

# The anti-locality signature of quirks of subject extraction\*

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## 1 Anti-locality and subject extraction

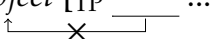
One property that often distinguishes subjects from other arguments is their exceptionally high position in the clause, e.g. in Spec,TP. In the context of  $\bar{A}$ -extraction, this means that subjects are exceptionally close to the target position of extraction, e.g. Spec,CP.

☞ If an *anti-locality* constraint blocks movement that is “too short,”<sup>1</sup> this may force subject extraction to proceed differently. This may result in an observable difference between subject vs non-subject extraction—a subject extraction “quirk.”

### (1) Anti-locality may block movement from canonical subject position:


a. Movement from Spec,TP to Spec,CP may be “too short”:

\* ... [CP *subject* [TP \_\_\_\_\_] ...]



b. But movement to Spec,CP from lower may be long enough:

✓ ... [CP *non-subject* [TP ... [ ... \_\_\_\_\_] ...]

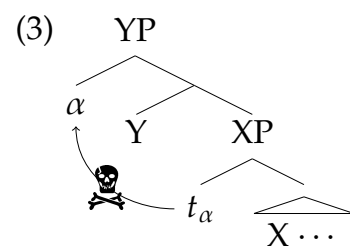


For concreteness, here, I discuss (2), schematized in (3).

### (2) Spec-to-Spec Anti-Locality (Erlewine, 2016):

$\bar{A}$ -movement of a phrase from the Specifier of XP must cross<sup>2</sup> a maximal projection other than XP.

This logic makes a certain set of predictions.



\*For discussion at various stages, I thank especially David Pesetsky and Hadas Kotek.

<sup>1</sup>Different authors have proposed different anti-locality constraints:

- Comp-to-Spec: Pesetsky and Torrego (2001) and Abels (2003) argue against movement from Compl,XP to Spec,XP, which is not relevant for our discussions here. See also Kayne (2005).
- Spec-to-Adj: Saito and Murasugi (1999) argue against the adjunction of Spec,XP to XP.
- Saito and Murasugi (1999); Bošković (1994, 1997, 2005) propose that movement must cross at least one phrase, which unifies Comp-to-Spec and Spec-to-Adj. See also Boeckx (2009).
- Spec-to-Spec: Erlewine (2016) specifically proposes the anti-locality constraint in (2).
- Grohmann (2003) proposes a ban against movement within certain “prolific domains.” Clausal spines regularly have three such domains.

See Grohmann (2011) for a review of formulations from the 90’s and 2000’s.

<sup>2</sup>Movement from position  $\alpha$  to  $\beta$  *crosses*  $\gamma$  if and only if  $\gamma$  dominates  $\alpha$  but does not dominate  $\beta$ .

(4) **The signature of quirks of subject extraction that are due to anti-locality:**

Suppose a particular quirk  $Q$  canonically affects the extraction of subjects.

If this is an anti-locality-driven behavior, we might observe:

- Ⓐ obviation of  $Q$  when additional material is added above the subject,
- Ⓑ applicability of  $Q$  to non-subjects that are exceptionally high, and
- Ⓒ no correlation of  $Q$  with other subjecthood properties such as case.

Ⓐ ✓ ... [CP *subject* [XP ... [TP \_\_\_\_\_] ...]

An additional projection makes movement from Spec,TP to Spec,CP grammatical, allowing for the straightforward extraction of subjects from Spec,TP.

Ⓑ \* ... [CP *non-subject* [XP \_\_\_\_\_] ...]

If a particular non-subject is exceptionally high and close to the clause edge, the quirk may affect such non-subjects too.

Ⓒ The anti-locality approach is *purely configurational*. (By itself,) it predicts no sensitivity to other subjecthood properties, such as being nominal, in a particular morphological case, or having been in a local relationship with T/Subj, etc., in contrast to e.g. Pesetsky and Torrego (2001), Rizzi (2006), Deal (2017, yesterday).

**Today:** Three examples of subject/non-subject extraction asymmetries which exhibit the properties Ⓐ, Ⓑ, Ⓒ: anti-agreement effects (§2), complementizer-trace effects (§3), Highest Subject Restrictions on resumption (§4).

## 2 Anti-agreement effects

*Anti-agreement* refers to the disappearance of regular  $\phi$ -agreement with an argument which is  $\bar{A}$ -extracted (Ouhalla, 1993). See Baier (2016) for a recent review.

Consider nominative agreement in Fiorentino, discussed in Brandi and Cordin (1989):

(5) **Preverbal subjects agree with the auxiliary and preverbal clitic:**

Le ragazze l' hanno telefonato.

the girls 3PL has.3PL phoned

'The girls have phoned.'

(Campos, 1997)

(6) **No agreement with *wh*-fronted subjects:**

Quante ragazze {\*le hanno, ✓gli ha} parlato con te?

How many girls 3PL has.3PL 3SGM has.3SGM spoken with you

'How many girls talked to you?'

Subject agreement is unaffected by non-subject extraction.

Brandi and Cordin (1989) relate the anti-agreement in (6) to the fact that postverbal subjects—possible when the subject is focused (their fn. 6)—are also not agreed with:

- (7) **No agreement with postverbal subjects:**  
 {\*Le hanno, <sup>✓</sup>Gli ha} telefonato delle ragazze.  
 3PL has.3PL 3SGM has.3SGM telephoned some girls  
 ‘Some girls have telephoned.’

Following Rizzi’s (1982) analysis of standard Italian, Brandi and Cordin (1989) propose that **subjects skip the Spec,TP position** when *wh*-extracted.  $\phi$ -agreement correlates with movement to the canonical Spec,TP position:

- (8) **Anti-agreement due to anti-locality:**
- T agrees with the subject in Spec,TP:  

$$\begin{array}{c} \text{[TP subject} \bullet \bullet \text{T [vP ... } \underline{\hspace{1cm}} \text{ ...}} \\ \uparrow \hspace{10em} \uparrow \\ \text{---} \end{array}$$
  - Movement of subject from Spec,TP to Spec,CP is ungrammatical:  

$$\begin{array}{c} * \text{[CP subject C [TP } \underline{\hspace{1cm}} \bullet \bullet \text{T ... [vP ... } \underline{\hspace{1cm}} \text{ ...}} \\ \uparrow \times \hspace{2em} \uparrow \hspace{10em} \uparrow \\ \text{---} \end{array} \quad \Rightarrow \text{movement too short!}$$
  - Movement of subject to Spec,CP instead skips Spec,TP:  

$$\begin{array}{c} \text{<sup>✓</sup>[CP subject C [TP T(no agreement) ... [vP ... } \underline{\hspace{1cm}} \text{ ...}} \\ \uparrow \hspace{10em} \uparrow \\ \text{---} \end{array} \quad \Rightarrow \text{anti-agreement!}$$

## 2.1 Obviation by negation and Ouhalla’s generalization **A**

Ouhalla (1993) notes that, in some languages, the addition of negation can obviate anti-agreement: i.e. normal agreement with the extracted argument reappears.

- (9) **Breton (Celtic):** (Borsley and Stephens, 1989)
- Petore paotred a {\*lenn-ent, <sup>✓</sup>lenn-e} al levrioù?  
 which boys C read-3PL, read-3SG the books  
 ‘Which boys read the books?’
  - Petore paotred [ne] {<sup>✓</sup>lenn-ent, \*lenn-e} ket al levrioù?  
 which boys NEG read-3PL, read-3SG} NEG the books  
 ‘Which boys did not read the books?’

However, there are languages where negation does not affect anti-agreement:

- (10) **Turkish:** (Ouhalla, 1993, pp. 484, 500)
- [<sub>RC</sub> hoca-yi gör-en-(\*ler)] öğrenci-ler  
 lecturer-ACC see-PART-(\*PL) student-PL  
 ‘the students who saw the lecturer’
  - [<sub>RC</sub> hoca-yi gör-[me]-yen-(\*ler)] öğrenci-ler  
 lecturer-ACC see-NEG-PART-(\*PL) student-PL  
 ‘the students who did not see the lecturer’

(11) **Ouhalla's (1993) Generalization:**

The addition of negation obviates anti-agreement if and only if negation is syntactically higher than the agreement controller.

This generalization is supported by the effects of two different negators in Welsh, not discussed in Ouhalla 1993.<sup>3</sup> The Welsh copula has a special non-agreeing "relative" form (*sy* be.REL) used in subject extraction constructions.

(12) **Welsh (Celtic):** (Borsley, Tallerman, and Willis, 2007, pp. 130–131)

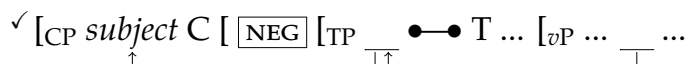
- a. Dinas hardd **yw** Caerdydd.  
city beautiful be.PRES.3SG Cardiff  
'Cardiff is a beautiful city.'<sup>4</sup>
- b. Caerdydd {<sup>✓</sup>*sy*, \**yw*} 'n ddinas hardd.  
Cardiff be.REL, be.PRES.3SG PRED city beautiful  
'It's CARDIFF that is a beautiful city.'

Welsh has two different negators, *na(d)* and *ddim*, which differ in structural height. See e.g. Borsley et al. (2007, p. 79) for discussion.

(13) **Welsh subject *wh*-questions:** (Borsley et al., 2007, pp. 139–140)

- a. Low *ddim* negator (colloquial) ⇒ non-agreeing copula:  
Pwy *sy* ddim yn gwybod am y gaŵn adnabyddus hon?  
who be.REL NEG PROG know.INF about the song well.known this  
'Who doesn't know about this well-known song?'
- b. High *na(d)* negator (literary) ⇒ agreeing copula:  
Pwy nad **yw** 'n gwybod am y gaŵn adnabyddus hon?  
who NEG be.PRES.3SG PROG know.INF about the song well.known this  
'Who doesn't know about this well-known song?'
- c. Copula after high *na(d)* showing 3PL agreement:  
Pa rai nad **dynt** yn addas?  
which ones NEG be.PRES.3PL PRED suitable  
'Which ones are not suitable?'

☞ Ouhalla's Generalization (11) is predicted by the anti-locality approach to anti-agreement (8), assuming the presence of negation reflects an additional projection.



! As noted by Ouhalla (1993) and Baier (2017), this approach may not extend to all languages with anti-agreement obviated by negation. In particular, Berber exhibits agreement with postverbal subjects in their Spec,vP base position.

<sup>3</sup>I thank Miriam Nussbaum (p.c.) for discussion of Welsh.

<sup>4</sup>The *yw* form is also special in that it cooccurs with fronting of some constituent, as opposed to the default PRES.3SG copula, *mae*. Example (13c) below shows that *yw* is 3SG and has a 3PL variant.

## 2.2 Absolutive anti-agreement **B**

In the languages above, I assume T agrees with transitive subjects and intransitive subjects in Spec,TP, following Brandi and Cordin (1989) and discussion in Ouhalla (1993). But the logic of anti-agreement (8) similarly applies to other sets of arguments in Spec,TP. The verb in Karitiâna (Tupian; Brazil) agrees with intransitive subjects and transitive objects (absolutive arguments). There is no agreement with transitive subjects.

### (14) Absolutive agreement alignment in Karitiâna (Storto, 2012):<sup>5</sup>

- |  |   |
|--|---|
| <p>a. Y-pyr-ahy-dn yn.<br/>1SG-A-drink-NFUT 1sg<br/>'I drank.'</p> <p>b. A-pyr-ahy-dn an.<br/>2SG-A-drink-NFUT 2sg<br/>'You drank.'</p> <p>c. Ø-Pyr-ahy-dn i.<br/>3-A-drink-NFUT 3sg<br/>'He/she drank.'</p> | <p>d. Y-pyr-ahoj-on yn òwã.<br/>1SG-A-laugh.at-NFUT 1sg child<br/>'The child laughed at me.'</p> <p>e. A-pyr-ahoj-on an òwã.<br/>2SG-A-laugh.at-NFUT 2sg child<br/>'The child laughed at you.'</p> <p>f. Ø-Pyr-ahoj-on i òwã.<br/>3-A-laugh.at-NFUT 3sg child<br/>'The child laughed at him/her.'</p> |
|--|---|

Storto (1997, 1998) proposes that absolutive arguments move to Spec,TP in Karitiâna, i.e. that Karitiâna is a "raising ergative" language (Bittner and Hale, 1996a,b).

☞ **Karitiâna shows absolutive anti-agreement:** Agreement does not change in transitive subject extraction (15). Intransitive subject extraction shows an invariant marker *i-* (16) whereas object extraction shows an invariant marker *ti-* together with exceptional *subject* agreement (17). (Examples from Storto, 1999)

- |  |   |
|--|---|
| <p>(15) <b>Transitive subject extraction:</b><br/>Morã y-sokõ'i?<br/>who 1SG-tie.up<br/>'Who tied me up?'</p> <p>(16) <b>Intransitive subject extraction:</b><br/>Mora-mon i-hyryp?<br/>who-COP i-cry<br/>'Who cried?'</p> | <p>(17) <b>Object extraction:</b></p> <p>a. 'Ep aj-ti-pasagngã-t ajxa.<br/>trees 2PL-TI-COUNT-NFUT 2pl<br/>'TREES, you all are counting.'</p> <p>b. Mora-mon y-'it Ø-ti-oky-t?<br/>what-COP my-father 3-TI-kill-NFUT<br/>'What did my father kill?'</p> |
|--|---|

☞ This too is explained if movement from Spec,TP to Spec,CP is too close, and absolutive extraction involves skipping Spec,TP. In (17), T cannot agree with the object and instead cross-references the subject.

The anti-locality approach in (8) offers a viable approach to (some) anti-agreement effects and their obviation.

<sup>5</sup>A is an "assertion" marker, which appears to have a discourse function. See Storto (2012).

### 3 Complementizer-trace effects<sup>6</sup>

In many languages with optional complementizers, the null complementizer form must be used when the local subject is extracted.<sup>7</sup> See Pesetsky (to appear) for a recent review.

(18) **The English *that*-trace effect (Perlmutter, 1968):**

- a. What did he say [<sub>CP</sub> (that) Laura hid \_\_\_]?
- b. Who did he say [<sub>CP</sub> (\*that) \_\_\_ hid the rutabaga]?

(19) **Levantine Arabic (Kenstowicz, 1983, 1989):**

- a. 'ayy fustaʔan Fariid kaal [<sub>CP</sub> (innu) l-bint iʃtarat \_\_\_]?  
which dress Fariid said that the-girl bought  
'Which dress did Fariid say that the girl bought?'
- b. 'ayy bint Fariid kaal [<sub>CP</sub> (\*innu) \_\_\_ iʃtarat l-fustaʔan]  
which girl Fariid said that \_\_\_ bought the-dress  
'Which girl did Fariid say bought the dress?'

(20) **Swedish:**

(Boef and Franco, 2012)

- a. mannen [<sub>RC</sub> (som) du hoppas [<sub>CP</sub> (att) Maria ska träffa \_\_\_ imorgon]]  
man.the SOM you hope that Mary will meet tomorrow  
'the man that you hope Mary will meet tomorrow'
- b. mannen [<sub>RC</sub> (som) du hoppas [<sub>CP</sub> (\*att) \_\_\_ kommer hit]].  
man.the SOM you hope that \_\_\_ comes here  
'the man that you hope will come here'

What's special about the null complementizer? Bošković (1997) and Ishii (2004) propose that embedded clauses without overt complementizers are TPs. Here I similarly propose that complementizer-less full clauses lack a distinct C layer, but are instead *CTPs*, headed by CT, which is a phase head.<sup>8</sup> (See also Erlewine (2017b) for a half-different analysis.)

(21) **Complementizer-trace effects due to anti-locality:**

- a. \* ... [<sub>CP</sub> that/innu/att [<sub>TP</sub> \_\_\_ ... ]  
←—————|↑—————X—————|↑—————
- b. ✓ ... [<sub>CTP</sub> \_\_\_ ... ]  
←—————|↑—————

<sup>6</sup>The material in this section follows Erlewine (2017b), which in turn benefited from detailed comments by Jamie Douglas and Yusuke Imanishi.

<sup>7</sup>There are also languages where a different form of complementizer is used for local subject extraction, e.g. French *que/qui* (Perlmutter, 1968) or Nupe *gànáń/’án* (Kandybowicz, 2006, 2009)—the latter exhibiting obviation by high adverbs **A**. I do not discuss such cases here.

See e.g. Taraldsen (2002) for an analysis of French *qui* which is very close to Rizzi's (1982) analysis for Italian in (22/23) below, and is compatible with the overall approach here.

<sup>8</sup>I am hesitant to simply adopt the analysis that complementizer-less clauses are TPs with no phase head. See Erlewine (2017b) for one argument against this. On CT vs separated C and T, see e.g. Martinović (2015); Erlewine (2017a); Aldridge (to appear). Alternatively, we could say that TP itself acts as the phase boundary when it is not extended by a CP as in Bošković (2014).

### 3.1 Comp-trace effects and inversion

As proposed by Rizzi (1982), null subject languages—which may have a weak EPP requirement or where the EPP may be satisfied by an empty element (see e.g. Roberts, 2010, for discussion)—allow for subject extraction directly from a base position, without moving through Spec,TP, and therefore do not exhibit comp-trace effects.

(22) **No complementizer-trace effect in Italian (Rizzi, 1982, p. 117):**

Chi credi [CP che verrà \_\_\_]?  
 who believe.2SG that will.come

‘Who do you believe will come?’

(23) **No complementizer-trace effects in null subject languages:**

✓ ... [CP \_\_\_ che/... [TP ∅ ...  
 ←—————↑—————

If there is another way of satisfying the EPP, the subject can be extracted from its predicate-internal position across an overt complementizer:

(24) **Avoiding the comp-trace effect by skipping Spec,TP (Rizzi and Shlonsky, 2007):**

- a. \* What do you think [CP \_\_\_ that [TP \_\_\_ is [Pred \_\_\_ in the box]]]?
- b. ✓ What do you think [CP \_\_\_ that [TP there is [Pred \_\_\_ in the box]]]?

Note that Gilligan (1987) shows, with a 100-language sample, that the general availability of postverbal subjects (“inversion”) entails the lack of comp-trace effects, but not the other way around. Inversion base order as in Italian allows for the “skipping” derivation in (23), but this may not be the only way that a language avoids comp-trace violations.

### 3.2 Obviation by high adverbs **A**

Complementizer-trace effects are famously obviated by the addition of certain adjuncts:

(25) **Obviation by adjuncts:** ((a–b): Bresnan, 1977; (c): Culicover, 1993)

- a. Who did she say [CP that \*(tomorrow) \_\_\_ would regret his words]?
- b. Which doctor did you tell me  
 [CP that \*(during an operation) \_\_\_ had had a heart attack]?
- c. Robin met the man [RC {that/who} Leslie said  
 [CP that \*(for all intents and purposes) \_\_\_ was the mayor of the city]].

As noted by Rizzi (1997, p. 311), who attributes the observation to Kinsuke Hasegawa, it is only high adjuncts that obviate the complementizer-trace effect:

(26) **Obviation only by higher adverbs:** (Brillman and Hirsch, to appear)

- a. Who did John say [CP \_\_\_ that [AdvP fortunately [TP \_\_\_ ran to the store]]]?
- b. \* Who did John say [CP \_\_\_ that [TP \_\_\_ [AdvP quickly [vP ran to the store]]]]?

☞ The anti-locality approach predicts obviation by high adverbs but not low adverbs, assuming additional functional projections to host adverbs as in Cinque (1999).

✓ ... [CP            that [AdvP *adverb* [TP            ...

### 3.3 Locative inversion **B+C**

Bresnan (1977) observes that locative PPs in *locative inversion* (LI) (27) are also subject to complementizer-trace effects when fronted (28a). (See Salzmann (2011) and Diercks (to appear) for recent overviews of LI.)

(27) [PP In these villages] can be found the best examples of this cuisine.

- (28) a. It's [PP in these villages] that we all believe (Bresnan, 1994, p. 97)  
           [CP (\*that)            can be found the best examples of this cuisine].  
 b. It's [PP in these villages] that we all believe  
           [CP (that) the best examples of this cuisine can be found           ].

One approach to this data is to take the locative PP to truly function as the subject here, in Spec,TP; see e.g. Pesetsky and Torrego (2001) note 20 for such an approach.

☞ But there are reasons to believe the PP in LI is in a distinct (perhaps topic) position:

(29) **No LI in clauses that disallow topicalization (Stowell, 1981, p. 272):**

- a. i. \* [That this book, you should read           ] is obvious.  
 ii. \* I don't believe John's claim [that this book, you should read           ].  
 iii. \* It shocked me [that this book, Bill liked           ].  
 b. i. \* [That [PP in the chair] was sitting my older brother] is obvious.  
 ii. \* ...John's claim [that [PP in the chair] was sitting my older brother].  
 iii. \* It shocked me [that [PP in the chair] was sitting my older brother].

(30) **No LI in certain nonfinite clauses:**

- a. \* I expect [nonfinite for [PP on this wall] to be hung a picture of Leonard Pabbs].<sup>9</sup>  
 b. \* I anticipated [nonfinite [PP on this wall] being a picture].  
 c. \* I believe [nonfinite [PP down the hill] to have rolled a ball].

((a–b): Bresnan, 1994 citing Aissen, 1975; (c): Stowell, 1981, p. 271)

☞ The anti-locality approach predicts PPs in LI to be subject to comp-trace effects—even if they are not in Spec,TP—by virtue of being high, e.g. in a topic position:

\* ... [CP            that [TopicP            ...

<sup>9</sup>Bresnan (1994) follows Aissen (1975) in reporting a *for*-less version of (30a) to also be ungrammatical, and Stowell (1981) reports a similar *for*-less example (\**I expect in the room to be sitting my older brother*) as ungrammatical, but I find such *for*-less clauses with LI under *expect* to be grammatical...



### 3.4 Yiddish **B+C**

Yiddish allows for embedded V2 clauses with an overt *az* complementizer (31). All examples here are from Diesing (1990). Following Diesing, I assume the V2 verb is in T.

(31) **Yiddish embedded V2:**

Ir zolt visn zayn... [CP *az* [TP *vayn ken men makhn fun troybn oykh*].  
 you should know be that wine can one make from grapes also  
 ‘You should know that one can make wine from grapes also.’

At first glance, it seems that Yiddish exhibits a complementizer-trace effect whereby non-subjects but not subjects can be extracted from embedded clauses with *az* (32):

(32) **A complementizer-trace effect in Yiddish:**

- a. Vos hot er nit gevolt [CP \_\_ *az* [TP mir zoln leynen \_\_]]?  
 what has he not wanted that we should read  
 ‘What did he not want us to read?’
- b. \*Ver hot er moyre [CP \_\_ *az* [TP \_\_ vet kumen]]?  
 who has he fear that will come  
 Intended: ‘Who is he afraid will come?’

☞ What is ungrammatical is not subject extraction across *az*, but rather extraction from the prefield (Spec,TP) across *az*. We can see this in two ways:

(33) **Ungrammatical object extraction from prefield:**

- \*Vos hot er nit gevolt [CP \_\_ *az* [TP \_\_ zoln mir leynen \_\_]]?  
 what has he not wanted that should we read

Intended: ‘What did he not want us to read?’ (cf 32a)

Prediction: an adverb in that pre-verbal position should fix the problem. Is that so?

(34) **Grammatical subject extraction with prefield object:**

Ver hot er nit gevolt [CP \_\_ *az* [TP [ot di bikher] zol \_\_ leynen]]?  
 who has he not wanted that PRT the books should read  
 ‘Who did he not want to read the books?’

As noted in Branigan (2005), the complementizer-trace effect in Yiddish cannot be about subject properties such as nominative case, contra Pesetsky and Torrego (2001). Instead, it is specifically about movement from the closest, embedded prefield position, to Spec,CP.

The anti-locality approach in (21) can account for complementizer-trace effects, including their adverb obviation effects and their relevance for high non-subjects.

## 4 Highest Subject Restriction<sup>10</sup>

In some  $\bar{A}$ -constructions in some languages, a *resumptive pronoun* can take the place of the trace (gap):

- (35) **Hebrew object relative (Borer, 1984, p. 220):**  
 Ra'iti 'et ha-yeled [<sub>RC</sub> še= Rina 'ohevet ('oto)].  
 saw.1SG ACC the-boy that Rina loves.3SGF ACC.3SGM  
 'I saw the boy that Rina loves (him).'

Here I limit attention to resumptive pronouns in non-island contexts.<sup>11</sup>

Resumptive pronouns in many languages are subject to a *Highest Subject Restriction* (HSR), where resumption is disallowed for subjects of the highest clause of the  $\bar{A}$ -construction:

- (36) **Highest Subject Restriction in Hebrew (Borer, 1984):**
- a. Highest subject relative: (p. 244)  
 Ha-'arie [<sub>RC</sub> še= (\*hu) taraf 'et ha-yeled] barax.  
 the-lion that 3sgm devoured.3SGM ACC the-boy escaped  
 literally 'The lion that (\*he) devoured the boy escaped.'
- b. Embedded subject relative: (p. 247)  
 ha-'iš [<sub>RC</sub> še= Xana 'amra [<sub>CP</sub> še= (hu) 'ohev 'arayot]  
 the-man that Hannah said.3SGF that 3sgm loves.3SGM lions  
 literally 'the man that Hannah said (he) loves lions'

Resumption in Irish (VSO) famously correlates with a change in complementizer morphology (McCloskey, 1990, 2002): (roughly) *aL* heads clauses with gapped dependencies; *aN* heads clauses with resumptive dependencies.

- (37) **Resumption and Highest Subject Restriction in Irish (McCloskey, 2002):**
- a. Object relative: (p. 189)
- i. an ghirseach [<sub>RC</sub> a ghoid na síogaí \_\_\_]  
 the girl aL stole the fairies
- ii. an ghirseach [<sub>RC</sub> a-r ghoid na síogaí í]  
 the girl aN-PAST stole the fairies her  
 'the girl that the fairies stole away (her)'

<sup>10</sup>I thank Hadas Kotek (p.c.) for discussion of Hebrew.

<sup>11</sup>As opposed to pronouns which appear to form  $\bar{A}$ -dependencies across islands, as in (i). Sells (1984) calls such pronouns "intrusive" pronouns, in contrast to resumptives.

(i) *Which picture of John were you wondering [<sub>island</sub> whether \*(it) was going to win a prize at the exposition]?* (Pesetsky, 1998, p. 28)

Perlmutter (1972) and Pesetsky (1998) propose to think of such pronouns as spelling-out the tail of island-violating chains, but resumption data suggest that they behave differently than movement chains; see e.g. Aoun, Choueiri, and Hornstein (2001). I will therefore leave the derivation of resumptives in islands open here.

- b. Highest subject relative: (p. 201; Ó Baoill and Maki, 2012 p. 361)
- i. an fear [RC a bhí \_\_\_ breoite]    ii.\* an fear [RC a raibh sé breoite]  
 the man aL was ill                      the man aN was he ill  
 ‘the man that (he) was ill’
- c. Embedded subject relative: (p. 201)
- an fear [RC a-r shíl muid [CP go raibh sé breoite]]  
 the man aN-PAST thought we C was he ill  
 literally ‘the man that we thought he was ill’

☞ I consider a derivational approach to **resumptives as the spell-out of lower copies of movement**. See Perlmutter (1972); Pesetsky (1998); Boeckx (2003) for previous approaches to resumption as pronounced trace positions.

(38) **Resumptive pronouns as lower copies with optional restrictor deletion:**

- a. Movement as copying: (Chomsky, 1993)
- [DP D NP] ... [DP D NP]  
 ↑                      ↓
- b. **Optionally delete the lower NP:**
- [DP D NP] ... [DP D NP]
- c. Chain resolution at LF: Trace Conversion (Sauerland, 1998; Fox, 2002)
- [DP D NP] λx ... [DP D x]  
 The DP cannot be “reconstructed” as the lower copy does not have the restrictor material. This accounts for the unavailability of reconstruction for optional resumptive pronouns in non-island contexts (Bianchi, 2004; Sichel, 2014).
- d. Chain resolution at PF:
- Nunes (2004): If  $\alpha$  c-commands  $\beta$  and  $\alpha = \beta$ , mark one for deletion.  
*But there is no such identity in (b)!* So the higher DP is pronounced, as is the lower restrictor-less D, as a pronoun.

The HSR then results from anti-locality:

(39) **Highest subject restriction due to anti-locality:**

- a. Subjects are generally high, e.g. in Spec,TP:<sup>12</sup>
- [TP subject ...  
 ↑
- b. Moving from Spec,TP to Spec,CP is too short:
- \* ... [CP subject [TP \_\_\_ ...  
 ↑                      ×                      ↑
- c. Subjects skip Spec,TP instead:
- ✓ ... [CP subject [TP  $\emptyset$  ...  
 ↑
- ⇒ a lower copy then cannot be pronounced (as a resumptive pronoun) in the canonical subject position ⇒ Highest Subject Restriction

## 4.1 Irish **A**

- ☞ The addition of certain adjuncts makes highest subject resumptives grammatical (Ó Baoill and Maki, 2012).

(40) **Conditional clause added in the RC (Ó Baoill and Maki, 2012, p. 363):** (cf 37bii)

✓ Tá [an fear [RC a raibh sé breoite [más fíor]] anseo anois.  
is the man aN was he ill if+cop true here now

‘The man who was ill supposedly is here now.’

(41) **Adding epistemic, temporal, comitative adjuncts (p. 363):**

a. HSR baseline:

\* Cé ar imigh sé?  
who aN left he

Intended: ‘Who left?’

b. ✓ Cé ar imigh sé {go hádhúil, is léir, is dócha, inné, trí lá  
who aN left he fortunately evidently probably yesterday three days  
ó shin, in am, le Máire)?  
ago in time with Mary

‘Who {fortunately, evidently, probably} left {yesterday, three days ago, in time, with Mary}?’

All of the adjuncts shown to obviate the HSR by Ó Baoill and Maki (2012) are high in the clause, plausibly between TP and CP (except possibly the comitative). This obviation is straightforwardly explained by the increase in distance between the canonical subject position and the clause edge.

## 4.2 Hebrew **A+C**

According to Borer (1984), Doron (1982) observes that fronting some constituent to increase the distance between the preverbal subject and the relative clause edge allows for a grammatical highest subject resumptive **A**:

(42) **Separating the highest subject from the clause edge:**

a. ha-iš [RC še= [rak 'al kesef] (hu) xošev]  
the-man that only about money he thinks

‘the man that thinks only about money’

(Borer, 1984, p. 247)

<sup>12</sup>The adoption of this analysis for Irish is complicated by the fact that, famously, Irish’s VSO word order has been analyzed with the subject *not* moving to Spec,TP. But see McCloskey (2001) for detailed discussion suggesting that subjects in Irish regularly *do* move out of their Spec,vP base position, to some higher position.

- b. ha-iš [RC še= {'etmol, ha-šavu'a še=avar} (hu) pagaš 'et Dina]  
 the-man that yesterday the-week that=passed he met.3SGM ACC Dina  
 'the man that {yesterday, last week} met Dina' (Hadas Kotek, p.c.)

Highest subject resumptives also become grammatical when they are postverbal. This is possible with a (high register) V2-like inversion structure, where another constituent is fronted to a preverbal position:

- (43) **Grammatical postverbal highest subject resumptives:** (Hadas Kotek, p.c.)
- a. ha-iš [RC še= 'et matana natan hu le-Dina]  
 the-man that ACC present gave.3SGM he DAT-Dina
- b. ha-iš [RC še= le-Dina natan hu 'et matana]  
 the-man that DAT-Dina gave.3SGM he ACC present  
 'the man that gave the present to Dina'

In the basic HSR cases, we might have imagined that the HSR reflects a particular relationship between the RC complementizer and its local T head (e.g. some issue with feature inheritance, etc.).

- ☞ But instead, the Highest Subject Restriction is a restriction on “being highest” and “being a subject” at the same time, not about “highest subjects.”

First, note that resumptives can be fronted within the relative, even long-distance (44b):

- (44) **Long-distance resumptive fronting (based on Borer, 1984, pp. 250–251):**
- ha-iš [RC še= {'oto} Xana 'amra [CP še= {'oto} Dalya ma'amina  
 the-man that ACC.3SGM Hannah said that ACC.3SGM Dalya believes  
 [CP še= {'oto} Kobi pagaš {'oto}]]  
 that ACC.3SGM Kobi met ACC.3SGM  
 'the man that Hannah said that Dalya believes that Kobi met'

If an embedded subject resumptive as in (36) is fronted to the edge of the RC, it becomes ungrammatical:

- (45) **Fronted embedded subjects become subject to the HSR (*ibid* p. 250):** (cf 36b)

- \* ha-iš [RC še= hu Xana 'amra [CP še= \_\_\_ 'ohev 'arayot]]  
 the-man that he Hannah said that \_\_\_ loves lions

Intended: 'the man that Hannah said loves lions'

So the HSR is not about a relationship between the local T and C; it's about being close to the edge of the RC **C**. But why is it limited to subjects?

- ☞ Subjects are the only nominals that are exclusively bare (preposition-less).
  - Assume that relative clause heads/operators in direct object position must be base-generated with the DOM ACC *'et*. Suppose *'et* is ambiguous between a preposition and a case-marker.
  - As Borer (1984) and others show for prepositions such as DAT *l(a)* and LOC *b(a)*, relativization over a prepositional object must always use the prepositional resumptive. The availability of a prepositional parse for *'et* allows for high, fronted direct object resumptives as in (44).

A movement theory for resumption allows for an anti-locality approach to the HSR (39), which explains the strict locality sensitivity of the HSR in Irish and Hebrew.

- ⚠ There remaining questions for this account of resumption and the HSR:
  - what governs the optional deletion in (38b), especially in different  $\bar{A}$ -constructions;
  - “intrusive” pronouns (footnote 11);
  - the precise position of subjects in Irish (footnote 12) and in Hebrew inversion;
  - obligatory non-subject resumptives (Palestinian Arabic in Shlonsky 1992)...

## 5 Conclusion

- ☞ Many classic quirks of subject extraction exhibit the anti-locality signature:
  - A** obviation of Q when additional material is added above the subject,
  - B** applicability of Q to non-subjects that are exceptionally high, and
  - C** no correlation of Q with other subjecthood properties such as case.
- Approaches to such subject extraction quirks based specifically on some “subjecthood” property such as a relationship with T/Subj (Pesetsky and Torrego, 2001; Rizzi, 2006), morphological case (Deal, 2017, yesterday), or the C-T relationship (feature inheritance), do not (immediately) predict such behavior.
- At the same time, the existence of subject extraction quirks with this signature suggests that (some variety of) an anti-locality constraint is possible and necessary in diverse languages of the world.

! These properties in **A**, **B**, and/or **C** do not guarantee that a subject extraction quirk is an anti-locality-driven effect.

In Erlewine (2016), I argued for an anti-locality analysis of the Agent Focus (AF) construction in Kaqchikel (Mayan) based on apparent **A** properties.

(46) **AF is required for transitive subject extraction:**<sup>13</sup>

- a. Iwir x-∅-u-tij ri wäy ri a Xwan.  
yesterday CPL-ABS.3S-ERG.3S-eat the tortilla the CL Juan  
'Yesterday Juan ate the tortilla.'
- b. Achike {<sup>✓</sup>x-∅-tij-o, \*x-∅-u-tij} ri wäy?  
who CPL-ABS.3S-eat-AF CPL-ABS.3S-ERG.3S-eat the tortilla  
'Who ate the tortilla?'

(47) **Adverb obviation of Agent Focus:**

- Achike kan qitzij {\*x-∅-tij-o, <sup>✓</sup>x-∅-u-tij} ri wäy?  
who truly truth CPL-ABS.3S-eat-AF CPL-ABS.3S-ERG.3S-eat the tortilla  
'Who truly ate the tortilla?'

**But Henderson and Coon (to appear) argue that there is no  $\bar{A}$ -movement in examples such as (47).** They show that some “adverbs” such as *kan qitzij* can in fact act as predicates which embed full clauses (48) and that similar constructions with overt pronouns can also be elicited (49).

(48) ***Kan qitzij* can embed a clause (H&C ex 39, from Bible):**

- ...achike q-ach'alal [RC ri kan qitzij [CP chi ki-nima-n ri kristo]]...  
which ERG.1PL-friend REL truly truth COMP ERG.3PL-obey-PERF the Christ  
'...whichever of our friends that it's true that they have obeyed Christ...'

(49) **Overt pronoun in the clause under *kan qitzij* (H&C ex 44, elicited):**<sup>14</sup>

- ...q-ach'alali<sub>i</sub> [RC ri kan qitzij [CP chi ri<sub>j</sub>e' ki-nima-n ri kristo...]  
ERG.1PL-friend REL truly truth COMP 3p ERG.3PL-obey-PERF the Christ  
'our friends that it's true that they have obeyed Christ...'

“Because the copula, embedded complementizer, and resumptive pronoun may all be null, this biclausality is not always readily apparent.” H&C

<sup>13</sup>I follow the spelling and glossing conventions of Henderson and Coon (to appear) here. CPL = completive, ICPL = incompletive, REL = relative clause marker.

<sup>14</sup>I wonder if it's important that these examples in (48–49)—especially (49) without the *wh* free relative—are definite DPs with potentially non-restrictive relative clauses. See Sells's (1984) discussion of intrusive pronouns as E-type pronouns in his dialect of English, which are not possible with quantificational heads:

- (i) a. that man that I can never tell whether he is going to be friendly or not (Sells, 1984, p. 453)  
b. \*no/every man that I can never tell whether he is going to be friendly or not

If such (overt) pronouns are only possible in certain  $\bar{A}$ -structures, it is unclear whether such parses can extend to all the adverb data. H&C recognize (fn 13) that there are many remaining questions regarding the distribution of resumptive pronouns in Kaqchikel.

As support for this explanation for (47), H&C show that other adverbs which do not embed clauses do not obviate AF:

(50) **Jantäq does not take a CP (H&C ex 57):**

Jantäq chi x-a-samäj.  
 sometimes COMP CPL-ABS.2S-work  
 'It's sometimes that you worked.'

(51) **Jantäq does not obviate AF (H&C ex 60):**

Achike jantäq {<sup>✓</sup>n-∅-tij-o, \*n-∅-u-tij} ri äk'.  
 who/what sometimes ICPL-ABS.3S-eat-AF ICPL-ABS.3S-ERG.3S-eat the chicken  
 'Who sometimes eats the chicken?'

Note that Henderson and Coon (to appear) concentrate on the discussion of this adverb data, and only briefly discuss the multiple  $\bar{A}$ -extraction examples in Erlewine (2016). Discussing a multiple focus(/topic) example, H&C say:

"there is reason to believe that the left-most nominal has not actually undergone A'-movement... but is instead a high, base-generated topic."

But I show in Erlewine (2016, p. 444) that there are at least some clear cases where the higher A'-operator is *not* base-generated high, as it is island-sensitive:<sup>15</sup>

(52) **Baseline: higher A'-extraction from lower clause**

<sup>✓</sup> [K'Ō] k'Ō x-∅-noji-n [chin yawa'].  
 ∃ ∃ INC-B<sub>3sg</sub>-think-AF that sick  
 'There is someone<sub>i</sub> that someone thinks they<sub>i</sub> are sick.'

(53) **Higher A'-extraction sensitive to relative clause island:**

\* [K'Ō] k'Ō x-∅-k'ul-ö [ri achin ri x-∅-u-tz'ët].  
 ∃ ∃ COM-B<sub>3sg</sub>-meet-AF the man RC COM-B<sub>3sg</sub>-A<sub>3sg</sub>-see  
 Intended: 'There's something<sub>i</sub> that someone met [the man who saw it<sub>i</sub>].'

(54) **Movement to non-immediately-preverbal position is sensitive to adjunct islands:**

\* [K'Ō] k'Ō x-∅-b'an-ö jun pastel [rma x-∅-loq'-ö ri jay].  
 ∃ ∃ COM-B<sub>3sg</sub>-make-AF a cake because COM-B<sub>3sg</sub>-buy-AF the house  
 Int.: 'There's s.o.<sub>i</sub> that someone made a cake [because they<sub>i</sub> bought the house].'

For such examples, it seems that Henderson and Coon (to appear) would have to appeal to the Principle of Minimal Compliance (Richards, 1998), as they briefly suggest (fn 16).

A lot of careful work is required to be certain whether an apparent anti-locality-driven interaction indeed reflects anti-locality or not. *Caveat emptor (et venditor)*.

<sup>15</sup>My beliefs about this *k'Ō* existential construction itself has also subsequently changed, so the structure in (52) would also be compatible with other, less strict forms of anti-locality. *K'Ō* is an existential predicate which takes a headless, transparent free relative. See Kotek and Erlewine (2016).



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