On the interaction of A′-movement and negation in Igbo

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1 Introduction

1.1 Extraction from negative clauses

A′-movement is possible from both affirmative and negative clauses in Igbo (cf. (1) & (2))

(1) Affirmative clause

  a. Úchè hụ̀-rụ̀   Òbí.
    Uche see-SFX Obi
    "Uche saw Obi."

  b. Ònyé kà   **Úché** hụ̀-rụ̀?
    who   FOC Uche see-SFX
    "Who did Uche see?"

(2) Negative clause:

  a. Úchè á-ˈhú-ghị̣   Òbí.
    Uche PFX-see-NEG Obi
    "Uche didn't see Obi."

  b. Ònyé kà   Úchè **ná** á-ˈhụ-ghị̣?
    who   FOC Uche PRT PFX-see-NEG
    "Who did Uche not see?"

observation: extraction from negative clauses triggers the presence of the particle *ná* in (2-b). Igwe and Green (1964); Goldsmith (1976); Nwachukwu (1976) observe this in relative clauses in the language.

Goals:

- present new data that show that *ná* is a reflex of A′-movement
- show that the particle is triggered by overt XP movement to Spec-ForceP or Spec-FocP out of a negative clause
- argue that the particle *ná* is a complementizer that lowers to T as a result of polarity [NEG] feature.
- this kind of lowering poses a challenge for local approaches to lowering
  ⇒ local solution: *ná* is the overt realization of Fin that lowers to T

Roadmap:
  §2 A′-dependencies and polarity in Igbo
  §3 The syntax of the *ná* particle
  §4 Analysis
  §5 Conclusion

1.2 Background on Igbo

- Niger-Congo, West Benue-Congo (Blench 1989)
- three level tones: low (à), high (á), downstep (ˈá); lexical + grammatical function
- inflection: no argument-V agreement but rich verbal morphology: tense/aspect, derivational and extensional affixes (Nwachukwu 1983; Uwalaka 1988; Emenanjo 2015)
- rigid word order: S – V – O – (ADJ)

(3) Òbí hụ̀-rụ̀   Àdá n'-áhíá
    Obi see-PST Ada P-market
    "Obi saw Ada at the market."

- head-intial VP

- DP_{ext} undergoes EPP-movement to Spec-TP
- V-movement to (Neg)ation or (Aff)irmation (but not to T) to pick up the inflection (Déchaine 1993)

(4) $[_{TP}$ DP_{ext} $[_{T'}$ T $[_{NegP}$ V+v+Neg $[_{vP}$ <DP_{ext}> $[_{,v'}$ <v> $[_{VP}$ <V> ... $]]]]]]]$

2 A′-dependencies and polarity in Igbo

2.1 Properties of A′-movement

- (non-subject) wh-/focus and relative clauses involve movement (Ndimele 1991; Amaechi and Georgi 2019) but topicalization involves base-generation (Georgi and Amaechi 2019)
- evidence: overt focus marker in ex-situ wh-question (1) & (2); island-sensitivity, reconstruction effects (Amaechi and Georgi 2019)

(5) Island-sensitivity (adjunct island)
   a. Úchè pùrù túpú   Òbí àhú Àdá n'-áhíá
       Uche left   before Obi saw Ada P-market
       "Uche left before Obi saw Ada at the market."
   b. *Ònyé kà   Úché pùrù túpú   Òbí àhú _ _ _   n'-áhíá
       who FOC Uche left   before Obi saw   P-market?
       "Lit.: Who did Uche leave before Obi saw at the market?"   *wh-question*
   c. Àdá Úché pùrù túpú   Òbí àhú ya   n'-áhíá
       Ada Uche left   before Obi saw 3SG.GEN P-market?
       "As for Ada, Uche left before Eze saw her."   *topicalization*

(6) Reconstruction (strong cross-over)
   a. Ó   chèrè nà   Òbí hùrù Àdá
       3SG.NOM think that Obi saw Ada
       "He thinks that Obi saw Ada."
   b. Ònyé kà ó   chèrè nà   Òbí hùrù _ _
       who   foc 3SG.NOM think that Obi saw
       *for which x, x thinks that Obi saw x
       ✓for which x, y thinks that Obi saw x   *wh-question*
   c. Àdá, ó chèrè   nà   Òbí hùrù yá
       who foc 3SG.NOM think that Obi saw 3SG.ACC
       ✓for which x, x thinks that Obi saw x
       ✓for which x, y thinks that Obi saw x   *topicalization*

- cyclicity effects: (i) final high tone on moved over subject (cf. (1-b) & (2-b)) (Manfredi 2018) in affirmative clauses (ii) non-extraction from perfective clauses (7)

(7) Perfective morphology
   a. Àdá è-rí-é-lá   ¡jí.
       Ada NMZL-eat-SFX-PFV yam.GEN
       "Ada has eaten yam."
   b. *Jí   kà   Àdá è-rí-é-lá   _ _ _
       yam FOC Ada NMZL-eat-SFX-PFV
       "Ada has eaten yam"   *focus*
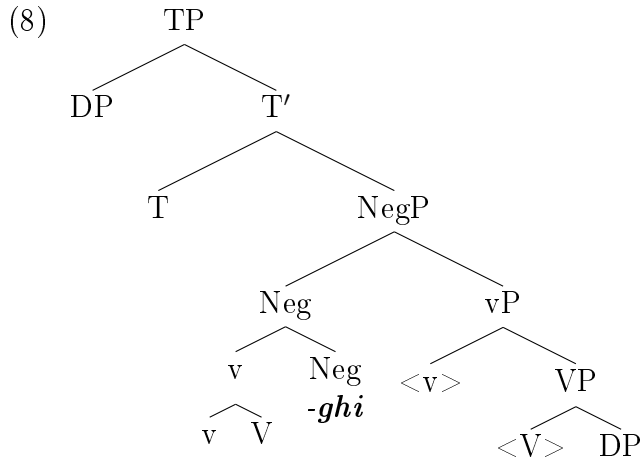
c. Jí   Àdá è-rí-é-lá   ꜛyá.
   yam Ada NMZL-eat-SFX-PFV 3SG.GEN
   "As for the yam, Ada has eaten it."   *topicalization*

New effect ⇒ presence of *ná* in negative clauses with A′-movement

2.2   Polarity

- Polarity of the clause could be negative or affirmative
- the negative suffix -*ghi* in (2) is the realization of Neg head below TP

(8)   TP
        / \
      DP   T′
           / \
          T   NegP
              /   \
            Neg   vP
           /   \   / \
          v   Neg <v> VP
         / \ *-ghi*   / \
        v   V   <V>   DP

- Déchaine (1993) argues that the verbal -*rV* suffix in (1) is an instantiation of affirmative polarity as it is in complementary distribution with the negative marker -*ghi*
- when the polarity of the clause is affirmative, -*rV* is realized as Aff head, which is the same position as Neg
- V moves to Neg or Aff depending on the polarity of the clause

3   The syntax of the *ná* particle

3.1   Basic properties

- *ná* occurs in all A′-movement dependencies with negative polarity. This applies to all grammatical functions.

(9) a. Òbí kà   Úchè **ná** á-ꜛhụ́-ghị̣.
       Obi FOC Uche PRT PFX-see-NEG
       "Uche didn't see OBI."   *focus*
    b. Ònyé kà   Úchè **ná** á-ꜛhụ-ghị́?
       who FOC Uche PRT PFX-see-NEG
       "Who did Uche not see?"   *question*
    c. ónyé **ná** á-ꜛhụ́-ghị̣   Òbí
       person PRT PFX-see-NEG Obi
       "the person who didn't see Obi"   *relativization*

- the particle is absent in negative clauses with a base-generated A′-dependency such as topicalization (10)

(10) Òbí, Úchè (***ná**) á-ˈhú-ghị̣   yá.
     Obi Uche PRT   PFX-see-NEG him
     "As for Obi, Uche didn't see him."   *topicalization*

- the particle only occurs along the path of negation. Compare (11) and (12)

(11) a.   Àdá á-ˈmá-ghị̣   nà   Úchè hù-rù   Òbí.
         Ada PFX-know-NEG that Uche see-SFX Obi
         "Ada didn't know that Uche saw Obi."
     b.   Ònyé kà   Àdá (ná) á-ˈmá-ghị̣   nà   Úchè hù-rù   ___?
         who FOC Ada PRT PFX-know-NEG that Uche see-SFX
         "Who did Ada not know that Uche saw?"

(12) a.   Àdá mà   nà   Úchè á-ˈhụ-ghị̣   Òbí.
         Ada know that Uche PFX-see-NEG Obi
         "Ada knows that Uche didn't see Obi."
     b.   Ònyé kà   Àdá (*ná) mà   nà   Úchè ná á-ˈhụ-ghị̣   ___?
         who FOC Ada PRT   know that Uche PRT PFX-see-NEG
         "Who did Ada know that Uche didn't see?"

- the particle is in complementary distribution with final high tone on crossed over subject (cf. (1-b) and (2-b) above) (Goldsmith 1976).
- perfective morphology on the verb is lost when the sentence is negated (Déchaine 1993). Thus extraction from (13-b) is allowed and we get *ná*, as shown in (13-c).

(13) a.   Àdá è-rí-é-lá   ˈjí.
         Ada NMZL-eat-SFX-PFV yam.GEN
         "Ada has eaten yam."
     b.   Àdá é-ri-bé-ghí   jí.
         Ada PFX-eat-yet--NEG yam.ACC
         "Ada hasn't eaten yam."
     c.   Gị̣ˈnị̣ kà   Àdá ná é-ri-bé-ghí   ___?
         what FOC Ada PRT PFX-eat-yet--NEG
         "What has Ada not eaten?"

- the particle bears a high tone as against the low tone on the declarative complementizer. See (12).

3.2   Evidence for movement

- island-sensitivity

(14) adjunct island
     a.   Òbí sì-rì   jí   màkà   nà   Úchè á-ˈzú-tá-ghị̣ òsìkápá.
         Obi cook-SFX yam because that Uche PFX-see-NEG rice
         "Obi prepared yam because Uche did not buy rice."
     b.   *Gị̣ˈní kà   Òbí sì-rì   jí   màkà   nà   Úchè ná á-ˈzú-tá-ghị̣?
         what FOC Obi cook-SFX yam because that Uche PRT PFX-see-NEG
         lit: "What did Obi prepare yam because Uche did not buy?"

(15) coordination island

    a. Úchè á-ˈhú-ghị   Òbí nà Àdá.
        Uche PFX-see-NEG Obi and Ada
        "Uche didn't see Obi and Ada."

    b. *Ònyé kà   Úchè **ná** á-ˈhu-ghị   _ _ _ nà Àdá?
        who FOC Uche PRT PFX-see-NEG   and Ada
        lit: "Who did Uche not see and Ada?"

- reconstruction effects

(16) Principle A

    a. Òbí$_i$ á-ˈhú-ghị   fòtó   [ònwé ˈyá   ]$_i$
        Obi PFX-see-NEG picture   SELF 3SG.ACC
        "Obi didn't see a picture of himself."

    b. [Fòtó   [ònwé ˈyá   ]$_i$] kà   Òbí$_i$ á-ˈhú-ghị   _ _ _
         picture SELF 3SG.ACC   FOC Obi PFX-see-NEG
        "It's a picture of himself that Obi didn't see."

(17) strong cross-over effect

    a. Ó   chèrè nà   Òbí á-ˈhú-ghị   Àdá
        3SG.NOM think that Obi PFX-see-NEG Ada
        "He thinks that Obi didn't see Ada."

    b. Ònyé kà ó   chèrè nà   Òbí (ná) á-ˈhú-ghị   _ _ _?
        who foc 3SG.NOM think that Obi PRT PFX-see-NEG
        *for which x, x thinks that Obi didn't see x
        ✓for which x, y thinks that Obi didn't see x

3.3 In-situ wh-/focus

- Wh-phrases and focused XPs can also occur in-situ. When they do, they are not followed by the focus marker (Uwalaka 1991; Ogbulogo 1995; Nwankwegu 2015; Amaechi and Georgi 2019)

- but the particle *ná* is incompatible with in-situ wh-/focus

(18) a. Úchè hù-rù   ònyé?
        Uche see-SFX who
        "Who did Uche see?"

    b. Úchè (*ná) á-ˈhú-ghị   ònyé?
        Uche PRT PFX-see-NEG Obi
        "Who did Uche not see?"

3.4 *Ná* not A-movement

AIM: to show that *ná* is only occurs in A′-movement contexts and not A-movement contexts.

- Igbo allows subject-object reversal with a subclass of inherent complement verbs (ICVs) (Nwachukwu 1987; Uwalaka 1988; Manfredi 1991)

- Amaechi (2018) shows that this reversal involves A-movement; evid.: case flip as in (19).

(19) a. Ọ́ tụ̀-rụ̀ ụ́ꜜjọ́.
　　　3SG.NOM ICV-SFX fear
　　　"S/he was afraid."

　　 b. Ụ́ꜜjọ́ tụ̀-rụ̀ yá.
　　　fear ICV-SFX 3SG.ACC
　　　"S/he was afraid."

- in negative contexts with reversal of the subject and object, *ná* particle is not found.

(20) a. Àdá á-ꜜtụ́-ghị́ ụ́ꜜjọ́.
　　　Ada PFX-ICV-NEG fear
　　　"Ada wasn't afraid."

　　 b. Ụ́ꜜjọ́ (*ná) á-ꜜtụ́-ghị́ Àdá.
　　　fear PRT PFX-ICV-NEG Ada
　　　"Ada wasn't afraid."

GENERALIZATIONS:
(i) *ná* is A′-movement related occurring only when an XP overtly moves to Spec-CP;
(ii) the particle is sensitive to negative polarity of the clause

(21) [$_{CP}$ XP　　C　[$_{TP}$ Subj　**ná**　[$_{NegP}$ … t$_{XP}$ …]]]

Question: What does *ná* realize?

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4 Analysis

4.1 *Ná*, a complementizer?

- in comparison to the declarative complementizer with a low tone (see (12-a) repeated here as (22)), the particle *ná* appears to occur in a lower position, after the subject DP

(22) Àdá mà **nà** Úchè á-ꜜhụ́-ghị́ Òbí.
　　Ada know that Uche PFX-see-NEG Obi
　　"Ada knows that Uche did not Obi."

- under long-distance subject extraction, Igbo exhibits the *that*-trace effect (23-a), but this can be circumvent with a resumptive pronoun in the extracted subject position (23-b)

(23) a. Ònyé kà Àdá mà (*nà) ꜜhụ́-ꜜrụ́ Òbí?
　　　who FOC Ada know that see-SFX Obi
　　　"Who does Ada know that Obi saw?"

　　 b. Ònyé kà Àdá mà nà ọ́ hụ̀-rụ̀ Òbí?
　　　who FOC Ada know that 3SG see-SFX Obi
　　　"Who does Ada know that Obi saw?"

- extraction of the subject from a negative clause without resumption triggers *ná* (24-a) but for extraction with resumption in the embedded subject position, *ná* is illicit (24-b).

(24) a. Ònyé kà   Àdá mà   *(**ná**) á-ˈhú̩-ghí̩   Òbí?
      who FOC Ada know PRT   PFX-see-NEG Obi
      "Who did Ada know that did not see Obi?"

   b. *Ònyé kà   Àdá mà   **nà** o̩ (***ná**) á-ˈhú̩-ghí̩   Òbí?
      who FOC Ada know that 3SG PRT   PFX-see-NEG Obi
      "Who did Ada know that did not see Obi?"

- data in (24-b) seems to suggest that declarative complementizer *nà* and *ná* are mutually exclusive

- with non-subject is the judgement different; some speaker allow *ná* in the embedded clause while some do not

(25) Ònyé kà   Àdá mà   **nà** Úché %(**ná**) á-ˈhú̩-ghí̩   _ _ _?
     who FOC Ada know that Uche PRT   PFX-see-NEG
     "Who did Ada know that Uche did not see?"

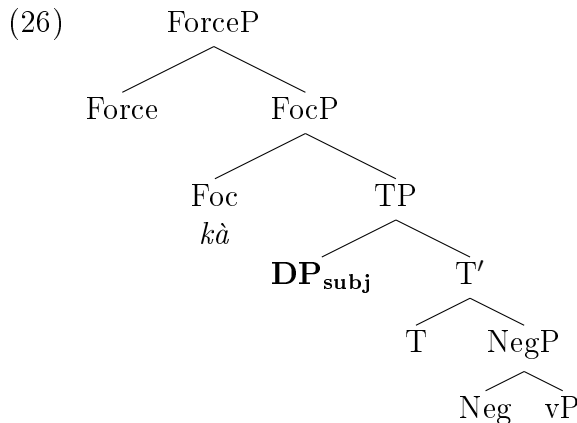- I assume that the declarative complementizer *nà* realizes Force (in a split CP-system (Rizzi 1997; 2001))

Puzzle: If *ná* is indeed a complementizer, how then does it appear low in the structure, after the subject DP?
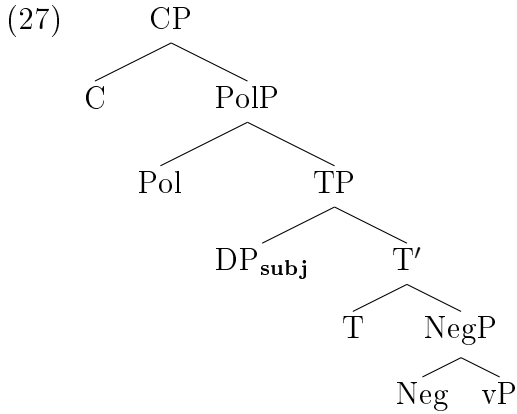
TWO APPROACHES:

1 C-lowering: where the complementizer lowers accounting for its post-subject position
2 Subject raising: the subject raises to a specifier of a C element

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4.2   Locality constraint

- both approaches are faced with the problem of locality, given that negation, which triggers the presence of the particle, occurs in a lower position

- with *ná* starting out in Force as in (26), we have a non-local relation ⇝ challenge for cyclic head-lowering. This is a non-local dependency because it skips intervening heads - e.g., the Foc-head, realized by *kà*, is not lowered, but is being crossed over (cf. (2-b))

- there is also the problem for subject raising, as it would have to skip Foc head, which given our data is not the case

(26)
```
            ForceP
           /      \
       Force      FocP
                 /    \
              Foc      TP
              kà      /  \
                 DP_subj   T'
                          /  \
                         T    NegP
                             /   \
                           Neg    vP
```
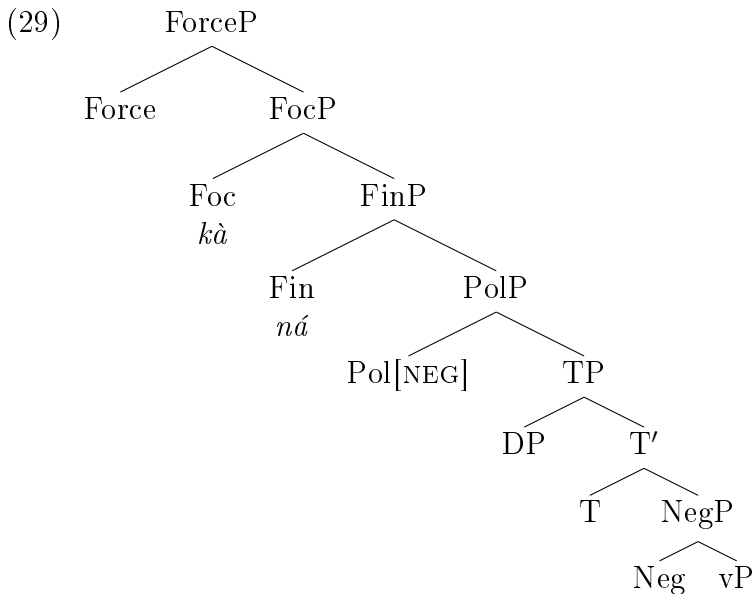
- to avoid this locality problem, I assume, following Laka (1990); Culicover (1991); Zanuttini (1994; 1997), that there is the functional category (Pol)arity between C and T (27)

(27)
```
              CP
            /    \
           C     PolP
                /    \
              Pol     TP
                    /    \
                DP_subj   T'
                        /    \
                       T    NegP
                            /   \
                          Neg   vP
```

- Zanuttini (1994) argues that higher PolP is where the polarity feature of the clause is established and interpreted. The lower NegP is were the negative element is generated but does not carry syntactic feature corresponding to syntactic negation

- this way, negation is close to the C-domain

- having *ná* in Force, still not local enough, as we have intervening Foc head (26), and *ná* does not attach to the Foc-head *kà*

- assuming Henderson's 2007 COMP position parameter (28), based on Rizzi's 1997 suggestion that Force and Fin may be specified on a single head, I assume that *ná* is in Fin as shown in the structure in (29).

(28)   COMP Position Parameter (Henderson 2007:172):
       languages differ in whether complementizers reside in Force or Fin.

(29)
```
              ForceP
             /      \
         Force      FocP
                   /    \
                 Foc     FinP
                 kà     /    \
                      Fin     PolP
                      ná     /    \
                        Pol[NEG]   TP
                                  /    \
                                DP      T'
                                      /    \
                                     T    NegP
                                         /    \
                                       Neg    vP
```

- having *ná* in Fin and not Force makes it adjacent to Pol. This also gives the right order of the particle below the focus marker as in (2-b).

- for speakers who accept having both the the declarative complementizer and *ná* in (25), this means that both Force and Fin will be realized in (29).

4.3 A lowering account

- having Fin next to Pol as in (29) creates the environment for postsyntactic lowering since the heads involved are structurally adjacent Embick and Noyer (2001)

- lowering proceeds cyclically from Fin-to-Pol, the head of its complement, and complex Fin-Pol lowers to T.

  (30) postsyntactic lowering:
  [$_{\text{FocP}}$ XP$_{foc}$ [$_{\text{Foc}'}$ Foc [$_{\text{FinP}}$ Fin [$_{\text{PolP}}$ Pol$_{[\text{NEG}]}$ [$_{\text{TP}}$ SUBJ [$_{\text{T}'}$ T [$_{\text{NegP}}$ Neg [$_{v\text{P}}$ v [$_{\text{VP}}$ ... |||||||||| $\Rightarrow$ [$_{\text{FocP}}$ XP$_{foc}$ [$_{\text{Foc}'}$ Foc [$_{\text{FinP}}$ ~~Fin~~ [$_{\text{PolP}}$ ~~Pol~~$_{[\text{NEG}]}$ [$_{\text{TP}}$ SUBJ [$_{\text{T}'}$ **Fin-Pol-T** [$_{\text{NegP}}$ Neg [$_{v\text{P}}$ v [$_{\text{VP}}$ ... ||||||||

- I assume that lowering is as a result of the [NEG] feature in Pol agreeing with some feature on Foc (or Force) since both negation & A′-movement are crucial in this context

- evidence that the particle only lowers to T and not to Neg is that it precedes the imperfective and future auxiliaries in the language (31), based on the assumption that auxiliaries occupy T position

  (31) a. Gị́ní kà Àdá **ná** á-ˈná-ghị̄   èrí   _ _ _?
         what FOC Ada PRT PFX-IMPFV-NEG NMZL.eat
         "What does Ada not eat?"
      b. Ònyé kà Àdá **ná** á-ˈgá-ghị̄   àhụ́   _ _ _?
         who FOC Ada PRT PFX-FUT-NEG NMZL.see
         "Who will Ada not see?"

4.4 Subject raising analysis

- the fact that the complementizer follows the subject could be accounted for by assuming that the subject moves to a higher (SpecFinP) position (see, for instance, Bodomo and Hiraiwa (2004; 2010) for such an account of Dàgáárè relative clauses)

  (32) [$_{\text{ForceP}}$ Force [$_{\text{FocP}}$ Foc [$_{\text{FinP}}$ SUBJ [$_{\text{Fin}'}$ Fin [$_{\text{TP}}$ <SUBJ> [$_{\text{T}'}$ T [$_{\text{NegP}}$ Neg [$_{v\text{P}}$ ... ||||||||||

- a subject raising account would lead us to expect - since the subject moves to a left-peripheral position - that preverbal subjects & left-dislocated XPs pattern alike

- but subjects in Igbo do not appear to be dislocated

  - XPs that are dislocated cannot be non-referential (Schneider-Zioga 2007; Sheehan 2016; Pietraszko 2019). Non-referential subjects are allowed in Igbo.

  (33) a. Éwú é-ˈnwé-ghí   úkwú àbụ̀ọ̀.
         goat PFX-have-NEG leg   two
         "Goat(s) do not have two legs."   *generic reading*
      b. Gị́ní kà éwú **ná** é-ˈnwé-ghí   _ _ _?
         what FOC goat PRT PFX-have-NEG
         "What do goats not have?"

  - there is also no evidence that the subject is in Spec-TopP (it cannot move to Spec-FocP as this position is already occupied by a wh/foc-moved XP (2-b) - and only one XP can move to SpecFocP in Igbo (Amaechi and Georgi 2019))

- subjects can be in focus e.g., in answers to questions ((2-a) can be an answer to (34))
⤳ an XP cannot be topic and focus at the same time

(34) Kèdú   ónyé   ná á-ˈhú-ghị̣   Òbí.
     WH.COP person PRT PFX-see-NEG Obi
     "Who didn't see Obi?"

- subjects can appear with the focus-sensitive particle *sọ̀ọ́sọ̀/nááni̱* 'only' (35) & preverbal *wh*-subjects are allowed in Igbo (36)

(35) Sọ̀ọ́sọ̀ Úchè á-ˈhú-ghị̣   Òbí.   (36) Ònyé á-ˈhú-ghị̣   Òbí.
     only   Uche PFX-see-NEG Obi   who PFX-see-NEG Obi
     "Only Uche didn't see Obi."   "Who didn't see Obi?"

- subject vs. topics (Goodall (2001) cited in Sheehan): clauses with fronted topics are islands for extraction, whereas clauses with preverbal subjects are not (cf. (2-b) & (37))

(37) a. Úchè, ọ̀   hú-ˈghị̣ Òbí.
         Uche 3SG see-NEG Obi
         "As for Uche, he didn't see Obi."
     b. *Ònyé kà   Úché ọ̀   **ná** hụ-ˈghị̣   _ _ _?
         who FOC Uche 3SG PRT PFX-see-NEG

- only nominals (DPs) may be subject

(38) Uche á-ˈhú-ghị̣   Òbí n'ụ́lọ̀.   (39) *N'ụ́lọ̀   Uche á-ˈhú-ghị̣   Òbí.
     Uche PFX-see-NEG Obi P-house   P-house Uche PFX-see-NEG Obi
     "Uche didn't see Obi at home."   "Uche didn't see Obi at home."

- in Igbo, all XPs other than the subject in initial position have to be associated with Force/Foc/Top feature to be able to occur sentence-initially

4.5   Other analyses

4.5.1   *Ná* as a negative allomorph of the complementizer

- there are negative complementizers in some languages, e.g., Latin Laka (1990); Zanuttini (1996). In Latin the complementizer *ut* alternated with *ne* when the complement was negative (40).

(40) a. Precor *ut* me vidas.
         "I beg that you visit me."
     b. Quaeso *ne* me deseras.
         "I insist that you not leave me."   (Zanuttini 1996 fn.39)

- *ná* is not only sensitive to negation but also to A′-movement

- the analysis is still faced with the problem of why the complementizer ends up following the subject, and not preceding it like the declarative complementizer

4.5.2 Previous analyses

- *ná* is a relative marker (Goldsmith 1976)

  - *ná* is present in other A′-dependencies without a relative clause structure (cf. (9))

- given its similarity to an aspect marker, Nwachukwu (1976) suggests that *ná* is an auxiliary

  - unlike auxiliaries, *ná* does not occur with verbal inflections (41-b)

  - the particle can co-occur with auxiliaries. See (31)

(41) a. Àdá á-ˈná-ghị̣   èrí   ˈjí.
          Ada PFX-IMPFV-NEG NMZL.eat yam
          "Ada does not eat yam."
      b. *Gị́nị̣ kà Àdá á-**ná**-ghị̣   nà   èrí   _ _ _?
          what FOC Ada PFX-PRT-NEG IMPFV NMZL.eat
          "What does Ada not eat?"

5 Conclusion

- There is a close link between A′-movement and polarity in Igbo .
- The *ná* particle that occurs under extraction from negative clauses can be analyzed as a reflex of movement.
- The *ná* particle is a C element which has undergone lowering, accounting for its pre-verbal position.

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