

A'-movement restrictions in Igbo reanalyzed

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1. Overview

- Igbo (Niger-Congo; Nigeria) clauses with the perfective morpheme (1a) or negation (2a) are incompatible with A'-movement, shown with *focus fronting* (Amaechi, 2020; Jian, 2024).

(1) Perfective (-lá)

a. Àdà [é-] rí -é -lá jí.
Ada E/A eat -OVS -PFV yam
'Ada has eaten yam.'

Focus fronting (kà)

b. *Jí_i kà Àdà [é-] rí -é -lá ____.
yam C_{WH} Ada E/A eat -OVS -PFV
Int.: 'Ada has eaten YAM.'

(2) Negation (-ghí)

a. Àdà [é-] rí -ghí jí.
Ada E/A eat -NEG yam
'Ada did not eat yam.'

b. *Jí_i kà Àdà [é-] rí -ghí ____.
yam C_{WH} Ada E/A eat -NEG
Int.: 'Ada did not eat YAM.'

- Extraction is possible from clauses with, e.g., the -rV suffix (3a).

(3) rV-sentence

a. Àdà (*e-) rí -rì jí.
Ada (*E/A)- eat -rV yam
'Ada ate yam.'

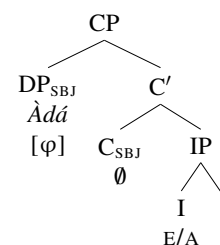
b. Jí_i kà Àdà rí -rì ____.
yam C_{WH} Ada eat -rV
'Ada ate YAM.'

- Key difference between clause types is the presence/absence of the harmonizing vowel E/A.

Main claim

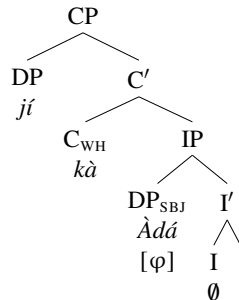
- E/A spells out I when IP does not contain φ -features. E/A occurs in PFV/NEG clauses because their subjects are higher than IP; structure needed for A'-extraction is blocked.
- When subjects are IP-internal, e.g., -rV, I is null and A'-extraction is permitted.

(4) IP-external subject; Extraction Banned



NEG & PFV clauses

(5) IP-internal subject; Extraction OK



-rV clause

Roadmap:

- E/A's identity
- Embedding restrictions tied to E/A
- Extraction restrictions with E/A beyond perfective and negation
- Discussion

2. E/A is inflection

- We propose that E/A is the exponent of I (see also Déchaine 1993), surfacing when no element with φ -features occupies the IP-layer.
 - It surfaces in all clauses when the subject has no φ -features.
 - It is in complementary distribution with clitic subjects.

IMPERSONAL SUBJECT

- When the subject is an impersonal, E/A surfaces in all clauses. The subject is a null φ -featureless pronoun (e.g., Nevins 2007; Holmberg and Phimsawat 2017; Fenger 2018).

(6) a. [É-] rí -rì jí. b. [É-] rí -é -lá jí. c. [É-] sí -ghí -rí Àdà ní.
E/A eat -rV yam E/A eat -OVS -PFV yam E/A cook -NEG -APPL Ada food
'Someone ate yam.' 'Someone has eaten yam.' 'Someone didn't cook for Ada.'

⇒ The head which E/A spells out is present in all clauses.

- Extraction from an rV-clause with E/A is possible:

(7) Gí' ní_i kà [é-] sí -rì ____?
what C_{WH} E/A cook -rV
'What did someone cook?'

⇒ E/A morphology is not responsible for the ban on extraction.

THE DISTRIBUTION OF CLITIC SUBJECTS

- PFV/NEG non-clitic subjects must co-occur with E/A (1a)-(2a). Clitic subjects in these clauses are in complementary distribution with E/A; they immediately precede the verb (8).

(8) a. M' rí -é -lá jí. b. Í rí -é -lá jí. c. Ó rí -é -lá jí.
1SG eat -OVS -PFV yam 2SG eat -OVS -PFV yam 3SG eat -OVS -PFV yam
'I have eaten yam.' 'You have eaten yam.' 'S/he has eaten yam.'

⇒ Clitic subjects occupy the same position as E/A, I. E/A is not present because clitic φ -features condition a null allomorph of I.

⇒ Non-clitic subjects in PFV/NEG clauses cannot condition null I, they must not be in IP.

- Clitic subjects in rV-clauses immediately precede the verb (9), like non-clitic subjects (3a).

(9) a. M rí -rì jí. b. Í rí -rì jí. c. Ó rí -rì jí.
1SG eat -rV yam 2SG eat -rV yam 3SG eat -rV yam
'I ate yam.' 'You ate yam.' 'S/he ate yam.'

⇒ Clitic and non-clitic subjects both occupy the IP-layer in -rV clauses.

Takeaways

- The same functional head (10) is present in all clause-types – it always surfaces as E/A when subject is φ -featureless.
- (10) **VI Rules:**
- $I \rightarrow \emptyset / [\varphi] ___$
 - $I \rightarrow e/a$
- Variation between clauses is whether or not non-clitic subjects also trigger E/A.
 - In PFV and NEG clauses, E/A must occur. This signals that these subjects are not in IP, but hosted in a higher layer of the clause.
 - Clauses where non-clitic subjects are hosted higher are those that ban A'-extraction.

3. Higher structure is blocked in subjunctives

- Clauses which involve the CP-layer, i.e., clauses with higher subjects or clauses with focus fronting, should be incompatible with clause types which require different Cs.
- This prediction is born out in subjunctives, which contain the complementizer *kà* (11).

- (11) Ézè kwèrè [*kà* Àdà gá-á órírí].
Eze agree C_{SBJV} 1SG go-OVS party
'Eze allowed Ada to go to the party.'
(Subjunctive)

- Subjunctives cannot be negated with *-ghi* (12).

- (12) *Ézè kwèrè [*kà* Àdà á- 'gá -*ghí* órírí].
Eze agree C_{SBJV} Ada E/A- go -NEG party
Int.: 'Eze allowed Ada to not go to the party.'
(Subjunctive, ✗ E/A NEG)

- Negation must be expressed periphrastically with the lexical verb *ghàrà* 'ignore'/'leave off'.

- (13) Ézè kwèrè [*kà* Àdà *ghàrà* í- 'gá órírí].
Eze agree C_{SBJV} Ada ignore NMLZ-go party
'Eze allowed Ada to not go to the party.'
(lit. 'Eze allowed Ada to leave off going to the party.')

- Focus fronting cannot target the subjunctive left periphery (14).

- (14) *Ézè kwèrè [*kà* órírí *kà* Àdà gá-á ____].
Eze agree C_{SBJV} party C_{WH} Ada go-OVS
Int.: 'Eze allowed Ada to go to the PARTY.'
(Subjunctive, ✗ C_{WH})

⇒ Clauses which we propose involve higher structure are incompatible with C_{SBJV} *kà*.

- Clauses embedded under *nà*, a high embedding head (e.g., Rizzi's 1997 Force⁰; Amaechi, 2020), permit perfective *-lá*, negative *-ghí*, and focus fronting.

- (15) Ézè ché [*nà* Àdà á- 'gá -*ghí* skúùl].
Eze thinks that Ada E/A- go -NEG school
'Eze thinks that Ada did not go to school.'
(*nà*, ✓ E/A NEG)
- (16) Ézè ché [*nà* órírí *kà* Àdà gá-rà ____].
Eze think that party C_{WH} Ada go-rV
'Eze thinks that Ada went to the PARTY.'
(*nà*, ✓ C_{WH})

⇒ The subjunctive embedding restriction is not due to these being 'root' phenomena. The subjunctive C is one of the low Cs competing for the same position as C_{SBJ} and C_{WH}.

- The same I (10) is present in subjunctives; it spells out as E/A with impersonal subjects (17).

- (17) Ézè kwèrè [*kà* é- 'sí-é òkúkò].
Eze agree C_{SBJV} E/A- cook-OVS chicken
'Eze allowed someone to cook chicken.'

- Non-clitic subjects do not occur with E/A in subjunctives (11).

⇒ Subjects in subjunctives are below C_{SBJV}, i.e., IP-internal. Null I is conditioned, as predicted.

Takeaways

- Blocked embedding in subjunctives show that clauses like NEG involve higher structure.
- C_{SBJ} and C_{WH} involve similar layers of structure – where one cannot be embedded, neither can the other. C_{WH}, C_{SBJ}, & C_{SBJV} are all in complementary distribution.
- Structural competition uniformly derives ban on A'-movement and ban on embedding.

4. [φ]-bearing subjects with E/A always block extraction: 1SG-inversion

- 1SG-inversion is a final clause type that we can account for within our proposal.

- In *-rV* clauses, non-clitic subjects and E/A do not co-occur (18).

- (18) Àdà (*é)- rì -rì jí.
Ada (*E/A)- eat -rV yam
'Ada ate yam.'

- 1SG pronoun conditions I's null allomorph (19). When 1SG pronoun follows the verbal complex (20), E/A must surface (*mù* permutation; Goldsmith, 1981).

- (19) *M* (*é)-rì-rì jí.
1SG (*E/A)-eat-rV yam
'I ate yam.'
- (20) *(É)-* rì -rì *m* jí.
(E/A)- eat -rV 1SG yam
'I ate yam.'

- 1SG-inversion is also possible in perfective and negative clauses.

- (21) **M** (*é)- 'rì -é -lá 'jí.
1SG (*E/A)- eat -OVS -PFV yam
'I have eaten yam.'
- (22) ***(*É)-** 'rì -é -lá **m** 'jí.
***(*E/A)-** eat -OVS -PFV **1SG** yam
'I have eaten yam.'

- 1SG-inversion structures are another case where a φ -bearing subject must occur with E/A.

⇒ The 1SG pronoun in these constructions is not IP-internal.

- 1SG-inversion involves movement of the 1SG pronoun to the same higher layer as in PFV and NEG. See also Eze (1995).
- The inverted order is due to a *postsyntactic* operation which reverses the linear order of the 1SG pronoun and the verbal complex after VI, *Local Dislocation* (Embick and Noyer, 2001).
- 1SG-inversion structures should (i) block A'-extraction, and (ii) be incompatible with subjunctive *kà*. This is borne out exactly.
- rV clauses permit extraction (23), but this is blocked with 1SG-inversion (24).

- (23) Jíi **kà** m rì -rì __i.
yam **C_{WH}** 1SG eat -rV
'I ate YAM.'
- (24) *Jíi **kà** **É-** rì -rì m __i.
yam **C_{WH}** **E/A-** eat -rV 1SG
Int.: *'I ate YAM.'*

- 1SG-inversion structures cannot be embedded under subjunctives (25), 1SG must be preverbal (26).

- (25) *Ézè kwèrè [kà **á-** gá-á **m** skúùl].
Eze agree **C_{SBJV}** **E/A-** go-OVS **1SG** school
Int.: *'Eze allowed me to go to school.'*

- (26) Ézè kwèrè [kà **m** gá-á skúùl].
Eze agree **C_{SBJV}** **1SG** go-OVS school
'Eze allowed me to go to school.'

- 1SG-inversion can be embedded wherever **C_{SBJ}** and **C_{WH}** can be, e.g., under *nà* (27).

- (27) Ézè ché [nà á-gà-rà m skúùl].
Eze thinks that E/A-go-rV 1SG school
'Eze thinks that I went to school.'

⇒ Whenever the presence of a subject with φ -features does not block E/A, both A'-extraction and subjunctive embedding are banned.

Takeaways

- E/A occurs in configurations out of which extraction and subjunctive embedding is banned, but it is not directly responsible for the ban.
- Other morphology in the clause is definitively ruled out as source of restriction: -rV clauses permit A'-extraction, even when E/A surfaces with an impersonal subject (7).
- This systematic set of properties holds across clauses in the language, Table 1.

CLAUSE TYPE	SUBJECT OCCURS WITH E/A?		A'-EXTRACTION?
	CLITIC	NON-CLITIC	
-rV	no	no	yes
FUT	no	no	yes
IPFV	no	no	yes
PFV	no	yes	no
NEG	no	yes	no
1SG-inversion		yes	no

Table 1: Summary. ① Clitic subjects have the same distribution in all clauses. ② & ③ Co-occurrence of E/A with a subject with φ -features determines availability of A'-extraction.

5. Analysis

- We formalize the following properties of the clausal left periphery:
 - In all clauses, E/A surfaces in the absence of IP-internal φ -features, as evidenced by impersonal subjects.
 - In -rV clauses, neither clitic nor non-clitic subjects occur with E/A.
 - In PFV and NEG clauses, clitic subjects do not occur with E/A, non-clitic subjects must.
 - PFV and NEG clauses involve higher structure that -rV clauses do not, as evidenced by extraction and subjunctive embedding restrictions.
- As discussed, E/A is the exponent of I in the absence of φ -features, in all clause-types.

(28) VI Rules:

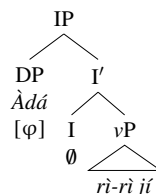
- $I \rightarrow \emptyset / [\varphi] _$
- $I \rightarrow e$

-rV CLAUSES

- rV clauses are IP-sized.
- Non-clitic subjects occupy spec,IP. Clitic subjects move to and adjoin to I (see e.g., Kayne 1991; Roberts 2010 on Romance clitics).
- Both types of subjects condition the null allomorph of I.
- These clauses do not contain an obligatory CP-layer, permitting A'-extraction driven by, e.g., **C_{WH}** (5).

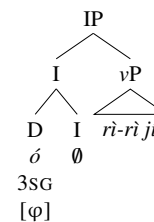
- (29) Àdá rì-rì jí.
Ada eat-rV yam
'Ada ate yam.'

(30) Non-clitic subject



- (31) Ó rì-rì jí.
3SG eat-rV yam
'S/he ate yam.'

(32) Clitic subject



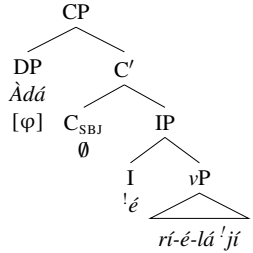
- These structures converge on existing proposals for *-rV* clauses, e.g., Déchaine (1993); Amaechi (2020); Jian (2024).

PFV & NEG CLAUSES

- These clauses contain an obligatory CP-layer. We propose that the same is true for perfectives and negation, but we leave it to future work to explain why they share this structure.
- Clitic subjects move to and adjoin to I, as in *-rV* clauses.
- The IP-internal position for non-clitic subjects, i.e., spec,IP, is not available in these clauses (e.g., a ‘defective’ I that lacks a specifier).
- Non-clitic subjects are hosted in spec,CP.
- This derives the observed morphological form: clitic subjects, which always head-adjoin, condition the null allomorph of I, but non-clitic subjects in spec,CP cannot.
- The higher layer blocks the projections necessary for A'-extraction, e.g., C_{WH}.

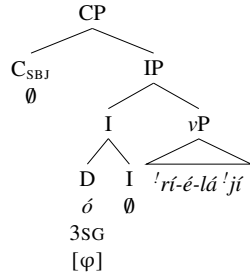
(33) Àdà 'é-rí-é-lá 'jǐ.
Ada E/A-eat-OVS-PFV yam
'Ada has eaten yam.'

(34) Non-clitic subject



(35) Ó 'rí-é-lá 'jǐ.
3SG eat-OVS-PFV yam
'S/he has eaten yam.'

(36) Clitic subject



ACCOUNTING FOR EXTRACTION RESTRICTIONS

- Previous accounts attribute the extraction restriction to the presence of E/A directly, proposing that it is a nominalizer (Amaechi, 2020, building on Déchaine, 1993).
- If E/A blocked extraction as a nominalizer, this predicts that there should be a subject/non-subject asymmetry because the subject linearly precedes E/A, i.e., it is *above* the nominalizer.
- No asymmetry is observed, illustrated with relativization (shown to involve A'-movement; Amaechi, 2020):

(37) *Ǹrí [É'zé é-sí-é-lá] nà é-sì ísì ọ́má.
food Eze E/A-cook-OVS-PFV PROG E/A-smell smell good.
Int.: 'The food that Eze has cooked smells good.'

(38) *Ǹdí [é-sí-é-lá nírí à] mà-à-rà í-sí n'írí ọ́fụ́má.
people E/A-cook-OVS-PFV food PROX be.good-APPL-rV NMLZ-cook food well.
Int.: 'The people that have cooked this food cook well.'

- We have argued that E/A does not block extraction, but can signal the presence of higher structure which competes with Cs required for A'-extraction – no subject/non-subject asymmetry predicted.
- Beyond extraction restrictions, nominalization-based accounts do not provide any treatment of the embedding restrictions we have discussed.

6. Summing up

- Our proposal unifies a disparate set of facts: the distribution of clitic/non-clitic subjects, impersonal and inverted subjects, A'-movement restrictions, and embedding restrictions.
- The core conclusion we reach is that clauses systematically fall into classes with respect to the position occupied by their subject.
- This has already been discussed for Igbo – Jian (2024) argues that *wh in-situ* and polar interrogative constructions in the language *also* result in movement of the subject to the CP-domain.
- Subjects occupying a higher position in indicative clauses has been observed across the Niger-Congo language family (Baker, 2003; Henderson, 2006; Schneider-Zioga, 2007; Martinović, 2015, 2023).
- Igbo presents an interesting case where this property covaries with changes in lower clausal domains, here, aspect and negation.

7. Acknowledgements

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7. References

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A. E/A is not a nominalizer

- E/A structures do not pattern with nominals in distribution, cf., I- prefixed or O+REDUP- prefixed verb stems (Ezeamuzie, 2020).
- (39) [Í-tá ánụ́ é'wú] sì-rì íké.
NMLZ-chew meat goat be.difficult
'Eating goat is difficult.'
- (40) [Ò-tí-tá ánụ́ é'wú] sì-rì íké.
NMLZ-REDUP-chew meat goat be.difficult
'Eating goat is difficult.'
- (41) *[À-tá ánụ́ é'wú] sì-rì íké.
E/A-chew meat goat be.difficult
Int.: 'Eating goat is difficult.'
- Often-referenced evidence draws on tonal parallels between E/A found in PFV verbal complexes and the E/A found in putative nominalizations, e.g., in FUT/IPFV clauses.
 - This does not hold across different Igbo varieties. In the variety described here, the tone on E/A in putative nominalizations is *polar*, e.g., L if verb root is H, H if verb root is L.
 - In the PFV, the tone matches the last syllable of the subject if the root is H (42), otherwise it is always L if the root is L (43).
- (42) a. Àdà 'é-rí-é-lá 'jí. (43) a. Àdà à-ghà-á-lá 'gí.
Ada E/A-eat-OVS-PFV yam Ada E/A-leave-OVS-PFV 2SG
'Ada has eaten yam.' 'Ada has left you.'
- b. Ézè è-rí-é-lá 'jí. b. Ézè à-ghà-á-lá 'gí.
Eze E/A-eat-OVS-PFV yam Eze E/A-leave-OVS-PFV 2SG
'Eze has eaten yam.' 'Eze has left you.'

B. Extraction in perfectives without E/A

- A repair strategy for extracting out of perfectives is available, showing that the perfective morphology itself is not the source of the extraction restriction.
- (44) Há 'é-nwété-lá é'gó.
3PL E/A-get-PFV money
'They have gotten money.'
- (45) *[Égó há 'é-nwété-lá ____] jù-rù há ányá.
money 3PL E/A-get-PFV satisfy-rV 3PL eye
Int.: 'The money they have gotten satisfied them.'
- The only form of the perfective which can be used in A'-extraction contexts lacks E/A.
- (46) [Égó há nwètè-rè-lá ____] jù-rù há ányá.
money 3PL get-rV-PFV satisfy-rV 3PL eye
'The money they have gotten satisfied them.'