Subextraction from subjects in Igbo: new evidence for an antilocality constraint on Ā-movement*

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1 Introduction

A frequently used ingredient in more recent structural approaches to restrictions on subject (vs. non-subject) extraction such as the *that*-trace effect is antilocality (AL), which imposes a lower limit on the length of an Ā-movement step. A common argument for the relevance of this concept comes from the observation that AL is obviated when visible material such as a high adverb is added between the extraction site of the subject (SpecT) and its landing site in the C-domain. In this paper, we provide a new type of evidence for an AL-component that does not involve the addition of visible material between CP and the TP. We rather increase the structural distance between the extraction site and the target position through subextraction from the subject. This configuration has not been considered much in the AL-literature so far because subjects are islands in most languages. We provide novel data from Igbo (Benue Congo, Nigeria), a language which also exhibits the *that*-trace effect, but in which subjects are not absolute islands. For concreteness, we will show that (a) short subject extraction is blocked in Igbo, while (b) short subextraction from the subject is possible, and (c) long subextraction from the subject (unlike long subject extraction) does not trigger the *that*-trace effect. This is a profile that is predicted if AL plays a role in Ā-movement. We will mainly use evidence from language-specific Ā-movement effects to make these arguments. The paper is structured as follows: In section 2 we give some background on the concepts and applications of AL from the literature, and summarize the evidence that is usually provided for it. Section 3 introduces basic grammatical properties of Igbo, and summarizes findings from our previous work on short and long Ā-dependencies in the language, including the *that*-trace effect and language-specific diagnostics for Ā-movement. We introduce the new evidence for AL from subextraction from subjects in section 4. Section 5 concludes.

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2 Antilocality and its signature in the previous literature

It is a common assumptions nowadays that movement is not only restricted by locality constraints, which define an upper bound of the dependency, but that it is also subject to an antilocality (AL) condition, which specifies the minimal distance that needs to be covered. Various definitions of what counts as too short movement have been provided in the literature. For example, Saito and Murasugi's 1999 AL-constraint bans adjunction of SpecXP to XP; Abels 2003 excludes movement of the complement of X to SpecXP, and Grohmann's 2003 version of AL bans movement within a given local domain (e.g., within the vP). According to Bošković 1994; 2005 et seq. AL requires movement to cross at least one phrase; Pesetsky (2021) proposes an AL-condition on movement to phase edges, while Zyman's (2021) version restricts subextraction from phase edges. More recently, Erlewine (2016: 431) proposed Spec-to-Spec Antilocality, as defined in (1). This version of AL states that a phrase originating in SpecXP cannot target the specifier of the immediately dominating phrase because Ā-movement must cross a phrase other than XP (see, e.g., Brillman and Hirsch 2016; Douglas 2017; Deal 2019; Amaechi and Georgi 2019; Branan 2023 for applications of (1); and Richards 2022 for an overview of AL concepts, as well as Ershova and Bezrukov 2024 for critical discussion, especially of (1)).[1]

(1) *Spec-to-Spec Antilocality*: Ā-movement of a phrase from the Specifier of XP must cross a maximal projection other than XP.

AL has prominently been invoked in accounts of phenomena that arise under subject extraction such as the *that*-trace effect, anti-agreement, resumption (Highest Subject Restriction), or agent focus (see, a.o., McCloskey 1990; Ishii 2004; Erlewine 2020). The general idea is that such restrictions arise in languages with a derived subject position (SpecTP) because Ā-movement of the subject from SpecTP to SpecCP (as the final or as an intermediate landing site) is too local, see (2) (which is ruled out, e.g., by Spec-to-Spec AL since the subject crosses only the minimal XP, viz., TP, from which it is subextracted, but no other XP).

(2) $[_{\text{CP}}$ ___ $[_{\text{C}'}$ C $[\boxed{_{\text{TP}}}$ XP $[_{\text{T}'}$ ...]]]]

Evidence for a minimality requirement on movement paths comes from the following observations (as summarized in Erlewine 2020): (i) The extraction in (2) becomes possible once additional material intervenes between the extraction site and the landing site, and (ii) the restriction applies to all elements that can occupy the high pre-extraction position (= SpecTP in (2)), not just to canonical subjects. We will mostly be concerned with (i) here, though see fn. 7 on (ii). An often reported instance of (i) is an intervening high adverb. Its ameliorating effect on long subject extraction in many languages is known as the Adverb Effect (Bresnan 1977; Culicover 1993; Kandybowicz 2006), see (3).

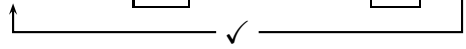
(3) Robin met the man who Leslie said that for all intents and purposes ___ was the mayor of the city. (Culicover 1993: 557)

The idea behind this effect in AL-based accounts is that the intervening material (ZP) is introduced in the specifier of a projection WP between CP and TP; this WP increases

[1] A different concept that is sometimes invoked in explaining restrictions on subject extraction is Ā-disjointness, which basically applies Principle B to configurations with the binder in an Ā-position, see, e.g., Ouhalla 1993; McCloskey 1990. But Principle B also involves a kind of antilocality condition since the binder and the bindee must not be in the same minimal binding domain.

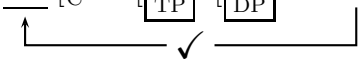
the structural distance between the extraction and the landing site of movement, as illustrated in (4). Spec-to-Spec AL (as well as some other AL-definitions) correctly predict an improvement because the movement dependency now crosses a phrase in addition to TP, viz., WP.[2]

(4) $[_{CP}$ ___ $[_{C'}$ C $[\boxed{_{WP}}$ **ZP** $[_{W'}$ W $[\boxed{_{TP}}$ XP $[_{T'}$ ...]]]]]]



In this paper, we argue that Ā-movement in Igbo, a Benue Congo language spoken in Nigeria, provides further evidence for an AL-restriction in the spirit of the intervention logic depicted in (4), but the argument will not involve adding visible material *in between* CP and TP. Rather, the intervening structure will be inside SpecTP. For concreteness, we will show (i) that subject Ā-movement from SpecTP to the local SpecCP (= the scenario in (2)) is blocked in Igbo, regardless of whether this movement step would be a terminal or an intermediate movement step; and (ii) that subextraction from the subject, which is possible in the language, is grammatical, see the schematic illustration in (5). This signature is expected under many AL-accounts because the dependency in (5) crosses not only TP but also the subject DP from which XP is subextracted, and it is thus long enough.

(5) $[_{CP}$ ___ $[_{C'}$ C $[\boxed{_{TP}}$ $[\boxed{_{DP}}$ ... XP ...] $[_{T'}$ ...]]]]



3 Ā-dependencies in Igbo

Before we can present the arguments, we will first provide some background on the grammatical properties of Igbo and summarize its Ā-syntax based on our previous work on the topic.

3.1 Basic grammatical properties of Igbo

Igbo has strict S-V-O-ADJ(unct) order in all-new declarative sentences, see (6).[3]

(6) Ézè hụ̀-rụ̀ Àdá n'-áhíá.
Eze see-rV Ada P-market
'Eze saw Ada at the market.'

Igbo is a tone languages with a H(igh) tone (á) and a L(ow) tone (à); a downstep (ꜜá) arises in a sequence of two adjacent H-bearing units (Clark 1990). Vowels exhibit a [±ATR]-distinction; the [–ATR] ones (except [a]) are indicated by a dot subscript. The language

[2]Erlewine (2016; 2020) exemplifies the effect in (4) also with multiple wh-fronting, where a non-subject wh-XP targets SpecWP and the subject wh-XP can subsequently move across WP to the Spec of a higher phrase. This diagnostic cannot be applied to Igbo since the language does not allow multiple fronting of any kind (see Amaechi and Georgi 2019). Erlewine 2020 also mentions a third property of AL: There is no correlation between (non-)extractability and subjecthood properties such as case. We do not address this here since Igbo does not have morphological case.

[3]See Green and Igwe 1963; Manfredi 1991; Uwalaka 1997; Mbah 2006; Emenanjo 2015 for grammatical descriptions of the language. The Igbo data and judgments in this paper were provided by the native speaker co-author, Mary Amaechi. We use the following glosses: 1/2/3 = 1st/2nd/3rd person, C = complementizer, DEP = dependent form of a pronoun, FOC = focus marker, IDP = independent form of a pronoun, NEG = negation, NMLZ = nominalizer, P = preposition, PFV = perfective, PL = plural, POSS = possessive form of a pronoun, PROG = progressive, PRT = particle, rV = rV suffix (V = a vowel that assimilates in quality and tone to the vowel in the stem it attaches to), SG = singular.

has neither agreement morphology nor case, and it does not exhibit pro-drop. Verbs inflect for TAM categories and polarity, and they can bear derivational affixes. Most of the verbs in this paper will have a single suffix glossed as *-rV* (where V represents a vowel that assimilates in ATR and tone to the last vowel of the verb stem). The exact meaning of this suffix is disputed (see Amaechi 2020: ch. 4.3.1 for discussion); in the examples in this paper its natural interpretation is past tense. Amaechi and Georgi (2019) argue for the clause structure in (7) for an example like (6) (without the adjunct). Verbal projections are head-initial, specifiers precede X′-projections. What will be crucial for our discussion is that the language has an obligatory EPP, viz., the structurally highest argument in the vP (= the external argument in Specv in (7)) undergoes EPP-movement to SpecT (see Amaechi and Georgi 2019). The finite verb (V in (7) or – if present – an auxiliary) moves to a higher functional head. It is debated which head the finite verb targets, we will simply take it to be T here, though nothing hinges on this (see Amaechi 2020 for discussion). Lower copies occur in angled brackets, and complex heads are indicated by a + sign in (7).

(7) $[_{\text{CP}}$ C $[_{\text{TP}}$ DP$_{ext}$ $[_{\text{T}'}$ V+v+Asp+T $[_{\text{AspP}}$ ⟨Asp⟩ $[_{\text{vP}}$ ⟨DP$_{ext}$⟩ $[_{\text{v}'}$ ⟨v⟩ $[_{\text{VP}}$ ⟨V⟩ DP$_{int}$]]]]]]]

Since resumption in Ā-dependencies will play a crucial role in this paper, and since resumptive pronouns (RPs) are cross-linguistically personal pronouns, we illustrate the Igbo personal pronoun paradigm in (8): The pronouns morphologically distinguish person and number (sg vs. pl). Moreover, they come in (up to) three distinct forms, which we label InDePendent, DEPendent, and POSSessive forms (the choice is predictable from the syntactic context, see Georgi and Amaechi 2023). This form distinction is irrelevant for our purposes. The phi-feature distinctions will play an important role, however.

(8) *Igbo personal pronouns:*

	1sg	2sg	3sg	1pl	2pl	3pl
DEP	–	i/ị	o/ọ	–	–	–
IDP	ḿ	gị́	yá	ànyí	ụ́nụ̀	há
POSS	ˡḿ	ˡgị́	ˡyá			ˡhá

3.2 Short Ā-movement in Igbo

Amaechi and Georgi 2019; Amaechi 2020; Georgi and Amaechi 2023 show that Igbo can form clause-bound Ā-dependencies by base-generation or by movement. The choice is not optional, however (unlike, e.g., in Irish, McCloskey 1990; 2002), but depends on construction type: topicalization is derived by base-generation, while focus fronting, wh-movement (of wh-pronouns) and relativization involve movement. (9a) shows an example of ex-situ focus of the direct object (DO), and (9b) illustrates topicalization of the DO, both based on (6). A topic XP surfaces in clause-initial position and must be resumed by a pronoun (here, the 3rd person independent pronoun *yá*); a gap (indicated by an underscore) in the postverbal DO position is impossible. A focused XP (represented by small caps in the translation) also occurs clause-initially. It is followed by the focus marker *kà*, and there must be a gap at the bottom of the dependency (with a DO extractee, see below for qualifications), an RP is prohibited. Focus fronting as in (9a) does not involve a cleft in Igbo (see Amaechi 2020).

(9) a. Àdá kà Ézé hụ̀-rụ̀ __ / *yá.
Ada FOC Eze see-rV 3SG.IDP
'Eze saw ADA.' *DO focus*

b. Àdá, Ézè hụ̀-rụ̀ yá / *__.
Ada Eze see-rV SG.IDP
'As for Ada, Eze saw her.' *DO topic*

Georgi and Amaechi 2023 provide evidence from a number of Ā-movement diagnostics for the claim that (short) focus fronting is derived by movement, see the summary of the results in line a. of the table in (10): Ex-situ focus is sensitive to islands, exhibits reconstruction effects (for idiom interpretation, variable binding, strong-cross over), and licenses parasitic gaps (*pg*s). Next to these classic diagnostics, Igbo exhibits three language-specific Ā-movement effects, abbreviated as LSMEs in what follows. Topicalization has none of these properties, see line c. in (10), and is thus the result of base-generation.

(10) *Movement diagnostics, summary:*

	island-sens.	reconstr.	*pg*-licensing	LSMEs	bottom
a. focus ex-situ	✓	✓	✓	✓	gap
b. focus ex-situ	✓	✓	✓	✓	RP
c. topicalization	*	*	*	*	RP

Since the LSMEs will play a crucial role in this paper, we will briefly introduce them here (see Amaechi 2020; Georgi and Amaechi 2023 for details). The first LSME is a tonal reflex of movement, which we will refer to as the **final H-tone** effect (see Robinson 1974; Tada 1995): When an XP Ā-moves across a subject DP, the rightmost TBU of this DP must surface with an H-tone. We can see the effect by comparing (6) and (9a): While the subject *Ézè* ends in a L-tone in the declarative in (6), its final tone obligatorily changes to H under DO focus fronting in (9a) (though not under DO-topicalization, see (9b)). The second effect arises when Ā-movement of an XP (regardless of its grammatical function) applies in a clause with sentential negation (expressed on the finite verb by a nominalizing prefix and the negative suffix *ghi*, see the baseline in (11a)). In this context, the **particle *ná*** must appear between the subject and the finite verb, see (11b); the particle cannot be used in the declarative in (11a), however (see Goldsmith 1976; Nwachukwu 1976; Amaechi 2020). Note that final H-tone and the *ná*-particle are in complementary distribution (there is no final H-tone on *Ézè* in (11b)) because H-tone overwriting surfaces only under positive polarity, and the particle only under negative polarity (in CPs with Ā-movement).

(11) a. Ézè á-ꜜhụ́-ghị́ Àdá.
Eze NMLZ-see-NEG Ada
'Eze did not see Ada.' *declarative*

b. Àdá kà Ézè *(ná) ꜜá-hụ́-ghị́ ___.
Ada FOC Eze PRT NMLZ-see-NEG
'Eze did not see ADA.' *DO focus*

The third language-specific diagnostic is **perfective islands** (Nwachukwu 1976; Amaechi 2020). In a clause with perfective aspect (expressed by a complex verb form with a nominalizing prefix and an aspectual suffix, see (12a)) it is not possible to subextract any XP (regardless of its grammatical function), see (12b) for an attempt to focus front the DO.

(12) a. Ézè à-hụ́-lá Àdá
Eze NMLZ-see-PFV Ada.
'Eze has seen Ada.' *declarative*

b. *Àdá kà Ézé à-hụ́-lá ___.
Ada FOC Eze NMLZ-see-PFV
'Eze has seen ADA.' *DO focus*

Amaechi 2020 and Georgi and Amaechi 2023 claim that these three processes unambiguously identify Ā-movement because they (i) do not arise in declaratives (without any Ā-dependency), (ii) do not surface with focus (or wh) in situ (which is in principle available in Igbo), (iii) are not triggered by A-movement (such as EPP-movement of the subject DP as in (6)), (iv) are absent from base-generation Ā-dependencies such as topicalization (as diagnosed, e.g., by island-sensitivity and reconstruction effects), see line c. in (10), and (v) are cyclic, i.e., they arise in each clause affected by Ā-movement.

A further crucial aspect of Igbo Ā-dependencies is the distribution of gaps vs. RPs. Topicalization always requires an RP at the foot of the dependency, see (9b) (for qualifications see Amaechi and Georgi to appear). Short focus fronting can terminate in a gap or in an RP, though they are always in complementary distribution: Focus fronting of a DO requires a gap (see (9a) above), and so do (some instances of) long subject focus (see below for details). However, focus fronting of (i) a DP conjunct, (ii) a focus associate, (iii) the complement of a preposition, and (iv) a possessor require the presence of an RP (Goldsmith 1981; Georgi and Amaechi 2023). We illustrate this for the first three contexts in (13)– (15):

(13) *Focus fronting of a conjunct:*

a. Ézè hụ̀-rụ̀ [$_{\&P}$ Àdá nà Òbí].
Eze see-rV Ada and Obi
'Eze saw Ada and Obi.' *declarative*

b. Àdá kà Ézé hụ̀-rụ̀ [$_{\&P}$ **yá** / *__ nà Òbí].
Ada FOC Eze see-rV 3SG.IDP and Obi
'Eze saw ADA and Obi.' *1st conjunct focus*

(14) *Focus fronting of a focus associate:*

a. Ézè hụ̀-rụ̀ [$_{DP}$ sọ̀ọ́sọ̀ Àdá].
Eze see-rV only Ada
'Eze saw only Ada.' *declarative*

b. Àdá kà Ézé hụ̀-rụ̀ [$_{DP}$ sọ̀ọ́sọ̀ **yá** / *__].
Ada FOC Eze see-rV only 3SG.IDP
'Eze saw only ADA.' *Focus associate focus*

(15) *Focus fronting of CompP:*

a. Ézè kwè-rè [$_{PP}$ nà Àdá].
Eze believe-rV P Ada
'Eze believes in Ada.' *declarative*

b. Àdá kà Ézé kwè-rè [$_{PP}$ nà **yá** / *__].
Ada FOC Eze believe-rV P 3SG.IDP
'Eze believes in ADA.' *CompP focus*

Crucially, focus fronting with an RP at the foot of the dependency patterns exactly like focus fronting that leaves a gap with respect to the movement diagnostics in table (10), see line b. (and Georgi and Amaechi 2020 for the data): It is blocked by islands, reconstructs, licences *pg*s, and triggers all three LSMEs (see, e.g., the final H-tone on the subjects in the b.-examples above). We can thus conclude that clause-bound focus fronting is always derived by Ā-movement. This in turn leads to two further insights that will be relevant in what follows: First, the XPs that can be subextracted from (to create focus ex-situ) with an RP, such as coordinations (&Ps), DPs, and PPs in (13) – (15) are not (absolute) islands in Igbo. Second, Igbo has two types of RPs (compare lines b. and c. in table (10)): RPs that terminate base-generation dependencies (line c.), and RPs that spell out low copies/traces (line b.). The presence of

an RP in an Igbo Ā-dependency thus does not tell us anything about the derivation; we must apply movement diagnostics to determine the underlying syntax.

In fact, Igbo provides further morphological evidence for the split between RPs in Ā-movement vs. base-generation dependencies, as illustrated in (16) for focus fronting and in (17) for topicalization of the complement of a preposition (Georgi and Amaechi 2023; Amaechi and Georgi to appear): An RP that spells out a trace (a) cannot be replaced by an epithet, see (16a), and (b) must surface in its default 3sg form (*yá*) when a personal pronoun is focused, regardless of the phi-features of this pronoun, which leads to a phi-mismatch between a non-3sg antecedent and its RP, see (16b). An RP in a base-generation dependency shows the opposite behavior: it (a) can be replaced by an epithet (see (17a)), and (b) it always has to match its antecedent (also a pronominal one) in phi-features (see (17b)).

(16) *Resumption under focus fronting*:

a. Àdá kà Ézé kwè-rè [PP nà **yá** / ***òfèkè**].
Ada FOC Eze believe-rV P 3SG.IDP idiot
'Eze believed in ADA (the idiot).' *epithet impossible*

b. Ụ́nụ̀ kà Ézé kwè-rè [PP nà *ụ́nụ̀ / **yá**].
2PL.IDP FOC Eze believe-rV in 2PL.IDP / 3SG.IDP
'Eze believes in you(pl).' *phi-mismatch*

(17) *Resumption under topicalization*:

a. Àdá, Ézè kwè-rè [PP nà **òfèkè**].
Ada Eze believe-rV P idiot
"As for Ada$_i$, Eze believes in the idiot$_i$." *epithet possible*

b. Ụ́nụ̀, Ézè kwè-rè [PP nà **ụ́nụ̀** / *yá].
2PL.IDP Eze believe-rV P 2PL.IDP / 3SG.IDP
'As for you(pl), Eze believes in you(pl).' *phi-matching*

3.3 Long focus fronting in Igbo

Our argument for an AL component in Ā-movement will also involve cross-clausal dependencies. We will thus briefly describe the formation of such dependencies in Igbo. We concentrate on focus fronting since it results from Ā-movement when clause-bound, see section 3.2.

The example in (18a) will serve as our baseline; its embedded clause is identical to the baseline we used in short Ā-dependencies in the previous subsection. Embedded declarative clauses in Igbo must be introduced by the overt C(omplementizer) *nà*; a zero C (Ø) is out. Long focus fronting is possible in Igbo, but it exhibits a cross-linguistically common subject/non-subject split. Long focus fronting of a non-subject is formed in the expected manner, see (18b) for long DO focus: The focused XP occurs at the left edge of the matrix clause, followed by the focus marker *kà*, and leaves a gap in its base position; the shape of the subordinating C is not affected by the dependency. Long subject focus, however, cannot be formed in a parallel manner, see (18c): a gap in the embedded subject position following the complementizer *nà* is ungrammatical. This pattern is known as the *that*-trace effect (see Pesetsky 2017 for an overview of the literature on this phenomenon).

(18) *Long SU vs. non-SU focus fronting*:

a. Úchè chè-rè **nà** / *Ø Ézè hụ̀-rụ̀ Àdá.
Uche think-rV C Eze see-rV Ada
'Uche thought that Eze saw Ada.' *declarative*

b. Àdá kà Úché chè-rè **nà** / *Ø Ézé hụ̀-rụ̀ __.
Ada FOC Uche think-rV C Eze see-rV
'Uche thought that Eze saw ADA.' *long DO focus*

c. *Ézè kà Úché chè-rè **nà** __ hụ̀-rụ̀ Àdá
Eze FOC Uche think-rV C see-rV Ada
'Uche thought that EZE saw Ada.' *long SU focus*

Igbo exhibits three repair strategies to express ex-situ focus of an embedded subject (Uwalaka 1991): Either *nà* is absent (see (19a)), or it is replaced by the element *sị́* (see (19b)), or *nà* is present but followed by an RP instead of a gap in the embedded subject position (see (19c)).[4]

(19) *Repair strategies for long SU focus*:

a. Ézè kà Úché chè-ré **Ø** __ ꜜhụ́-ꜜrụ́ Àdá n'-áhịá.
Eze FOC Uche think-rV C see-rV Ada P-market
'Uche thought that EZE saw Ada at the market.' *zero C*

b. Ézè kà Úché chè-rè **sị́** __ ꜜhụ́-ꜜrụ́ Àdá n'-áhịá.
Eze FOC Uche think-rV C see-rV Ada P-market
'Uche thought that EZE saw Ada at the market.' *different C*

c. Ézè kà Úché chè-rè **nà ọ́** hụ̀-rụ̀ Àdá n'-áhịá.
Eze FOC Uche think-rV C 3SG.DEP see-rV Ada P-market
'Uche thought that EZE saw Ada at the market.' *C + RP*

Amaechi and Georgi (to appear) provide extensive evidence (e.g., from island-sensitivity, reconstruction, and the three language-specific effects introduced in section 3.2) that the repairs in (19a,b) are the result of long (successive-cyclic) Ā-movement from the gap site in the embedded clause to the left edge of the matrix clause. (19c), however, involves prolepsis. The corresponding declarative is shown in (20), where *Ézè* is introduced as a proleptic object (inside a PP) in the matrix clause and has a purely anaphoric (but no syntactic) relation to the pronoun in the embedded clause. (19c) is derived from (20a) by short Ā-movement (focus fronting) of the proleptic object, in the process of which the preposition is lost. One piece of evidence that suggests that there is no cross-clausal movement from the embedded subject position to the surface position of *Ézè* in (19c), with the launching site realized as an RP, involves ex-situ focus of personal pronouns. Recall from section 3.2 that an RP that spells out a trace in a movement chain with a pronominal antecedent always surfaces in its 3sg form, which leads to a phi-mismatch with non-3sg antecedents (see (16b)). RPs that do not pronounce traces but only have an anaphoric relation to their antecedent as in base-generation dependencies must fully match the antecedent in phi-features (see (17b)). The RP in the embedded subject position in

[4]Comparing the surface strings in (18a,b) one might think that *sị́* is just an allomorph of *nà*. Evidence against this view comes from two observations (see Amaechi and Georgi to appear): (i) In some varieties, *nà* and *sị́* can co-occur; and (ii) *sị́* is identical to the verb meaning 'to say' in Igbo, we might thus have an instance of *say*-complementation here. It is thus likely that *sị́* occupies a higher, non-C position. We leave this for future research. For present purposes, nothing hinges on the nature of *sị́*.

the construction in (19c) does not allow phi-mismatches with a pronominal antecedent, see (20b) (Amaechi and Georgi to appear: ex. (48b)). This fact argues against a long movement derivation for (19c), and will be crucial for our discussion in section 4.

(20) a. Úchè chè-rè [PP màkà Ézè] nà **ọ́** hù-rù Àdá.
Uche think-rV about Eze C 3SG.DEP see-rV Ada
'Uche thinks about Eze$_i$ that he$_i$ saw Ada.' *prolepsis baseline*

b. Ụ́nù kà Úchè chè-rè nà **ụ́nù** / *yá hù-rù Àdá.
2PL.IDP FOC Uche think-rV C 2PL.IDP 3SG.IDP see-rV Ada
'Uche thinks that YOU(PL) saw Ada.' *long SU focus + RP repair*

What causes the difficulties with long subject extraction (vs. long non-subject extraction) in many languages is still debated. Pesetsky (2017) divides the existing approaches into two broad types: surface/PF-approaches and structural approaches. According to the former, there is nothing wrong with (long) subject movement in the syntax, but the surface string it creates, with C being linearly adjacent to a gap, is not tolerated. Structural approaches locate the problem with (long) subject extraction in syntax, i.e., some syntactic constraint blocks movement. Amaechi and Georgi (to appear) argue against a surface/PF-account of the *that*-trace effect in Igbo based on the distribution of RPs in the language and the syntax of the repair in (19c). We thus need to look for a structural reason behind the effect in Igbo.

4 New evidence for an antilocality component

If the *that*-trace effect in Igbo has a syntactic source, the question is what exactly the constraint is that blocks subject extraction. A recurring ingredient in many recent approaches to the effect involves antilocality (see section 2): The intermediate movement step of the subject from the embedded SpecTP to the local SpecCP is blocked because it would be too short, e.g., in terms of Spec-to-Spec AL, see (2). Igbo could in principle be analyzed along these lines because (a) it has the EPP-property, i.e., subjects raise from a vP-internal base position to SpecTP, and (b) focus fronting targets a low left-peripheral position, at least one that is lower than the position topics occupy (Amaechi and Georgi 2019). For present purposes, it is sufficient to take the landing site of focus XPs to be SpecCP (while topics either adjoin to CP or target a higher CP-shell).[5] Amaechi and Georgi (2019) further argue that the head of the projection targeted by focus movement is pronounced as *kà* when its specifier is filled. As mentioned in section 2, a recurring piece of evidence for an AL-component to subject extraction restrictions are intervention effects, where visible material in between the CP and the TP, e.g., an adverb, enables subject movement (see (4)). We cannot apply this diagnostic in Igbo, though, because the language does not allow any material to be in this position. Adverbs, for example, are confined to the clause-final position.[6] Fortunately, Igbo offers a different kind of evidence, which is related to the in-

[5] Amaechi and Georgi (2019) identify the projection targeted by focus fronting as FocP in a split CP along the lines of Rizzi 1997, while topics target the higher TopP. Crucially, the FocP is the projection right above the TP in their proposal, just like the (non-split) CP is in the structures we introduced in section 2, i.e., the structural distance between SpecTP and the landing site of focus fronting (SpecCP or SpecFocP) is the same.

[6] The only expression that we could find so far that is mildly acceptable (though marked) in between the embedding C and the subject in SpecTP (with a significant pause) is 'in one's opinion', see (ia). In fact, when the subject of this clause undergoes long focus fronting, the *that*-trace repairs are not triggered,

tervention diagnostic: The language allows for subextraction from DP subjects in SpecTP because they are not islands in Igbo (Georgi and Amaechi 2023). And subextraction from a subject indeed does not trigger the *that*-trace effect. This pattern can be explained under an AL approach: Subextraction from the subject increases the length of the movement path to the landing site in SpecCP because the subject DP needs to be crossed in addition. Depending on one's definition of AL, this minor increase in structure can be sufficient to create a long-enough movement step.[7]

4.1 No local subject extraction

AL-based approaches to restrictions on long subject extraction predict that local subject extraction (where the movement step from SpecTP to SpecCP is a terminal one) should be blocked in the respective languages, too. Thus, a simple subject question like 'Who left?' should not involve short subject wh-movement but rather leave the wh-subject in-situ. It has proven to be notoriously difficult, though, to determine whether a language exhibits local subject Ā-movement or not, at least in subject-initial languages where the movement step in question would (often) be string-vacuous. This is also because it is challenging to apply some of the standard movement diagnostics such as reconstruction effects or sensitivity to islands given the short distance of the dependency; and pg-licensing by subjects is excluded for independent reasons (Engdahl's 1983 anti-c-command condition, see a.o. Nissenbaum 2000 for an explanation). It is thus not surprising that even for a language like English, for which this question has been studied extensively, it is still debated whether there is local subject Ā-movement or not (see, e.g., Bošković 2016; Ishii 2004 for overviews of the Vacuous Movement Hypothesis discussion). As we will show below, Igbo

i.e., the complementizer *nà* can remain and co-occur with a gap in the embedded subject position, see (ib). Since this is just one (marked) example, we do not want to draw any conclusions based only on this fact. But it is in line with what will be arguing for in section 4.

(i) a. Úchè chè-rè nà, n'-úchè nkè ꜜyá, Ézè hụ̀-rụ̀ Àdá.
Uche think-rV C P-mind the.one 3SG.POSS Eze see-rV Ada
'Uche thought that, in his opinion, Eze saw Ada.'

b. Ézè kà Úché chè-rè nà, n'-úchè nkè ꜜyá, __ ꜜhṵ́-ꜜrṵ́ Àdá.
Eze FOC Uche think-rV C P-mind the.one 3SG.POSS see-rV Ada
'Uche thought that, in his opinion, EZE saw Ada.'

[7]The Igbo *that*-trace effect exhibits another major AL signature postulated in Erlewine 2020: The effect does not only arise with 'canonical' subjects, but also with other XPs that can reach SpecTP, as shown in Amaechi and Georgi 2019: 16f.. The relevant construction in Igbo is subject-object reversal (Amaechi 2018). A subclass of transitive experiencer verbs allows its two arguments to swap positions (pre- vs. postverbal) without a change in meaning, see (i). The construction does not involve a valency-reduction. Crucially, whichever of the two arguments is preverbal (viz., in SpecTP) cannot undergo long Ā-movement across *nà* leaving a gap, see (ii), while the respective postverbal DP in (ii) can (not illustrated here).

(i) *Subject-object reversal*:

a. Ézè nà-àtṵ́ ṵ́ꜜjọ́.
Eze PROG-grip fear
'Eze is afraid.'

b. Ṵ́ꜜjọ́ nà-àtṵ́ Ézè.
fear PROG-grip Eze
'Eze is afraid.'

(ii) *The that-trace effect under embedded reversal*:

a. *Ézè kà Úché chè-rè nà __ nà-àtṵ́ ṵ́ꜜjọ́.
Eze FOC Uche think-rV C PROG-grip fear
'Uche thought that EZE was afraid.'

b. *Ṵ́ꜜjọ́ kà Úché chè-rè nà __ nà-àtṵ́ Ézè.
fear FOC Uche think-rV C PROG-grip Eze
'Uche thought that Eze was AFRAID.'

provides comprehensive language-internal evidence that local subject Ā-extraction is indeed impossible, as expected under an AL-account of the Igbo *that*-trace effect.

We will now investigate focus on subjects in simple clauses in Igbo, as in (21a). Note that we use a focus-sensitive particle here to ensure that the subject is focused since the string would be identical to an all-new declarative without the particle.[8] The central question is whether in the focused subject has undergone short Ā-movement to SpecCP or whether it remains in SpecTP. A first indication that the focused subject may stay in SpecTP comes from the observation that the focus marker *kà* must be absent with local subject focus, see (21).

(21) *Local subject focus*:

a. Sọ́ọ́sọ́ Ézè hụ̀-rụ̀ Àdá.
only Eze see-rV Ada
'Only Eze saw Ada.'

b. *Sọ́ọ́sọ́ Ézè **kà** hụ̀-rụ̀ Àdá.
only Eze see-rV Ada
'Only Eze saw Ada.'

This marker must be present, however, with both local and long non-subject focus (see (9a) and (18b)) as well as with long subject focus (derived by cross-clausal movement as in (19a) and (19b)), so its absence in (21a) cannot be attributed to the grammatical function or any inherent property of the focused XP. Recall also that Amaechi and Georgi (2019) concluded (in part for independent reasons) that the focus marker pronounces the left-peripheral head H to whose specifier the focused XP moves, but only when SpecHP is overtly filled. If this is correct, the absence of *kà* in (21a) can be interpreted such that the focused subject has not reached SpecCP, hence C is silent. Indeed, there is more evidence that the subject in (21a) has not undergone local Ā-movement. This evidence comes from the language-specific movement effects introduced in section 3.2.[9] Recall that Ā-movement of an XP (of any grammatical function) in a clause with sentential negation obligatory triggers the occurrence of the particle *ná* before the finite verb. When we negate (21a), however, the particle cannot surface, see (22a). Furthermore, the perfective aspect erects an island for subextraction of any XP in the clause, but the perfective equivalent of (21a) is grammatical, indicating that no Ā-movement took place.[10]

(22) *Local SU focus*:

a. Sọ́ọ́sọ́ Ézè (***ná**) á-!hú̱-ghí Àdá.
only Eze PRT NMLZ-see-NEG Ada
'Only Eze did not see Ada.' *+ sentential negation*

b. Sọ́ọ́sọ́ Ézè à-hú̱-lá Àdá.
only Eze NMLZ-see-PFV Ada
'Only Eze has seen Ada.' *+ perfective aspect*

[8]Igbo does not use prosody to indicate focused constituents. Note that the facts reported here for the subjects containing a focus-sensitive particle also hold for short subject question such as 'Who saw Ada?'; this type of question is syntactically identical to the focus fronting construction, see Amaechi and Georgi 2019; Amaechi 2020 for some wh-data.

[9]We already argued in Amaechi and Georgi (2019) that Igbo lacks short Ā-movement. But we only used the final H-tone diagnostic in this paper (in addition to a perhaps less conclusive test involving ATB-constructions). The facts reported below for the diagnostics involving the *ná*-particle, perfective islands, and phi-mismatches are new. Together they provide comprehensive evidence for the claim we made in the 2019 paper.

[10]Long subject Ā-movement as in (19a) and (19b) is blocked by the presence of the perfective in the embedded clause (see Amaechi and Georgi to appear for examples). This shows that the perfective blocks the extraction of all XPs, not just of non-subjects

We now turn to the the third language-specific Ā-movement diagnostic in Igbo, the final H-tone effect on crossed-over subjects. This test requires a few remarks, though. We actually do not expect to see the final H-tone on the subject in an example like (21a), even if it did involve short Ā-extraction, because the dependency would not *cross* a subject but rather move the subject itself. Subjects that undergo Ā-movement in Igbo (attested under long subject focus) never exhibit the final H-tone reflex. Instead, in such a configuration the floating H-tone triggered by Ā-movement manifests itself as a downstep on the verb the subject is thematically linked to (as the result of a combination with a further floating H-tone that originates in the emptied SpecTP position, see Amaechi 2020 for details), see (19a) and (19b). If (21a) were the result of short subject extraction, we would thus expect the final H-tone reflex in the form of a downstep on the finite verb. It is not possible, however, to use a downstep in this sentence, see (23):

(23) *Sọ́ọ́sọ́ Ézè ꜜhụ̀-ꜜrụ̀ Àdá.
only Eze see-rV Ada
'Only Eze saw Ada.'

We conclude from these observations that Igbo does not allow local subject Ā-movement. This is predicted to be the case if AL (e.g., Spec-to-Spec AL) is active in Igbo Ā-movement dependencies, which we might want it to be in order to explain the *that*-trace effect in the language.[11]

4.2 Short subextraction from the subject

Having established that Igbo does not allow short Ā-extraction of subjects, we now turn to another prediction of an AL-based account: short *sub*extraction from the subject should be possible. This is because an XP moving from within the subject would cross the subject DP-projection in addition to the TP, see (24). Depending on one's definition of AL, this path may be long enough (e.g., under Spec-to-Spec AL).

(24) $[_{\text{CP}}\ \mathbf{XP}\ [_{\text{C}'}\ \text{C}\ [\boxed{_{\text{TP}}}\ [\boxed{_{\text{DP}}}\ \ldots\ t_{\text{XP}}\ \ldots\ ]\ [_{\text{T}'}\ \ldots\ ]]]]$

This prediction cannot be tested in most languages since subjects – in particular those in derived positions – are usually islands. In Igbo, however, they are not per se islands: While subextraction from clausal subjects is prohibited, DP subjects are transparent for subextraction, at least to some extent (see Georgi and Amaechi 2020; 2023). Recall from section 3.2 that short focus fronting, which always results from Ā-movement (see line b. in

[11] Pesetsky (2021: sec. 3.3.2) proposes an exfoliation reanalysis of local *that*-trace effects, i.e., the absence of C-forms in local subject Ā-dependencies as in (21a) in Igbo. He postulates that the focused subject *does* undergo Ā-movement in these sentences, but not to the Spec of the immediately dominating SpecCP, but to the Spec of a higher projection WP (called superstructure). This longer movement step to SpecWP circumvents an AL-violation. Subsequently, the CP-layer undergoes exfoliation, and the C-head, which would be pronounced as *kà*, is thus absent. There are two empirical problems with this reanalysis. Note that Pesetsky does not address the Ā-diagnostics we put forward to argue against Ā-movement in (21a). Exfoliation may be able to explain the lack of the the final H-tone and the *ná*-particle if these elements originate in the C-domain (as assumed in Amaechi 2020) since only Ā-movement triggers these effects), and if exfoliation applies before they float rightwards to their surface positions at PF. The perfective island, however, cannot be accounted for in this way: whatever constitutes the island must be very high, above the TP, since it blocks extraction of XPs of any grammatical function. At the point when the subject would move, the island would thus be present, even if it were affected by exfoliation afterwards. Moreover, subject movement would lead to an empty SpecTP, which causes a floating H-tone in Igbo that attaches to the verb on its right (see Amaechi 2020); but we do not get H-tones on the verb in (21a).

table (10)), sometimes requires an RP at the extraction site; the relevant contexts include ex-situ focus of a conjunct, of the complement of a preposition, and of a focus associate. We illustrated this in (13) – (15) for subextraction from DPs and PPs in direct object position. Crucially, these complex constituents (with the exception of PPs) can also be put in subject position and still allow ex-situ focus of subparts of them. We illustrate this for a coordinated subject in (25), and for one containing a focus-sensitive particle in (26). The b.-examples show focus fronting of the initial conjunct and of the focus associate, respectively. These b.-sentences are felicitous in Igbo when one wants to correct parts of a previous statement such 'Obi and Ibe saw Ada.' or 'Only Obi saw Ada.'.

(25) *1st conjunct focus*:

a. [$_{\text{\&-DP}}$ Ézè nà Íbè] hụ̀-rụ̀ Àdá.
Eze and Ibe see-rV Ada
'Eze and Ibe saw Ada.' *Declarative*

b. Ézè **kà** [$_{\text{\&P}}$ yá nà Íbé] hụ̀-rụ̀ Àdá.
Eze FOC 3SG.IDP and Ibe see-rV Ada
'EZE and Ibe saw Ada.' *1st conjunct focus*

(26) *Focus associate focus*:

a. [$_{\text{DP}}$ Sọ̀ọ́sọ̀ Ézè] hụ̀-rụ̀ Àdá.
only Eze see-rV Ada
'Only Eze saw Ada.' *Declarative*

b. Ézè **kà** [$_{\text{DP}}$ sọ̀ọ́sọ̀ yá] hụ̀-rụ̀ Àdá.
Eze FOC only 3SG.IDP see-rV Ada
'Only Eze saw Ada.' *Ex-situ focus associate*

That the focused subparts of the subject are external to the subject DP in (25b) and (26b) is evident from the obligatory presence of the focus marker *kà* (recall that this marker was absent with short subject focus). But the surface strings alone do not tell us yet whether the b.-examples are derived by Ā-movement like their counterparts with the complex DPs in direct object position. They could potentially also involve base-generation (independently attested, e.g., for topicalization in Igbo, which also requires resumption, see line c. in table (10)), or even (a very short kind of) prolepsis given that the latter is an option in long Ā-dependencies in Igbo (e.g., in the RP-repair of long subject focus, see (19c)).[12] To find out what the underlying derivation is, we can apply the language-specific Ā-movement diagnostics to these strings. (25b) exhibits the final H-tone on the right edge of the subject, viz., on *Ibe* (not visible in (26b) because the RP already ends in a high tone). (27) and (28) show that negating these sentences triggers the occurrence of the *ná*-particle. Moreover, using perfective aspect in these sentences leads to ungrammaticality, see (29) and (30):

(27) *1st conjunct focus + sentential negation*:

a. [$_{\text{\&P}}$ Ézè nà Íbè] á-ǃhụ́-ghí Àdá.
Eze and Ibe NMLZ-see-NEG Ada
'Eze and Ibe did not see Ada.' *declarative*

b. Ézè kà [$_{\text{\&P}}$ yá nà Íbè] ***(ná)** á-ǃhụ́-ghí Àdá.
Eze FOC 3SG.IDP and Ibe PRT NMLZ-see-NEG Ada
'EZE and Ive did not see Ada.' *1st conjunct focus*

[12] We would like to thank Amy Rose Deal for pointing out to us the option that the examples in (25b) and (26b) could in principle result from (clause-bound) prolepsis, with the focused XP base-generated in a position P above TP but below CP, followed by short Ā-movement from P to SpecCP.

(28) *Focus associate focus + sentential negation*:

a. [$_{DP}$ Sọ́ọ́sọ́ Ézè] á-ǃhṵ́-ghí Àdá.
only Eze NMLZ-see-NEG Ada
'Only Eze did not see Ada.' *declarative*

b. Ézè kà [$_{DP}$ sọ́ọ́sọ́ yá] ***(ná)** á-ǃhṵ́-ghí Àdá.
Eze FOC only 3SG.IDP PRT NMLZ-see-NEG Ada
'Only EZE did not see Ada.' *focus associate focus*

(29) *1st conjunct focus + perfective*:

a. [$_{\&P}$ Ézè nà Íbè] à-hṵ́-lá Àdá.
Eze and Ibe NMLZ-see-PFV Ada
'Eze and Ibe have seen Ada.' *declarative*

b. *Ézè kà [$_{\&P}$ yá nà Íbé] à-hṵ́-lá Àdá.
Eze FOC 3SG.IDP and Ibe NMLZ-see-PVF Ada
'EZE and Ibe have seen Ada.' *1st conjunct focus*

(30) *Focus associate focus + perfective*:

a. [$_{DP}$ Sọ́ọ́sọ́ Ézè] à-hṵ́-lá Àdá.
only Eze NMLZ-see-PFV Ada
'Only Eze has seen Ada.' *declarative*

b. *Ézè kà [$_{DP}$ Sọ́ọ́sọ́ yá] à-hṵ́-lá Àdá.
Eze FOC only 3SG.IDP NMLZ-see-PVF Ada
'Only EZE has seen Ada.' *focus associate focus*

These facts argue against a base-generation account, since the construction under discussion exhibits Ā-movement reflexes. In order to choose between Ā-movement from the position of the RP inside the subject and prolepsis (where the RP is not a spelled-out trace) we can use the phi-mismatch diagnostic. Recall that only RPs that terminate an Ā-movement dependency in Igbo exhibit a phi-mismatch with a pronominal antecedent (the RP must be 3sg in this context), while RPs that have a purely anaphoric relation to their antecedent (as those in base-generation dependencies and in the prolepsis construction) exhibit full matching with their antecedent. In fact, when we replace the initial conjunct and the focus associate in our examples with a 2pl pronoun and focus this pronoun ex-situ, the resuming RP must be the mismatching 3sg pronoun. These facts rule out the remaining option, viz., prolepsis (as well as base-generation, which we had already excluded, though).

(31) *2pl pronoun conjunct*:

a. [$_{\&\text{-}DP}$ Ụ́nụ̀ nà Íbè] hụ̀-rụ̀ Àdá.
2PL.IDP and Ibe see-rV Ada
'You(pl) and Ibe saw Ada.' *declarative*

b. Ụ́nụ̀ kà [$_{\&P}$ yá / *ụ́nụ̀ nà Íbé] hụ̀-rụ̀ Àdá.
2PL.IDP FOC 3SG.IDP 2PL.IDP and Ibe see-rV Ada
'YOU(PL) and Ibe saw Ada.' *1st conjunct focus*

(32) *2pl pronoun focus associate*:

a. [$_{DP}$ Sọ́ọ́sọ́ ụ́nụ́] hụ̀-rụ̀ Àdá.
only 2PL.IDP see-rV Ada
'Only you(pl) saw Ada.' *declarative*

b. Ụ́nụ́ kà [$_{DP}$ sọ́ọ́sọ́ yá / *ụ́nụ́] hụ̀-rụ̀ Àdá.
2PL.IDP FOC only 3SG.IDP 2PL.IDP see-rV Ada
'Only YOU(PL) saw Ada.' *focus associate focus*

We can thus conclude that ex-situ focus of subparts of a complex subject DP is indeed derived by short Ā-movement. The contrast between the lack of short subject extraction and the possibility of short subextraction from a subject is expected when AL plays a role in Ā-movement since the number of XPs crossed by the latter is higher than the number crossed by the former. This pattern could be captured, e.g., by Spec-to-Spec antilocality: subextraction from a subject in SpecTP crosses an XP in addition to the DP it is subextracted from, viz., TP, whereas short subject extraction only crosses the immediately containing TP.[13, 14]

We would like to close this subsection with a remark on the nature of intervention in Igbo subextraction from subjects. The ameliorating effect of intervening material on Ā-extraction, taken to be a crucial argument for an AL-account of such restrictions, always involves additional overt material between the extraction site and the landing site in the literature, e.g., and adverb (see (3)). But overt intervening elements also allow for a PF-account of constraints on movement. Take the PF-account of, e.g., the *that*-trace effect, which postulates a PF-filter that bans an overt C that is linearly adjacent to a gap, a configuration created by local subject Ā-movement (see, a.o. Perlmutter 1968; Chomsky and Lasnik 1977). Intervening material disrupts this linear adjacency, and thus also predicts Ā-extraction to be possible in this context. In fact, the adverb effect is cited as evidence for structural as well as for PF-accounts of constraints on subject extraction (see, e.g., Kandybowicz 2006; Erlewine 2020). Extraction of a conjunct from a subject in Igbo (see (25b)) is different in that we see an amelioration even though there is no overt element in between the launching site of Ā-movement (realized by the RP) and its landing site SpecCP. The intervening material is purely structural (an additional XP).[15]

[13] A similar ameliorating effect of embedding on subject Ā-dependency formation is observed in McCloskey 1990 for Irish. He notices that a long subject Ā-dependency can terminate in an RP, while a local one cannot (Highest Subject Restriction). An RP *within* the subject (representing a conjunct or a possessor) is possible even in a clause-bound dependency, however (McCloskey 1990: 215f.).

[14] Zyman 2021 also discusses cases of subextraction from subjects as evidence for an AL-constraint on movement. He focuses on English, in which this kind of subextraction is much more restricted, namely to subjects of unaccusative and passivized verbs (and subextraction does not apply from the DP in SpecTP in his derivations). Ershova and Bezrukov 2024 present cases of possessor subextraction in West Circassian, though this is only allowed from absolutive (not ergative) DPs. Subextraction from subjects is more generally available in Igbo, i.e., regardless of the argument structure of the selecting verb. Subextraction from complex DPs is still constrained in Igbo. Non-initial conjuncts, for example, are less easily extractable than the initial one (see Georgi and Amaechi 2020; 2023).

[15] Note that subextraction of a focus associate is different since the focus-sensitive particle surfaces between the bottom and the top of the movement chain. The argument can only be made with 1st conjunct extraction.

4.3 Long subextraction from a subject

Finally, an AL-account of the *that*-trace effect predicts that not only short, but also long subextraction from subjects should be possible without the need for repairs in the C-domain. The configuration is the same as in (24): The moving XP crosses the embedded subject DP in addition to the TP before it moves to the local SpecCP, and it should thus be long enough, e.g., under Spec-to-Spec AL. The only difference is that the movement step depicted in (24) is now an intermediate one. The XP will undergo further movement to a superordinate clause in a subsequent step. In fact, if we take (33a) with a complex embedded subject as our baseline, long subextraczion from this subject, here or the focus associate, is possible across the complementizer *nà*; *nà* cannot be zero, unlike under long subject extraction (compare (18c) and (19a)).

(33) a. Úchè chè-rè **nà** / *Ø [$_{DP}$ sọ́ọ́sọ́ Ézè] hụ̀-rụ̀ Àdá.
Uche think-rV C only Eze see-rV Ada
'Uche thought that only Eze saw Ada.'

b. Ézè kà Úché chè-rè **nà** / *Ø [$_{DP}$ sọ́ọ́sọ́ yá] hụ̀-rụ̀ Àdá.
Eze FOC Uche think-rV C only 3SG.IDP see-rV Ada
'Uche thought that only EZE saw Ada.'

However, this does not yet show that long subextraction is possible in Igbo since the surface string in (33b) is derivationally ambiguous: It could be the result of long (successive-cyclic) Ā-movement of the focus associate from the position of the RP, which thus spells out a trace (= proper long subextraction); but it could also involve prolepsis. In the latter case, the baseline would be (34), with *Ézè* being a subpart of the proleptic object PP in the matrix clause that undergoes short Ā-fronting (thereby losing the preposition); it would only have an anaphoric relation to the embedded subject pronoun then.

(34) Úchè chè-rè [$_{PP}$ màkà Ézè] nà sọ́ọ́sọ́ yá hụ̀-rụ̀ Àdá.
Uche think-rV about Eze C only 3SG.IDP see-rV Ada
'Uche thinks about Eze$_i$ that only he$_i$ saw Ada.'

To disambiguate the structure, we can use a pronominal antecedent, which can only be resumed by a default 3sg RP in an Ā-movement dependency, but must have a fully matching RP under prolepsis. As (35) shows, both options are possible with the complementizer. This is expected if indeed both prolepsis and long Ā-movement can produce this string.[16]

(35) Ụ́nụ̀ kà Úché chè-rè **nà** / *Ø [$_{DP}$ sọ́ọ́sọ́ **ụ́nụ̀** / **yá**] hụ̀-rụ̀ Àdá.
2PL.IDP FOC Uche think-rV C only 2PL.IDP / 3SG.IDP see-rV Ada
'Uche thought that only YOU(PL) saw Ada.'

Crucially for our present discussion, the option with the mismatching RP also exhibits other Ā-movement reflexes: When the embedded clause is negated, the *ná*-particle surfaces (see (36a)), and perfective aspect is incompatible (see (36b)).

[16]While both the matching and the mismatching RP are possible, there is variation among speakers regarding their preference for one or the other in the construction under discussion. There is also intra-speaker variation: M. Amaechi prefers the mismatching RP in (35), but the matching one with long 1st conjunct focus. This variation probably indicates the influence of non-syntactic factors on the choice between dependencies.

(36) a. Ụ́nụ̀ kà Úché chè-rè nà [$_{DP}$ sọ̀ọ́sọ̀ **yá**] ***(ná)** !á-hṵ́-ghḭ́ Àdá.
2PL.IDP FOC Uche think-rV C only 3SG.IDP PRT NMLZ-see-NEG Ada
'Uche thought that only YOU(PL) did not see Ada.'

b. *Ụ́nụ̀ kà Úché chè-rè nà [$_{DP}$ sọ̀ọ́sọ̀ **yá**] à-hṵ̀-lá Àdá.
2PL.IDP FOC Uche think-rV C only 3SG.IDP NMLZ-see-PFV Ada
'Uche thought that only YOU(PL) has seen Ada.'

We can thus be sure that Igbo exhibits proper long subextraction from subjects, as expected under an AL-account such as Spec-to-Spec AL.

5 Conclusion

We have provided new evidence for an antilocality constraint on Ā-movement from Igbo, a language in which subjects are not absolute islands. This property allows us to test a prediction of AL-accounts that cannot be addressed in most other languages: Short subject extraction should be ungrammatical, while subextraction from a subject should be fine. Based on a number of language-specific Ā-movement diagnostics, we have shown that this is indeed the case in Igbo. The subextraction-from-subject pattern follows the logic of the ameliorating effect that intervening material (such as an adverb) has on AL-violations. But at least in the case of subextraction of the first conjunct from a coordinated subject, there is no visible additional material in between the extraction and the landing site, only more structure. This argues for a structural reason behind restrictions on subject extraction in the language. Note that we did not provide or argue for a specific version of AL here for two reasons: (a) The definition must also be compatible with a split-CP analysis of the Igbo left periphery (argued for in Amaechi 2020), not just with the simple CP-TP-structure that is usually assumed in the AL-literature (as well as in this paper). And (b), we first need to better understand the syntax of the left periphery of the two repairs of long subject focus that involve long Ā-movement (see (19a) and (19b)). If AL is indeed the source of the restrictions on subject extraction in (18c) reported here, these repairs should not violate it. We leave it to future research to determine whether any of the existing AL-accounts can capture all the Igbo facts with a split CP, or if a different explanation is required. But currently, Spec-to-Spec AL seems a promising candidate for the Igbo pattern.

References

Abels, Klaus (2003): Successive Cyclicity, Anti-Locality, and Adposition Stranding. PhD thesis, University of Connecticut, Storrs, CT.

Amaechi, Mary (2018): Subject-object reversal in Igbo. *In:* A. van Alem, A. Ionova and C. Pots, eds, *Proceedings of ConSOLE XXVI*. LUCL, Leiden, pp. 241–263.

Amaechi, Mary (2020): A′-movement dependencies and their reflexes in Igbo. PhD thesis, University of Potsdam, Potsdam.

Amaechi, Mary and Doreen Georgi (2019): 'Quirks of subject (non-)extraction in Igbo', *Glossa: a journal of general linguistics* **4**(1), 1–36. DOI: https://doi.org/10.5334/gjgl.607.

Amaechi, Mary and Doreen Georgi (to appear): The *that*-trace effect – a surface or deep island phenomenon? Evidence from resumption and prolepsis in Igbo. *In:* J. Kandybowicz, ed., *Languages Special Issue 'Escaping African Islands'*. MDPI.

Bošković, Željko (1994): 'D-Structure, Theta-Criterion, and movement into theta-positions', *Linguistic Analysis* **24**, 247–286.

Bošković, Željko (2005): 'On the locality of left branch extraction and the structure of NP', *Studia Linguistica* **59**, 1–45.

Bošković, Željko (2016): 'On the timing of labeling: Deducing Comp-trace effects, the Subject Condition, the Adjunct Condition, and tucking in from labeling', *The Linguistic Review* **33**(1), 17–66.

Branan, Kenyon (2023): 'Locality and anti-locality: the logic of conflicting requirements', *Linguistic Inquiry* **54**, 1–38.

Bresnan, Joan (1977): Variables in the Theory of Transformations. *In:* P. W. Culicover, T. Wasow and A. Akmajian, eds, *Formal Syntax*. Academic, New York, pp. 157–196.

Brillman, Ruth and Aron Hirsch (2016): An anti-locality account of English subject/non-subject asymmetries. *In:* R. Burkholder, C. Cisneros, E. Coppess, J. Grove, E. A. Hanink, H. McMahan, C. Meyer, N. Pavlou, Ö. Sarıgül, A. Singerman and A. Zhang, eds, *Proceedings of CLS 50*. Chicago Linguistic Society, Chicago.

Chomsky, Noam and Howard Lasnik (1977): 'Filters and Control', *Linguistic Inquiry* **8**, 425–504.

Clark, Mary M. (1990): *The tonal system of Igbo*. Dordrecht, Foris.

Culicover, Peter W. (1993): 'Evidence against ECP accounts of the that-t effect', *Linguistic Inquiry* **24**, 557–561.

Deal, Amy Rose (2019): 'Raising to Ergative: remarks on applicatives of unaccusatives', *Linguistic Inquiry* **50**, 388–415.

Douglas, Jamie (2017): 'Unifying the *that*-trace and anti-*that*-trace effects', *Glossa: a journal of general linguistics* **2**(1), 1–28. DOI: http://doi.org/10.5334/gjgl.312.

Emenanjo, Emmanuel Nolue (2015): *A grammar of contemporary Igbo: Constituents, features and processes*. M&J Grand Orbit Communications Ltd, Port Harcourt.

Engdahl, Elisabet (1983): 'Parasitic gaps', *Linguistics and Philosophy* **6**, 5–34.

Erlewine, Michael Yoshitaka (2016): 'Anti-locality and optimality in Kaqchikel Agent Focus', *Natural Language and Linguistic Theory* **34**, 429–479.

Erlewine, Michael Yoshitaka (2020): 'Anti-locality and subject extraction', *Glossa: a journal of general linguistics* **5(1)**(84), 1–38.

Ershova, Ksenia and Nikita Bezrukov (2024): Moving away from antilocality. A defense of very local movement. Handout of a talk at the LASER workshop, April 2024, link.

Georgi, Doreen and Mary Amaechi (2020): Resumption and islandhood in Igbo. *In:* M. Asatryan, Y. Song and A. Whitmal, eds, *Proceedings of NELS 50*. GLSA, Amherst, MA, pp. 261–274.

Georgi, Doreen and Mary Amaechi (2023): 'Resumption in Igbo: Two types of resumptives, complex phi-mismatches, and dynamic deletion domains', *Natural Language and Linguistic Theory* **41**, 961–1028.

Goldsmith, John A. (1976): Autosegmental Phonology. Phd dissertation, Massachusetts Institute of Technology.

Goldsmith, John A. (1981): 'The structure of wh-questions in Igbo', *Linguistic Analysis* **7**, 367–393.

Green, Margaret Mackeson and Georgewill Egemba Igwe (1963): *A descriptive grammar of Igbo*. Akademic-Verlag, Berlin.

Grohmann, Kleanthes (2003): *Prolific Domains: On the Anti-Locality of Movement Dependencies*. John Benjamins, Amsterdam, Philadelphia.

Ishii, Toru (2004): 'The Phase Impenetrability Condition, the Vacuous Movement Hypothesis, and *that*-t effects', *Lingua* **114**, 183–215.

Kandybowicz, Jason (2006): 'Comp-Trace Effects Explained Away', *Proceedings of the West Coast Conference on Formal Linguistics* **25**, 220–228.

Manfredi, Victor (1991): Agbo and Ehugbo: Igbo linguistics, consciousness, its origin and limits. PhD thesis, Havard University, Cambridge, MA.

Mbah, Boniface M. (2006): *GB syntax: Theory and application to Igbo*. St. Jon-Afam Publications, Enugu.

McCloskey, James (1990): Resumptive Pronouns, A-Binding and Levels of Representation in Irish. *In:* R. Hendrick, ed., *The Syntax of the Modern Celtic Languages*. Academic Press, San Diego, pp. 199–248.

McCloskey, James (2002): Resumption, successive cyclicity, and the locality of operations. *In:* S. Epstein and T. D. Seely, eds, *Derivation and Explanation in the Minimalist Program*. Blackwell, Oxford, pp. 184–226.

Nissenbaum, Jon (2000): Investigations of covert Phrase Movement. PhD thesis, Massachusetts Institute of Technology, Cambridge, MA.

Nwachukwu, Philip Akujuoobi (1976): Noun phrase sentential complementation in Igbo. PhD thesis, School of Oriental and African Studies, London.

Ouhalla, Jamal (1993): 'Subject-Extraction, Negation and the Antiagreement Effect', *Natural Language and Linguistic Theory* **11**, 477–518.

Perlmutter, David M. (1968): Deep and Surface Structure Constraints in Syntax. Phd dissertation, Massachusetts Institute of Technology.

Pesetsky, David (2017): Complementizer-trace effects. *In:* M. Everaert and H. C. van Riemsdijk, eds, *Blackwell Companion to Syntax, 2nd edition*. Wiley-Blackwell.

Pesetsky, David (2021): Exfoliation: Towards a Derivational Theory of Clause Size. Ms., Massachusetts Institute of Technology, lingbuzz/004440.

Richards, Norvin (2022): Anti-locality. Ms., Massachusetts Institute of Technology, lingbuzz/007830.

Rizzi, Luigi (1997): The Fine Structure of the Left Periphery. *In:* L. Haegeman, ed., *Elements of Grammar*. Kluwer, Dordrecht.

Robinson, J. (1974): Focus-presupposition and wh-questions in Igbo. *In:* E. Voeltz, ed., *Proceedings of the 3rd annual conference on African linguistics*. Indiana University Press, Bloomington, p. 243–249.

Saito, Mamoru and Keiko Murasugi (1999): Subject predication within IP and DP. *In:* K. Johnson and I. Roberts, eds, *Beyond principles and parameters: Essays in memory of Osvaldo Jaeggli*. Kluwer Academic Publisher, Dordrecht, pp. 167–188.

Tada, Hiroaki (1995): 'Floating tones and Ā-movement in Igbo', *Fukuoka University review of literature & humanities* **26**(4), 1619–1642.

Uwalaka, Mary Angela (1991): 'Wh-movement in Igbo', *University College London Working Papers in Linguistics* **3**, 185–208.

Uwalaka, Mary Angela (1997): *Igbo grammar*. The Pen Services, Ibadan.

Zyman, Erik (2021): 'Antilocality at the Phase Edge', *Syntax* **24**(2), 510–556.