

# On the interaction of extraction and argument marking in Asante Twi

Johannes Hein & Doreen Georgi

johannes.hein@uni-potsdam.de

doreen.georgi@uni-potsdam.de

GLOW 43, Humboldt Universität Berlin  
April 2020

Funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) –  
project number 317633480 – SFB 1287, Project C05

# Introduction

# Topic

- ❖ study of the distribution of resumptive pronouns (RPs) vs. gaps in Asante Twi focus/wh-fronting
- ❖ the pattern is more complex than previously described
- ❖ asymmetries
  - ▶ between types of extractees (wrt. category)
  - ▶ between subject and object extraction
  - ▶ in island-sensitivity
- ❖ Asante Twi (Kwa, Ghana), novel data from elicitations with 2 native speakers

# Goals

We argue for the following:

- ❖ One and the same type of extraction may result in both a gap or an RP (*pace* claims that extraction of NP-arguments always leaves an RP).
- ❖ The choice between gap/RP is not determined by the  $[\pm N]$  feature or the GF of the extractee, but by the structure of the extracted XP (presence/absence of a D-shell).
- ❖ This supports the partial deletion account of RPs in movement chains under the copy theory of movement.
- ❖ AT exhibits a preference of an RP over a gap when possible – a pattern that is in conflict with economy constraints such as Avoid Pronoun.

# Overview

1. Introduction
2. Previous work
3. New observation
4. Analysis
5. Extension: Subject extraction
6. Open questions
7. Conclusion

## Previous work

# Saah (1994), Korsah (2017), Korsah and Murphy (2019)

- ❖ Focus fronting of nominal arguments: always leaves behind a RP – with a surface split based on animacy of the extractee:
  - ▶ animates: always leave a RP, (1-a)
  - ▶ inanimates: often seem to leave a gap, (1-b)
  - ▶ but the ‘gap’ with inanimates is in fact an unpronounced RP; evidence: RP is forced to be overt when followed e.g. by a clause-final adverb, (2)

- (1) a. Hwáń<sub>1</sub>/Kofĩ<sub>1</sub> na Yaw pé {\*—<sub>1</sub> / no<sub>1</sub>}?  
       who/Kofi       FOC Yaw like               3SG.O  
       ‘Who does Yaw like? / It’s Kofi who Yaw likes.’
- b. Déén<sub>1</sub>/[krataá nó]<sub>1</sub> na Yaw pé {—<sub>1</sub> / \*no<sub>1</sub>}?  
       what/book       DEF FOC Yaw like               3SG.O  
       ‘What does Yaw like? / It’s the book that Yaw likes.’ (KM 2019)
- (2) [Aduane nó]<sub>1</sub> na Kofĩ pé {\*—<sub>1</sub> / nó<sub>1</sub>} anɔ́pá.  
       food       the FOC Kofi like               3SG.O morning  
       ‘It’s the food that Kofi likes in the morning.’ (KM 2019)

# Saah (1994), Korsah (2017), Korsah and Murphy (2019)

- ❖ Focus fronting of non-nominal XPs (VPs, PPs) leaves true gaps (even when followed by a clause-final adverb)

- (3) a. [PP Akonwá nó mú ] na Kofi dá {——PP / \*hɔ} anɔpá.  
           chair     the in     FOC Kofi lie                 there morning  
           ‘Kofi is lying IN THE CHAIR in the morning.’ (KM 2019)
- b. [VP Dán sí]-é                 na Ámá káa sé Kofi á-yó {——VP /  
           house build-NMLZ FOC Ama say.PST that Kofi PFV-do  
           \*nó} anɔpá.  
           3SG.O morning  
           ‘Ama said that Kofi BUILT A HOUSE in the morning (not bought a car).’

- ❖ both the gap and the (overt/null) RP cases involve movement, evidence (KM 2019): reconstruction effects, tonal reflex of movement



# Saah (1994), Korsah (2017), Korsah and Murphy (2019)

- ❖ movement of nominal XPs (overt or null RP): is not island-sensitive  
→ island repaired by resumption

- (4) a. Hwáń<sub>1</sub> na wo-ním [DP onipa ko [CP áa ɔ-bóɔ nó<sub>1</sub>  
 who FOC 2SG-know person the REL 3SG.S-hit.PST 3SG.O  
 nó ]]?  
 CD  
 ‘Who do you know the person who hit (him)?’ (KM 2019)
- b. Déén<sub>1</sub> na wo-ním [DP onipa ko [CP áa ɔ-tóóé —<sub>1</sub>  
 what FOC 2SG-know person the REL 3SG.S-buy.PST  
 nó ]]?  
 CD  
 ‘What do you know the person who bought (it)?’ (KM 2019)

## Saah (1994), Korsah (2017), Korsah and Murphy (2019)

❖ movement of non-nominal XPs (true gap): is island-sensitive

- (5) a. \*<sub>[PP Akonwá nó mú ] na Ama níím [DP neá ntí [CP áa</sub>  
           chair    the in    FOC Ama know    thing because.of   REL  
           Kofi dá —<sub>PP</sub> ]].  
           Kofi lie  
           ‘Ama knows the reason why Kofi lies IN THE CHAIR.’ (KM 2019)
- b. \*<sub>[VP Dán sí]-é na mé-n-tée [DP atétésém biará [CP</sub>  
           house build-NMLZ FOC 1SG-NEG-hear.PST   rumour.PL any  
           sé Kofi á-yó —<sub>VP</sub> ]].  
           that Kofi PFV-do  
           ‘I didn’t hear any rumours that Kofi has BUILT A HOUSE.’ (Hein 2017)

# Previous work: summary

- ❖ asymmetry between nominal (RP) vs. non-nominal extractees (gap)
- ❖ nominal extractees: surface asymmetry between RPs (animates) and apparent gaps (inanimates)
- ❖ correlation: RPs (overt or silent) repair islands

(6) Interaction of category  $[\pm N]$ , gap/RP and islandhood:

summary:	NP	VP/PP
true gap	no	yes
island-sensitive	no	yes

New observation

# Observation

- ❖ the RP/gap split is not determined by the [ $\pm$ N]-status of the extractee
- ❖ even some nominal extractees leave true gaps under ex-situ focus: parts of idioms, predicate Ns, kind-expressions

- (7) a. Ne-nán<sub>1</sub> na ɔ-gyáε {—<sub>1</sub> / \*nó<sub>1</sub>} [PP wɔ dán nó mú ].  
 his-leg FOC 3SG.S-leave.PST 3SG.O LOC room the inside  
 Id.: ‘It’s defecating that he did in the room.’  
 Lit.: ‘It’s his leg that he left in the room.’ (KM 2019)
- b. Tíkyani<sub>1</sub> na Kofi bé-yé {—<sub>1</sub> / \*nó<sub>1</sub>} afe yí.  
 teacher FOC Kofi FUT-be 3SG.O year this  
 ‘It is a teacher that Kofi will become this year.’
- c. Nípa<sub>1</sub> na Kofi súró {—<sub>1</sub> / \*nó<sub>1</sub>} páa.  
 person FOC Kofi fear 3SG.O really  
 ‘It’s people that Kofi really fears.’

# Observation

Interestingly, even though these Ns leave true gaps (like VPs, PPs), the dependencies are not island-sensitive (unlike VPs, PPs)!

- (8) a. Ne-nán<sub>1</sub> na m-á-té [DP atésém bí [CP sé ɔ-gyáε  
his-leg FOC 1SG.S-PFV-hear rumour a that 3SG.S-leave.PST  
{\_\_\_\_<sub>1</sub> / \*nó<sub>1</sub>} wɔ dán nó mú ]].  
3SG.O LOC room the inside

Id.: 'It's defecating that I have heard a rumour that he did in the room.'

- b. Tíkya<sub>1</sub> na m-á-té [DP atésém nó [CP sé Kofi bé-yé {\_\_\_\_<sub>1</sub>  
teacher FOC 1SG-PERF-hear rumour the that Kofi FUT-be  
/ \*nó<sub>1</sub>} afe yí ]].  
3SG.O year this

'It is a teacher that I have heard the rumour that Kofi will become this year.'

- c. Nípa<sub>1</sub> na wo-té-e [DP atésém nó [CP sé Kofi súró {\_\_\_\_<sub>1</sub> /  
person FOC 2SG.S-hear-PST rumour the that Kofi fear  
\*nó<sub>1</sub>} páa ]].  
3SG.O really

'It's people that I have heard the rumour that Kofi really fears.' (not animals)

# Observation

► KM's (2019) idea that it is the presence of an RP that repairs islands breaks down: gap dependencies can also be island-insensitive

(9) Updated table:

summary:	NP <sub>KM</sub>	NP <sub>novel</sub>	VP/PP
true gap	no	yes	yes
island-sensitive	no	no	yes

# Analysis



# Source of the split between Ns

- ❖ What's the difference between the nominals that leave an RP and those that leave a gap under focus movement?
- ❖ **Proposal:** the presence of a D-layer; those extractees that have a D-layer leave behind RPs because RPs spell-out D-heads; if a D-shell is absent, we get a gap
- ❖ background: cross-linguistically, RPs are (personal) pronouns (Asudeh 2011, 2012; McCloskey 2017); pronouns are of category D (Abney 1987)

# Source of the split between Ns

Gap-leaving elements: absence of D-head

- ❖ VP, PP: obvious
- ❖ predicate N: Ns are predicates of type  $\langle e, t \rangle$ , type  $\langle e \rangle$  achieved by combination with D (cf. Longobardi 1994, Partee 1987)
- ❖ kind-expression: structurally smaller than Ns of other types (Chierchia 1998)
- ❖ idiomatic N: potential problem, but idioms are always special...

RP-leaving nominals: presence of D-head

- ❖ proper names: are of category D (Longobardi 1994)
- ❖ definite Ns with an overt D – obvious
- ❖ specific Ns without an overt D: May usually occur with overt D optionally  $\rightarrow$  silent D-head.

# Supporting evidence

- ❖ Elements without a D-layer are also unable to be taken up by a discourse anaphoric pronoun.

(10) a. ɔ-gya-a                  ne-nán                  wɔ dán      nó mú.  
           3SG.S-leave-PST 3SG.POSS-leg LOC room DEF inside  
           ‘He defecated (lit.: left his leg) in the room.’

b. \*Na ε-a-bu.  
           PST 3.INAN.S-PFV-break  
           ‘It was broken.’

(11) a. Kofi kan křataá.  
           Kofi read paper  
           ‘Kofi reads (a) newspaper.’

b. ?ε-yε                  aniká.  
           3.INAN.S-be interesting  
           ‘It is interesting.’

(12) a. Kofi yε tíkya.  
           Kofi be teacher  
           ‘Kofi is a teacher.’

b. ?ε-yε                  adwúma pa.  
           3.INAN.S-be work                  good  
           It is a good job.

# An alternative: Referentiality

A different approach:

- ❖ Referential nouns leave an RP, non-referential ones leave a gap
- ❖ Non-referential nouns (Chen 2009):
  - ▶ idiomatic
  - ▶ generics/kinds
  - ▶ non-specific
  - ▶ non-D-linked
  - ▶ inherently non-referential quantifiers (every, no)
  - ▶ non-ostensive use

# An alternative: Referentiality

## Problem:

- ❖ How can the semantics influence the syntactic behaviour of an argument? Only possible if semantics encoded syntactically (e.g. presence of a head → D-shell)
- ❖ no effect of D-linking, quantifiers (every), non-specific indefinites

- (13) a. Hwáń na Ámá hú-u \*(nó) nnera?  
           who FOC Ama see-PST 3SG.O yesterday  
           ‘Who did Ama see yesterday?’
- b. Papa bɛn na Ámá hú-u \*(nó) nnera?  
           man which FOC Ama see-PST 3SG.O yesterday  
           ‘Which man did Ama see yesterday?’
- c. ɔbáá bíará na Kofí hú-u \*(nó) nnera.  
           woman every FOC Kofi see-PST 3SG.O yesterday  
           ‘It is every woman that Kofi saw yesterday.’
- d. ɔbáá (bí) na mé-hú-u \*(nó) nnera; nyɛ barimá.  
           woman (a) FOC 1SG.S-see-PST 3SG.O yesterday not man  
           ‘It’s (some/a) woman that I saw yesterday, not (some/a) man.’

# Implementation

We propose a partial deletion account of RPs under the copy theory of movement (cf. van Urk 2018).

- ❖ highest copy is pronounced, lower copies need to be reduced
- ❖ either this copy is entirely deleted  
 $[_{CP} [_{DP} D NP] \dots [\text{DP } \text{D } \text{NP}]]$
- ❖ or it is deleted only partially, viz., the projection of the lexical head is deleted: NP, VP, PP  
 $[_{CP} [_{DP} D NP] \dots [_{DP} D \text{NP}]]$

# Implementation

## Asante Twi

- ❖ observation: partial deletion applies obligatorily in AT to the lowest copy in a chain, full deletion applies to intermediate copies
- ❖ lower copy = DP: partial deletion deletes NP, D remains → RP:  
[<sub>CP</sub> [<sub>DP</sub> D NP ] ... [<sub>DP</sub> D ~~NP~~ ] ]

(14) [<sub>DP</sub> Aduane nó ] na Kofi pé [<sub>DP</sub> ~~aduane nó~~ ] anɔ́pá.  
           food     the   FOC Kofi like                                 3SG.O morning  
           ‘It’s the food that Kofi likes in the morning.’ (KM 2019)

- ❖ lower copy is NP/VP/PP: partial deletion deletes the entire XP, nothing remains for pronunciation → gap:  
[<sub>CP</sub> [<sub>NP</sub> N (XP) ] ... [<sub>NP</sub> ~~N (XP)~~ ] ]

(15) [<sub>NP</sub> Nípa ] na Kofi súró [<sub>NP</sub> ~~nípa~~ ] paa.  
           person   FOC Kofi fear         person really  
           ‘It’s people that Kofi really fears.’

# Consequence: Avoid Gap

- ❖ Usually: Full deletion = default, partial deletion = a position needs to be spelled out
  - ❖ Reasons:
    - ▶ special (non-structural) case (Pesetsky 1998)
    - ▶ particular phonological requirement (Landau 2006)
    - ▶ EPP (van Urk 2018)
- ⇒ Avoid Pronoun (Chomsky 1981, 1982; Montalbetti 1984)

Asante Twi:

- ❖ Partial deletion is the default
- ❖ What reason would there be to spell out the base position of objects?  
Also: Gaps are allowed in this position.
- ❖ It is just that a gap is the special case, where a structurally poorer object, i.e. idiom, generic/kind, predicative nominal is extracted



## Extension: Subject extraction

# Subject extraction

- ❖ Nominal subjects are usually doubled by a RP (*o-/ɔ-* for animates; *e-/ɛ-* for inanimates).

- (16) a. Kofí na ɔ-pɛ sika.  
 Kofi FOC 3SG.S-like money  
 ‘It’s Kofi who likes money.’
- b. Hwáń na o-hú-u ɔbáá nó?  
 who FOC 3SG.S-see-PST woman DEF  
 ‘Who saw the woman?’
- c. ɔbáá nó na ɔ-fá-a fie nó akyí.  
 woman DEF FOC 3SG.S-pass-PST house DEF behind  
 ‘It’s the woman who passed behind the house.’
- (17) a. ɛboɔ nó na ɛ-bɔ-ɔ mɛ.  
 stone DEF FOC 3.INAN.S-hit-PST 1SG.O  
 ‘The stone hit me.’
- b. Déén na ɛ-dá pónó nó só?  
 what FOC 3.INAN.S-lie table DEF on  
 ‘What lies on the table?’

# Subject extraction

- ❖ The noun-types identified above (idiom parts, generic/kind) are doubled by the inanimate marker *e-/ε-* despite being animate (*o-/ɔ-*).

(18) a. Ne-hó            na    ε-dáné-eε.

3SG.POSS-self FOC EXPL-turn-PST

‘It’s her who became pregnant. / It’s her self that turned.’

b. Ne-hó            na    ɔ-dáné-eε.

3SG.POSS-self FOC 3SG.S-turn-PST

‘#It’s her who became pregnant. / It’s her self that turned.’

(19) Báríma na    e/\*o-n-dí            aduá.

man    FOC EXPL/3SG.S-eat beans

‘It’s men that don’t eat beans’

# Subject extraction

- ❖ In addition, non-specific indefinites also take the inanimate marker

(20) Q: Did your mother tell you that it's healthy to eat a lot of fruit?

- Daabi. Dɔketá na ε-ká kyéré-ε mé sε ε-yε.  
no doctor FOC EXPL-say say-PST 1SG.O COMP 3.INAN.S-be  
'No. A (non-specific) doctor told me that it is.'
- Daabi. Dɔketá na ɔ-ká kyéré-ε mé sε ε-yε.  
no doctor FOC 3SG.S-say say-PST 1SG.O COMP 3.INAN.S-be  
'No. The doctor told me that it is.'

- ❖ Subjects show a similar split as objects
- ❖ Difference:  
objects: RP vs. gap alternation;  
subjects: RP vs. {e/ε} alternation

# Subject extraction

- ❖ Idea (in analogy to object extraction): these noun-types leave a gap which triggers insertion of an expletive.
- ❖ reason for expletive: phonological EPP? (position needs to be pronounced)
- ❖ Extracted VP-subjects also trigger presence of *e-/ε-*:

(21) [<sub>VP</sub> Dán sí]-é            na Kofi nim sε    ε/\*ɔ-yε            den.  
          house build-NMLZ FOC Kofi know COMP EXPL/3SG.S-be difficult  
          ‘It is building a house that Kofi knows is difficult.’

# Subject extraction

❖ *e-/ε-* is used in expletive contexts

- (22) a.  $\varepsilon$ -yε      mé    sε      Kofi a-waré.  
 EXPL-do/be 1SG.O COMP Kofi PFV-marry  
 ‘It appears that Kofi is married.’
- b.  $\varepsilon$ -n-yε      m-máá      nó    na    e-hú-u      m-marimá nó.  
 EXPL-NEG-do/be PL-woman DEF FOC EXPL-see-PST PL-man      DEF  
 ‘It was no woman who saw the men.’
- c.  $\varepsilon$ -wɔ      sé      obíáá      túmí kyéré n-ádweén.  
 EXPL-be COMP everyone can    show 3SG.POSS-mind  
 ‘It ought to be the case that everybody is able to express their  
 opinion.’ (Korsah 2016: 113)

## Open questions

# Islandhood

- ❖ recall: no 1:1 correspondence between gaps/RPs and island-insensitivity

## (23) *Distribution of gaps and RPs*

summary:	NP <sub>KM</sub>	NP <sub>novel</sub>	VP/PP
true gap	no	yes	yes
island-sensitive	no	no	yes

- ❖ If it is not the dichotomy between gap and RP, what then causes island-sensitivity?
- ❖ So far, it seems as if the category of the lexical head of the (extended) projection ( $[\pm N]$ ) of the extractee matters (XPs with nominal core are not island-sensitive, those with a non-nominal core are) – why should that be the case?
- ❖ We leave it to future research to resolve the island issue.



# Optionality under local subject extraction

- ❖ Usually: *e-/ɛ-* for inanimate subjects, non-nominal subjects (*e-/ɛ-* = default); *o-/ɔ-* for animate Ns
- ❖ Optionality for animate N-subjects in local extraction

(24) Kofí na ɔ/ɛ-káń-n ḱrataá nó.  
 Kofi FOC 3SG.S/EXPL-read-PST book DEF  
 'It is Kofi who read the book.'

- ❖ No optionality in long-distance extraction

(25) Kofí na wo-nim sɛ ɔ/\*ɛ-káń-n ḱrataá nó.  
 Kofi FOC 2SG.S-know COMP 3SG.S/EXPL-read-PST book DEF  
 'It is Kofi who you know read the book.'

- ❖ unclear why the less specific/default element can be used for animate N-antecedents only under local subject extraction

# Non-specific indefinites

- ❖ Pattern with RP-leaving nominals in object position but with gap-leaving nominals in subject position

(26) Q: Did your mother tell you that it's healthy to eat a lot of fruit?

a. Daabi. Dɔketá na ɛ-ká kyéré-ɛ mé sɛ ɛ-yɛ.  
 no doctor FOC EXPL-say say-PST 1SG.O COMP 3.INAN.S-be  
 'No. A (non-specific) doctor told me that it is.'

b. Daabi. Dɔketá na ɔ-ká kyéré-ɛ mé sɛ ɛ-yɛ.  
 no doctor FOC 3SG.S-say say-PST 1SG.O COMP 3.INAN.S-be  
 'No. The doctor told me that it is.'

(27) Q: Did you consult a lawyer about the issue?

A: Daabi. Dɔketá na mé-hú-u \*(nó) nnera.  
 no doctor FOC 1SG.S-see-PST 3SG.O yesterday  
 'No. I consulted a (non-specific/specific) doctor yesterday.'

- ❖ Context not clear enough in forcing a non-specific reading?

## Conclusion

# Conclusions

(28) Updated table:

summary:	DP	NP	VP/PP
true gap	no	yes	yes
island-sensitive	no	no	yes

- ❖  $\bar{A}$ -extraction of nominal elements may result in either a gap or a pronoun, both are island-insensitive
- ❖ The choice is dependent on the structural properties of the extracted nominal (DP vs. NP)
- ❖ A partial deletion account captures this split straightforwardly
- ❖ Consequence: There seems to be a preference for rsumptive pronouns over gaps when possible. This is in conflict with economy principles like Avoid Pronoun.

# References I

- Abney, Steven Paul. 1987. The English noun phrase in its sentential aspect. PhD diss, MIT, Cambridge, MA.
- Asudeh, Ash. 2011. Towards a unified theory of resumption. In *Resumptive pronouns at the interfaces*, ed. Alain Rouveret, 121–187. Amsterdam: John Benjamins.
- Asudeh, Ash. 2012. *The logic of pronominal resumption*. Oxford: Oxford University Press.
- Chen, Ping. 2009. Aspects of referentiality. *Journal of Pragmatics* 41 (8): 1657–1674.
- Chierchia, Gennaro. 1998. Reference to kinds across languages. *Natural Language Semantics* 6: 339–405.
- Chomsky, Noam. 1981. *Lectures on Government and Binding*. Dordrecht: Foris.
- Chomsky, Noam. 1982. *Some concepts and consequences of the theory of government and binding*. Cambridge, MA: MIT Press.
- Hein, Johannes. 2017. Doubling and *do*-support in verbal fronting: Towards a typology of repair operations. *Glossa* 2 (1): 67–136. doi:<http://doi.org/10.5334/gjgl.161>.
- Korsah, Sampson. 2016. Beyond resumptives and expletives in Akan. In *Diversity in African languages: Selected papers from the 46th Annual Conference on African Linguistics*, eds. Doris L. Payne, Sara Pacchiarotti, and Mokaya Bosire, 103–117. Berlin: Language Science Press.
- Korsah, Sampson. 2017. Issues in Kwa syntax: Pronouns and clausal determiners. PhD diss, Universität Leipzig, Leipzig.
- Korsah, Sampson, and Andrew Murphy. 2019. Tonal reflexes of movement in Asante Twi. *Natural Language and Linguistic Theory*. doi:<https://doi.org/10.1007/s11049-019-09456-9>.
- Landau, Idan. 2006. Chain Resolution in Hebrew V(P)-fronting. *Syntax* 9 (1): 32–66.
- Longobardi, Giuseppe. 1994. Reference and proper nouns. *Linguistic Inquiry* 25: 609–666.
- McCloskey, James. 2017. Resumption. In *The Wiley Blackwell Companion to Syntax, Second Edition*, eds. Martin Everaert and Henk van Riemsdijk, 1–30. Oxford: Wiley-Blackwell.
- Montalbetti, Mario. 1984. After binding: On the interaction of pronouns. PhD diss, MIT, Cambridge, MA.

# References II

- Partee, Barbara. 1987. Noun phrase interpretation and type shifting principles. In *Studies in discourse representation theory and the theory of generalized quantifiers*, eds. Jeroen Groenendijk, Dick de Jongh, and Martin Stokhof. Vol. 8 of *Groningen-Amsterdam studies in semantics*, 115–141. Dordrecht: Foris.
- Pesetsky, David. 1998. Some optimality principles of sentence pronunciation. In *Is the best good enough?*, eds. P. Barbosa, D. Fox, P. Hagstrom, M. McGinnis, and D. Pesetsky, 337–383. Cambridge, Mass.: MIT Press.
- Saah, Kofi K. 1994. Studies in Akan syntax, acquisition and sentence processing. PhD diss, University of Ottawa, Ottawa.
- van Urk, Coppe. 2018. Pronoun copying in Dinka Bor and the copy theory of movement. *Natural Language and Linguistic Theory* 36 (3): 393–990.