Session V - INDEFs, DEFs, and bare NPs in Akan

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A comment on wani-DPs in Hausa

Opening Questions

Q1: Why would *wani*-DPs not be semantically restricted to wide scope readings?

Q2: Why is the narrow scope reading for (1) not blocked by the bare NP-option, which unambigously expresses narrow scope?

(1) Musa ba-i auri **wata yarinya** 'yar Daura ba.
Musa neg-3sg.m marry WANI girl daughter-of D. neg
'Musa didn't marry any girl from Daura.'

Opening Questions

Q3: Why is there even a third option in Hausa to express narrow scope under negation? NB: The same holds for Akan

(2)

bà-n	ga	**koo-waa/**	**koo-wànè**	**mùtûm**	ba
NEG-1sg.SUBJ	see	DISJ-wh	DISJ-wh	person	NEG

'I didn't see anyone/ any person.'

The INDEF-marker *bi* in Akan

The Akan INDEF marker *bi*

(3) Context: At the beginning of a story:

a. **Papa bí** live akyire hɔ
man INDEF live back there
'A (certain) man stays at the back of the house.' (Owusu 2022:63)

- Has been carefully described, and discussed in much detail by various authors: Amfo (2010), Arkoh (2011), Bombi et al. (2019), Owusu (2022), Philipp (2022)
- Has been given competing analyses, both as an existential quantifier and as denoting a choice function
- Often comes with a specific reading, though not obligatorily = Hausa *wani*
- A major difference to Hausa: Interpretation under clausemate negation is exclusively wide scope.

The Akan INDEF marker *bi*: Data

Bí is an INDEF marker:

- It occurs at the beginning of stories to introduce new discourse referents; cf. (3)
- It can serve as the antecedent for sluicing, cf. (4)

(4) Ama pɛ sɛ ɔ-kɔ-hwɛ **sini** **foforɔ** **bi** a a-ba.
Ama want COMP 3SG-go-watch movie new INDEF REL PERF-come
Me-n-nim sini koro mpo.
1SG-NEG-know movie one even
'Ama wants to see a certain new movie. I don't even know what movie.' (adapted from Owusu 2019:266)

The Akan INDEF marker *bi*: Data

Scopal Properties I: Higher Quantifiers

- *bí* can take scope above or below a higher distributive universal quantifier:

(5) Obaa biara kane-e **nhoma bí.** (Owusu 2022:73)
woman every read-PST book INDEF
i. For every woman there is a possibly different book that they read. ∀ » INDEF
ii. There is a particular book that all the woman read. INDEF » ∀

- *bí* must take scope ABOVE group-denoting ALL-quantifiers - which presumably cannot bind individual (skolem) variables..., cf. (6):

(6) Àkyìrɛkyírɛnfʊ nyìnáá hwí-ì **àbʊfrá** bí.
teachers all cane-PAST child INDEF
'There is a (certain) child that all (the) teachers caned.' (adapted from Arkoh 2011:40-41)

The Akan INDEF marker *bi*: Data

Scopal Properties II: Conditional clauses

- *bí* can take narrow scope or exceptional wide scope relative to CONDITIONAL operators:

(7) Sɛ **ɔpanyin bi** ba a, yɛ-bɛ-hyɛ mmra no.
COND elder IND come COND 1PL.SBJ-FUT-force law DEF
'If SOME/any elder comes, we will pass the law.' (Bombi et al. 2019:192)

(8) Sɛ **sukuuni bi** twa nsɔhwɛ no a ɔykerɛykerɛni no ani bɛ-gye.
COMP student IND cut exam DEF COND teacher DEF ?? FUT-happy
'If a (certain)/any student passes the exam the teacher will be happy.' (Philipp 2022:141)

The Akan INDEF marker *bi*: Data

Scopal Properties III: Intensional Operators

- *bí* can take narrow scope or wide scope relative to intensional operators, such as *want*, cf. (9), modal necessity operators, cf. (10), and modal possibility operators, cf. (11):

(9) Ama pɛ sɛ **ɔkyerɛkyerɛni bí** ware no.
Ama want COMP teacher INDEF marry 3SG.OBJ
'Ama wants SOME/a teacher to marry her.' (Philipp 2022:138, adapted from Bombi et al. 2019); i. pɛ » bí; ii. bí » pɛ

(10) ɛsɛ.sɛ Kwame kan **nwoma bi**.
must Kwame read book INDEF
'Kwame must read SOME/sm book.' (Philipp 2022:142); i. must » bí; ii. bí » must

(11) Ebia, Esi bɛ-to **dwom bi**.
maybe Esi FUT-sing song INDEF
'Maybe, Esi sang SOME/sm song.' (Philipp 2022:142); i. maybe » bí; ii. bí » maybe

The Akan INDEF marker *bi*: Data

Scopal Properties IV: Polar Questions

- *bí* preferably takes narrow scope in polar questions (Philipp 2022:144), cf. (12-ab):

(12) a. **Akwadaa bi** drɔ-ɔ mfonin?
child INDEF draw-PST picture
'Did any child draw a picture?'

b. Ama a-kan **nwoma bi** (da)?
Ama PERF-read book INDEF ever
'Has Ama (ever) read a book?'

The Akan INDEF marker *bi*: Data

Scopal Properties V: Negation 1

- *bí* does NOT take narrow scope relative to clausemate negation ≠ HAUSA!!!:

(13) Ama a-**n**-kan **nwoma bi**.
Ama PERF-NEG-read book INDEF
'Ama didn't read SOME book.'
NOT: 'Ama didn't read any book.' (Amfo 2010)

The Akan INDEF marker *bi*: Data

Scopal Properties V: Negation 2

- BUT: Focused *NP-bí* takes scope under negation (= SOME):

(14) ɛ-n-yɛ **abaayewa bi** na ɔ-tɔ-ɔ atadeɛ.
3SG.SBJ-NEG-COP girl INDEF FOC 3SG.SBJ-buy-PAST dress
'It is not SOME lady that bought a dress.' (Philipp 2022:145)

- and *bí* can take scope under higher negation:

(15) ɛ-n-yɛ nokorɛ sɛ ɔkyerɛkyerɛni no hyia-a **sukuuni bi**.
3SG.SBJ-NEG-COP true COMP teacher DEF meet-PST student INDEF
'It is not true that the teacher met SOME/any student.' (Philipp 2022: 145)

The Akan INDEF marker *bi*: Data

Scopal Properties VI: Intermediate Scope

- NP-*bi* allows for intermediate scope:

(16) Sukuuni biara kane-e nhoma biara [aa **tikyani bi** kamfo-e]
student every read-PST book every REL teacher INDEF praise-PST
'Every student read every book some teacher had praised.' (Owusu 2022:85)
∀student » ∃teacher » ∀book

The Akan INDEF marker *bi*: Data

Scopal Properties VII: Can universal quantifiers take inverse scope over NP-*bí*?

(17) **Sojani bi$_1$** gyina pono$_1$ biara ano.
soldier INDEF stand door every mouth
'A (certain) soldier is standing in front of every door.' (Owusu 2022:88)
Owusu (2022): Inverse scope unavailable because of WCO!

(18) **Adeɛ huhuuhu bi** hunahuna-a akwadaa biara.
thing scary INDEF terrify-PAST child every
'A (certain) creepy thing terrified every child.' (Philipp 2022:146)
Philipp (2022): Inverse scope marginally available!

The Akan INDEF marker *bi*: Data Summary

Summary

1. *bí* receives a specific interpretation in unembedded position
2. ***bí* must take scope over clausemate negation**
3. *bí* shows flexible scope behaviour with intensional operators quantifying over situations
4. *bí* allows for exceptional wide scope and intermediate scope
5. **It is unclear whether *bí* can be scoped over by a lower $\forall$-quantifier...**

Two analyses

There are two competing analyses of the *bi*-facts

1. Following Arkoh (2011), Owusu (2022) analyses *bí* as denoting a contextually-bound (Kratzer 1998), situation-dependent skolemized choice function.
2. Following Amfo (2010), Philipp (2022) analyses *bi* as denoting an existential quantifier with explicit domain restriction C (von Fintel 1994).

Two analyses

Owusu (2022): A contextually-bound, situation-dependent choice function:

(19)
a. [[bi]] = $f_{CH,i,s}$: $\lambda s.\lambda P_{<s,et>}$. x; defined iff x ∈ P(s) (adapted from Owusu 2022).
b. The s-argument can be bound by s_0 or bound by intensional operators, thereby giving different P(s)-sets to choose from for different worlds: wide AND narrow scope readings in (7) to (12). In addition, f is skolemized to worlds, too...
c. Moreover, f is skolemized, so that its index *i* can be fixed either relative to the speaker ((exceptional) wide scope), or it can be bound by a higher quantifier (Q-dependency); cf. (5), (16) (intermediate scope).
d. Negation does not affect the s-argument nor the skolem-index: hence only wide scope for *bi* relative to negation, cf. (13)!
e. **Inverse readings under c-commanded quantifiers should be blocked by weak crossover, cf. (17)!**

Two analyses

Philipp (2022): ∃-quantifier with explicit domain restriction:

(20) a. $[\![\text{bi}]\!] = \lambda C_{<et>}.\lambda P_{<et>}.\lambda Q_{<et>}.\ \exists x\ [C(x) \wedge P(x) \wedge Q(x)]$

b. The ∃-operator can be interpreted above or below intensional operators, thereby giving rise to wide AND narrow scope readings in (7) to (12). ALTERNATIVELY, the wide scope reading could be achieved by having C denote a singleton set evaluated relative to the utterance situation s_0.

c. The ∃-operator can be interpreted in the scope of other quantifiers, cf. (5), and its restriction can be a singleton set, thereby allowing for intermediate scope à la Schwarzschild (2002); cf. (16).

d. **Obligatory scope over negation is achieved by narrowing down the domain C to a singleton set, possibly in competition with bare NPs...**: It is not the case that Ama read the one book in C ...

e. **Inverse readings under c-commanded quantifiers should be possible in principle, cf. (18)!**

Evaluation

Comparing the analyses

- The NEG-facts argue in favour of the Choice-function approach in Owusu (2022)...
- ... pending an evaluation of the inverse scope facts and the WCO-properties of Akan
- **The difference in the NEG-scope potential of Akan NP-*bí* and Hausa *wani*-NPs warrants a different treatment: Hausa ∃-GQ; Akan CF**
- The CF-analysis is compatible with the fact that INDEF*bi* can co-occur with DEF *no*, cf. (21)

(21) a. **Pàpá bí nó** bìsá-à mè mè nɔmà
man IND DEF ask-PAST 1SG 1SG.POSS number
'After the party, that certain man asked me for my number.' (Philipp 2022:138, adapted from Bombi et al. 2019:8)

b. input of *nó*: λx. x = f(y: y a man)

Bare NPs in Akan

Distribution and meaning of bare NPs in Akan

Overview:

1. Bare NPs are typically interpreted as indefinites, unlike in Hausa, where definite construals are also possibly with globally non-unique NP-referents:
2. Only singleton-denoting bare NPs (sun, moon,...) are licit in topic/subject position. Such NPs receive a uniqueness DEF-interpretation in all argument positions; see class 2
3. Bare NPs in non-topical subject position can receive an INDEF interpretation
4. INDEF bare NPs always take narrow scope,
5. BUT: INDEF bare NPs do NOT seem to instantiate PNI (Philipp 2022)

The semantic status of Bare NPs

INDEF Bare NPs in Akan denote unrestricted existential quantifiers with a non-specific interpretation (Philipp 2022, Owusu 2022)

Bare NPs: Data

Bare NPs in topic/topical subject position are illicit with non-singleton denoting NPs:

(22) ***Sukuuni** boa ɔkyerɛkyerɛni no. [Akan, Philipp 2022:155]
student help teacher DEF
intended: 'A/the student helps the teacher.'

This seems to be different in Hausa!!!

(23) **tùuluu** yaa fashèe [Hausa, Newman 2000: 143]
pot 3sg.PFV break
'**The**/ A water pot broke.'

Bare NPs: Data

Bare singleton NPs referring to globally unique referents receive a DEF interpretation

(24) a. **Awia** yɛ nsoromaa
sun COP star
'The sun is a star.'

b. Ama hu-u ɔ**sram**.
Ama see-PST moon
'Ama saw the moon.'

Bare NPs: Data

All non-singleton denoting bare NPs receive an INDEF-interpretation, including non-topical subjects; cf. (25-b)

(25) a. Kòfí hú-ù **ɔtʊmfʊ**
Kofi see-PST blacksmith
'Kofi saw a blacksmith.' (Arkoh Matthewson 2013: 11)

b. [Krataa no]$_{TOPIC}$ (de), **sukuuni** kan-n yɛ.
document DEF TOP student read-PST
'(As for) the letter, a student read it.' (Philipp 2022:168)

Bare NPs: Data

Bare NPs must take narrow scope relative to all intensional operators, cf. (26), (27), and the NEG-operator, cf. (28):

(26) Sɛ **ɔpanyin** ba a, yɛ-bɛ-hyɛ mmra no.
COND elder come COND 1PL.SBJ-FUT-force law DEF
'If any elder comes, we will pass the law.' (Owusu 2022:69)

(27) Ama pɛ sɛ **ɔkyerɛkyerɛni** ware no.
Ama want COMP teacher marry 3SG.OBJ
'Ama wants some teacher or other to marry her.' (Owusu 2022:71)

(28) Kofi a-n-kan **krataa** #(bi), nanso -kan-n nkrataa fofor no nyinaa.
Kofi PRF-NEG-read. paper (IND) but 3SG.SBJ-read-PAST paper new DEF all
'Kofi didn't read a #(certain) paper, but he read all the new papers.' (Philipp 2022:162)

Bare NPs do not show typical properties of PNI

Akan bare NPs do not instantiate PNI (Driemel 2019, Philipp 2022)

- Bare NPs can marginally license anaphoric pronouns
- Bare NPs are not number-neutral
- Bare NPs can conjoin with individual-denoting expressions
- Bare NPs can be modified
- Bare NPs can extract
- Bare NPs can bind possessive pronouns and control/bind PRO/pro

$\Longrightarrow$Akan bare NPs do not constitute proto-typical instances of PNI
$\Longrightarrow$Akan bare NPs are not interpreted qua RESTRICT

Akan bare NPs: Summary

Summary:

- Bare NPs with singleton-denoting NPs: unique DEF
- Bare NPs with non-singleton-denoting NPs: unspecific INDEF
- Bare NPs function as independent syntactic and semantic constituents

Deriving uniqueness DEF and unspecific INDEF from pragmatic competition

Competition-based derivation of ι and $\exists$-surface readings

In principle, there are two options to derive the available surface reading (unique DEF with singleton NPs, unspecific INDERF for non-singleton NPs) for bare NPs:

1. Covert Operators (Chierchia 1998)
2. Unrestricted Existentials (A&M 2013, Owusu 2022, Philipp 2022)

We will look at each in turn...

Competition-based derivation of ι and $\exists$-surface readings

Covert operators:

- Chierchia (1998) proposes that it is possible to insert covert ι and $\exists$-operators in languages in which these meanings are not expressed by overt DEFs; such as, e.g., Slavic.
- If Akan *nó* codes [non-uniqueness, familiarity] (Owusu 2022), and if Akan *bí* expresses a (contextually bound) choice function (Owusu 2022), the insertion of ι and $\exists$ would not be blocked by overt competitors
- **BUT: If so one would expect ι to be freely insertable and to have a wider distribution, on a par with bare uniqueness NPs in Slavic (Simik 2021), or, possibly, with bare uniqueness NPs in Hausa**.
- Recall that Hausa allows for uniqueness DEF-readings with non-singleton denoting bare NPs; cf. (23), repeated:

(29) **tùuluu** yaa fashèe [Hausa, Newman 2000: 143]
pot 3sg.PFV break
'**The**/ A water pot broke.'

Competition-based derivation of ι and $\exists$-surface readings

Unrestricted Existentials I:

- It therefore seems more adequate to treat Akan bare NPs as denoting unrestricted existential quantifiers without domain restriction (domain restriction with overt DETs only!):

  (30) $[\![\text{NP}_{AKAN}]\!] = \lambda P_{<et>}.\ \exists x\ [NP(x) \wedge P(x)]$

- This may be different in Hausa if it holds true that UNIQUE DEF-readings are more widely attested with Hausa bare NPs...
- The observable surface readings derive from a combination of the meaning of the NP itself and anti-presuppositions that are triggered by comparison with the semantically more information form *nó* [non-unique, indexed] and *bí* [specific = speaker-known]:

Competition-based derivation of ι and $\exists$-surface readings

Unrestricted Existentials II:

- There are two anti-presuppositions triggered by competition with *nó* with two meaning components:
  1. violation of non-uniqueness (with singleton NPs) $\Longrightarrow$ [unique, new/fam]: uniqueness DEF
  2. violation of indexing/familiarity (with non-singleton NPs) $\Longrightarrow$ [non-unique, new]: INDEF
- In addition, there is an anti-presupposition triggered by competition with specific *bí*:
  1. violation of specificity (with non-singleton NPs) $\Longrightarrow$ non-specific INDEF = the meaning of bare INDEF NPs in Akan!!!

$\Longrightarrow$ **Together, these three instances of competition determine the surface interpretation of weak $\exists$-operators expressed by bare NPs in Akan.**

Conclusion

Conclusions

- In isolation, it is difficult to determine for Hausa and Akan whether an ∃-based or Choice Function-based analysis is more adequate. Both modelling tools are powerful enough to model the available data **in isolation**
- When comparing the semantic behaviour of marked INDEF DPs and bare NPs in Akan vs Hausa, two differences emerge:
  1. Marked INDEF NDs in Akan must take scope over NEG; marked INDEF DPs in Hausa need not.
  2. Bare NPs in Akan only get DEF-readings with singleton-denoting NPs, but also with non-singleton NPs in Hausa
- The two observable differences warrant different semantic analyses for the two languages:
- Akan INDEF *bí*-DPs denote contextually-bound choice functions; Hausa *wani*-DPs denote existential quantifiers
- Akan bare NPs denote unrestricted ∃-quantifiers; Hausa bare NPs may be interpreted via RESTRICT...
- **More careful empirical work required!!!**

References

References

Amfo, N. A. A. (2010). Indefiniteness marking and Akan bi. Journal of Pragmatics, 42, 1786-1798. https://doi.org/10.1016/j.pragma.2009.02.002

Arkoh, R. (2011). Semantics of Akan bi and n . Master's thesis, University of British Columbia.

Bombi, C., Grubic, M., Renans, A., Duah, R. A. (2019). The semantics of the (so-called) clausal determiner nó in Akan (Kwa). In M. T. Espical, E. Castroviejo, M. Leonetti, L. McNally, C. Real-Puigdollers (Eds.), Proceedings of Sinn und Bedeutung 23 (pp. 181-200). Universitat Autònoma de Barcelona. https: doi.org/10.18148/sub/2019.v23i1.510

Owusu, Augustina. 2022. Cross-categorial Definiteness/Familiarity. PhD thesis. Rutgers University, New Brunswick.

Philipp, Mareike. 2022. Quantifier Scope Ambiguities in English, German, and Asante Twi (Akan): Structural and Pragmatic Factors. PhD thesis. Universität Potsdam.