

# Anti-locality and Kaqchikel Agent Focus

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## 1. Introduction

It has been widely noted that  $\bar{A}$ -extraction of different arguments can be subject to different restrictions. In many cases, such extraction asymmetries identify subject positions as the locus of ideosyncratic behavior. This is observed in well-known cases such as English *that*-trace effects, the French *que/qui* alternation, the distribution of resumptive pronouns in Hebrew, among many others.

In many Mayan languages,  $\bar{A}$ -extraction of subjects of transitive clauses triggers a change to that verb's morphology. This construction is called Agent Focus (AF) in the Mayan literature (Aissen 1999; Stiebels 2006; Norcliffe 2009; Coon et al. 2011; a.o.). AF is traditionally described as obligatory whenever the subject of a transitive clause is  $\bar{A}$ -extracted. In this paper I will discuss the distribution and derivation of the AF construction in Kaqchikel, a Mayan language of Guatemala. I will argue that AF in Kaqchikel reflects a sensitivity to the *locality of movement* of a transitive subject, rather than a specific reaction to the extraction of a transitive subject. In particular, Kaqchikel has an anti-locality constraint that bans movement which is *too short*:

### (1) Spec-to-Spec Anti-Locality:

$\bar{A}$ -movement of a phrase in the Specifier of XP must cross a maximal projection other than XP.

I argue first that subjects of transitive verbs are required to be in a higher position in the clause than other types of arguments—Spec,TP—in order to satisfy Richards's (2010) principle of Distinctness on linearization.  $\bar{A}$ -movement of transitive subjects to the clausal periphery (from Spec,TP to Spec,CP) will be *too short*—a violation of Spec-to-Spec Anti-Locality (2a). In such situations a last-resort AF derivation is chosen, where the subject skips its normal Spec,TP position and instead moves directly from its base-generated position to Spec,CP.  $\bar{A}$ -movement of other arguments begins from a position below Spec,TP, and thus is never in danger of triggering this anti-locality constraint.

### (2) Short $\bar{A}$ -movement of transitive subjects triggers AF:

- a. \* [CP subject C [TP  $\underbrace{\quad\quad\quad}_X$  ... [VP  $\underbrace{\quad\quad\quad}$  ...] ] ] *violates Spec-to-Spec Anti-Locality!*
- b.  $\checkmark$  [CP subject C [TP ... [VP  $\underbrace{\quad\quad\quad}$  ...] ] ] subject skips Spec,TP; triggers AF morphology

Evidence for this locality-sensitive view of Kaqchikel AF comes from new data where AF is not triggered even though a transitive subject has  $\bar{A}$ -moved (3). The intervening material makes the subject's movement from Spec,TP to Spec,CP no longer too short, and thus AF is not triggered.

### (3) Intervening material makes movement longer, obviating AF:

- $\checkmark$  [CP subject C [ ...*intervening material*... [TP  $\underbrace{\quad\quad\quad}$  ... [VP  $\underbrace{\quad\quad\quad}$  ...] ] ]  $\Rightarrow$  no Agent Focus!

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## 2. Basics of AF in Kaqchikel

There are four syntactic contexts which trigger AF in Kaqchikel: subject *wh*-questions, subject relative clauses, subject focus constructions, and subject existentials. Examples of each construction in both subject and object variants are given in (4–7). AF is limited to transitive verbs; intransitive verbs never undergo AF. AF verbs can be identified by the addition of an AF suffix, normally *-ō* or *-n*, which will always be in bold in this paper.<sup>1,2,3</sup>

(4) ***Wh*-questions:**

- |   |   |
|---|---|
| <p>a. <u>Achike</u> <u>xtj-ō</u> ri wäy?<br/>         who ate-<b>AF</b> the tortilla<br/>         ‘Who ate the tortilla?’</p> | <p>b. Achike xutěj ri a <u>Juan</u>?<br/>         what ate Juan<br/>         ‘What did Juan eat?’</p> |
|---|---|

(5) **Relative clauses:**

- |  |   |
|--|---|
| <p>a. [Ri <u>xteni</u>’ (ri) xojtz’et-<b>ō</b> roj] xewär.<br/>         the girls RC saw-<b>AF</b> 1pl slept<br/>         ‘[The girls who saw us] slept’</p> | <p>b. [Ri xteni’ (ri) xeqatz’ët <u>roj</u>] xewär.<br/>         the girls RC saw 1pl slept<br/>         ‘[The girls that we saw] slept’</p> |
|--|---|

(6) **Focus constructions:**

- |   |  |
|---|--|
| <p>a. Ja <u>ri xta Maria</u> xtz’et-<b>ō</b> ri a Juan.<br/>         FOC Maria saw-<b>AF</b> Juan<br/>         ‘It was Maria who saw Juan.’</p> | <p>b. Ja ri xta Maria xutz’ët ri a <u>Juan</u>.<br/>         FOC Maria saw Juan<br/>         ‘It was Maria that Juan saw.’</p> |
|---|--|

(7) **Argument existentials:**

- |   |  |
|---|--|
| <p>a. <u>K’o</u> xojtz’et-<b>ō</b> roj.<br/>         ∃ saw-<b>AF</b> 1pl<br/>         ‘Someone saw us.’</p> | <p>b. K’o xqatz’ët <u>roj</u>.<br/>         ∃ saw 1pl<br/>         ‘We saw someone.’</p> |
|---|--|

Each of the constructions above involve  $\bar{A}$ -movement of an argument to preverbal position. In each of the (a) examples in (4–7) above, where movement of the subject is involved, the AF form of the verb is required. Corresponding object-extractions (b) do not trigger AF. The generalization thus far, then—and the generalization presented in all prior literature on Mayan AF (Stiebels 2006; Coon et al. 2011; a.o.)—is that AF occurs if and only if the subject of a transitive verb is  $\bar{A}$ -moved.

## 3. Kaqchikel AF is locality-sensitive

In the previous section we observed that all of the constructions that trigger AF involve  $\bar{A}$ -movement of the transitive subject. In this section we will see that the distribution of AF in Kaqchikel is more complicated. I will show that  $\bar{A}$ -movement of a transitive subject is a necessary but not sufficient condition to trigger AF. When additional material is introduced between the verb and the landing site of subject movement, the subject extraction no longer triggers AF. I argue that this motivates a *locality-sensitive view* of AF; that is, that the true trigger of AF is *movement that is too short*, a notion that will be formalized in the next section.

### 3.1. Intervening adverbs

I begin with the first class of motivating examples: the obviation of AF by intervening adverbs. Recall that in a simple subject *wh*-question (4a), AF is required. In example (8) below, the baseline example is modified with the adverb *kanqtzij* ‘actually’ intervening between the fronted *wh*-word and the verb. In this case *the AF form of the verb is not required* and in fact cannot be used.

<sup>1</sup>Abbreviations used: AF = Agent Focus, FOC = focus marker, RC = relative clause marker. Note that subjects of transitive verbs are underlined in this paper.

<sup>2</sup>The Kaqchikel verbal complex minimally contains an aspect marker, agreement marker(s), and the verbal root; however, these details are not relevant for the argumentation in this paper, so such morphemes will not be individually glossed here. The AF verb form involves the addition of the AF suffix, glossed here, but also affects the agreement pattern on the verb, which is not glossed here. See Preminger (2011) and Erlewine (2013) for details on the morphological realization of the verbal complex and AF in Kaqchikel.

<sup>3</sup>I assume that the underlying word order in Kaqchikel is VOS. See section 5 for discussion.

(8) **AF obviated by an adverb:**

Achike **kanqtzij** <sup>✓</sup>xutej/\*xtj-**ö** ri wäy?  
 who actually ate/ate-**AF** the tortilla  
 ‘Who actually ate the tortilla?’

This obviation of AF occurs in other AF-triggering environments as well. The examples below involve the subject relative clause “the man who eats tortillas.” In the baseline, (9a), we see that the verb “eat” must be in its AF form. In example (9b), the temporal modifier *nojel mul* “always” is inserted between the relative clause marker *ri* and the verb. The result is again a flip in the pattern of AF realization: AF is no longer required for the subject relative, and is in fact no longer grammatical.<sup>4</sup>

(9) **Intervening adverb in a subject relative clause:**

- a. Wetaman wech [ri achin ri \*nutěj/<sup>✓</sup>ntj-**ö** wäy].  
 know face the man RC ate/ate-**AF** tortilla  
 ‘I know the man who eats tortillas.’
- b. Wetaman wech [ri achin ri **nojel mul** <sup>✓</sup>nutěj/\*ntj-**ö** wäy].  
 know face the man RC all time ate/ate-**AF** tortilla  
 ‘I know the man who always eats tortillas.’

I propose that the contrast between the *wh*-questions (4a) and (8) and between the relative clauses in (9a–b) can be explained through a locality-sensitive view of AF. In (4a), movement of the subject *wh* was too short and thus the last-resort AF derivation was required to avoid this anti-locality violation. However, in (8), the intervening adverb projects additional structure in the clause, allowing for movement of the subject *wh* to proceed without being too short, and therefore without resorting to an AF form. Similarly, the movement of the subject relative clause operator was too short in (9a), triggering AF, but was long enough in (9b) due to the addition of the intervening adverb.

3.2. *Multiple extractions*

The second class of motivating examples comes from clauses which involve multiple  $\bar{A}$ -extractions. In Kaqchikel, if a clause contains multiple arguments that require fronting to a preverbal position, all of them are fronted.<sup>5</sup> This results in clauses where multiple  $\bar{A}$ -operators are before the verb.

Consider the two examples in (10). Both are formed of transitive clauses where one argument is the *wh*-word *achike* and another is the argument existential *k’o*. Both have the same basic word order, “*achike k’o* verb.” However, one verb is in its AF form and the other is not and this corresponds to a radical difference in interpretation.

(10) **A minimal pair of multiple extractions:**

- |   |  |
|---|--|
| <p>a. Achike <u>k’o</u> x-<math>\emptyset</math>-tz’et-<b>ö</b>?<br/>         who <math>\exists</math> saw-<b>AF</b><br/> <sup>✓</sup> ‘Who did someone see?’<br/>         * ‘Who saw someone?’</p> | <p>b. <u>Achike</u> k’o x-<math>\emptyset</math>-u-tz’et?<br/>         who <math>\exists</math> saw<br/>         * ‘Who did someone see?’<br/> <sup>✓</sup> ‘Who saw someone?’</p> |
|---|--|

Example (10a) is an object *wh*-question with a subject existential. The operator controlling the subject is thus the *k’o* in immediately preverbal position. The AF on the verb in (10a) is completely expected: the movement of the subject *k’o* to preverbal position triggered the AF.

Example (10b), on the other hand, contains a puzzle. Example (10b) is a subject *wh*-question with an object existential. Thus the operator controlling the subject is the *wh*-word *achike* which has been  $\bar{A}$ -moved to the beginning of the clause. Subject *wh*-questions normally trigger AF, as we have seen, but the verb in (10b) does not have AF. In fact, the AF on (10a) and the lack of AF on (10b) is the only difference on the surface between the two questions.

<sup>4</sup>Many but not all preverbal adverbs have this effect. These do not form natural classes—for example, *aninäq* ‘quickly’ obviates AF in this way, but the synonym *jonamin* does not. At this point I have no generalization to offer regarding which adverbs are AF-obviating and which are not.

<sup>5</sup>With one exception: in matrix multiple *wh*-questions, only one *wh*-word fronts.

Examples with other combinations of preverbal  $\bar{A}$ -operators all follow this pattern in (10): AF is required if the subject of the transitive verb has  $\bar{A}$ -moved to *immediately preverbal position* and AF is not used otherwise. Here below are additional examples which bare out this pattern.

(11) **Relative clause & *k'o*:**

- |  |   |
|--|---|
| <p>a. ri achin ri [k'o x̄tj-<math>\bar{\text{ö}}</math>]<br/> the man RC <math>\exists</math> eat-<b>AF</b><br/> ✓‘The man who someone ate’<br/> * ‘The man who ate something’</p> | <p>b. ri achin ri [k'o xutëj]<br/> the man RC <math>\exists</math> eat<br/> * ‘The man who someone ate’<br/> ✓‘The man who ate something’</p> |
|--|---|

(12) ***K'o* & *k'o*:**

- |  |   |
|--|---|
| <p>a. K'o k'o xtz'et-<math>\bar{\text{ö}}</math>.<br/> <math>\exists</math> <math>\exists</math> saw-<b>AF</b><br/> ✓There's something that someone saw.<br/> * Someone saw something.</p> | <p>b. K'o k'o xutz'ët.<br/> <math>\exists</math> <math>\exists</math> saw<br/> * There's something that someone saw.<br/> ✓Someone saw something.</p> |
|--|---|

(13) **Relative clause & *ja*-focus:**

- |  |   |
|--|---|
| <p>a. ri achin ri [ja ri xta Maria xtz'et-<math>\bar{\text{ö}}</math>]<br/> the man RC FOC Maria saw-<b>AF</b><br/> ‘the man who MARIA (but not others) saw’</p> | <p>b. ri achin ri [ja ri xta Maria xutz'ët]<br/> the man RC FOC Maria saw<br/> ‘the man who saw MARIA (but not others)’</p> |
|--|---|

In all of the examples in (10–13), AF is required in order to interpret the immediately preverbal operator as the subject (a). If AF is not used (b), the operator which is not immediately preverbal is interpreted as the subject. This leads us to the generalization in (14). A similar generalization is made independently in Broadwell (2000:appendix) based on the study of another dialect of Kaqchikel.

(14) **The Kaqchikel AF generalization:**

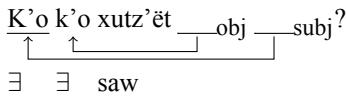
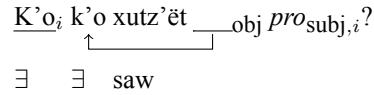
AF morphology occurs if and only if the subject moves to *immediately preverbal position*.

In all of the (b) examples in (10–13), the immediately preverbal operator was the direct object. However, the generalization in (14) is not limited to combinations of subjects and direct objects in preverbal position. Example (15a) is a baseline showing the obligatory AF in a subject-*wh* question using a ditransitive verb, ‘send.’ Example (15b) shows that when the indirect object is a *k'o* object existential and moved before the verb, AF is not used, as the subject is no longer in immediately preverbal position.

(15) **AF in ditransitive clauses:**

- |  |
|--|
| <p>a. Achike *xutäq/✓x̄taq-<math>\bar{\text{ö}}</math> ri sikibuj che jun uneq?<br/> who sent/sent-<b>AF</b> the book to one man<br/> ‘Who sent the book to a man?’</p>    |
| <p>b. Achike k'o achoj che ✓xutäq/*x̄taq-<math>\bar{\text{ö}}</math> ri sikibuj?<br/> who to someone sent/sent-<b>AF</b> the book<br/> ‘Who sent the book to someone?’</p> |

In this paper I propose that AF is a response to movement that is *too short*. The generalization in (14) is then telling us that movement of a transitive subject to immediately preverbal position counts as “too short,” triggering the AF form, while movement past another preverbal operator is not “too short.” It is important for this argument to show that, in those cases where AF is not used, the subject has indeed  $\bar{A}$ -moved instead of being base-generated high. For example, we could imagine two different derivations for example (12b): one where the subject *k'o* has indeed  $\bar{A}$ -moved across another preverbal operator (16a) and one where an existential *k'o* is base-generated in non-immediately-preverbal position and binds a null bound variable below (16b). If (16b) is the correct derivation, we would have an alternative explanation for the surprising lack of AF in such cases: we could say that AF truly tracks the  $\bar{A}$ -movement of the subject but the subject has not  $\bar{A}$ -moved in such cases.

(16) **Two possible derivations for (12b):**a.  $\bar{A}$ -moving subject *k'o*:b. *Base-generating subject k'o high*:

I will show that in general there is no option to base-generate  $\bar{A}$ -operators in non-immediately-preverbal position and therefore the correct derivation of (12b) is (16a). Evidence will come from island-sensitivity. Example (17) shows that *k'o* in embedded clauses can move optionally to higher clauses, with scope consequences. Examples (18–19) show that such movement to non-immediately-preverbal position cannot cross syntactic islands.

(17) **Baseline: Long-distance movement of *k'o* to non-immediately-preverbal position**a. K'o nnoji-**n** [chin k'o yawa].  
 $\exists$  think-**AF** that  $\exists$  sick

‘Someone thinks that someone is sick.’

b.  $\checkmark$  K'o k'o nnoji-**n** [chin yawa].  
 $\exists$   $\exists$  think-**AF** that sick

‘There is s.o. that s.o. thinks is sick.’

(18) **Movement to non-immediately-preverbal position is sensitive to relative clause islands:**a. K'o xk'ul-**ö** [ri achin ri k'o xutz'ët].  
 $\exists$  met-**AF** the man RC  $\exists$  saw

‘Someone met the man who saw s.t.’

b. \* K'o k'o xk'ul-**ö** [ri achin ri xutz'ët].  
 $\exists$   $\exists$  met-**AF** the man RC saw‘There's s.t.<sub>i</sub> that s.o. met the man who saw it.<sub>i</sub>’(19) **Movement to non-immediately-preverbal position is sensitive to adjunct islands:**a. K'o xb'an-**ö** jun pastel [rma k'o xloq'ö ri jay].  
 $\exists$  made-**AF** a cake because  $\exists$  bought-**AF** the house

‘Someone made a cake because someone bought the house.’

b. \* K'o k'o xb'an-**ö** jun pastel [rma xloq'ö ri jay].  
 $\exists$   $\exists$  made-**AF** a cake because bought-**AF** the houseIntended: ‘There's someone<sub>i</sub> that someone made a cake because they<sub>i</sub> bought the house.’

If  $\bar{A}$ -operators could be base-generated in non-immediately-preverbal positions, examples (18b) and (19b) should be grammatical. Therefore,  $\bar{A}$ -operators in non-immediately-preverbal position must have  $\bar{A}$ -moved from argument positions, making the examples above strong support for the view that Kaqchikel AF is a response to movement which is *too short*, as reflected in the generalization in (14).

The pattern of AF realization observed with these multiple extraction constructions shows us again that  $\bar{A}$ -movement of a transitive subject is only a necessary but not a sufficient condition for AF. In particular, it is *shorter* movements of subjects which trigger AF, while *longer* movements of subjects do not yield AF. In the next section, I will formalize this locality condition on movement and give my proposal for AF in Kaqchikel.

## 4. Proposal

The examples presented in the previous section motivate a locality-sensitive view of Kaqchikel AF. We saw that movement of transitive subjects across some intervening material does not trigger AF. AF is not responding to the movement of transitive subjects *per se*; it is instead responding to movement that is *too short*. I propose that  $\bar{A}$ -movement in Kaqchikel is subject to Spec-to-Spec Anti-Locality:

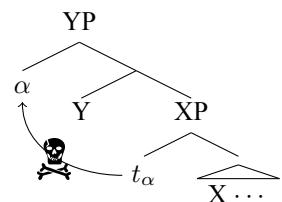
(20) **Spec-to-Spec Anti-Locality:**

$\bar{A}$ -movement of a phrase in the Specifier of XP must cross a maximal projection other than XP.

(21) **Definition: crossing**

Movement from position  $\alpha$  to position  $\beta$  *crosses*  $\gamma$  if and only if  $\beta$  c-commands  $\gamma$  but  $\alpha$  does not c-command  $\gamma$ .

(22)



The schema in (22) illustrates the configuration which is banned. Movement of the specifier of XP to the specifier of YP crosses only the maximal projection XP, according to the definition of *crossing* stated in (21). This movement violates Spec-to-Spec Anti-Locality.<sup>6</sup>

Subjects of transitive verbs are uniquely in danger of violating Spec-to-Spec Anti-Locality because they are in a uniquely high position in the clause. I propose that the high position of transitive subjects is the effect of Richards's (2010) principle of Distinctness (23), which states in effect that two nodes that are too similar, e.g. of the same category, cannot be in the same phase.

(23) **Distinctness (Richards, 2010):**

If a linearization statement  $\langle \alpha, \alpha \rangle$  is generated, the derivation crashes.

In transitive clauses, both the subject and object DPs will be base-generated in the vP phase (24a). Distinctness will require that one of the DPs move out of vP.<sup>7</sup> TP is able to host a specifier and Distinctness is satisfied in non-AF transitive clauses by A-movement of the subject to Spec,TP (24b). Note that Spec,vP and Spec,TP positions are linearized as right specifiers, following Aissen (1992), deriving the basic VOS word order of Kaqchikel, but they are illustrated here attaching to the left.<sup>8</sup>

(24) **Derivation for transitive clauses:**

a. Base-generate both arguments in vP:

[<sub>vP</sub> subject v [<sub>vP</sub> V object ] ]

At this point, the subject and object DPs violate Distinctness.

b. Merge T; subject moves to Spec,TP to satisfy Distinctness:

[<sub>TP</sub> subject T [<sub>vP</sub> \_\_\_ v [<sub>vP</sub> V object ] ] ]

c. Head movement of V → v → T:

[<sub>TP</sub> subject T<sup>+v+V</sup> [<sub>vP</sub> \_\_\_ t<sub>v+V</sub> [<sub>vP</sub> t<sub>V</sub> object ] ] ] ⇒ “inflected verb – object – subject”

Head movement of the V to v and then T results in realization of the entire verbal complex in T. The realization of the verbal complex will be sensitive to the presence of the subject DP in Spec,TP, resulting in the non-AF transitive verb form in (24c).

Now let's see what happens if the subject is an  $\bar{A}$ -operator—e.g. a *wh*-word, focused constituent, relative clause operator, or argument existential—which must move to the CP periphery to take scope. We first consider a derivation which builds on the standard derivation for transitive clauses in (24).  $\bar{A}$ -movement of the subject from Spec,TP to Spec,CP will be a violation of Spec-to-Spec Anti-Locality (25a). I propose that AF is the spellout of a last-resort alternative derivation wherein the subject bypasses Spec,TP and moves directly from its Spec,vP theta-position to Spec,CP (25b). This movement of the subject to Spec,CP will not violate Spec-to-Spec Anti-Locality.<sup>9</sup>

<sup>6</sup>Bans against movement which is “too close” are not a new idea, though the formulation given here is distinct from other constraints proposed in the literature. Murasugi & Saito (1995), Saito & Murasugi (1999), and Bošković (1994, 1997) propose that a specifier of XP cannot be adjoined locally to that same XP. Similarly, Pesetsky & Torrego (2001) and Abels (2003) have motivated a ban on movement from a complement position of XP to the specifier of XP. Grohmann (2003) offers a different conception of anti-locality, where movement chains contained entirely within a single Domain of the clause (vP, TP, and CP) are banned, again enforcing a constraint against movements which are in some sense “too close.”

<sup>7</sup>For the purposes of Distinctness, CPs will also be in competition with DPs, such that a DP and CP in the same phase will be unlinearizable. This reflects the fact that the derivation of Kaqchikel transitive clauses presented here, where the subject must move to Spec,TP, is also what happens when the complement of the verb is a CP, not a DP. Note also that pro-dropped arguments which are unpronounced also participate in this Distinctness calculus.

<sup>8</sup>Subject-initial word orders will be discussed in section 5.

<sup>9</sup>Similar “skipping” strategies are surveyed cross-linguistically in Rizzi & Shlonsky (2007). See also Schneider-Zioga (2007) for a similar skipping derivation forced by an anti-locality constraint in Kinande.

(25) **Subject extraction with and without AF:**a. Regular transitive clause derivation (24) and  $\bar{A}$ -movement of subject:\* [CP subject C [TP  $\bar{X}$  T+v+V [vP  $\bar{X}$  [vP object ] ] ] ]  
violates *Spec-to-Spec Anti-Locality!*b. AF clause derivation, with no subject movement to Spec,TP:√ [CP subject C [TP T+v+V [vP  $\bar{X}$  [vP object ] ] ] ] ⇒ “subject – AF verb – object”

Again, the inflected verb realized in T is sensitive to the presence or absence of a nominal in Spec,TP. In (25b), where the subject does not pass through Spec,TP, the verbal complex will be realized in its AF form.<sup>10</sup> The Kaqchikel TP does not have a requirement that it have a specifier—instead, in regular transitive clause derivations (24), movement of the subject to Spec,TP was used to satisfy Distinctness. In AF derivations as in (25b), Distinctness will be satisfied by the  $\bar{A}$ -movement of the subject out of vP.

In contrast,  $\bar{A}$ -movement of non-subjects never triggers AF. Consider such a derivation, as in (26) below. As subjects are uniquely in Spec,TP in transitive clauses, movement of a non-subject will necessarily cross multiple maximal projections and therefore satisfy Spec-to-Spec Anti-Locality. As the AF derivation with the subject staying in its Spec,vP position is a last-resort derivation, the derivation in (26) will be used instead and the non-AF form of the transitive verb will be spelled out.

(26) **Regular transitive clause derivation (24) with  $\bar{A}$ -movement of object:**√ [CP object C [TP subject T+v+V [vP  $\bar{X}$  [vP  $\bar{X}$  ] ] ] ] ⇒ “object – inflected verb – subject”

My proposal for Kaqchikel clause structure makes the prediction that subjects are structurally higher than objects in Kaqchikel transitive clauses. Independent evidence from binding shows this to be true. Example (27) from Henderson (2012) shows the binding of the reciprocal “each other” *ki'*, which requires a plural antecedent.<sup>11</sup> *Ki'* itself triggers singular agreement. In the grammatical example (27a), the subject (pro-dropped) is plural and successfully binds the object (*ki'*).

(27) **Subject asymmetrically c-commands object in a transitive clause (Henderson, 2012):**a. X- $\emptyset$ -ki-tz'ët ki'.  
COM-B<sub>3sg</sub>-A<sub>3pl</sub>-see REFL  
'They<sub>i</sub> saw each other<sub>i</sub>.'b. \*X-e'-ru-tz'ët ki'.  
COM-B<sub>3pl</sub>-A<sub>3sg</sub>-see REFL  
Intended: 'Each other<sub>i</sub> saw them<sub>i</sub>.'

In contrast, in example (27b) the subject *ki'* is intended to be in subject position, with its antecedent, a pro-dropped third-plural pronoun, in object position. Example (27b) thus exhibits third-singular Set A (subject) agreement and third-plural Set B (object) agreement. However, example (27b) is ungrammatical, indicating that the object cannot bind the reciprocal *ki'* in subject position, and cannot act as its antecedent. This binding asymmetry shows that the subject is structurally higher than the object.<sup>12</sup>

Now consider the case of  $\bar{A}$ -extraction from an intransitive clause. Recall that intransitive verbs do not participate in an AF alternation. In the derivation of an intransitive clause, only one DP will be base-generated within vP, and therefore there will be no Distinctness violation. As Kaqchikel does not require

<sup>10</sup>While AF is glossed here only using the AF suffix, the AF form of transitive verbs also has a different pattern of agreement morphology. This can be captured by this sensitivity to the Spec,TP position: the verbal complex shows Set A (in Mayanist terms)  $\phi$ -agreement with the nominal in Spec,TP, if present. In AF clauses, where the subject does not pass through Spec,TP, no Set A agreement is present on the verb.

<sup>11</sup>Here the verb-internal morphology is glossed as it is relevant to the argument. Following Mayanist tradition, the Set A marker cross-references the subject and Set B marker cross-references the object. COM is completive aspect.

<sup>12</sup>One strategy that has been proposed to explain syntactically-ergative extraction asymmetries cross-linguistically is to analyze absolutive arguments (objects of transitives and subjects of intransitives) as being structurally higher in the clause than ergative arguments (subjects of transitives) (Manning 1996; Aldridge 2004; Coon et al. 2011; a.o.). This binding evidence from Henderson (2012) shows that such approaches cannot be adopted for Kaqchikel AF.

that Spec,TP be filled, the subject of the intransitive verb will stay *in situ*, in a vP-internal position. For our purposes unergative and unaccusative verbs will behave similarly; the derivation of an unergative clause is sketched below:

(28) **Derivation of (unergative) intransitive clause with subject extraction:**

- a. One DP argument generated within vP:  
 $[_{vP} \text{ subject } v [_{vP} V ] ]$   
 At this point, Distinctness is satisfied. No subsequent DP movement is required.
- b. Merge T; no movement to Spec,TP:  
 $[_{TP} T [_{vP} \text{ subject } v [_{vP} V ] ] ]$
- c. Head movement of V → v → T:  
 $[_{TP} T+v+V [_{vP} \text{ subject } t_{v+V} [_{vP} t_V ] ] ] \Rightarrow \text{“inflected verb – subject”}$
- d.  $\bar{A}$ -movement of the intransitive subject:  
 $\checkmark [_{CP} \text{ subject } C [_{TP} T+v+V [_{vP} \text{ \_\_\_ } [_{vP} ] ] ] ] \Rightarrow \text{“subject – inflected verb”}$

When an intransitive subject is  $\bar{A}$ -moved to preverbal position, it will move from within vP: from Spec,vP in the case of unergatives (28d) or from the complement of V in unaccusatives (not illustrated). Either way, this movement step will cross over both the vP and TP maximal projections, and therefore will always satisfy Spec-to-Spec Anti-Locality.

Note that this proposal derives the basic distribution of AF—AF is triggered by  $\bar{A}$ -movement of transitive subjects but not other kinds of arguments—from the general principle of Distinctness proposed by Richards (2010). Kaqchikel does not have an EPP property, so the derived subject position in Spec,TP is only used as a means to avoid a Distinctness violation, making the subjects of transitive verbs uniquely high in the clause.  $\bar{A}$ -movement of the subject of a transitive verb from Spec,TP to Spec,CP will be *too short*—a violation of Spec-to-Spec Anti-Locality—and instead in such cases the subject stays in-situ in Spec,vP and moves directly to Spec,CP, resulting in the AF form of the verb. Intransitive subjects and transitive objects are lower in the clause and thus their movement to Spec,CP never violates Spec-to-Spec Anti-Locality. AF is not a response to the movement of subjects of transitive verbs (ergative arguments) *per se*, but rather a strategy to avoid the violation of Spec-to-Spec Anti-Locality.

In the remainder of this section I will demonstrate how this proposal derives the full pattern of Kaqchikel AF, including those cases where the subject of a transitive verb has  $\bar{A}$ -moved to a non-immediately-preverbal position and AF is not used. Such data was presented in section 3, and is the primary motivation for the idea that AF in Kaqchikel is *locality-sensitive*. The first case is the effect of certain preverbal adverbs which obviate the need for AF, schematized in (29). The second is the pattern of AF in multiple extraction constructions: if a transitive subject is moved to a preverbal position above another preverbal  $\bar{A}$ -operator, as schematized in (30), AF is not used.

- (29) **No AF due to preverbal adverb:**      (30) **No AF when moved over another operator:**  
 $[_{CP} \text{ subject } [ \text{adverb } [_{TP} t \dots V(*AF) ] ] ]$        $[_{CP} \text{ subject } [_{CP} \text{ op } [_{TP} t \dots V(*AF) ] ] ]$

We begin with the obviation of AF by intervening adverbs. Consider the derivation of a standard transitive TP (24), where the subject moves to Spec,TP. For these adverbs which obviate AF, I follow the functional specifier approach of (Cinque 1999; a.o.), whereby a particular functional projection, AdvP, is projected above TP and hosts the adverb in its specifier. The complementizer is merged above this extended projection. The movement of the subject from Spec,TP to Spec,CP will not violate Spec-to-Spec Anti-Locality in this derivation, as it crosses both TP and AdvP. Therefore the last-resort AF derivation will not be used, in contrast to the basic case without an intervening adverb, as in (25) above.

- (31) **Subject extraction across AdvP satisfies Spec-to-Spec Anti-Locality:**  
 $\checkmark [_{CP} \text{ subject } C [_{AdvP} \text{ adverb } [_{TP} \text{ \_\_\_ } T+v+V [_{vP} \text{ \_\_\_ } [_{vP} \text{ object } ] ] ] ] ] \quad (\text{cf 25a})$

Next we turn to the pattern of AF in multiple extraction constructions. Recall that in examples (10–13), we saw that object-subject-verb word order required AF (the (a) examples) and subject-object-verb clauses did not trigger AF (the (b) examples). Here I will present derivations for these cases schematically. For both (a) and (b) cases we begin our consideration with the standard transitive clause derivation as in (24), where the subject moves to Spec,TP to satisfy Distinctness. I assume that multiple CP maximal projections will be projected in order to host the multiple  $\bar{A}$ -operators in the periphery, with one specifier per CP projection (Watanabe, 1992; Rizzi, 1997).<sup>13</sup> In the (a) examples, where the subject is in immediately preverbal position, the subsequent  $\bar{A}$ -movement of the subject from Spec,TP to Spec,CP will violate Spec-to-Spec Anti-Locality (32ai). Therefore the AF clause derivation will be used instead, with the subject skipping the Spec,TP position entirely, and triggering the AF verb form (32aii). The object will subsequently move to a higher Spec,CP position.

(32) **Explaining the pattern of AF in multiple extraction constructions:**

- a. Subject in immediately preverbal position (10–13a):
- i. \* [CP object [CP subject [TP        T+v+V [vP        [VP        ] ] ] ] ] violates S-to-S A-L!
- ii. ✓ [CP object [CP subject [TP T+v+V [vP        [VP        ] ] ] ] ] ⇒ “O – S – AF verb”
- b. Subject in non-immediately-preverbal position (10–13b):
- ✓ [CP subject [CP object [TP        T+v+V [vP        [VP        ] ] ] ] ] ⇒ “S – O – non-AF verb”

In contrast, in (32b) the subject moves across another operator. The non-subject (here, object) will first move to Spec,CP above TP, and this movement step will satisfy Spec-to-Spec Anti-Locality, as all non-subject movements do (see 26). The subject will then move to a higher Spec,CP position. Recall that in such multiple extraction constructions, separate maximal projections are used for each of the preverbal  $\bar{A}$ -operators. As such, the  $\bar{A}$ -movement of the subject will cross both TP and the lower CP maximal projections, satisfying Spec-to-Spec Anti-Locality. The last-resort AF derivation is unnecessary, so the non-AF verb form is used.

## 5. Subject-initial word orders as topicalization

In this section I discuss a potential counter-example to the distribution of AF discussed here, which I have summarized as occurring if and only if a transitive subject moves to *immediately preverbal* position (14). While VOS is the base word order in Kaqchikel, SVO order is possible *without Agent Focus* for subjects which are not one of the AF-triggering  $\bar{A}$ -operators. An example is given in (33a) below. If AF is used instead, the interpretation changes so that the subject has exhaustive focus (33b).

(33) **An immediately preverbal subject without AF:**

- a. Ri a Pedro xuchäk ri premio.                      b. (Ja) ri a Pedro xchak-ö ri premio.  
 Pedro    won    the prize                                      FOC Pedro    won    the prize  
 ‘Pedro won the prize.’    ‘It’s Pedro that won the prize.’

I propose that such SVO word order without AF is the result of subject topicalization, where topics are necessarily in a position *higher* than CP. Subject  $\bar{A}$ -movement to this topic position will necessarily cross both TP and CP projections, satisfying Spec-to-Spec Anti-Locality. Therefore AF is not used. All AF-triggering  $\bar{A}$ -operators, on the other hand, move to the specifier of a (possibly split or recursive) CP.<sup>14</sup>

Under this proposal, we predict that if a clause has both a topic and an  $\bar{A}$ -operator, the topic will necessarily precede the  $\bar{A}$ -operator. Therefore immediately preverbal subjects which do not trigger AF (a topic, as in 33a) cannot cooccur with other preverbal  $\bar{A}$ -operators. This prediction is borne out.

<sup>13</sup>I remain agnostic here as to whether the multiple CP-level projections are part of a split CP extended projection (Rizzi, 1997) or an extension of a single C head (Watanabe, 1992). This choice is not crucial to the analysis presented.

<sup>14</sup>This is reminiscent of Aissen’s (1992) proposal that Mayan clause structure has dedicated preverbal Focus and Topic positions, where Topic is always above Focus.

- (34) **Subject topics cannot come between the verb and an  $\bar{A}$ -operator:**
- |  |   |
|--|---|
| a. <u>Preverbal subject in <i>wh</i>-question:</u> | b. <u>Preverbal subject in relative clause:</u>   |
| * Achike <u>ri</u> a Juan xutěj?                   | * ri xten [ri <u>ri</u> a Juan xutz'ët]           |
| What Juan ate                                      | the girl RC Juan saw                              |
| Intended: 'What did Juan eat?'                     | Int.: 'the girl that J saw' (Daeyoung Sohn, p.c.) |

This analysis is crucially different from those which view the standard derived subject position (Spec,TP in the terms used here) as a left specifier and the source of preverbal subjects without AF (e.g. Aissen, 1992; Broadwell, 2000). Such an analysis does not accurately predict the limited distribution of preverbal subjects which do not trigger AF. Instead, in the proposal made here, both the subject's base position (Spec,vP) and derived position (Spec,TP) are right specifiers yielding VOS order; SVO order without AF is due exclusively to subject topicalization.

## 6. Summary

In the study of the Mayan Agent Focus construction, previous researchers have assumed an exceptionless correlation between AF and the  $\bar{A}$ -extraction of a transitive subject (Aissen 1999; Stiebels 2006; Coon et al. 2011; a.o.). In this paper I present new data that shows that AF in Kaqchikel reflects a sensitivity to the *locality of movement*, rather than a response to the extraction of a transitive subject. I proposed the Spec-to-Spec Anti-Locality constraint and showed how this constraint can explain the full distributional pattern of AF in Kaqchikel.

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