

Asymmetries in Asante Twi A'-movement: On the role of noun type in resumption*

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December 2020

1 Introduction

Asante Twi (AT), a Kwa language spoken mainly in Ghana, exhibits an asymmetry in whether a focus-fronted constituent leaves a gap or a resumptive pronoun (RP) in its base position. It has been argued that this asymmetry is linked to the category of the extracted constituent (Korsah and Murphy, 2020) such that constituents with a nominal [+N] core leave an RP while those with a non-nominal [-N] core leave a gap. In this paper, based on elicitation data from five native speakers, however, we observe that the [\pm N]-status of the extractee is not decisive. The data show that focus-fronting of some nominals obligatorily results in a gap in the base position, too. The relevant nominals are parts of idioms, predicative nouns, and non-specific indefinite bare nouns. What unites those nominals is that they form a subset of what is often termed non- or less referential nouns (cf. Chen, 2009). The crucial factor in determining a gap or an RP thus seems to be a semantic/pragmatic one. As the relevant noun types do not match up entirely with the set of non-referential expressions, we propose to model the apparent influence of semantic properties as stemming from a structural difference between the two types of nominals. The nominals that leave an RP contain a D-layer, whereas the ones that leave a gap lack it. Given that (resumptive) pronouns are D-heads (Postal, 1969; Abney, 1987; Elbourne, 2001) we suggest that partial deletion of the NP-part of the lowest copy in a focus movement chain is what creates a stranded D-head to be realized as an RP. For nominals that lack a D-layer independently, the result of partial deletion is the same as that of full copy deletion, namely a gap. Asante Twi thus exhibits a preference of RPs over gaps where possible, a pattern that is in conflict with economy constraints such as Avoid Pronoun (Chomsky, 1981; Montalbetti, 1984).

*We would like to thank the audiences at Ling 3 (2/2020, Göttingen), GLOW 43 (4/2020, Berlin), CLS 56 (8/2020, Chicago), NELS 51 (11/2020, Montréal), the Syntax-Semantics Lab at the University of Delaware (12/2020), the syntax-semantics colloquium at the University of Potsdam (1/2021), and Imke Driemel, Paul Okyere, and Andrew Murphy for valuable feedback. This research was funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) – Project ID 317633480 – SFB 1287, Project C05.

2 Previous work

Asante Twi comprises of a focus construction in which the focused constituent appears clause-initially immediately followed by the focus marker *na*, see (1-a). This construction expresses contrastive focus and is also used to form ex-situ wh-questions, see (1-b).

- (1) *Overt RP with animate extractee* (Korsah and Murphy, 2020, 845)¹
- | | | | | | | | |
|----|----------------------------|--------|---------------------------------------|----|----------------------|--------|---------------------------------------|
| a. | Kofí ₁ na | Yaw pé | {*— ₁ / no ₁ }? | b. | Hwáń ₁ na | Yaw pé | {*— ₁ / no ₁ }? |
| | Kofi | FOC | Yaw like | | who | FOC | Yaw like |
| | | | 3SG.O | | | | 3SG.O |
| | ‘It’s Kofi who Yaw likes.’ | | | | ‘Who does Yaw like?’ | | |

The syntax of the focus construction has been extensively studied, see Saah (1994); Marfo (2005); Korsah (2017); Korsah and Murphy (2020). In this paper we are interested in the distribution of gaps vs. RPs at the bottom of the focus fronting dependency. The generalization in the literature is that the choice is determined by the category of the lexical root of the extractee, i.e. whether the extractee is nominal [+N] or not nominal [-N] (Korsah and Murphy 2020): A nominal extractee always leaves an RP, whereas a non-nominal one leaves a gap. That nominals obligatorily leave an RP under focus fronting can be illustrated with animate extractees, see the examples in (1) where an animate [+N] direct object is focused. With inanimate [+N] extractees, however, the generalization seems to be wrong at first sight, since they leave a gap on the surface, see (2).

- (2) *Apparent gap with inanimate extractee* (Korsah and Murphy, 2020, 845,846)
- | | | | | | | | |
|----|---------------------------------|---------|---------------------------------------|-----------|-----------------------|----------|---------------------------------------|
| a. | [Aduane nó] ₁ na | Kofí pé | { — ₁ /*no ₁ }? | b. | Déén ₁ na | Yaw pé | { — ₁ /*no ₁ }? |
| | food | DEF | FOC | Kofi like | | what | FOC |
| | | | 3SG.O | | | Yaw like | 3SG.O |
| | ‘It’s the book that Yaw likes.’ | | | | ‘What does Yaw like?’ | | |

However, it has long been noted that 3rd person inanimate object pronouns in AT generally remain unpronounced, i.e. undergo pro-drop (see, e.g., Saah 1992). In fact, Saah (1994) argues that there is a null RP present with inanimate extraction. Evidence in favour of an underlying RP comes from the observation that 3rd person inanimate RPs can be made to appear overtly in three contexts: with (i) clause-final adverbs (Saah, 1994), (ii) change-of-state verbs (Osam, 1996), and (iii) secondary predicates (Korsah, 2017). Example (3) illustrates (i) (see the literature cited for examples of (ii) and (iii)).

- (3) *Clause-final adverb forces overt inanimate RP* (Korsah and Murphy, 2020, 846)
- | | | | |
|-------------------------------------------------|---------|---------------------|-----------------|
| [Aduane nó] ₁ na | Kofí pé | *(no ₁) | anɔpá |
| food | DEF | FOC | Kofi like |
| | | | 3SG.OBJ morning |
| ‘It’s the food that Kofi likes in the morning.’ | | | |

Korsah and Murphy (2020) take this to show that an RP is syntactically present whenever a nominal is extracted, regardless of its animacy, but the RP is deleted at PF if the focus fronted [+N]P is inanimate. This deletion rule is suspended in the contexts (i)–(iii), forcing

¹The following glosses are used in this paper: 1/2/3 = 1st/2nd/3rd person, ACC = accusative, ANIM = animate, C = complementizer, CD = clausal determiner, DEF = definite article, FOC = focus, FUT = future, LOC = locative, NEG = negation, NMLZ = nominalizer, O = object, PFV = perfective, PL = plural, POSS = possessor, PST = past tense, REL = relative complementizer, S = subject, SG = singular; á = high tone.

the RP to be pronounced. Turning to non-nominal constituents, Korsah and Murphy (2020) show that focus fronting of VPs and PPs consistently results in a true gap in the base position, see (4). That we are not dealing with an unpronounced RP here is evident by the fact that the gap pertains even when followed by a clause-final adverb, compare (3).

(4) *True gap with PP- and VP-focus* (Korsah and Murphy, 2020, 847)

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

Importantly, all focus-constructions involve A'-movement, whether they contain a true gap (VP/PP-focus) or an (overt or covert) RP (nominal focus). The asymmetry between RP-leaving and gap-leaving focus therefore cannot be attributed to an independent difference between base generation and syntactic movement. Evidence for movement is presented in Korsah and Murphy (2020) and involves reconstruction effects and a tonal reflex of movement. In summary, previous work on resumption in Asante Twi has documented an asymmetry in the ex-situ focus construction that is claimed to be based on the category of the extractee: nominal extractees leave an RP, non-nominal extractees leave a gap, see (5).

(5) Interaction of category [\pm N] and gap/RP-choice:

| extractee: | NP | VP/PP |
|-------------|-----|-------|
| (c)overt RP | yes | no |

3 A new observation

The nominal extractees in the example sentences in the previous literature on AT used to illustrate the choice between RPs and gaps were almost exclusively proper names, definite NPs (with an overt determiner) or bare nouns interpreted as specific indefinites, plus wh-pronouns in questions. Based on elicitations with five native speakers we found evidence that once we consider other noun types, the asymmetry between gaps and RPs in AT does not entirely match with the [\pm N]-category of the extractee, pace previous work on the matter: Some nominal elements, even animates, leave a true gap in the base position, too. Those nominals are a subset of the nouns that are often classified as non- or less referential (parts of idioms, predicative nouns, non-specific indefinites), while those nominals that leave an RP are fully referential (proper names, personal pronouns, definite and specific indefinite NPs). The [\pm N]-status of the extractee is thus not a sufficient predictor for gaps vs. RP in the ex-situ focus construction. It rather seems that a semantic/pragmatic property, viz., the referentiality of the extractee, determines the choice.

Our elicitation items presented speakers with a context that was supposed to facilitate or even force a desired reading of a nominal. The contexts were partly modelled after the ones used in the semantic literature on Asante Twi nominal interpretation (see Arkoh, 2011;

Arkoh and Matthewson, 2013; Bombi, 2018; Bombi et al., 2019). They all contained an utterance by a person A including a nominal which was then corrected (in order to license the use of the *na*-focus construction) by a person B. Each elicitation item contained two versions of B’s correction, one with an RP and another with a gap. Participants had to choose which version they preferred. Since examples with referential nominal extractees (that require a (c)overt RP) can be found in the previous literature, we will only present examples with less referential extractees here. For parts of idioms, there is an example already in Korsah and Murphy (2020) where a gap appears in the base position of the inanimate idiomatic object *ne-nan* ‘his/her leg’, despite the presence of a clause-final PP-adverb that should force an overt RP, see (6-a). Korsah and Murphy (2020) do not discuss this unexpected absence of an RP. Our informants confirmed that on the idiomatic reading only a gap is grammatical, see (6-a). With an RP, the idiomatic reading is lost, see (6-b).

(6) *Ex-situ focus of inanimate idiomatic object, gap vs. RP* (Korsah and Murphy, 2020, 855)

- a. Ne-nán₁ na ɔ-gyáɛ —₁ [PP wɔ dán nó mú].
 his-leg FOC 3SG.S-leave.PST 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.’
- b. Ne-nán₁ na ɔ-gyáɛ no₁ [PP wɔ dán nó mú].
 his-leg FOC 3SG.S-leave.PST 3SG.O LOC room DEF inside
 #Id.: ‘It’s defecating that he did in the room.’
 Lit.: ‘It’s his leg that he left in the room.’

This observation is confirmed by our own data involving the idiom *bɔ n’ano twɛdɛɛ* ‘to punch one’s own mouth / to eat’. When the object is focus-fronted the idiomatic reading is only available with a gap in the base position (7-b); the RP favours the literal interpretation.

(7) Context: Ama is visiting her friend Abena. Abena’s husband Kofi is mentally unstable at the moment and tends to lose his temper especially when he’s home from work for lunch. Suddenly, Abena’s dog walks past. It looks like it’s been beaten up: It has lots of scratches and is noticeably limping. Ama, knowing about Kofi’s anger issues, says:

- a. Me-n-tumi nnye nni sɛ Kofi bɔ-ɔ kraman no ɛnora.
 1SG-NEG-can believe that Kofi hit-PST dog DEF yesterday
 ‘I can’t believe that Kofi punched the dog yesterday’

Abena knows this can’t be true as Kofi ate lunch during his break yesterday. She says:

- b. Daabi. [N’-ano twɛdɛɛ]₁ na Kofi bɔ-ɔ { —₁ / *no₁ } ɛnora.
 no 3SG.POSS-mouth FOC Kofi hit-PST 3SG.O yesterday
 Id.: ‘No. Kofi ATE yesterday (during his lunchbreak).’
 #Lit.: ‘No. Kofi punched his own mouth yesterday.’

Similarly, a nominal that is used predicatively, like *tikyani* ‘teacher’ in (8-b), leaves a gap under focus fronting. This is a true gap rather than a covert RP because (i) the extractee is animate and (ii) there is a clause-final adverb that should force a covert RP to surface.

(8) Context: Kofi is about to graduate this year. Kwame claims:

- a. Kofi bε-yε dɔkɔta afe yí.
 Kofi FUT-be doctor year this
 ‘Kofi will become a doctor this year.’

But Ama knows that this is not correct and says:

- b. Tíkyani₁ na Kofi bé-yé { —₁ / *nó₁ } afe yí.
 teacher FOC Kofi FUT-be 3SG.O year this
 ‘It is a teacher that Kofi will become this year.’

Lastly, non-specific indefinites leave a gap when focus-fronted. The bare noun object *ɔkyerɛkyerɛni* ‘teacher’ in (9-b) is plausibly interpreted as referring to some random teacher at the school in the given context. Under this reading, the base position is occupied by a gap, despite the object’s animacy and the following adverb *kane* ‘first’.

(9) Context: You’re a new student at a school and tell a classmate that you’re planning to rent a school uniform instead of buying one. However, you don’t know if that’s possible. Your classmate asks:

- a. Wo-be-bisa headmaster no?
 2SG-FUT-ask headmaster DEF
 ‘Will you ask the headmaster?’

But you didn’t want to bother the headmaster with this so you say:

- b. Daabi. ɔkyerɛkyerɛni₁ na me-be-bisa { —₁ / ??no₁ } kane.
 no teacher FOC 1SG-FUT-ask 3SG.O first
 ‘No. I will ask A (RANDOM) TEACHER first.’ (one of the many teachers around)

On the other hand, we can add nouns interpreted as kinds (a context not considered in the literature) to the list of nominals that leave an RP under extraction. The context in (10) facilitates a kind reading of the plural animate bare noun *asebɔ* ‘tigers’ (cf. Krifka et al., 1995).

(10) Context: The government is about to pass a new law to protect certain animals. Ama and Kofi discuss which animals are protected by this law. Ama says:

- a. Me dwene sε mmra foforɔ no bε-bɔ mpan ho ban.
 1SG think C law new DEF FUT-hit bat.PL self wall
 ‘I think that the new law will protect bats.’

But Kofi disagrees:

- b. Daabi. Asebɔ₁ na mmra foforɔ no bε-bɔ { *—₁ / wɔn₁ } ho ban.
 no tiger.PL FOC law new DEF FUT-hit 3PL.ANIM.O self wall
 ‘No. The new law will protect TIGERS.’

The three noun types in (6) – (9), which do not leave an RP under A’ extraction, have in common that they have been classified as being less or non-referential (Chen, 2009). Thus, it is not true that focus-fronted nominals consistently leave a (c) overt RP, as opposed to non-nominals, which leave a true gap. Rather, the referentiality of a nominal seems to play a role: Less referential [+N]s pattern with [-N]s in leaving gaps:

(11) Updated table (compare (5)):

| extractee: | [+N] _[+ref] | [+N] _[-ref] | VP/PP |
|-------------|------------------------|------------------------|-------|
| (c)overt RP | yes | no | no |

That the noun type of the focused XP has an effect on resumption is not surprising given that various pronominal elements that double an extractee have been observed to be sensitive to semantico-pragmatic properties of their antecedents before. For example, pronominal clitics are known to trigger a specific interpretation of their associate and can only double referential expressions (Suñer, 1988; Anagnostopoulou, 2017; Baker and Kramer, 2018). This effect has also been described for languages in which gaps and RPs can alternate in \bar{A} -dependencies, especially in relative clauses (e.g. in Hebrew, Doron 1982; Sharvit 1999): The head noun can only be interpreted as specific when the RP is present, see (12):

- (12) Dani yimca et ha-iša [še hu mexapes — / ota]
 Dani find.FUT ACC DEF-woman C he seeks her
 “Dani will find the woman he is looking for.”
 with RP: ✓de re, *de dicto
 with gap: ✓de re, ✓de dicto (Hebrew, Doron 1982, 305)

But apart from observations about single sentences such as (12), there has been no systematic investigation of the role of noun type on resumption / interpretation of the antecedent so far in which the noun type of the antecedent has been systematically varied.

4 Analysis

4.1 A structural account

The question that emerges is what is the difference between XPs that require an RP under focus fronting and those that leave a gap (a subset of less referential nominals and non-nominals). We propose to derive this distribution by combining two independently motivated assumptions concerning (i) structural differences between noun types (DP vs. NP) and (ii) the analysis of RPs as the spell-out of the D-head of a DP-copy whose NP-subpart has been deleted (partial copy deletion). We will address each of them in turn.

Starting with (i), it has been argued in the semantic and syntactic literature that noun types differ in their structural make-up. In particular, some noun types contain a D-layer (viz., are DPs), while others lack (at least) the functional projection D (viz., are NPs).² The hypothesis is that those XPs that leave an RP under A'-extraction are DPs, while those that leave a gap are NPs (lack a D-shell). We make the following background assumptions about the relation between semantic type and structural complexity: nouns are underlyingly of type $\langle e, t \rangle$ in Asante Twi (Malte Zimmermann, p.c.). Following the basic logic in Chierchia (1998), nouns with a different semantic type are derived from this underlying type. We assume that semantic complexity correlates with syntactic complexity, i.e., a derived semantic type implies more syntactic structure, viz., the presence of functional structure (such as a D-shell) above

²We assume a simple structure of the nominal projection here where D takes NP as its complement. We leave aside the question whether there are other functional projections in between DP and NP, such that the D-shell lacking nominals may be bigger than NP, e.g., nP or NumP.

the NP. We can think of the functional head merging with the NP as the host for a (potentially silent) morpheme with a semantic type that delivers the derived noun type under combination with the NP. Let us consider the noun types that leave RPs: proper names, personal pronouns, definite nouns (with an overt D), bare nouns with a specific indefinite interpretation. With definite nouns the D-layer is visible, pronounced as the determiner; personal pronouns have been treated as D-elements since Postal (1969); Abney (1987). Moreover, pronouns, proper names and kind expressions are of type $\langle e, \iota \rangle$, and thus derived. In addition, Longobardi (1994) argues that proper names are structurally DPs (with a silent D-head to which the N-head moves). The standard analysis of specific indefinites is that these nouns contain a variable over choice functions (Reinhart, 1997; Winter, 1997; Kratzer, 1998; Matthewson, 1999), which is commonly assumed to be hosted in an NP-external functional projection, i.e., the (potentially silent) D-head. In contrast, the gap-leaving noun types have been argued to be structurally smaller, viz., to lack a D-layer. This is obvious for non-nominals like VPs and PPs: they do not have any nominal layer in their extended projections. The lack of a D-layer is also uncontroversial for predicate nouns: They are predicates of the underlying type $\langle e, t \rangle$ and thus underived (combining them with D would turn them into expressions of type $\langle e \rangle$, see among others Longobardi 1994; Partee 1987). As for non-specific indefinites, they have been claimed to be NPs rather than DPs (like specific indefinites and definites), see e.g. Higginbotham (1987); this view is very prominent in the literature on differential argument marking and on (pseudo) noun incorporation (see among others Massam 2001; Danon 2006; López 2012; Arkadiev and Testelets 2019; and Driemel 2020 for critical discussion). For idiomatic objects we assume their internal structure is opaque for the (post)syntax while the structure of the whole V+DP expression is accessible thus blocking partial deletion of the NP-subpart but allowing full deletion of the whole DP-object.³

We now turn to the second ingredient of our analysis: the nature of resumption. Cross-linguistically, RPs are taken from the personal pronoun paradigm (Asudeh, 2012; McCloskey, 2017); this also holds in Asante Twi (see Korsah 2017, 106 for pronoun paradigms). Personal pronouns are of category D (see above), and so must be RPs. Following an idea in Postal (1969), revived e.g. in Elbourne (2001); Jenks and Bi (2019), pronouns spell-out D-heads whose NP-complement has been deleted. This idea has been transferred to RPs in A'-movement chains: an RP results if a copy of a DP-extractee undergoes *partial* copy deletion (see Pesetsky 1998; Landau 2006; van Urk 2018 on partial copy deletion) such that only the NP-subpart is deleted, while the D-head remains. This D-head is realized as a pronoun, viz., an RP arises. Gaps surface if a lower copy is subject to *full* copy deletion, i.e. the entire XP is deleted, and hence no projection remains to be morpho-phonologically realized as an RP. Partial and full copy deletion are schematically exemplified in (13) and (14) for a DP-copy (copies occur in angled brackets, deletion is indicated by a strike-through). How much structure partial deletion affects is defined in (15).

³Support for the hypothesis that gap-leaving nominals lack a D-shell comes from the observation that the same noun types cannot be taken up by a discourse anaphoric pronoun in a subsequent sentence in Asante Twi.

(13) partial copy deletion:
 $\langle [_{\text{DP}} \text{D NP}] \rangle \rightarrow \dots \langle [_{\text{DP}} \boxed{\text{D}} \text{NP}] \rangle$
 \downarrow
 RP

(14) full copy deletion:
 $\langle [_{\text{DP}} \text{D NP}] \rangle \rightarrow \dots \langle \langle \text{DP} \text{D NP} \rangle \rangle$
 \downarrow
 gap

(15) Partial deletion deletes the maximal projection of the lexical core of an XP (where lexical categories are N, V, P, A).

In Asante Twi, RPs can only surface in the base position of the A'-moved XP, not in intermediate landing sites. Given the analysis of gaps vs. RPs outlined above, this means that full (rather than partial) copy deletion must apply to all intermediate copies of a moved XP in Asante Twi, while partial (rather than full) copy deletion must apply to the lowest copy in the A'-chain (to potentially produce RPs). We can now combine the assumptions in (i) and (ii). We have three scenarios to consider: The extractee can either be (a) a nominal with a D-layer (DP), (b) a nominal without a D-layer (NP), or (c) a non-nominal (VP, PP). The result of applying partial deletion to the lowest copy is shown in (16)–(19):

(16) DP-extractee:
 $[_{\text{DP}} \text{D NP}] \rightarrow [_{\text{DP}} \boxed{\text{D}} \text{NP}]$ **RP**

(18) VP-extractee:
 $[_{\text{VP}} \text{V XP}] \rightarrow \langle \langle \text{VP V XP} \rangle \rangle$ **gap**

(17) NP-extractee:
 $[_{\text{NP}} \text{N XP}] \rightarrow \dots \langle \langle \text{NP N XP} \rangle \rangle$ **gap**

(19) PP-extractee:
 $[_{\text{PP}} \text{P NP}] \rightarrow \langle \langle \text{PP P NP} \rangle \rangle$ **gap**

If a DP-copy undergoes partial deletion, the NP (= the maximal projection of the DP's lexical core, viz., N) is deleted, D remains and is realized as a pronoun, compare (13). If an NP-copy is affected by partial deletion, the result is equivalent to full copy deletion since the entire NP is affected. The same applies to copies of non-nominals (VP, PP): the partial deletion domain is identical to the entire copy since P and V are lexical items and thus PP and VP are their maximal projections. In the three latter cases (NP-, PP-, VP-copies) nothing remains of the copy after partial deletion has applied that could be pronounced, in particular no D-head (these copies never contained a D-head in the first place). Given assumption (i) that referential nouns have a D-layer, they can leave an RP under A'-movement. Other extractees, including (some) less referential nominals of the kind listed in section 3 and non-nominals, lack a D-layer and hence can only leave a gap.

4.2 An alternative, semantics-based approach

In our description of the novel observation in section 3 we used the term 'referentiality' to distinguish nominals that leave an RP and those that leave a gap, because the gap-leaving ones are a subset of expressions that are classified as less referential (Chen, 2009). However, in the analysis in 4.1 we did not make reference to this semantico-pragmatic notion at all; rather, we pursued a purely structural account: DPs leave RPs, other XPs leave gaps. In what follows we argue why an account that relies on referentiality to be doomed.

The alternative account would be based on the descriptive generalization: Referential Ns leave an RP, non-referential ones leave a gap. There are two problems with this view. First, referentiality is a semantic/pragmatic notion, but it has an influence on PF in Asante Twi, i.e., on whether the lowest copy in an A'-chain is overtly realized (RP) or silent (gap). Given

the T/Y-model of grammar (Chomsky and Lasnik, 1977), it is not possible that semantic properties, encoded at LF can influence PF, since both branch off from syntax but do not interact. The only way to resolve this would be to encode referentiality in the syntax, e.g. as a morpho-syntactic feature [\pm ref] (such that referential expressions bear [+ref]). PF could then make reference to this feature. We believe, though, that it is neither explanatory nor particularly elegant to simply turn semantic/pragmatic notions into features in the syntax. Apart from this conceptual reason, there is an empirical argument against basing the analysis on referentiality: The RP/gap divide in nominals in Asante Twi does not perfectly track referentiality. There are noun types typically classified as less or even non-referential in the literature that still leave an RP in Asante Twi. Thus, not all less referential nominals leave gaps. This is the case for e.g. universal quantifiers, see (20-a). They are non-referential expressions but require an RP when they undergo focus fronting. Furthermore, there is no difference in Asante Twi between D-linked and non-D-linked wh-expressions with respect to the gap/RP choice: both leave RPs even though non-D-linked wh-expressions (viz., wh-pronouns) are claimed to be less referential than D-linked ones (*which*-phrase). A minimal pair is shown in (20-b-c); see also (1) for an example with a wh-pronoun.

- (20) a. [ɔbáá bíará]₁ na Kofí hú-u {*_ _1 / nó₁} nnera.
 woman every FOC Kofi see-PST 3SG.O yesterday
 ‘It is every woman that Kofi saw yesterday.’
- b. Hwáń₁ na Ámá hú-u {*_ _1 / nó₁} nnera?
 who FOC Ama see-PST 3SG.O yesterday
 ‘Who did Ama see yesterday?’
- c. [Papa bɛn]₁ na Ámá hú-u {*_ _1 / nó₁} nnera?
 man which FOC Ama see-PST 3SG.O yesterday
 ‘Which man did Ama see yesterday?’

Thus, a referentiality-based approach cannot derive the distribution of gaps vs. RPs in Asante Twi. Our structural account correctly predicts the emergence of an RP in (20): In all cases the extractee has a D-layer. The wh-element in (20-b) is a pronoun and thus of category D. The *which*-element in wh-phrases is usually identified as a D-element in the syntactic literature and has been argued to contain a (silent) D-layer for semantic reasons (Rullmann and Beck, 1998). Quantifiers are NP-external elements, located in D (Abney 1987).

5 Consequences and further issues

5.1 Gap vs. RP: the role of economy conditions

In our account of resumption in Asante Twi the lowest copy in an A'-chain undergoes partial deletion, which may result in an RP. This is the opposite of the standard view in the literature that full deletion (which always results in a gap) is the default copy deletion operation, and partial deletion is a repair strategy that must be triggered by a PF-requirement that enforces the pronunciation of a (subpart of) a certain position (see e.g. Landau 2006). This standard view is also expressed in economy constraints like Avoid Pronoun that favour gaps over (overt)

pronouns (Chomsky, 1981; Montalbetti, 1984). In Asante Twi, however, RPs must be used when DPs are extracted – even though gaps are in principle possible in the same position (e.g., with NP-extractees). In this sense, Asante Twi exhibits a preference for RPs over gaps whenever the use of RPs is possible, *pace* economy conditions such as Avoid Pronoun. We do not see a reason for why partial rather than full deletion is the default for lowest copies in Asante Twi.⁴ But the language shows that the preference for gaps over RPs is not universal; we take the application of full vs. partial deletion to be subject to cross-linguistic variation, i.e., languages can choose which option they prefer.

5.2 Resumption and islandhood

Animate and inanimate nominal objects may undergo focus-fronting from inside an island without incurring an island-violation (21). Non-nominal constituents, on the other hand, give rise to ungrammaticality when extracted from inside an island configuration (22).

(21) *Nominal object extraction from RC-island* (Saah, 1994, 197,172)

- a. Hwáń₁ na wo-ním [DP onipa ko [CP áa ɔ-bóó nó₁ nó]]?
 who FOC 2SG-know person the REL 3SG.S-hit.PST 3SG.O CD
 ‘Who do you know the person who hit (him)?’
- b. Déén₁ na wo-ním [DP onipa ko [CP áa ɔ-tóóé —₁ nó]]?
 what FOC 2SG-know person the REL 3SG.S-buy.PST CD
 ‘What do you know the person who bought (it)?’

(22) *PP-/VP-extraction from CNP-island* (Korsah and Murphy, 2020, 848, Hein, 2017, 14)

- a. *[_{PP} Akonwá nó mú] na Ama ním [DP neá ítí [CP áa Kofi dá —_{PP}]].
 chair the in FOC Ama know thing because REL Kofi lie
 ‘Ama knows the reason why Kofi lies IN THE CHAIR.’
- b. *[_{VP} Dán sí]-é na mé-n-tée [DP atétésém bíará [CP sé Kofi
 house build-NMLZ FOC 1SG-NEG-hear.PST rumour.PL any that Kofi
 á-yó —_{VP}]].
 PFV-do
 ‘I didn’t hear any rumours that Kofi has BUILT A HOUSE.’

Korsah and Murphy (2020) directly link this asymmetric behaviour in island-sensitivity to the asymmetry in resumption. It is well-established that at least in some languages RPs may alleviate island violations (see e.g. McCloskey, 1979 on Irish; Borer, 1984 on Hebrew). For Asante Twi, Korsah and Murphy (2020) adopt the view of islands as PF-constraints on structural configurations (Merchant, 2001; Boeckx, 2012) that are satisfied as long as there is an RP in the root of the dependency. The fact that nominal extractees always leave a RP in syntax coupled with a PF-ordering where island-constraints are checked before deletion of inanimate RPs then accounts for their island-insensitivity. As non-nominal constituents

⁴Properties that have been proposed to enforce the pronunciation of certain positions, and thus the application of partial rather than full copy deletion, include inherent case (Pesetsky, 1998) and various phonological requirements (Landau, 2006), e.g., phonological EPP-features (van Urk, 2018). None of these conditions seems to hold for the positions in which we find RPs in Asante Twi.

lack RPs, they consistently incur violations of these PF-constraints. Crucially, this reasoning leads us to expect that the less-referential noun types that do not leave RPs upon extraction should be island-sensitive. As the data in (23) attest, however, this is not the case. The relevant noun types pattern with other (referential) noun types in being island-insensitive.

- (23) a. Ne-nán₁ na m-á-té [DP atésém nó [CP sé ɔ-gyáε {—₁ / his-leg FOC 1SG.S-PFV-hear rumour DEF that 3SG.S-leave.PST *nó₁} wɔ dán nó mú]].
 3SG.O LOC room DEF inside
 Id.: ‘It’s defecating that I have heard the rumour that he did in the room.’
- b. Tíkyá₁ na m-á-té [DP atésém nó [CP sé Kofi bé-yé {—₁ / *nó₁} teacher FOC 1SG-PERF-hear rumour DEF that Kofi FUT-be 3SG.O afe yí]].
 year this
 ‘It is a teacher that I have heard the rumour that Kofi will become this year.’
- c. Nnípa₁ na wo-té-e [DP atésém nó [CP sé Kofi sùró {—₁ / *nó₁ / person FOC 2SG.S-hear-PST rumour DEF that Kofi fear 3SG.O *wɔn₁} páa]].
 3PL.O really
 ‘It’s people that I have heard the rumour that Kofi really fears.’

Korsah and Murphy’s (2020) explanation of island-repair by resumption thus cannot account for the observed pattern of island-insensitivity. Rather, it seems that it is the category of the lexical head of the (extended) projection of the extractee that matters: XPs with a nominal core are not island-sensitive whereas XPs with a non-nominal one are. Unfortunately, we do not currently have an explanation for this.

6 Conclusion

Based on novel elicitation data from five speakers we found evidence that extraction of nominal constituents may result in either a gap or a RP (24), *pace* claims in the literature.

(24) *Distribution of gaps vs. RPs and island-sensitivity*

| summary: | [+N] _[group1] | [+N] _[group2] | VP/PP |
|------------------|--------------------------|--------------------------|-------|
| (c)overt RP | yes | no | no |
| island-sensitive | no | no | yes |

We argued that the choice is dependent on structural properties of the extractee, that is whether it contains a D-layer or lacks it: DPs leave an RP ([+N]_[group1]), while XPs that lack a D-layer ([+N]_[group2], [-N]) leave a gap. Within the copy theory of movement, a partial copy deletion account where RPs realize D-heads of lower copies whose NP-complement has been deleted straightforwardly captures the split between the distinct noun types. As a consequence of our account, there seems to be a preference for RPs over gaps where possible – a preference that is in conflict with economy constraints like Avoid Pronoun. Furthermore,

gap-leaving noun types are just as island-insensitive as their RP-leaving counterparts which poses a challenge to the idea that the island-insensitivity of nominal extractees is due to a "repair by resumption". One important result of this study of resumption is that in addition to proper names, definite nouns and specific indefinites, one should also test the resumptive behaviour of less-referential noun types under extraction.

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