WHEN ADVERBS EMBED CLAUSES: AN EXPLANATION OF VARIABILITY IN KAQCHEKEL AGENT FOCUS*

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1 INTRODUCTION

Kaqchikel, like many Mayan languages, puts constraints on the A'-extraction of transitive subjects from a normal transitive clause:

- In many cases, like (1), A'-extraction of the transitive subject is simply banned.1

  (1) * Achike $x$-$Ø-u$-loq'$_{TV}$ ri äk’?
  who CPL-ABS.3S-ERG.3S-buy the chicken
  intended: ‘Who bought the chicken?’

- To A'-extract the transitive subject, the Agent Focus (AF) construction is required:

  (2) Achike $x$-$Ø-loq’$_{AF}$ ri äk’?
  who CPL-ABS.3S-buy-AF the chicken
  ‘Who bought the chicken?’

In recent work, Erlewine (to appear) proposes that the restriction on transitive-subject extraction in Kaqchikel is the result of an Anti-Locality effect.

1 INGREDIENTS OF ANTI-LOCALITY

a. Transitive subjects—but not intransitive subjects or transitive objects—move to Spec,TP in Kaqchikel.

b. In order to A'-extract a transitive subject, movement would occur from Spec,TP-to-Spec,CP.

c. SPEC-TO-SPEC ANTI-LOCALITY: A'-movement of a phrase from the Specifier of XP must cross a maximal projection other than XP.

• The primary empirical support for Erlewine’s account comes from sentences like those in (4), in which a preverbal adverb appears to permit transitive subject extraction without the use of AF.

  (4) Achike kan qitzij $x$-$Ø-u$-tij$_{TV}$ ri wäy?
  who truly truth CPL-ABS.3S-ERG.3S-eat the tortilla
  ‘Who truly ate the tortilla?’
  (Erlewine to appear, 27)

• However, the data are more complex.

  – As Erlewine (fn. 11) notes, not all intervening adverbs have this effect.

  – Furthermore, as we show below, even the same adverb may vary in whether or not it permits extraction without Agent Focus.

In this talk: We argue against the Anti-Localy analysis along two lines.

1. First, we review existing Mayan literature, noting problems with the assumption that transitive, but not intransitive subjects, move to Spec,TP.

2. Our second, and main focus, is to show that there is variation in whether AF is observed in configurations like (4), which undermines the primary argument in favor of Anti-Localy.

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1Abbreviations used in glosses are as follows: ABS – absolutive; AF – Agent Focus; CAUS – causative; COMP – complementizer; CPL – completive; ERG – ergative; ICPL – incompletive; IRR – irreals; NML – nominal; P – plural; REL – relative clause marker; S – singular. Note that we’ve altered Erlewine’s examples to be in accordance with standard Kaqchikel orthography.
We propose an alternative to the Anti-Locality analysis of AF that can also account for the variation in whether AF is observed in the presence of adverbs.

A preview:

- The corpus examples in (5) and (6) demonstrate that the same adverb—here kan qitzij—may trigger AF, as in (30), or not, as in (5):

\[(5) \quad \ldots \text{roma } \text{ri winaq } \text{kan qitzij } \text{n-Ø-u-ya'} \text{TV} \]
\[\text{because the person REL truly truth ru-q'ij } \text{ri Dios...} \]
\[\text{ERG.3S-day the God } \]
\[\ldots \text{because the person who truly presents God’s valor...’} \]

\[(6) \quad \text{Ri } \text{kan qitzij } \text{y-e-ya'-on } \text{AF} \]
\[\text{ru-q'ij } \text{k'o chi e REL truly truth ICPL-ABS.3PL-give-AF ERG.3S-day must ABS.3P uitz chuqa‘.} \]
\[\text{good also } \]
\[\text{‘Those who truly present his word must also be good.’} \]

- We argue that despite their surface similarity, these classes of examples have radically different structures, schematized in (7)–(8).

\[(7) \quad \text{NP}_i [\text{REL ABS.3S COP adverb } [(\text{COMP pro; verb object})] \quad \text{no extraction}] \]
\[(8) \quad \text{NP}_i [\text{REL OP; adverb } t_i \text{ verb-AF object}] \quad \text{extraction} \]

- The examples that Erlewine identifies, like (5), which we propose has the structure in (7), are actually biclausal.

  - In (5)/(7), the adverb acts as a matrix predicate, embedding a lower clause which contains a resumptive pronoun.

  - These examples contain no actual movement of the subject, and AF morphology is not predicted.

  - We show how this analysis allows us to make correct predictions about which adverbs can and cannot appear in such constructions.

- Examples like (6)/(8) are monoclusal with true A’-movement of the subject over the adverb.

  - Here AF appears because it is necessary in Kaqchikel for the extraction of ergative subjects (see e.g. Aissen 2011, to appear; Coon and Henderson 2011; Coon et al. 2014)

  \[\rightarrow \text{Anti- Locality plays no role.} \]

The remainder of this talk is organized as follows:

- §2 Background: Agent Focus and the Anti-Locality Account
- §3 The location of subjects in Mayan
- §4 Purported Anti-Locality effects
- §5 When adverbs embed clauses
- §6 Summary and conclusions

2 AF AND THE ANTI-LOCALITY ACCOUNT

In this section:

1. Properties of the extraction asymmetry and the Agent Focus construction
2. The anti-locality account

2.1 KAQCHIKEL AGENT FOCUS

- A Kaqchikel transitive is shown in (9):

\[(9) \quad \text{x-Ø-u-loq'} \text{TV ri äk’ ri tijonel.} \]
\[\text{CPL-ABS.3S-ERG.3S-buy the chicken the teacher} \]
\[\text{‘The teacher bought the chicken.’} \]

  - The verb appears with two sets of person markers, ERG and ABS, co-indexing core arguments.3

  - Overt nominal arguments appear post-verbally.

  - Obligatory fronting occurs for wh-questions, focus, topic, and relativization (Aissen 1992).

3These are labelled “Set A” (ergative/possessive) and “Set B” (absolutive) in Mayan linguistics.

2Most of our examples come from a Kaqchikel Bible whose text the first author has extracted and cleaned. This particular Bible was translated by a team of native speakers of Kaqchikel, and the translation is extremely loose. The result is that the text, while clearly Biblical in content, is similar to other Kaqchikel texts concerning the range of constructions one finds.
• While transitive objects and intransitive subjects extract with no other change to the clause (10a), extraction of a transitive (ergative) subject is ungrammatical (10b):

(10) a. Achike x-Ø-u-loq’-TV ri tijonel? what CPL-ABS.3S-ERG.3S-buy the teacher ‘What did the teacher buy?’

b. * Achike x-Ø-u-loq’-TV ri äk’? who CPL-ABS.3S-ERG.3S-buy the chicken intended: ‘Who bought the chicken?’

• Instead, in order to extract a transitive subject, the Agent Focus (AF) construction must be used, repeated from (11):

(11) Achike x-Ø-loq’-o AF ri äk’? who CPL-ABS.3S-buy-AF the chicken

‘Who bought the chicken?’

While this work is focused on explaining when AF is triggered, and less concerned with deriving the specific properties of AF clauses, such clauses have five core properties in Kaqchikel.

(12) PROPERTIES OF AF CLAUSES:

i. AF is only possible when the transitive subject undergoes A’-movement (questions, focus, relativization).

ii. The object remains a direct argument of the verb—it is not made oblique (cf. antipassive).

iii. The verb bears the AF suffix {-o/-on}

iv. The verb has only one agreement morpheme, and this is drawn from the set of ABS-markers; ERG marking does not appear.

v. Either argument can control agreement depending on a person/number hierarchy (see Preminger 2014).

• While Agent Focus constructions are common across the Mayan family, there is also variability in properties of these constructions; see Stiebels 2006; Aissen 2011, to appear; Henderson et al. 2013; Coon et al. 2014 and works cited there for discussion.

• Here we focus specifically on Kaqchikel.

2.2 ANTILOCALITY

Any successful account of the ergative extraction restriction and Agent Focus must explain (at least) three things:

1. What goes wrong when you A’-move the subject of a canonical transitive clause?

2. Why do objects and intransitive subjects fail to run into whatever problem transitive subjects do?

3. How does the AF form—including the lack of ergative agreement—fix this problem?

Anti-Localiry accounts, exemplified by Erlewine (to appear), address these three problems in the following way:

1. The movement of canonical transitive subjects would occur from Spec,TP-to-Spec,CP—this movement is too close!

   (13) SPEC-TO-SPEC ANTI-LOCALITY

   A’-movement of a phrase from the Specifier of XP must cross a maximal projection other than XP.

   (14) DEFINITION: CROSSING

   Movement from position \( \alpha \) to position \( \beta \) crosses \( \gamma \) if and only if \( \gamma \) dominates \( \alpha \) but does not dominate \( \beta \).

2. Only transitive subjects are in Spec,TP—intransitive subjects and transitive objects do not violate Anti-Localiry.

3. The AF form is special in that it permits transitive subjects to extract directly from their base positions: Spec,vP.

   - The lack of ergative morphology in the AF form reflects the fact that the subject does not move to Spec,TP.

3 THE LOCATION OF SUBJECTS IN MAYAN

The Anti-Localiry account requires subjects of canonical transitive clauses to be in Spec,TP; intransitive subjects and transitive objects all remain vP-internal.

• Here we provide evidence against the proposal that transitive subjects are in Spec,TP.
• In the next section, we present an alternative analysis of the adverbial facts shown above, which not only better accounts for the data, but also makes correct predictions about which adverbials may appear to obviate the need for Agent Focus.

Like other Mayan languages, Kaqchikel has two sets of person markers used to cross-reference core arguments on predicates, shown in (15) and (16).

• These forms have prevocalic and preconsonantal allomorphs:

(15) **ERGATIVE ("SET A")**

<table>
<thead>
<tr>
<th></th>
<th>SG</th>
<th>PL</th>
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</thead>
<tbody>
<tr>
<td>1st</td>
<td>in-</td>
<td>qa-</td>
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<td>2nd</td>
<td>a-</td>
<td>i-</td>
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<tr>
<td>3rd</td>
<td>(r)u</td>
<td>(r)k</td>
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</tbody>
</table>

(16) **ABSOLUTIVE ("SET B")**

<table>
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<td>2nd</td>
<td>a-</td>
<td>ix-</td>
</tr>
<tr>
<td>3rd</td>
<td>Ø</td>
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</table>

• Ergatives cross-reference transitive subjects (17a); absolutes cross-reference transitive objects (17a) and intransitive subjects (17b):

(17) a. X[ERuss]pön väytortilla
   CPL-ERG.3P-ABS.3S-make.tortilla tortilla the girl
   ‘The girl made tortillas.’

   b. X[ERuss]b’iyin ri ixtän.
   CPL-ABS.3P-walk the girl
   ‘The girl walked.’

• The **Anti-Locality** account posits that both agreement probes are on T^0:

  - The absolutive probe is obligatory, accounting for the fact that absolutive is found in both transitive and intransitive clauses
  - The ergative probe is active only in transitive clauses—its EPP feature requires that the transitive subject move to Spec,TP

(18) Two φ-probes on T:

  a. **ERG probe**: φ-probe with EPP property; realizes ERGATIVE agreement; optional
  b. **ABS probe**: φ-probe; realizes ABSOLUTIVE agreement

• **Intransitive**: Single φ-probe on T^0; agrees with intransitive subject and realizes absolutive morphology:

(19)

• **Transitive**: Two φ-probes on T^0

  - One agrees with transitive object and realizes absolutive morphology
  - The other agrees with transitive subject, realizes ergative morphology, and requires transitive subject to raise to Spec,TP

(20)

• This account contrasts with work on Mayan languages which takes transitive subjects to remain in situ, e.g. Aissen 1992; Coon 2013, to appear; AnderBois and Armstrong 2014. We review three arguments here.
3.1 Word order

As examples like (17) above show, basic order in Kaqchikel clauses is VOS/VS.

- There have been two main approaches to V1 order in Mayan: a base generation account (Aissen 1992), or a predicate-fronting account (Coon 2010).

Base-generation

- In order to account for the fact that subjects and possessors appear linearly to the right, while wh-words, topic, and focus appear to the left, Aissen proposes the following parameter:

\[ (21) \text{ Spec-ordering parameter (Aissen 1992)} \]

  a. Specifiers of functional projections are ordered to the left.
  b. Specifiers of lexical projections are ordered to the right.

This account crucially relies on non-fronted subjects remaining low, in their merged positions.

(22) Specifier parameter

Predicate fronting

- Coon (2010) argues that VOS order in Ch’ol is derived by fronting the predicate containing the verb and the object to the specifier of a high functional projection.

- It is not clear how either option would be possible under the Anti-Locality proposal, which requires transitive—but not intransitive—subjects to move to Spec,IP.

3.2 Licensing

Recent analyses of Agent Focus attribute the ban on extracting ergatives to a problem with how arguments are licensed (Coon et al. 2014; Assmann et al. 2012). Though these Case-based analyses differ in the details, the core problem is as follows:

- Transitive subjects are licensed in situ by \( v^0 \) (see also Woolford 1997; Legate 2008, to appear; Aldridge 2004, a.o.)

- Finite \( \text{Inf}^0 \) probes past the transitive subject to license the transitive object; “absolutive” = nominative (see also Bok-Bennema 1991; Campana 1992; Johns 1992; Bittner and Hale 1996, a.o.)

(23) Predicate fronting

(24)
• The Case-based vs. Anti-Locality accounts make very different predictions about the availability of ergative in non-finite embedded clauses:
  – Under the configuration in (24), ergative should be available so long as a vP layer is present
  – Under the Anti-Locality account in (20), it should not
• Imanishi (2014) discusses Kaqchikel embedded clauses in detail, and concludes that absolutive comes from finite Infl\(^0\), while ergative is assigned low.
  – In order to embed, a transitive verb must first be passivized or antipassivized
  – The remaining argument may be coindexed with ergative—absolutive is unavailable\(^4\)

\[(25)\]

\[
\begin{align*}
&\text{a. X-Ø-qa-k’is } [\text{a-tzijo-x-ik}] . \\
&\quad \text{CPL-ABS.3S-ERG.1P-finish ERG.2S-talk.about-PASV-NML.} \\
&\quad \text{‘We finished talking about you. (lit. We finished you being talked about.)’}
\end{align*}
\]

\[
\begin{align*}
&\text{b. X-Ø-u-chäp } [\text{q’ete-n-ik r-ichin ri ak’wal }]. \\
&\quad \text{CPL-ABS.3S-ERG.3S-start hug-AP-NML ERG.3S-for the child} \\
&\quad \text{‘He started hugging the child.’ (García Matzar and Rodríguez Guaján 1997, p. 457-458)}
\end{align*}
\]

• While the examples in (25) look very similar to possessed nouns (because of (ERG=GEN morphological syncretism), we also find clausal arguments triggering ergative agreement in non-finite clauses.

\[(26)\]

\[
\begin{align*}
&\text{a. } \ldots \text{ x-Ø-ki-chäp } [\text{ru-ch’ob’i-k}]. \\
&\quad \text{CPL-ABS.3S-ERG.3P-start ERG.3S-think-PASV-NML COMP WHAT IRR ERG.3S-do-NML.} \\
&\quad \text{‘...they started to think about what [do]...’}
\end{align*}
\]

\[
\begin{align*}
&\text{b. ni-Ø-ki-b’än } [\text{ru-b’an-ik}]. \\
&\quad \text{ICPL-ABS.3S-ERG.3P-do ERG.3S-for COMP ICPL-ABS.3S-ERG.3P-die-CAUS the Jesus} \\
&\quad \text{‘...they would do in order to kill Jesus.’}
\end{align*}
\]

– It is less clear how the ergative agreement in (26) could be attributed to possessor agreement.

• Coon et al. (2014) demonstrate that the unavailability of absolutive in non-finite embedded clauses is a general property of the Mayan languages with extraction asymmetries.

\[
\begin{align*}
&\text{\textbullet Ergative morphology, on the other hand, is consistently available.} \\
&\text{\textbullet These correlations are surprising under an Anti-Locality account of extraction restrictions.}
\end{align*}
\]

3.3 Morphophonology

Mayan languages have a class of roots known as “vowel-initial roots”, like el ‘leave’ in Kaqchikel.

• These roots surface with an initial glottal stop (not represented in the orthography) when they appear word-initially or preceded by certain proclitics, as in (27a) and (27b)...
  \[
  \begin{align*}
  &\text{a. } \text{elik } [?rl-i-k] \ ‘\text{leaving’} \\
  &\text{b. } \text{aj’elik } [ah-=?rl-i-k] \ ‘\text{one who leaves’}
  \end{align*}
  \]

  \[
  \begin{align*}
  &\text{c. } \text{welik } [w-e-l-i-k] \ ‘\text{I’m leaving’}
  \end{align*}
  \]

– See Bennett (to appear) and works cited there for evidence that glottal stop is epentetic in these forms.

• Coon (to appear) presents morphophonological evidence that ergative agreement must occur low in the structure, internal to the vP/VoiceP phase
  \[
  \begin{align*}
  &\text{Like in Semitic languages (see e.g. Arad 2003 on Hebrew), properties of the vowel affect voice alternations (e.g. active vs. passive in Kaqchikel) and vowel quality is fixed at the VoiceP phase (Lois 2011)}
  \end{align*}
  \]

\[
\begin{align*}
&\text{\textcircled{R} Roots are subject to a CVC templatic requirement, evaluated at the VoiceP phase} \\
&\quad \ast VC roots must either insert a glottal stop (27a) \\
&\quad \ast or, if consonantal material is present from another morpheme, it satisfy the requirement for an initial C (27b)
\end{align*}
\]

\[
\begin{align*}
&\text{\textcircled{R} Crucially, the presence or absence of the ergative morpheme must be known} \\
&\quad \text{internally to the VoiceP phase in order to prevent glottal stop epenthesis in vowel-initial roots.}
\end{align*}
\]

• See the Appendix for details.
4 PURPORTED ANTI-LOCALITY EFFECTS

Recall that the primary argument in favor of the anti-locality analysis is that intervening adverbials appear to obviate the need for AF:

(28) Achike kan qitzij x-Ø-u-tij
who truly truth
CPL-ABS.3S-ERG.3S-eat the tortilla
‘Who truly ate the tortilla?’ ADVERB; NO AF — (Erlewine to appear, 27)

If AF allows a transitive subject to move when its movement would otherwise be too short, then the adverbial kan qitzij in (28) appears to obviate the need for AF by increasing the distance of the relevant movement.

• When we look at more examples, though, what we find is something completely mysterious under the anti-locality account.

Sometimes an intervening adverbial obviates the need for AF and sometimes it does not.

Consider the following attested near-minimal pair—here we have the same relative clause complementizer, adverbial, and verb, yet one verbs bears AF morphology, while the other doesn’t.

(29) ... roma ri winäq ri kan qitzij n-Ø-u-ya’
because the person REL truly truth
ICPL-ABS.3S-ERG.3S-give
ru-q’ij ri Dios...
ERG.3S-day the God
‘...because the person who truly presents God’s valor...’

(30) Ri kan qitzij y-e-ya’-on
REL truly truth
ICPL-ABS.3P-give-AF ERG.3S-day must ABS.3P good
ru-q’ij k’o chi e ütz
ru-q’ij then iche good
chuqa’.
also
‘Those who truly present his word must also be good.’

This is not an isolated example. We similarly find variation in attested examples with the adverbial kan ‘truly’ alone.

• In (31–32) we see a normal transitive clause even though the transitive subject has been purportedly extracted, as predicted under the anti-locality analysis.

(31) ... ri pastores ri kan x-Ø-ki-tzijoj ru-ch’ab’äl
the pastors REL truly CPL-ABS.3S-ERG.3S-preach the ERP.3S-word the
Dios ch-ìw-e.
God P-ERG.2P-to
‘...the pastors who truly preach the word of God to y’all.’

(32) Rija’ kan jun achi ri kan x-Ø-u-q’alaj-saj
He truly a man REL truly CPL-ABS.3S-ERG.3P-visible-CAUS the
nu-ch’ab’äl.
ERG.3S-word
‘He is truly a man that truly makes visible my word.’

In contrast, (33–34) show AF-morphology appearing in the same context, namely when the transitive subject has “moved over” kan ‘truly’.

(33) ... k-uma ri winäq ri kan x-e-tz’et-o tāq
ERG.3P-by the people REL truly CPL-ABS.3P-see-AF when
x-e’e’-elles-āx ri itzel taq espirito r-ik’in ri achi r-oma
CPL-ABS.3P-remove-PAS the evil PL spirit ERG-with the man ERP.3S-by
the Jesus.
the Jesus
‘...by the people that truly saw when the evil sprits were removed from the man by Jesus.’

(34) Ri kan xti-Ø-b’an-o
REL truly POT-ABS.3D-do-AF then ERP.3S-work, POT-ABS.3S-give-PAS
k’a ru-q’ij roma ri Nata’.
then ERG.3S-work POT-give-PAS then ERP.3S-Father
‘Who truly does my work then, he will then be blessed by the Father.”

We see the exact same pattern with adverbials belonging to other classes. For instance, consider the behavior of k’a ri ‘then’ / ‘after’.

• Examples (35–36) show that k’a ri can obviate the need of AF-morphology, as you might expect under the Anti-Locality account.

(35) Achike k’a ri n-Ø-u-k’ut
who then ICPL-ABS.3S-ERG.3P-show this word DEIC P-erg.1p-front
ru tzij re’ ch-qa-wäch?
re’ ch-qa-wäch?
‘Who then showed this word to us.’
(36) Ri achihe k’a ri n-Ø-r-ak’axaj ri ru-ch’ab’il ri Nata’ Dios y n-Ø-r-etamaj, kan xti-Ø-pe k’a chi and ICP-ABS.3S-learn truly POT-ABS.3S-come then pu-nu-kano-x-ik.
ERG.3S-find-PAS-NMLZ
‘He who then hears the word of God the Father and learns it, truly he will come then to find me.’

Once again, though, it is equally easy to find examples where AF is present when a transitive subject A’-moves over k’a ri, which should not be possible under an Anti-Locality account.

(37) Achihe k’a ri x-a-ch’ey-o\_AF? who then CPL-ABS.2S-fight-AF ‘Who then hit you?’

(38) Xab’ achihe k’a ri xti-Ø-nima-n\_AF ri Jesús kan whoever then POT-ABS.3S-believe-AF the Jesus truly xti-Ø-r-il wi k’a jun k’aslen ri… POT-ABS.3S-ERG.3S-find FOC then a life REL ‘Whoever then will believe in Jesus will truly find then a life that…’

We propose a retreat to one of the previously-defended accounts of AF in which Anti-Locality is not at issue (e.g., Aissen 2011; Coon and Henderson 2011; Assmann et al. 2012; Coon et al. 2014)—we don’t review the details here.

- But this still leaves open the variation noted in §4
- Why to adverbs sometimes block AF-marking?

Our positive proposal is that in those examples where no AF is seen, the adverbs are not interveners because there is no A’-movement. Instead, these constructions are characterized by the following properties:

(39) ADVERB EMBEDDING
a. The adverb is in a copular clause.
b. The adverb embeds a CP complement.
c. The purported subject trace is actually a bound (resumptive) pro.

With no A’-movement, such constructions are immediately predicted to not have AF.

- Kaqchikel has a null copula, null 3rd person singular absolutive agreement, null pro, and null complementizers.
- Thus, this bi-clausal construction is predicted to be string-equivalent to monoclusal structure with A’-movement over an intervening adverb.
- The two structures are summarized in (40) for the case of subject relatives (though it is generalizable to other A’-constructions like WH-questions).

(40) a. NP₁ [REL.OP, adverb t₁ verb-AF object] extraction
b. NP₁ [REL, ABS.3S COP adverb [(COMP) pro, verb object]] no extraction

– Overt expressions are bold-faced, demonstrating that the two constructions are surface-equivalent, even though they are structurally distinct.

The same facts can be generated for other adverbials, but even with just a few, we have a strong argument against anti-locality.

- Recall that the anti-locality predicts that the need for AF should be obviated when an expression intervenes between the verb a subject’s A’-landing site.
- But adverbials are nothing but interveners. They are base-generated in the left-periphery, increasing the distance between a subject and its A’ landing site, as measured by intervening XPs.

The anti-locality account simply cannot predict the observed variation because if some movement is far enough to obviate the need for AF in any of these cases, it should be far enough to obviate it in all cases.

- Instead, we find variation—not just across different types of adverbials, as acknowledged by Erlewine, but even with the same adverbials.

This suggests that something else is going on.

5 OUR POSITIVE PROPOSAL

Given that:

1. Interveners do not uniformly block AF (§4)
2. There are independent problems with the assumptions (about case-licensing and the location of subjects) that an anti-locality analysis must make (§3)

We propose a retreat to one of the previously-defended accounts of AF in which Anti-Locality is not at issue (e.g., Aissen 2011; Coon and Henderson 2011; Assmann et al. 2012; Coon et al. 2014)—we don’t review the details here.

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- Thus, this bi-clausal construction is predicted to be string-equivalent to monoclusal structure with A’-movement over an intervening adverb.
- The two structures are summarized in (40) for the case of subject relatives (though it is generalizable to other A’-constructions like WH-questions).

(40) a. NP₁ [REL.OP, adverb t₁ verb-AF object] extraction
b. NP₁ [REL, ABS.3S COP adverb [(COMP) pro, verb object]] no extraction

– Overt expressions are bold-faced, demonstrating that the two constructions are surface-equivalent, even though they are structurally distinct.
The analysis makes two predictions:

1. While often covert, we should find cases clauses with overt complementizers or WH-expressions embedded under these adverbs—but only in cases with transitive verb forms; i.e. from which no extraction has occurred like (40b).

2. We should find clear cases of resumption—again, only with transitive verb forms.

These predictions are borne out.

5.1 Overt complementizers

First, we find naturally occurring examples of the adverbs discussed embedding a full CP, as evidenced by WH-words and the complementizer chi.

(41) Rin kan qitzij [cf chi y-ix-in-wajo’].
PRN.1S truly true COMP ICPL-ABS.2P-ERG.1S-love
‘As for me it’s true that y’all love me.’

(42) K’a ri [cf chi xi-O-k’achoj r-uma ].
then COMP CPL-ABS.3S-cured ERG.3S-by
‘It was then that it was cured by him.’

(43) Y kan [cf achi ke k’a ru-b’an-ik ri and truly what then ERG.3S-do-NML REL y-e-ki-b’an-ala’ chi-ki-ju-jun-al ]?
ICPL-ABS.3PL-ERG.3PL-do-DIST PREP-ERG.3P-RED-one-ADJ
‘And truly what then was its doing that each of them did?’

• (41–43) show us that adverbs may embed CPs...

But even better, we find examples where these adverbials embed CPs under relative clauses—this is exactly the configuration studied in §4 where we see variation in AF-marking.

(44) ...achi ke q’ach’alal [REL ri kan qitzij [cf chi which ERG.1PL-friend REL truly truth COMP ki-nima-n ri kristo... ]]
ERG.3PL-obey-PERF the Christ
‘...whichever of our friends that it’s true that they have obeyed Christ...’

(45) ...ma x-O-in-kusaj ta chuqa’ ch’ab’el [REL ri kan [cf NEG CPL-ABS.3S-ERG.1S-use IRR also speech REL truly janipe’ na ru-b’an-ik... ]]
how.much PART ERG.3S-do-NOM
‘...neither did I use language that truly (who knows) how great its form is...’

(46) ... ri nimalaj q’aq’, [REL ri k’a [cf akuchi xk-e-b’e-qa wi the great fire REL then where POT-ABS.3P-MOV-down FOC ri y-e’-etzelan r-ichin ri dios.
REL ICPL-ABS.3P-hate ERG.3S-for the god ]]
‘...the great fire, that then where they will go down those who hate God.’

• Crucially, we have found no examples of overt complementizers in adverbial constructions with Agent Focus verb forms—i.e. the verb forms from which extraction has truly taken place (40a)

• Initial elicitation work with speakers suggest these are impossible without a reading in which there is focus internal to the embedded CP (i.e. not across it)

5.2 Resumptive pronouns

Finally, we find clear evidence for resumptive pronouns in other environments.

• In the naturally occuring example (47) we see that there must be some kind of covert pro controlling AG agreement.

(47) ... ri e ka’i’ winaq ri k’o itzel taq espíritu [k-ik’in the ABS.3PL two people REL EXST even PL spirits ERG.3P-with pro ]
pro
‘...the two people, that there were evil spirits with them.’

• This contrasts with a WH-relative like (48), where we have a WH-expression controlling agreement and pied-piping with inversion.

(48) ... y ri achi’-a’ [achoj k-ik’in] x-O-ch’o wi ri and the man-PL WH ERG.3P-with CPL-ABS.3S-speak FOC the jesus.
Jesus
‘...and the men with whom Jesus spoke.’
Even better, one can elicit overt resumptive pronouns in structures like (44-46)—that is, where the host of the relative clause is separated by an adverbial embedding a CP:

- This strengthens the case that (44) there is, instead of a trace, a null resumptive pronoun, which we know Kaqchikel has independently (e.g., 47).

(49) ...qach'alal ri kan qitzij [ chi rije' ki-nima-n ri ERG.1PL-friend REL truly truth COMP they ERG.3PL-obey-PERF the kristo... ]

Christ
‘...our friends that it's true that they have obeyed Christ...’

5.3 Summary
What these data show is that Kaqchikel has exactly the morphological and syntactic resources to support the analysis in (40).

- In addition to a bona fide adverbial constructions, Kaqchikel allows adverbs to embed clauses.
  - Moreover, these adverbials can occur in relative clauses, intervening between NP host of the relative clause and a resumptive pronoun it binds.
  - But, because Kaqchikel has null complementizers, copulas, and resumptive pronouns, this resumptive construction can appear string-equivalent to a relative clause in which an A’-operator moves over an adverb.
  - It is this equivalence that accounts for minimal pairs §4 where adverbs only sometimes appear to block AF.

- In those clauses without AF, there is actually no movement to trigger it. Instead, we have a bi-clausal construction where an adverb embeds a CP with a resumptive pronoun.

While the analysis makes sense of the variation we see in relative clauses, there is still the question of what goes on in matrix clauses like (53)

(50) Achike kan qitzij x-Ø-u-tij ri wiý? who truly truth CPL-ABS.3S-ERG.3S-eat the tortilla

‘Who truly ate the tortilla?’ (Erlewine to appear, 27)

These can actually be reduced to the relative clause case. Note that Kaqchikel allows WH-expressions to embed relative clauses.

(51) Achike ri x-Ø-b’e-i-tz’et-a’ rix pa desierto?

Who REL CPL-ABS.3S-GO-ERG.3P-see-SC y’all P desert

‘Who is it that y’all went to see in the desert.’

(52) Achike ri n-Ø-a-tzij-oj r-ik’in?

What REL ICP-ABS.3S-ERG.3S-say-TV ABS.3S-with

‘What is it that you spoke about with him?’

- Once again, though, the relative clause marker ri can be null, as well as the copula and third person singular absolutive agreement.
- Thus, a monoclausal WH-construction can be indistinguishable from a bi-clausal WH question with a relative clause.
- In the latter case, the overt WH-expression does not move out of the lower clause.

We propose, then, that examples like (53) have exactly the kind of relative clause structure we’ve seen above, where there is no movement out of the lower clause, and thus no AF.

(53) Achike [REL (ri) kan qitzij [ (chi) x-Ø-u-tij ri wiý?]]

who (REL) truly truth (COMP) CPL-ABS.3S-ERG.3S-eat the tortilla

‘Who truly ate the tortilla? (lit. Who is it that it’s true that he ate the tortilla?)’

6 CONCLUSION
There are two take-away points:

1. First, while Anti-Locality might explain the ban on agent extraction in some ergative languages, it cannot do so in Mayan.
   - Such an account requires transitive subjects to move to Spec,TP and for ergative agreement morphology to be the result of an agreement relationship with T⁰, neither of which is supported in those Mayan languages that ban agent extraction.
   - Interveners like adverbials do not, in fact, block Agent Focus, which is a challenge for an Anti-Locality account.
2. Second, AF can go missing in environments where one might otherwise expect it due to the presence of covert structure.

- The problem might be especially difficult in Kaqchikel which has resumptive pronouns and rampant clefting/relativization.
  - This is important because variation in the appearance of AF in agent-extraction contexts has been noted, not just with adverbal interveners, but across a variety of constructions, and this has been attributed to the construction being lost (e.g. Heaton (2015)).
  - Our work suggests that the facts might be more complicated, and that whatever attrition we observe in this construction might be less severe than some propose.

While our talk has focused on extraction restrictions in Kaqchikel, these take-away points also have broader cross-linguistic implications.

- Anti-Locality is initially appealing because of the potential to connect the restriction on extracting transitive subjects to Anti-Agreement effects in nominative-accusative languages (see e.g. Ouhalla 1993, discussed in Erlewine to appear and see also Bošković 2015)
- Though tempting, this type of unification does not seem to be right for Mayan—this should lead us to question whether such an extension is generally warranted for ergative extraction restrictions
- Indeed, work on ergativity increasingly converges on the idea that while there is considerable variation among ergative languages, ergative subjects are low…
  - Either because they are licensed in situ, as in an “Inherent Ergative” approach (see Legate to appear)
  - Or because they are low enough to be “case competitors” with other arguments, as in a “Dependent Ergative” approach (see Baker and Bobaljik to appear)

We suggest that ergative extraction restrictions should not receive the same treatment as Anti-Agreement in nominative-accusative systems — or at least should not receive this treatment without significant language-internal motivation

- Instead, see Assmann et al. 2012 and Coon et al. 2014 for approaches which connect extraction restrictions directly to a low licensing of ergative subjects.

References

Bošković, Željko. 2015. On the timing of labeling: Deducing comp-trace effects, the subject condition, the adjunct condition and tucking in from labeling. Lingbuzz/002452.


A Morphophonology

(54) Vowel-initial roots with ergative prefix

\[ \text{uq}' \] [uq'] 'skirt' \[ w-uq' \] [wuq'] 'my skirt'
[aq] [waq] 'pig' \[ w-aq \] [wil] 'I have met her.'
[\text{tOnik}] \[ \text{wil} \] 'meeting' \[ w-\text{wil} \] [wilon] 'I have met her.'

(55) Vowel-initial roots with proclitic

\[ \text{ik}' \] [ik'] 'month' \[ a\text{j}=\text{ik}' \] [a\text{j}ik'] 'domestic worker'
[\text{itzel}] [it] [\text{itzel}] 'evil' \[ a\text{j}=\text{itzel} \] [a\text{j}itzel] 'witch; evil-doer'

\[ \text{il} \] [wil] 'man' \[ w-\text{il} \] [wil] 'I have met her.'

\[ \text{el} \] [wil] 'man' \[ w-\text{el} \] [wil] 'I have met her.'

\[ \text{wel} \] [wel] 'I am going' \[ w-\text{wel} \] [wel] 'I am going.'

\[ \text{PUq}' \] [wuq] 'my skirt'
\[ \text{waq}' \] [waq] 'my pig'
\[ \text{PilonIk} \] [wil] 'I have met her.'
\[ \text{Pitzel} \] [wil] 'I have met her.'

This is not a general onset requirement, but a requirement that roots have an onset.

Lois (2011) argues from vowel-alternations in Yucatecan languages that Mayan CVC roots are mini version of Semitic triliteral roots:
- For most roots, consonants are fixed, as is vowel quality
- Suprasegmental features of the vowel (tone, length, height, glottalization) fix argument structure properties

As in Yucatecan (Lois 2011) and Ch’ol (Coon to appear), Kaqchikel has productive vowel alternations which affect argument structure. A tense~lax alternation governs the alternation between active and passive in certain verb roots:

(56) a. X-Ø-b’än.
CPL-ABS.3S-do.PASV
'I did it.'

b. X-Ø-b’an.
CPL-ABS.3S-do.PASV
'It was done.'

(57) a. X-Ø-in-chäp.
CPL-ABS.3S-ERG.1S-grab
'I grabbed it.'

b. X-Ø-chap.
CPL-ABS.3S-grab.PASV
'It was grabbed.'

- Coon (to appear) argues that glottal stop is inserted in vowel-initial roots in Ch’ol in order to fulfill a templatic requirement of roots
- The CVC requirement is evaluated at the vP/nP phase, when the vowel quality is also fixed (see e.g. Arad 2003 on Hebrew and Lois 2011 on Yucatecan)
- Recall that the ergative markers bleed glottal stop insertion

Locating the ergative markers internal to the vP/nP phase explains why no glottal stop is inserted—they contain consonantal material which fills the first C in a CVC root

(58) Vowel-initial root with ergative prefix

root morpheme \[ e \]
\[ / / \]
template CVC el [el] — elik ‘leaving’
vP-phase

(59) Vowel-initial root with ergative prefix

root morpheme \[ e \]
\[ / / \]
template CVC wel [wel] — welik ‘I’m leaving’
vP-phase — 1ERG w-

- This lends support to what is generally assumed for Mayan languages:
  - Ergative markers represent a low agreement relationship between the external argument and a low functional head (e.g. vP/nP); see also Aissen 2010 on Tsotsil and AnderBois and Armstrong 2014 on Yucatec.
  - If ergative markers came about as the result of an agreement relationship with a high functional head, T0, we can no longer explain why ergative markers bleed glottal stop insertion