Voice Mismatches in Kaqchikel (Mayan) Sluicing

Rodrigo Ranero

WSCLA 24
May 11th, 2019, University of Maryland, College Park

1. Preliminaries

Sluicing involves ellipsis with a *wh*-remnant (Ross 1969a):

(1) *Sluicing*
   a. Alexander likes some metal bands. Do you know which metal bands Alexander likes?
   b. Alexander likes some metal bands. Do you know **which metal bands$_1$** <Alexander likes **t$_1$**>?

Let's define some terminology:

(2) *Terminology*
   a. **Antecedent:** the first clause in (1)b; '*Alexander likes some metal bands*.'.
   b. **Target clause**: the second clause in (1)b; '*Do you know which metal bands <Alexander likes>?*
   c. **Ellipsis site/sluice**: the elided part in (1)b; *<Alexander likes t_1>*.
   d. **Remnant:** the material outside the ellipsis site in (1)b; '*Do you know which metal bands*.'
   e. **Correlate:** material in the antecedent of (1)b which corresponds to some element of the remnant; '*some metal bands*' is the correlate of '*which metal bands'*.

Broad research question: How syntactically similar must the ellipsis site be to elements in the antecedent?

Consider the impossibility of *voice* mismatches between antecedent and ellipsis site in English and Spanish sluicing (Merchant 2013):

(3) **Active antecedent – Passive sluice*
   a. *Someone **hugged** Robin, but we don't know who by <Robbin **was hugged**>.

   b. *Alguien **pintó** la casa, pero no sabemos por quién <**fue pintada** la casa>. [Spanish]
   someone **painted** the house but NEG know.1PL by who **was painted** the house
   Intended: 'Someone painted the house, but we don't know who by.'

Based on the above, it has been proposed that some degree of syntactic identity between ellipsis site and antecedent is required:

(4) *Merchant (2013)'s syntactic identity condition* (based on Chung 2013: 3)
   The heads in the verbal spine of the elided constituent must be syntactically identical to the corresponding heads in the antecedent.

Here, we will discuss novel sluicing data from Kaqchikel (Mayan).

(5) *Sluicing in Kaqchikel*
   Ri a Juan k'o x-Ø-u-loq'=pa... Man w-etama-n ta achike < x-Ø-u-loq'=pa>.
   DET CLF Juan EXIST COM-A3S-E3S-buy=DIR NEG GEN3S-know-PRF NEG what COM-A3S-E3S-buy=DIR
   'Juan bought something... I don't know what.'

In contrast to languages like English, voice can mismatch in Kaqchikel sluicing. In the example shown below, the antecedent is in the Agent Focus voice (henceforth AF), whereas the sluice is in the active voice:

(5) *Voice mismatch in Kachikel: Agent Focus antecedent – Active sluice*
A: Xa xe ri ma Juan **x-Ø-loq'-o** kotz'i'j.
just only DET CLF Juan **COM-A3S-buy-AF** flower
'Only Juan bought flowers.'

B: Kan qitzij? Ta-b'ij pe chwe achike kotz'i'j <**x-Ø-u-löq'/** ***x-Ø-loq'-o** >!
INT truth IMP-say DIR PREP.E1S.RN what flower **COM-A3S-E3S-buy / COM-A3S-buy-AF**
'Really? Tell me which flowers!'

We will argue for the following:

(6) *Syntactic parallelism in ellipsis*
Antecedent and material properly contained within the ellipsis site must be featurally non-distinct.

(7) *AF in Kaqchikel*
An AF clause does not have a VoiceP layer.

All allowed voice mismatches comply with (6); all disallowed voice mismatches violate (6).

Outline:
Section 2: Kaqchikel morphosyntax
Section 3: Sluicing and voice mismatches
Section 4: Agent Focus as Voice Exfoliation
Section 5: Against a repair-by-ellipsis analysis
Section 6: Conclusion

2. Kaqchikel morphosyntax

Kaqchikel is a Mayan language from the K'ichean branch spoken by about 500,000 people in Guatemala.
- There exist several in-depth descriptions of the language by native speaker linguists; e.g. the grammar by García Matzar & Rodríguez Guaján 1997 and the dialectal variation study by Patal Majzul et.al. 2000.
- Generative studies focusing on Kaqchikel include Preminger (2014), Erlewine (2016), Henderson & Coon (2018), Burukina (to appear), a.o.
- All the data presented here were gathered from 2018-2019 in collaboration with three consultants who speak the Patzún dialect.

Kaqchikel displays ergative-absolutive head-marking alignment:
- Transitive objects (8) and intransitive subjects (9) are cross-referenced by *absolutive (A) agreement*.
- Subjects of transitive clauses are cross-referenced by *ergative (E) agreement* (8).
- Case is not marked overtly on noun phrases.
- There is pro-drop for both subject and object.
- VOS order, although topicalization of the subject leads to frequent SVO order (García Matzar and Rodríguez Guaján 1997, England 1991, Clemens and Coon 2018)

(8) *ERG-ABS-agreement in transitive clauses*
Y-**e**-*qa*-to' **ri akwala'** *roj.*
INC-**A3P**-*E1P*-help **DET children** *1P*
'We are helping the children.'

(9) *ABS-agreement in intransitive clauses*
Y-**e**-wär ri akwala'.
INC-**A3P**-sleep DET children
'The children are sleeping.'

- In (8) and (9), *ri akwala'* 'the children' is cross-referenced by the absolutive agreement marker /*e-*/.
- In (8) and, *roj* 'we' is cross-referenced by the ergative agreement marker /*qa-*/.

Complete paradigms for strong pronouns, absolutive agreement, and ergative agreement are provided in (10):

(10) *Kaqchikel pronominal and agreement paradigms*

	STRONG PRONOUN	ABS-AGREEMENT	ERG-AGREEMENT
1SG	*yïn*	*i(n)-*	*n/w-*
1PL	*roj*	*oj-*	*q(a)-*
2SG	*rat*	*a(t)-*	*a(w)-*
2PL	*rïx*	*ix-*	*i(w)-*
3SG	*rja'*	*Ø-*	*r(u)-/u-*
3PL	*rje'*	*e-*	*k(i)-*

Preminger (2014)

NB: the absolutive 3rd person singular marker is a null morpheme /*Ø-*/

The templatic ordering of morphemes in the verbal stem is given below:

(11) *Morpheme ordering in Kaqchikel transitive verbs*

TAM — ABS-AGREEMENT — ERG-AGREEMENT — VERB STEM — VOICE SUFFIX

NB: verbal stems in Kaqchikel have a dedicated stem-final slot for a suffix which indicates voice specification.

We will discuss four voices in Kaqchikel.

(12) *Voices in Kaqchikel (discussed today)*
a. Active
b. Passive
c. Incorporation Antipassive (AP_{INC})
d. Agent Focus

NB: I will not discuss the oblique antipassive here.

Examples of familiar active and passive voices are shown below:

(13) *Active voice*
X-**e**-*ki*-chäp ak'wala' *ri ixoqi'*.
COM-**A3P**-*E3P*-grab children *DET women*
'The women grabbed the chidren.' (GM & RG 1997: 369)

(14) *Passive voice*
X-**e**-chap-**atäj** ri ak'wala' **k-uma ri ixoqi'**.
COM-**A3P**-grab-**PAS** DET children **GEN3P-RN DET women**
'The children were grabbed by the women.' (GM & RG 1997: 370)

- Note three differences in the verb between active and passive voices.
  - First, both absolutive and ergative agreement arise in the active (13), whereas only absolutive agreement arises in the passive (14).
  - Second, there is a stem-final morpheme /-Vtäj/ that signals passive voice.
  - Third, the logical subject (the women) is introduced obliquely in the passive via a relational noun (RN) *uma.*

(15) *Passive voice; logical subject introduced by relational noun*
Ri tz'i' x-Ø-muq-utäj **r-uma** ri achi.
DET dog COM-A3S-bury-PAS **GEN3S-RN** DET man
'The dog was buried by the man.' (Patal Majzul et.al. 2000:153)

Now let us compare the active voice with the incorporation antipassive (henceforth AP_{INC}):

(16) *Active voice*
N-Ø-ki-tïk ixim *pro.*
INC-A3S-E3S-plant corn
'They are planting corn.'

(17) *AP_{INC}*
Y-**e**-tik-**on** (ixim) *pro.*
INC-**A3P**-plant-**API** corn
'They are planting.'

- Note three differences in the verb between active and AP_{INC} voices:
  - First, both absolutive and ergative agreement arise in the active (16), whereas only absolutive agreement arises in the AP_{INC} (17).
  - Second, there is a stem final morpheme /-on/ that signals AP_{INC} voice.
  - Third, the logical object of an AP_{INC} must be a bare nominal and stem-adjacent (GM & RG 1997) and is optional.

Finally, let us compare the active voice with the Agent Focus (henceforth AF) voice:

(18) *Active voice*
X-**Ø-u**-chüp ri q'aq' ri jäb'.
COM-**A3S-E3S**-put.out DET fire DET rain
'The rain put out the fire.'

(19) *AF*
Ja ri jäb' x-**Ø**-chup-**u** ri q'aq'.
FOC DET rain COM-**A3S**-put.out-**AF** DET fire
'THE RAIN put out the fire.' (GM & RG 1997: 374)

- Note three differences between the active and AF voices:
  - First, both absolutive and ergative agreement arise in the active (18), whereas only absolutive agreement arises in AF (19).
  - Second, there is a stem final morpheme /-u/ that marks AF.
  - Third, there is a word order change, wherein the logical subject is preverbal in AF.

The table below indicates the morphemes that are observable in each of the voices discussed:

(20) *Kaqchikel voices (discussed today)*

		suffix	
voice	**agreement**	*underived root*	*derived stem*
active	ERG and ABS	N/A	-Vj (some)
passive	ABS	-Vx; -Vtaj	-Vx; -Vtaj
AP_{INC}	ABS	-Vn	-Vn
AF	ABS	-o/u	-Vn

Certain aspects of AF are crucial to understanding the examples and argumentation in what follows.

First, A'-extraction (*wh*-movement, focus) of the EA of a transitive clause requires the use of AF (Aissen 2017).

(18) **EA wh-extraction with active voice*
*Achike x-Ø-u-tej n-wäy?
who COM-A3S-E3S-eat GEN1S-tortilla
Intended: 'Who ate my tortillas?'

(19) *EA wh-extraction with AF*
Achike x-Ø-tj-o n-wäy?
who COM-A3S-eat-AF GEN1S-tortilla
'Who ate my tortillas?'

(21) **EA focus movement with active voice*
Q: 'Who bought the flowers?'
*X-Ø-u-löq' ri kotz'i'j xa xe ma Juan.
COM-A3S-E3S-buy DET flower just only CLF Juan
Intended: 'Only Juan bought the flowers.'

(22) *EA focus movement with AF*
Q: 'Who bought the flowers?'
Xa xe ma Juan x-Ø-loq'-o ri kotz'i'j.
just only CLF Juan COM-A3S-buy-AF DET flower
'Only Juan bought the flowers.'

Second, if the EA is an existential indefinite, AF is required:

(23) *Existential indefinite EA and AF*
a. *K'o jun x-Ø-u-löq' ri kotz'i'j.
EXIST one COM-A3S-E3S-buy DET flower
Intended: 'Someone bought the flowers.'

b. K'o jun x-Ø-loq'-o ri kotz'i'j.
EXIST one COM-A3S-buy-AF DET flower
'Someone bought the flowers.'

NB: Erlewine 2016 shows that this construction involves movement of the EA.

Third, extraction of the internal argument is incompatible with AF.

(24) *AF incompatible with IA A'-movement*

a. Achike x-Ø-u-tej ma Juan?
what COM-A3S-E3S-eat CLF Juan
'What did Juan eat?'

b. *Achike x-Ø-tj-o ma Juan?
what COM-A3S-eat-AF CLF Juan
Intended: 'What did Juan eat?'

Fourth, extraction of adjuncts is incompatible with AF.

(25) *AF incompatible with adjunct A'-movement*

a. Ankuchi x-Ø-u-löq' (wi) ri kotz'i'j?
where COM-A3S-E3S-buy FP DET flower
'Where did s/he buy the flowers?'

b. *Ankuchi x-Ø-loq'-o (wi) ri kotz'i'j?
where COM-A3S-buy-AF FP DET flower
Intended: 'Where did s/he buy the flowers?'

The relevant distributional facts about AF are observed below:

(26) *Distribution of AF*

a. AF is required if the EA of a transitive is A'-extracted.
b. AF is required if the EA of a transitive is an existential indefinite.
c. AF is banned if the IA of a transitive is A'-extracted.
d. AF is banned if an adjunct is extracted.

NB: we will not discuss how some idiosyncratic properties of AF follow from the analysis.

3. Sluicing and voice mismatches

We will explore sluicing in Kaqchikel:

(22) *Sluicing*

a. Someone ate my tortillas, but I don't know who$_1$ < ~~t$_1$~~ ate my tortillas>

b. K'o jun x-Ø-tj-ö nu-wäy, po man w-etama-n ta **achike$_1$**
EXIST one COM-A3S-eat-AF GEN1S-tortilla but NEG GEN1S-know-PRF NEG **who**
< x-Ø-tj-ö nu-wäy **t$_1$**.>
COM-A3S-eat-AF GEN1S-tortilla
'Someone ate my tortillas, but I don't know **who.**'

NB: I will assume (i) that there is structure in the ellipsis site (Ross 1969a, Merchant 2001, Lasnik 2001); (ii) that sluicing involves PF-deletion (Ross 1969a, Merchant 2001) licensed by an E-feature (Merchant 2001); and (iii) that all examples involve sluicing and not a reduced cleft/pseudosluicing (diagnostics omitted here).

We can now discuss voice mismatches in Kaqchikel.

(31) *Summary of voice mismatches in Kaqchikel*
- a. * AP_{INC} – Active mismatches
- b. ✓ Active – AF mismatches
- c. ✓ AF – Active mismatches
- d. ✓ Passive – AF mismatches

NB: (i) some mismatches cannot be tested and (ii) the oblique antipassive can also mismatch with active voice; ask me if you're interested.

We will investigate possible voice mismatches in Kaqchikel by **manipulating the *wh*-remnant** in the target clause.

- If the *wh*-remnant is the EA of a transitive, then the voice specification within the sluice must be AF.

(27) *EA wh-remnant; Voice = AF*
- a. *wh-EA_1 <V-**ACT** IA t_1>
- b. ✓wh-EA_1 <V-**AF** IA t_1>

- If the *wh*-remnant is the IA of a transitive, then the voice specification within the sluice cannot be AF.

(28) *IA wh-remnant; Voice ≠ AF*
- a. ✓wh-IA_1 <V-**ACT** t_1 EA>
- b. *wh-IA_1 <V-**AF** t_1 EA>

- If the *wh*-remnant is an adjunct, then the voice specification within the sluice cannot be AF.

(29) *Adjunct wh-remnant; Voice ≠ AF*
- a. ✓wh-ADJ_1 <V-**ACT** IA EA t_1>
- b. *wh-ADJ_1 <V-**AF** IA EA t_1>

NB: we will return to putative alternative analyses positing a voice match and repair by ellipsis.

First, observe that an AP_{INC} cannot mismatch with an active voice sluice.

(30) *AP_{INC} banned with IA extraction; active voice must be used*

a. Y-e-tik-on ixim.
INC-A3P-plant-API corn
'They plant corn.'

b. *Achike ixim y-e-tik-**on**?
what corn INC-A3P-plant-**API**
Intended: 'What corn do they plant?'

c. Achike ixim n-Ø-ki-tïk?
what corn INC-A3S-E3P-plant
'What corn do they plant?'

We can force a voice mismatch under sluicing between AP_{INC} and active voice by having an IA *wh*-remnant.

(31) **AP$_{INC}$ antecedent – Active sluice*

a. Yïn x-i-loq'-**on** pe pa k'ayib'äl. Ta-wla **achike x-Ø-in-löq'** pe!
1S COM-A1S-buy-**API** DIR PREP market IMP-guess **what** **COM-A3S-E1S-buy** DIR
'I bought (something) at the market. Guess what I bought!'

b. *Yïn x-i-loq'-**on** pe pa k'ayib'äl. Ta-wla **achike** <**x-Ø-in-löq'** pe>!
1S COM-A1S-buy-**API** DIR PREP market IMP-guess **what** **COM-A3S-E1S-buy** DIR
Intended: 'I bought at the market. Guess what!'

Summary of voice mismatches (partial):
a. *AP_{INC} – Active

In contrast, an active antecedent can mismatch with an AF sluice.

(32) *Active antecedent – AF sluice; wh-EA remnant*

Yïn x-Ø-in-tz'ët chi jun ixöq **x-Ø-u-chöy** la che' la'.
1S COM-A3S-E1S-see COMP one woman **COM-A3S-E3S-cut** DEM tree DEM

Man x-Ø-in-tz'ët ta jab'ël achike ixöq <**x-Ø-choy-o** la che' la'>.
NEG COM-A3S-E1S-see NEG well what woman **COM-A3S-cut-AF** DEM tree DEM
'I saw that a woman cut that tree. I didn't see clearly what woman.'

Summary of voice mismatches (partial):
a. *AP_{INC} – Active
b. ✓ Active – AF

Furthermore, an AF antecedent can mismatch with an active sluice.

(33) *AF antecedent – Active sluice; reason adjunct sprouting*

a. K'o jun **x-Ø-loq'-o** ri aq. Aw-etama-n achike ru-ma **x-Ø-u-löq'**?
EXIST one **COM-A3S-buy-AF** DET pig GEN2S-know-PERF what GEN3S-RN **COM-A3S-E3S-buy**
'Someone bought the pig. Do you know why he/she bought it?'

b. *K'o jun **x-Ø-loq'-o** ri aq. Aw-etama-n achike ru-ma **x-Ø-loq'-o**?
EXIST one **COM-A3S-buy-AF** DET pig GEN2S-know-PERF what GEN3S-RN **COM-A3S-buy-AF**
Intended: 'Someone bought the pig. Do you know why he/she bought it?

c. K'o jun **x-Ø-loq'-o** ri aq. Aw-etama-n achike ru-ma <**x-Ø-u-löq'**>?
EXIST one **COM-A3S-buy-AF** DET pig E2S-know-PERF what GEN3S-RN **COM-A3S-E3S-buy**
'Someone bought the pig. Do you know why?'

Summary of voice mismatches (partial):
a. *AP_{INC} – Active
b. ✓ Active – AF
c. ✓AF – Active

Finally, a passive antecedent can mismatch with an AF sluice.

(34) *Passive antecedent – AF sluice*
A: Ri aq **x-Ø-kam-is-äx** r-uma jun ixöq.
DET pig **COM-A3S-die-CAUS-PAS** GEN3S-RN a woman
'The pig was killed by a woman.'

B: *Kan qitzij? Achike ixöq **x-Ø-u-kam-sa-j**?
INT truth which woman **COM-A3S-E3S-die-CAUS-ACT**
Intended: 'Really? Which woman killed it?'

B′: Kan qitzij? Achike ixöq **x-Ø-kam-sa-n**?
INT truth which woman **COM-A3S-die-CAUS-AF**
'Really? Which woman killed it?'

B″: Kan qitzij? Achike ixöq <x-**Ø-kam-sa-n** >?
INT truth which woman **COM-A3S-die-CAUS-AF**
'Really? Which woman?'

Summary of voice mismatches (final):
a. *AP_{INC} – Active
b. ✓ Active – AF
c. ✓AF – Active
d. ✓Passive – AF

4. Agent Focus as Voice Exfoliation

Let us remind ourselves what the puzzle is, in a broad sense:

(35) *All voice mismatches are disallowed in English sluicing (and in other languages)*
a. *Someone **hugged** Robin, but we don't know who by <Robbin **was hugged**>.
b. *Robin **was hugged**, but we don't know who <**hugged** Robin>.

(36) *A subset of voice mismatches are allowed/disallowed in Kaqchikel sluicing*
a. *AP_{INC} – Active
b. ✓ Active – AF
c. ✓AF – Active
d. ✓Passive – AF

To account for this asymmetry in voice mismatch possibilities, the current proposal has two components:

- **The first component**: syntactic parallelism in ellipsis is satisfied if antecedent and ellipsis site are featurally non-distinct (see Chomsky 1965).

(37) *Syntactic parallelism in ellipsis*
Antecedent and material properly contained within the ellipsis site must be featurally non-distinct.

- The condition above rules in/out the following:

(38) *Allowed/disallowed mismatches in sluicing*

Antecedent	**Ellipsis site**	**Status**
Voice $_X$	Voice $_Y$	*
Voice $_Y$	Voice $_X$	*
Voice $_X$	Voice $_Ø$	✓
Voice $_Ø$	Voice $_X$	✓

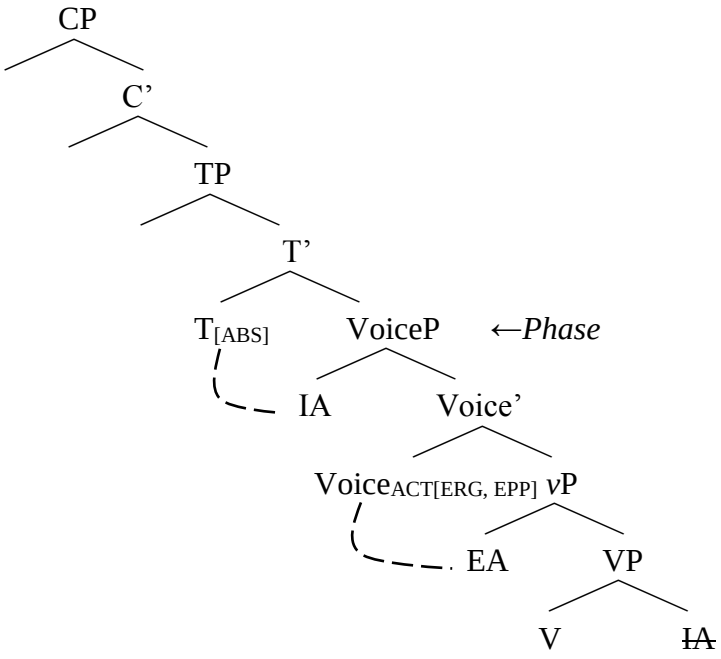
- A clash between feature bundles (e.g.., $Voice_{ACT}$ and $Voice_{PASS}$) is ruled out, whereas a mismatch between the presence and absence of a feature bundle (e.g. $Voice_{PASS}$ and $Voice_{Ø}$) is ruled in.

- **The second component**, is that AF instantiates a clause without VoiceP.

(39) *AF in Kaqchikel*
An AF clause does not have a VoiceP layer.

I assume the following structure for a Kaqchikel transitive:

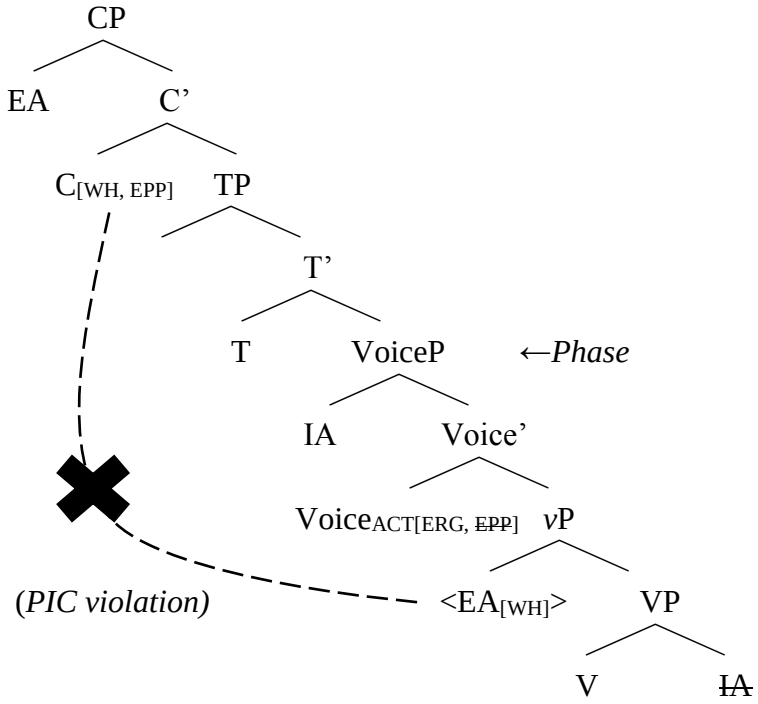
(40) *Kaqchikel active transitive clause*



- The verbal domain contains a Voice and *v* projections, with Voice dominating *v* (Legate 2014. Harley 2017; see also Kratzer 1996).
- In a transitive, $Voice_{ACT}$ (the topmost layer) is a phase (Chomsky 2001, Citko 2014).
- The EA is merged in Spec*v*P.
- The EA enters into an Agree relation with $Voice_{ACT}$, resulting in a clitic-doubling chain
  - ERG agreement is a doubled clitic on $Voice_{ACT}$ (see Preminger 2014 for this suggestion).
- The IA moves to SpecVoiceP (Coon at.al. 2014; see Aldridge 2014).
- The IA enters into an Agree relation with T, resulting in a clitic-doubling chain.
  - ABS agreement is a doubled clitic on T (Preminger 2014).

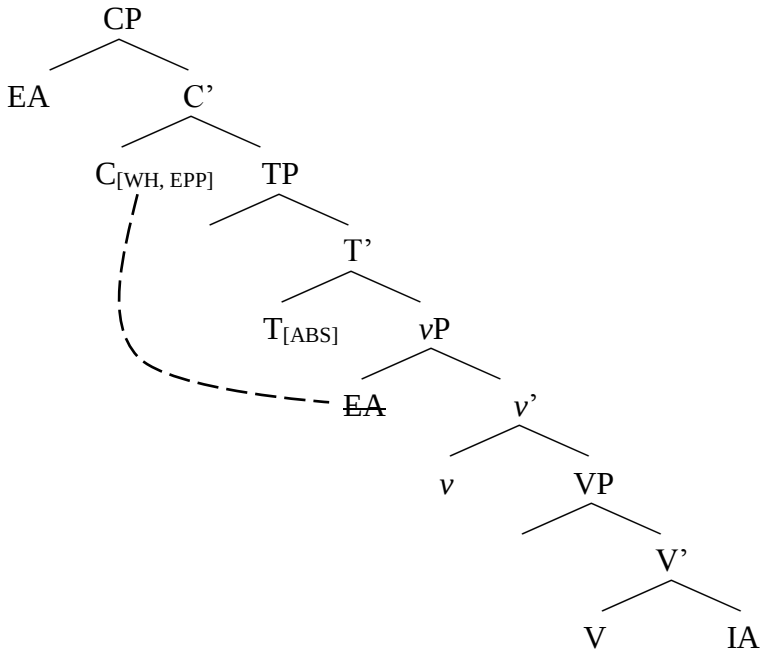
- Crucially, the configuration in Kaqchikel transitives triggers the extraction restriction on the EA.
    - The EA is inaccessible for movement to SpecCP (Coon et.al. 2014, Douglas et.al. 2017; see also Aldridge 2004), since the IA occupies the only available escape hatch in the Voice phase.

(41) *Extraction restriction in active transitive clause*



- The current proposal is that AF is the absence of Voice.

(42) *AF instantiates the absence of Voice*



- Since there is no Voice phase, the EA is free to extract.

- VoiceP is removed in the course of the derivation via the Last Resort operation of Exfoliation (Pesetsky 2019).
    - Exfoliation is a revival of structure removal operations that go back to the early days of generative grammar (Lees 1963, Rosenbaum 1967; see Ross 1969b's "Node Deletion").
    - The main explananda of Exfoliation are Raising-to-Subject, Raising-to-Object, complementizer-trace effects, a.o. (see Pesetsky 2019 for ample discussion).

(43) *Exfoliation* (Pesetsky 2019: 10)

a. **Structural description:** β … [$YP_{(PHASE)}$ …. [$\gamma P_{(NON\text{-}PHASE)}$ … α]], where
   (i) YP is the phase that dominates α, but not β,
   (ii) α occupies the edge of γP, and
   (iii) a movement-triggering probe on β has located α as its goal

b. **Structural Change:** Replace YP with γP

NB: Pesetsky (2019) assumes γP becomes the new phase; I do not assume this here (in line with Pesetsky 2017).

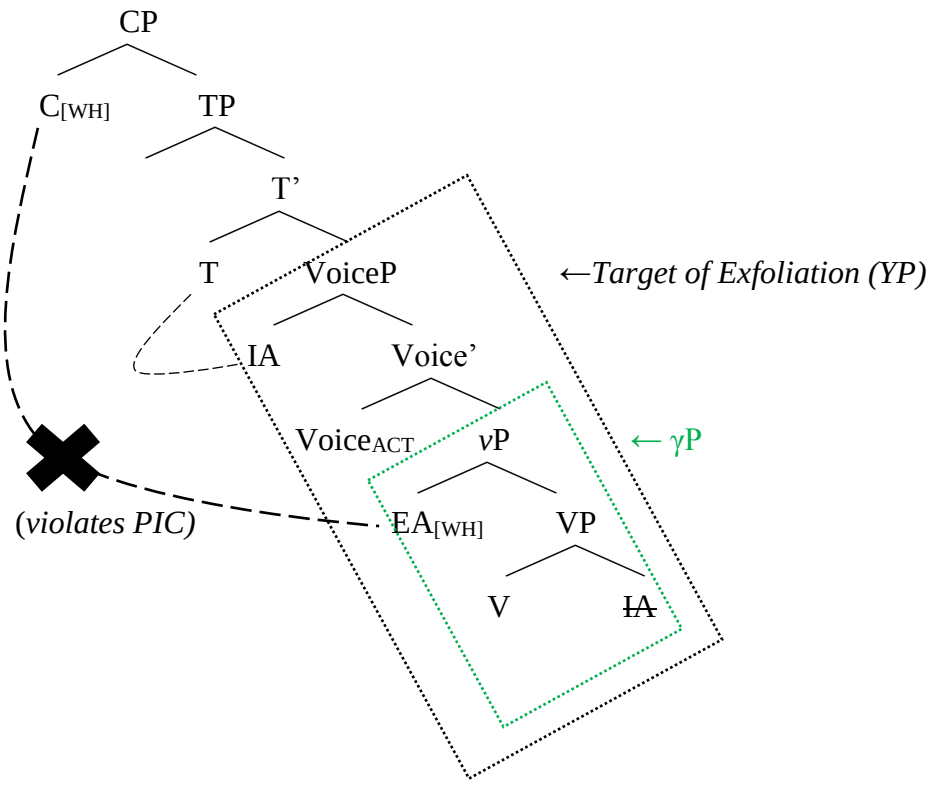
- Exfoliation applies in Kaqchikel as follows:

(44) *Exfoliation of Voice in Kaqchikel = AF*

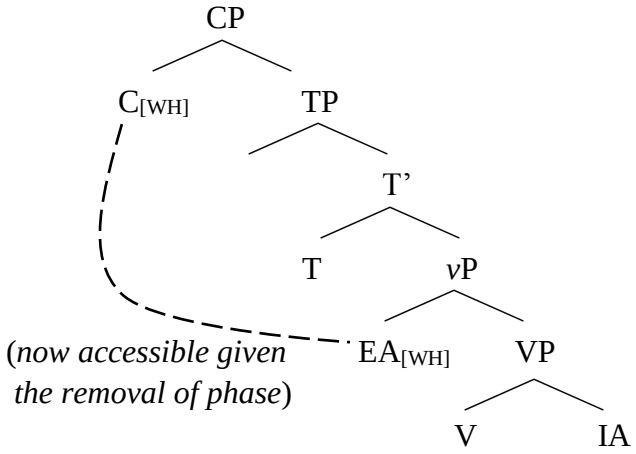
a. **Structural description**: C … [$VoiceP_{(PHASE)}$ …. [*v*$P_{(NON\text{-}PHASE)}$ … EA]], where
   (i) VoiceP is the phase that dominates EA, but not C,
   (ii) EA occupies the edge of *v*P, and
   (iii) a movement triggering probe on C has located EA as its goal

b. **Structural Change**: Replace VoiceP with *v*P

c. *Structure pre-Exfoliation*



d. *Exfoliation applies*



(45) *Consequences of Exfoliation*

a. The Voice^0 phase is removed, allowing for the EA to be targeted by the $C_{[WH]}$ probe.
b. The EA and IA become phasemates and can both be targeted by T^0
c. $Voice_{ACT}$ is deleted. Thus the clitic doubling chain <$Voice_{ACT}$, EA> that results in ergative agreement is disrupted.
d. The higher copy of the IA is deleted. Thus the clitic doubling chain <T^0, IA> that results in absolutive agreement is disrupted.

NB: these consequences can account for any of the idiosyncrasies of AF; ask me for details.

- The present analysis of AF as Voice Exfoliation captures the behavior of voice mismatches under sluicing in languages of the English type vs. Kaqchikel.

(46) *Allowed/disallowed mismatches in sluicing*

Antecedent	**Ellipsis site**	**Status**	**Language**
$Voice_{ACT}$	$Voice_{PASS}$	*	English, Spanish…
$Voice_{PASS}$	$Voice_{ACT}$	*	English, Spanish…
$Voice_{API}$	$Voice_{ACT}$	*	Kaqchikel
$Voice_{ACT}$	AF = $Voice_{Ø}$	✓	Kaqchikel
AF = $Voice_{Ø}$	$Voice_{ACT}$	✓	Kaqchikel
$Voice_{PASS}$	AF = $Voice_{Ø}$	✓	Kaqchikel

NB: this approach has consequences for mismatches beyond voice; see Ranero (2019).

5. Against a repair by ellipsis approach

Let us assess an alternative analysis for the Passive – AF mismatches.

(47) *Passive antecedent – AF sluice*
Ru-ma jun winäq x-e-k'ay-ex aq pa k'ayib'äl. Ri a Pedro
GEN3S-RN a person COM-A3P-sell-PAS pig PREP market DET CLF Pedro

x-Ø-u-kut-uj achike winäq <x-e-k'ay-in aq >?
COM-A3S-E3S-ask-ACT which man COM-A3P-sell-AF pig
'Pigs were sold by some person in the market. Pedro asked which person.'

- The most salient alternative analysis to the proposal here involves positing that this voice "mismatch" actually involve a voice *match*.
- Extracting the *wh*-phrase from the matching voice target clause is a violation (of some sort) that is repaired by ellipsis.
- For example, **sluicing repairs island violations** (Ross 1969a, Merchant 2001, Lasnik 2001, Lasnik 2009)

(48) *Island repair under sluicing*
a. *She kissed a man who bit one of my friends, but Tom doesn't realize which one of my friends she kissed a man who bit.
b. She kissed a man who bit one of my friends, but Tom doesn't realize which one of my friends <she kissed a man who bit>. Lasnik (2009)

c. *She bought beans and corn at the market, but I don't know which beans she bought and corn at the market.
d. She bought beans and corn at the market, but I don't know which beans <she bought and corn at the market.>

- Kaqchikel behaves as expected in repairing island violations via sluicing.

(49) *Island violation; if-clause island*
a. Yïn n-Ø-in-tïj ri nu-xajab' si ma Juan n-Ø-u-k'ayij ri ru-ch'ich'.
1S INC-A3S-E1S-eat DET GEN1S-sandal if CLF Juan INC-A3S-E3S-sell DET GEN3S-car
'I will eat my sandal if Juan sells his car.'

b. Achike$_1$ n-Ø-in-tïj t_1 si ma Juan n-Ø-u-k'ayij ri ru-ch'ich'?
what INC-A3S-E1S-eat if CLF Juan INC-A3S-E3S-sell DET GEN3S-car
'What will I eat if Juan sells his car?'

c. *Achike n-Ø-in-tïj nu-xajab' si ma Juan n-Ø-u-k'ayij t_1?
what INC-A3S-E1S-eat GEN1S-sandal if CLF Juan INC-A3S-E3S-sell
Intended: 'What is the thing such that I would eat my sandal if Juan sold that thing?'

(50) *Island violation repair under sluicing; if-clause island*
a. Yïn n-Ø-in-tïj ri nu-xajab' si ma Juan k'o n-Ø-u-k'ayij=el.
1S INC-B3S-A1S-eat DET A1S-sandal if CLF Juan EXIST INC-B3S-A3S-sell=DIR
Aw-etama-n achike?
A2S-know-PERF what
'I will eat my sandal if Juan sells something. Do you know what?'

However, not all types of violations are repairable by ellipsis!

- English allows preposition stranding (P-stranding) in general (51)b and in sluicing (51)d.

(51) *P-stranding in English*
  a. **For who(m)** did Jo buy the flowers?
  b. Who did Jo buy the flowers **for**?
  c. Jo bought the flowers for someone, but I don't know **for who(m)$_1$** <Jo bought the flowers **t$_1$** >.
  d. Jo bought the flowers for someone, but I don't know **who** <Jo bought the flowers **for t$_1$** >.

- In contrast, some languages disallow P-stranding.
- **Sluicing does not repair P-stranding violations** (Merchant 2001).

(52) *P-stranding violation is not repairable by ellipsis*
  a. I Anna milise me kapjon, all dhe ksero *(me) pjon. [Greek]
  the Anna spoke with someone but not I.know with who
  b. *Pjon milise me?
  who she.spoke with Merchant (2001)

- Recall that obliques are introduced by relational nouns (RNs) in Kaqchikel, which are functionally akin to prepositions.
- RNs cannot be stranded in Kaqchikel.

(53) *RN stranding is illicit in Kaqchikel*
  a. [**Achoj k'in**]$_1$ x-a-b'e pa Armita **t$_1$**?
  WH **RN** COM-A2S-go PREP Guatemala.City
  'Who with did you go to Guatemala City?'

  b. ***Achoj** x-a-b'e pa Armita **t$_1$ k'in**?
  WH COM-A2S-go PREP Guatemala.City **RN**
  Intended: 'Who did you go to Guatemala City with?'

- As expected, RN stranding cannot be repaired by sluicing in Kaqchikel.

(54) *RN-stranding cannot be repaired in Kaqchikel*
  a. Rat k'o achoj k'in x-a-b'e pa Armita. Ta-b'ij pe chwe achoj
  2S EXIST WH RN COM-A2S-go PREP Guatemala.City IMP-say DIR PREP.RN.E1S WH
  k'in x-a-b'e pa Armita!
  RN COM- A2S-go PREP Guatemala.City
  'You went with someone to Guatemala city. Tell me who you went to G. C. with!'

  b. Rat k'o achoj k'in xab'e pa Armita. Tab'ij pe chwe **achoj k'in$_1$** <xab'e pa Armita t$_1$>!
  c. *Rat k'o achoj k'in xab'e pa Armita. Tab'ij pe chwe **achoj$_1$** <xab'e pa Armita **t$_1$ k'in**>!
  **RN-stranding under sluicing*

- Let us assess the ingredients that would be necessary to posit a voice match in Passive – AF cases.

(55) *Passive – AF mismatches are actually Passive – Passive + repair*

a. Alternative Passive – Passive analysis
Ru-ma jun winäq x-e-k'ay-**ex** aq pa k'ayib'äl.
GEN3S-RN a person COM-A3P-sell-**PAS** pig PREP market

Ri a Pedro x-Ø-u-kut-uj [achike winäq]$_1$ <x-e-k'ay-**ex** aq ru-ma t_1 >?
DET CLF Pedro COM-A3S-E3S-ask-ACT which man COM-A3P-sell-**PAS** pig GEN3S-RN
'Pigs were sold by some person in the market. Pedro asked which person.'

b. *Pre-wh movement in the target clause*
Ri a Pedro xukutuj [CP [C$_{[E, WH]}$ [TP [Voice$_{PASS}$ [VP [ruma **achike winäq**] [V…]]]]]]

c. *Wh-movement and **RN-stranding***
Ri a Pedro xukutuj [CP [C$_{[E, \sout{WH}]}$ **achike winäq$_1$** [TP [Voice$_{PASS}$ [VP [**ruma t$_1$**] [V…]]]]]]
d. *Ellipsis*
Ri a Pedro xukutuj [CP [C$_{[E, \sout{WH}]}$ **achike winäq$_1$** [~~TP [Voice$_{PASS}$ [VP [**ruma t$_1$**] [V…~~]]]]]]

- The alternative analysis requires that a RN-stranding violation be repaired by sluicing.
- Sluicing does not repair this type of violation.
- We reject the alternative analysis.

NB: the AF – Active mismatch cannot be repair-by-ellipsis either; ask me for details!

6. Conclusion

- Sluicing in Kaqchikel provides valuable insight into the types of mismatches that are possible under ellipsis.
  - Specifically, a subset of voice mismatches are possible in Kaqchikel sluicing.

- The account defended here has two components:

(56) *Syntactic parallelism in ellipsis*
Antecedent and material properly contained within the ellipsis site must be featurally non-distinct.

- Investigating other mismatches under ellipsis suggests that this condition is on the right track (Ranero 2019, Saab 2019).

(57) *AF in Kaqchikel*
An AF clause does not have a VoiceP layer.

- Alternative analyses that take the data to involve repair by ellipsis cannot cover all the mismatches.

Abbreviations

A, ABS – absolutive, ACT – active voice, AF – Agent Focus, API – incorporation antipassive, CAUS – causative, CLF – classifier, COM – completive, DET – determiner, DIM – diminutive, DIR – directional, E, ERG – ergative, EXIST – existential, FP – fronting particle, IMP – imperative, INC – incompletive, INT – intensifier particle, P – plural, PAS – passive, PREP – preposition, PRF – perfect, RN – relational noun, S – singular.

Acknowledgments

A special thank you is due to my three main Kaqchikel consultants: Glenda Chuluc Tum, Gilda Ixén, and Imelda Ixén. Thank you as well to Filiberto Patal Majzul, Ana López de Mateo (Patzún Kaqchikel) and Lolmay Pedro García Matzar (San Andrés Semetabaj Kaqchikel) for their occasional judgments.

Thank you to Howard Lasnik, Masha Polinsky, and Omer Preminger, for their support throughout the development of this project. I also benefited from discussions with Judith Aissen, Scott AnderBois, Chris Baron, Sandra Chung, Aaron Doliana, Mina Hirzel, Norbert Hornstein, Ted Levin, Paulina Lyskawa, Pedro Mateo Pedro, Jim McCloskey, Gesoel Mendes, Eric Potsdam, Anissa Zaitsu, and attendees at S-Lab and ECO-5. Finally, thank you to the Mateo Pedro and Ixén families for their hospitality in Patzún.

This research was supported in part by a Cosmos Club Foundation Scholars grant, a Jacobs Research Funds grant, NSF grant # 1449815 for the UMD Language Science Center, and NSF grants #1563129 and BCS-1563129 for Maria Polinsky. All mistakes are my own.

References

Aissen, Judith. 2017. "Correlates of Ergativity in Mayan." In *The Oxford Handbook of Ergativity*, edited by J. Coon, D. Massam, and L. Travis. Oxford: Oxford University Press.

Aldridge, Edith. 2004. "Ergativity and Verb-Initial Word Order in Austronesian Languages." PhD Dissertation, Cornell University.

Burukina, Irina. To appear. "Reflexive Functional Head, Verbal and Nominal Predicates." In *Proceedings of WCCFL 36*.

Chomsky, Noam. 1965. *Aspects of the Theory of Syntax*. Cambridge, MA: MIT Press.

Chomsky, Noam. 2001. "Derivation by Phase." In *Ken Hale: A Life in Language*, edited by Michael Kenstowicz, 1–50. Cambridge, MA: MIT Press.

Chung, Sandra. 2013. "Syntactic Identity in Sluicing: How Much and Why." *Linguistic Inquiry* 44 (1): 1–44.

Citko, Barbara. 2014. *Phase Theory: An Introduction*. Cambridge: Cambridge University Press.

Clemens, Lauren, and Jessica Coon. 2018. "Deriving Verb-Initial Word Order in Mayan." *Language* 94 (2): 237–80.

Coon, Jessica, Pedro Mateo Pedro, and Omer Preminger. 2014. "The Role of Case in A-Bar Extraction Asymmetries." *Linguistic Variation* 14 (2): 179–242.

Douglas, Jamie, Rodrigo Ranero, and Michelle Sheehan. 2017. "Two Kinds of Syntactic Ergativity in Mayan." In *Proceedings of GLOW in Asia XI, Volume 2*, edited by Michael Yoshitaka Erlewine, 41–56. MIT Working Papers in Linguistics #85. Cambridge MA: MIT Working Papers in Linguistics.

England, Nora. 1991. "Changes in Basic Word Order in Mayan Languages." *International Journal of American Linguistics* 57 (4): 446–86.

Erlewine, Michael Yoshitaka. 2016. "Anti-Locality and Optimality in Kaqchikel Agent Focus." *Natural Language and Linguistic Theory* 34 (2): 429–79.

García Matzar, Lolmay Pedro, and José Domingo Rodríguez Guaján. 1997. *Gramática Kaqchikel*. Guatemala: Editorial Cholsamaj.

Harley, Heidi. 2017. "The 'Bundling' Hypothesis and the Disparate Functions of Little V." In *The Verbal Domain*, edited by Roberta D'alessandro, Irene Franco, and Angel J. Gallego. Oxford: Oxford University Press.

Henderson, Robert, and Jessica Coon. 2018. “Adverbs and Variability in Kaqchikel Agent Focus: A Reply to Erlewine (2016).” *Natural Language and Linguistic Theory* 36 (1): 149–73.

Kratzer, Angelika. 1996. “Severing the External Argument from Its Verb.” In *Phrase Structure and the Lexicon*, edited by Johan Rooryck and Laurie Zaring, 109–37. Studies in Natural Language and Linguistic Theory 33. Dordrecht: Springer.

Lasnik, Howard. 2001. “When Can You Save a Structure by Destroying It?” In *Proceedings of the North East Linguistic Society*, edited by U. Strauss, 2:301–20. 31. GLSA.

Lasnik, Howard. 2009. “Island Repair, Non-Repair and the Organization of the Grammar.” In *InterPhases: Phase-Theoretic Investigations of Linguistic Interfaces*, edited by Kleanthes Grohmann, 339–53. Oxford: Oxford University Press.

Legate, Julie Anne. 2014. *Voice and v: Lessons from Acehnese*. Cambrdige, MA: MIT Press.

Merchant, Jason. 2001. *The Syntax of Silence: Sluicing, Islands and the Theory of Ellipsis*. Oxford: Oxford University Press.

Merchant, Jason. 2013. “Voice and Ellipsis.” *Linguistic Inquiry* 44 (1): 77–108.

Patal Majzul, Filiberto, Lolmay Pedro García Matzar, and Carmelina Ixchel Espantzay Serech. 2000. *Rujunamaxik Ri Kaqchikel Chi’: Variación Dialectal En Kaqchikel*. Guatemala: Editorial Cholsamaj.

Pesetsky, David. 2017. “Exfoliation: Towards a Theory of Clause Size.” Handout for talk presented at Workshop on Quirks of Subject Extraction.

Pesetsky, David. 2019. *Exfoliation: Towards a derivational theory of clause size*. Ms, MIT. Version 1.6; draft of March 24th, 2019. Available at https://ling.auf.net/lingbuzz/004440.

Preminger, Omer. 2014. *Agreement and Its Failures*. Cambridge, MA: MIT Press.

Ranero, Rodrigo. 2019. *The eventive core is not special in ellipsis: A reply to Rudin (2018)*. Ms. University of Maryland, College Park.

Rosenbaum, Peter Steven. 1965. “The Grammar of English Predicate Complement Constructions.” PhD Dissertation, MIT.

Rosenbaum, Peter Steven. 1967. *The Grammar of English Predicate Complement Constructions*. Cambridge, MA: MIT Press.

Ross, John R. 1969a. “Guess Who?” In *Papers from the 5th Regional Meeting of the Chicago Linguistic Society*, edited by Robert Binnick, Alice Davison, Georgia Green, and Jerry Morgan, 252–86. Chicago: Chicago Linguistic Society.

Ross, John Robert. 1969. “A Proposed Rule of Tree Pruning.” In *Modern Studies in English*, edited by D. A. Reibel and S. A. Schane, 288–99. Prentice-Hall.

Saab, Andrés. 2019. “Ellipsis: Its Way from Syntax to Morphology.” Ms. CONICET-UBA. Version 2. Available at https://ling.auf.net/lingbuzz/004522