night. Unfortunately, Aba called you to cancel since she was sick. The week after you report Aba's words.*
- (10) Aba ka-à [sɛ ...]
Aba say-LEN COMP
'Aba said that...'
- a. ɔ-yare. b. ná ɔ-yare. c. #ɔ-yare-è
3SG-sick NA 3SG-sick 3SG-sick-LEN
'...she was sick.' '...she was sick (then).' '...she had been sick.'
- N.B. *SIM*-readings for *LEN*-under-*LEN* become available with a deictic adverbial.
- (11) Aba kaà sɛ ɔyareè saa anadwo nó ('Aba said she was sick that night.')
- (12) **BACK-Context:** *It's Monday. You ask Aba how she spent her Sunday. Unsurprisingly she was busy making food!*
- a. #Aba ka-à [sɛ ɔ-re-noa aduane].
Aba say-LEN COMP 3SG-PROG-cook food
'Aba said that she was cooking food.'
- b. ... ná ɔ-re-noa aduane. c. ... ɔ-noa-à aduane.
NA 3SG-PROG-cook food 3SG-cook-LEN food
'...she was cooking (then).' '...she cooked food.'
- *SIM* for *ná*-embeddings is not the result of deletion!
- (13) Context: On Ama's birthday, Kofi expressed a peculiar belief: 'Obi is Nigerian.' Today, you report it, aware that Obi is, in fact, Ghanaian.
- a. εwɔ Ama awoda nó ná Kofi gye di sɛ (#ná) Obi ye Nigerian.
on Ama birthday DEF NA Kofi believe COMP NA Obi COP Nigerian

Composing Simultaneous readings

⇒ **Asante Twi is a -*Vac*-language**

- **Bare-embeddings** → *de Se* interpretation
- (14) LF for (9a): [*CP* t* [*past*_{2,3} ... [ka [*CP* λw_5 [*TP* - [*AspP* STAT λe_6 [*VP* yare_{w_5, e_6}]]]]]]]]]
[[*CP* sɛ ɔyare]]] = $\lambda w. \lambda t. \exists s[\tau(s) \supseteq t \ \& \ \text{yare}(w)(s)(A)]$
- ***ná*-embeddings** → *de Re* interpretation
- The attitude holder is acquainted with a certain time denoted by *ná*
→ Acquaintance-based descriptions are produced by **concept generators**, which relate the att. holder's now to a temporal *res* (CG, cf. Sharvit 2018)
- (15) [[*ka_{deRe}*]] = $\lambda w_s. \lambda e_v. \lambda p_{\langle (i, (s,i)), (s, (i,t)) \rangle}. \lambda x_e. \exists G[G \text{ a time-CG suitable for } x \text{ in } w \text{ at } \tau(e) \ \& \ \forall \langle w', t' \rangle [\langle w', t' \rangle \in \text{Say}(x, w, \tau(e)) \rightarrow p(G)(w')(t')]]$
- (16) LF for (9b): [*CP_{mat}* past_{2,3} ... [ka_{deRe} w₀] e₆] [*CP_{emb}* [λG_7 [λw_5 [λt_2 [*TP* [λT [λG_7 na₉] t₂] w₅] [*AspP* STAT [λe_3 [*VP* ɔ₈-yare_{w_5, e_3}]]]]]]]]]]]]]
G = $\lambda t. \lambda t'. \lambda w'. t$ the temporal interval ongoing at t' in w' during Aba's call
→ G(g(9)) = 'now'
- (17) [[(16)]] = 1 iff $\exists e[\tau(e) \subseteq g(2) \ \& \ \exists G[G \text{ a time CG suitable for Aba in } w@ \text{ at } \tau(e) \ \& \ \forall \langle w', t' \rangle [\langle w', t' \rangle \in \text{Say}(Aba, w@, \tau(e)) \rightarrow \exists e'[G(g(9))(t')(w') \subseteq \tau(e') \ \& \ \text{sick}(w')(e')(Aba)]] \ \{ \text{with } g(2) < t^*; g(9) \text{ a contextually salient time such that } \neg(g(9) \circ t^*) \}$
- ⇒ For (12b): G(g(9)) = 'the day before now' → *BACK*-reading for *ná*-under-*LEN*
⇒ For (11) G(g(2)) = 'now' → *SIM*-reading for *LEN*-under-*LEN*!

Explaining the *SIM*-ranking: bare > *ná* > *LEN*

- ***Prefer de Se!*** (Ogihara and Sharvit 2012; Schlenker 2005; Tsilia 2021):
In the derivation of simultaneous readings for complement clauses of homogeneous attitude predicates, unbounded attitude reports are preferred over bounded ones.
⇒ bare-under-*LEN* > *ná*/under-*LEN*
- ***Prefer unbounded structures!***:
In the derivation of simultaneous readings for complement clauses of homogeneous attitude predicates, unbounded attitude reports are preferred over bounded ones.
{*ná* is imperfective, *LEN* is perfective} ⇒ *ná* > *LEN*

Selected References: Armenante & Lecavelier 2024 (Past) temporal reference in an aspect prominent language.
• Boadi 2008 Tense, aspect and mood in Akan. • Bochnak, Hohaus & Mucha 2019 Variation in Tense and Aspect, and the Temporal Interpretation of Complement Clauses. • Ogihara & Sharvit 2012 Embedded tenses. • Osam 2008 Akan as an aspectual language. • Schlenker 1999 Propositional Attitudes and Indexicality. • Sharvit 2018 Sequence of Tense: Syntax, Semantics, Pragmatics. • Tsilia 2021 Embedded Tense: Insights from Modern Greek.