

Implicit objects in Kaqchikel, with a special emphasis on antipassives

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1 Introduction

The distribution of implicit arguments cross-linguistically: What is the status of implicit objects in the syntax and semantics of finite clauses? Are they syntactically and semantically projected, and how can we tell? If implicit objects are present in syntax, what is their category (*pro*, ϕ P, NP, np)?

Goal: Examine the distribution of implicit objects (ImpOs) and their licensing conditions in Kaqchikel (Mayan language family)

Constructions with implicit objects:

- Active transitive

(1) Ri ixoq-i' n-Ø-ki-këm *ImpO*.
DET woman-PL ICMP-ABS3SG-ERG3PL-weave
'The women weave.'

- Agent Focus

(2) Ja ri ixoq-i' y-e-kem-ø *ImpO*.
FOC DET woman-PL ICMP-ABS3PL-weave-AF
'THE WOMEN weave.'

- Antipassive

(3) Ri ixoq-i' y-e-kem-øn *ImpO*.
DET woman-PL ICMP-ASB3PL-weave-AP
'The women weave.'

Core questions:

1. Do the implicit objects in these constructions form a uniform class?
2. What can we learn about the structure of transitives, Agent Focus constructions, and antipassives based on these results?

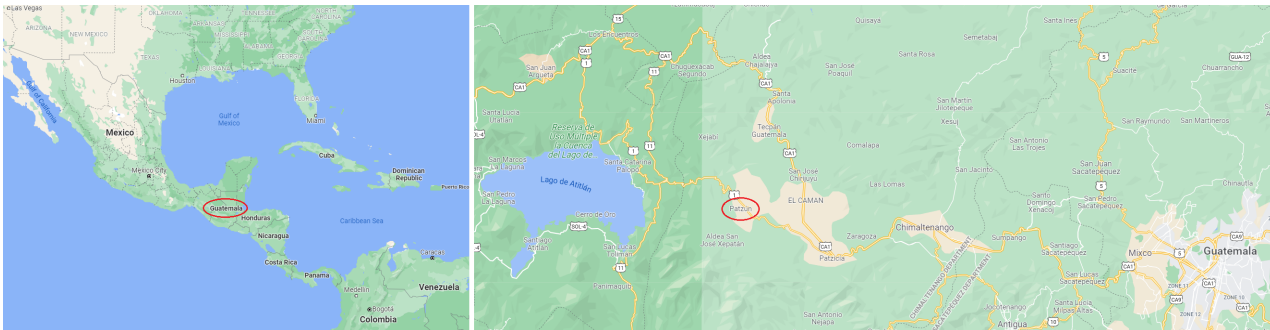
What we argue:

Implicit objects do not form a homogeneous class:

- Implicit objects in the active transitive and Agent Focus constructions exhibit the same semantic and syntactic behavior and are structurally present as *pro*'s
- Implicit objects in the antipassive are not projected syntactically or semantically

2 Background on Kaqchikel

Kaqchikel: part of the K'iche'an-Mamean (Eastern) branch of the Mayan language family. The data are from the variety spoken in Patzún (Chimaltenango), Guatemala, collected in 2023 during online elicitation sessions with three native speakers.



Relevant morphosyntactic properties of Kaqchikel:

- Ergative alignment, head-marking ((4)-(7))
- V1, VOS, and frequent SVO
- Finiteness marked via Tense-Aspect-Mood prefix (in/completive)
- Finite verb template: (1)CMP-ABS-ERG-ROOT(-CAUS-PASS/AP-TV)
- Unergative/unaccusative distinction: not much discussion, but see Burukina (2021) on Kaqchikel and Coon (2013) on Chol and Lyskawa and Ranero (2022) on Tz'utujil for some diagnostics. Kaqchikel appears to have true unergatives that cannot be analyzed as hidden transitives or unaccusatives.
- Frequent use of implicit arguments

- | | | | | | |
|-----|-----------------------------|-------|-------------------|--------------------------------|-------|
| (4) | (Röj) y-at-q-oyoj | (rat) | (5) | (Rat) y- <u>o</u> j-aw-oyoj | (röj) |
| | 1PL ICMP-ABS2SG-ERG1PL-call | 2SG | | 2SG ICMP-ABS1PL-ERG2SG-call | 1PL |
| | 'We call <u>you</u> .' | | | ' <u>You</u> call <u>us</u> .' | |
| (6) | y-oj-ok | (7) | y-at-ok | | |
| | ICMP-ABS1PL-enter | | ICMP-ABS2SG-enter | | |
| | ' <u>We</u> enter.' | | | ' <u>You</u> enter.' | |

(8) Agreement markers

| | 1SG | 2SG | 3SG | 1PL | 2PL | 3PL |
|--------------|----------|-----|------|-----|-----|------|
| ERG before C | nu/in/n | a | ru/u | qa | i | ki |
| ERG before V | w/inw/nw | aw | r | q | iw | k |
| ABS | in | at | Ø | oj | ix | e(') |

3 Kaqchikel antipassives and antipassive-like constructions

Disclaimer: A diverse array of terms, sometimes inconsistent in their nature; English and Spanish terms do not always line up. See García Matzar and Rodríguez Guaján (1997); Patal Majzul et al. (2000); McKenna Brown et al. (2006).

- Agent Focus (AF) = *antipasivo de incorporación* in descriptive grammars
Clemens (2013); Erlewine (2013, 2016); Coon et al. (2014); Preminger (2014); Henderson and Coon (2018); Ranero (2021) on Kaqchikel, Aissen (2017) on Tsotsil, and Stiebels (2006); Coon et al. (2021) on Agent Focus in Mayan in general
- Null antipassive (AP_{null}) = *antipasivo absoluto*
- Oblique antipassive (AP_{obl}) = *antipasivo de enfoque*
we will not discuss this type today

(9) Active transitives, AF, and AP_{null}

| | TV | AF | AP _{null} |
|-------------------|----------------------|-------------------------|--------------------|
| External argument | ERG DP | ABS DP | ABS DP |
| Internal argument | ABS DP/Ø | ABS DP/Ø | Ø |
| Exponent | -V _j or Ø | -o/u or -V _n | -V _n |

Note: AF is usually used when the Agent is focus-fronted. In AF only one ABS marker is present on the verb, cross-referencing the argument with the higher person value (omnivorous agreement, see Preminger 2014).

(10) Active transitive, overt object optional

Ri ixoq-i' n-Ø-ki-këm (ri ützt pot(-aj)).
DET woman-PL ICMP-ABS3SG-ERG3PL-weave DET good huipil-IPOSS

‘The women weave (the) good huipil/huipiles.’

(11) Agent Focus, overt object optional

a. ??Ri ixoq-i' y-e-kem-ø (ri ützt pot(-aj)).
DET woman-PL ICMP-ABS3PL-weave-AF DET good huipil-IPOSS

‘The women weave good huipil(es).’

b. Ja ri ixoq-i' y-e-kem-ø (ri ützt pot(-aj)).
FOC DET woman-PL ICMP-ABS3PL-weave-AF DET good huipil-IPOSS

‘THE WOMEN weave (good huipil(es))/It is the women that weave (good huipil(es)).’

- (12) Null antipassive, overt object impossible
- a. Ri ixoq-i' y-e-kem-**on** (*ri ützt pot(-aj)).
 DET woman-PL ICMP-ABS3PL-weave-AP DET good huipil-IPOSS
 'The women weave.'
- b. Ja ri ixoq-i' y-e-kem-**on**.
 FOC DET woman-PL ICMP-ABS3PL-weave-AP
 'THE WOMEN weave.'

What is the status of implicit objects in these constructions?

4 Implicit objects across the three constructions

Proposal:

- The implicit object in active transitive and in AF is a null pronominal.
- The implicit object in AP_{null} is not syntactically projected.

See Rizzi (1986); Bhatt and Pancheva (2006); Williams (2015) for an overview of syntactic tests for implicit arguments.

(13) Diagnostics of implicit objects (ImpOs)

| |
|---|
| Extra-linguistic reference Discourse reference to existential Paycheck pronouns Modification by depictives Control Binding |
|---|

4.1 Extra-linguistic reference and discourse reference

☞ The ImpO of **transitive** and **AF** constructions can receive a definite/specific/deictic reading.

The ImpO of **AP_{null}** cannot be understood as referring to a specific person/object and is normally interpreted existentially, thus comparable to existential non-specific indefinites.

(14) Extra-linguistic reference: I

- a. Ri ixoq-i' n-Ø-ki-këm. – TV
 DET woman-PL ICMP-ABS3SG-ERG3PL-weave
 'The women weave it/this.' – about some identifiable object
- b. Ja ri ixoq-i' y-e-kem-**o**. – AF
 FOC DET woman-PL ICMP-ABS3PL-weave-AP
 'THE WOMEN weave this.'
 – only with deixis, if there is an object in front of the interlocutors
- c. Ja ri ixoq-i' y-e-kem-**on**. – AP_{null}
 FOC DET woman-PL ICMP-ABS3PL-weave-AP
 'THE WOMEN weave (engage in weaving).' – in general

- (15) Extra-linguistic reference: II
- a. Ri xta Nikte' man n-Ø-u-kēm ta (ri potaj).
 DET CLF Nikte' NEG ICMP-ABS3SG-ERG3SG-weave NEG DET huipil
 N-Ø-u-kēm ri uqaj. – TV
 ICMP-ABS3SG-ERG3SG-weave DET skirt
 'Señora Nikte' is not weaving a huipil. She is weaving a skirt.'
- b. Ja ri xta Nikte' man n-Ø-kem-o (ri potaj).
 FOC DET CLF Nikte' NEG ICMP-ABS3SG-weave-AF DET huipil
 N-Ø-u-kēm ri uqaj. – AF
 ICMP-ABS3SG-ERG3SG-weave DET skirt
 'SEÑORA NIKTE' is not weaving it/a huipil. She is weaving a skirt.'
- c. Ri xta Nikte' man n-Ø-kem-on. #N-Ø-u-kēm ri
 DET CLF Nikte' NEG ICMP-ABS3SG-weave-AP ICMP-ABS3SG-ERG3SG-weave DET
 uqaj. – AP_{null}
 skirt
 'Señora Nikte is not weaving (anything). #She is weaving a skirt.'

- (16) Discourse reference
- a. Ri ati't x-Ø-u-k'ayi-j ri ru-pot ... – context
 DET grandma CMP-ABS3SG-ERG3SG-sell-DTV DET ERG3SG-huipil
 'Grandma sold her huipil.'
- b. La xtän x-Ø-u-säch. / Ja la xtän x-Ø-sach-o. – TV/AF
 DET girl CMP-ABS3SG-ERG3SG-lose FOC DET girl CMP-ABS3SG-lose-AF
 '(Then) the girl lost it (=grandma's huipil).'
- c. #La xtän x-Ø-sach-on. – AP_{null}
 DET girl CMP-ABS3SG-lose-AP
 'The girl lost (something).'

4.2 Paycheck pronouns

☞ The ImpO of **transitive** and **AF** constructions allows a bound variable reading and can function as a paycheck pronoun.

The ImpO of **AP_{null}** cannot be interpreted as a bound variable, and AP_{null} is infelicitous in a paycheck-pronoun context.

- (17) Bound variable reading: active transitive
- a. Chi ki-jujunal la ixoq-i' x-Ø-ki-t'is jun
 PREP ERG3PL-individually DET woman-PL CMP-ABS3SG-ERG3PL-embroider one
 pot. – context
 huipil
 'Each woman embroidered a huipil.'
- b. Ri ati't x-Ø-u-k'ayi-j (ri ru-pot), po la xtän
 DET grandma CMP-ABS3SG-ERG3SG-sell-DTV DET ERG3SG-huipil but DET girl
 x-Ø-u-säch (ri ru-pot).
 CMP-ABS3SG-ERG3SG-lose DET ERG3SG-huipil
 'The grandma sold her huipil, but the girl lost her (own) huipil.'

- (18) Bound variable reading: AF vs AP_{null}
- a. ... Ri ati't x-Ø-u-säch ri ru-pot? Manäq, ja la
 DET grandma CMP-ABS3SG-ERG3SG-lose DET ERG3SG-huipil no FOC DET
 xtän x-Ø-sach-**o**. – AF
 girl CMP-ABS3SG-lose-AF
 ‘Did the grandma lose her huipil? No, THE GIRL lost her (own) huipil.’
- b. ... Ri ati't x-Ø-u-k'ayi-j (ri ru-pot)? #po la
 DET grandma CMP-ABS3SG-ERG3SG-sell-DTV DET ERG3SG-huipil but DET
 xtän x-Ø-sach-**on**}. – AP_{null}
 girl CMP-ABS3SG-lose-AP
 ‘Did the grandma lose her huipil? #The girl suffered a loss (lost something)’.

4.3 Depictives

☞ The ImpO of **transitive** and **AF** constructions can license depictives.

The ImpO of **AP_{null}** cannot license depictives.

- (19) Depictives
- a. Ri xta Maria x-Ø-u-tz'ët ri ak'wal pa'äl.
 FOC CL Maria CMP-ABS3SG-ERG3SG-see DET boy standing
 ‘Maria saw the boy_i (as he was) standing_i.’
- b. Ri xta Maria x-Ø-u-tz'ët pa'äl. – TV
 FOC CL Maria CMP-ABS3SG-ERG3SG-see standing
 (i) ‘Maria saw someone_i as they were standing_i.’
 – allowed if we have been talking about someone specific before
 (ii) ‘Maria_i saw someone as she was standing_i.’
- c. Ja ri xta Maria x-Ø-tz'et-**o** pa'äl. – AF
 FOC DET CL Maria CMP-ABS3SG-see-AF standing
 ‘Maria_k saw/visited someone_i standing_{i/k}.’
- d. #Ja ri xta Maria x-Ø-tz'et-**on** pa'äl. – AP_{null}
 FOC DET CL Maria CMP-ABS3SG-see-AP standing
 Only: ‘Maria visited (someone) and she was on foot (standing).’

Two diagnostics are not applicable in Kaqchikel.

Control: there are no infinitives in Kaqchikel and no double object-like constructions.

Binding: reflexives and reciprocals are restricted to the direct object position; see Burukina (2019) on reflexive voice.

4.4 The status of implicit objects

(20) Implicit objects in Kaqchikel

| | TV | AF | AP _{null} |
|------------------------------------|----------------|----|--------------------|
| Extra-linguistic reference | ✓ | ✓ | ✗ |
| Discourse reference to existential | ✓ | ✓ | ✗ |
| Paycheck pronouns | ✓ | ✓ | ✗ |
| Modification by depictives | ✓ | ✓ | ✗ |
| Control | not applicable | | |
| Binding | not applicable | | |

- The implicit object in active transitives and Agent Focus is a null pronominal.
- The implicit object in AP_{null} is not syntactically projected.

4.5 Implicit objects in the antipassive

Assuming that the object is not syntactically projected in the antipassive, several analytical options arise:

- ✗ AP implicit objects are syntactically present but deficient ϕ Ps
 Problem: ϕ Ps can be used as deictic or anaphoric and ϕ Ps are expected to exhibit featural specification (Déchaine and Wiltschko 2002; Landau 2010; Šereikaite 2022) ← this doesn't match the empirical data
- ✗ AP implicit objects are syntactically present but small NP/Ns
 Problem: AP with an overt bare NP object is not accepted, except for some combinations that can be considered set phrases, which can be analyzed as complex predicates (21)
- ✓ AP implicit objects are not projected at all.

(21) AP with a bare NP object as a set phrase

- a. Y-oj-pon-on (wäy).
 ICMP-ABS1PL-bake-AP tortilla
 'We make tortillas.'
- b. *Y-e-tz'et-on tz'i'.
 ICMP-ABS3PL-see-AP dog
 Intended: 'They see dogs.'

If AP implicit objects are not projected in syntax, are they present in semantics?

Analytical options:

1. The object argument **is** part of the theta-grid:
 - ✗ The null object is **unlinked**
 Problem: how is the strictly-existential reading of the null object derived?

- ✗ The null object is **existentially closed** by a functional head (vAP/VoiceAP) in syntax (e.g., Coon 2019 for Chuj; cf. also Bruening 2013 on passive)
Problem: the existential closure operation would need to be optional, an undesirable outcome for a syntactic derivation

2. The object argument is **not** part of the theta-grid

- ✗ AP and TV/AF verbs are **lexical doublets** (on a *projectionist* approach)
Problem: AP is highly productive, possible with all transitive predicates
- ✓ The object reading is **an optional entailment** of the predicate (on a *separationist* approach, e.g., Williams 2015; Pietroski 2018)

- AP_{null} in Kaqchikel does not include an object in its structure.
- The internal argument thematic relation is an entailment of the AP predicate.

5 Deriving Kaqchikel antipassives

Proposal:

- Antipassive verbs are a subset of unergatives
- The demotion of an internal argument is not a defining property of the antipassive derivation

Aldridge (2012: 195) also proposes “to connect antipassive to syntactic intransitivity, rather than forcing it to be analyzed as a derived construction in which the internal argument has been demoted to adjunct status”.

5.1 Antipassives as unergatives

☞ Evidence:

- Unaccusatives do not antipassivize (unexpected if antipassivization “demotes” an internal argument) (22)
- AP and unergatives can have the same exponent (23)

(22) No antipassivized unaccusatives

- a. x-e/Ø-kos / *x-Ø-kos-**on**
 CMP-ABS3PL/ABS3SG-get.tired CMP(-ABS3SG)-get.tired-AP
- b. x-e/Ø-käm / *x-Ø-kam-**on**
 CMP-ABS3PL/ABS3SG-die CMP(-ABS3SG)-die-AP

(23) Shared exponent -**Vn**

b'iyin / atin / muxan / tzopin – inherent unergatives
 walk bathe swim jump

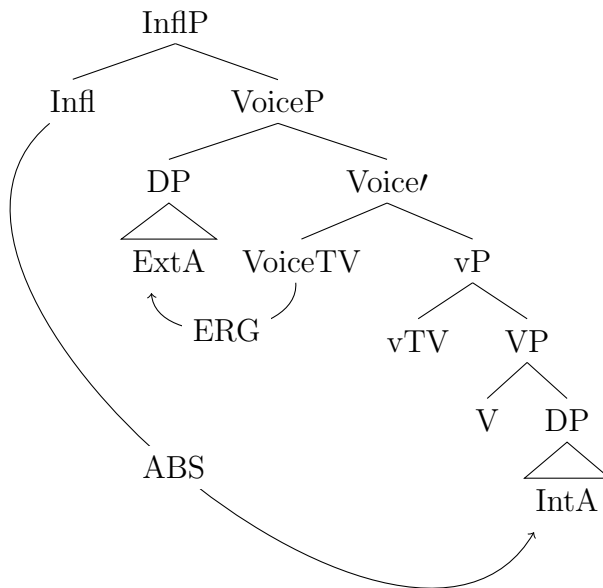
5.2 Derivations

5.2.1 Background assumptions

Background assumptions regarding Kaqchikel syntax:

- split vP-VoiceP (Imanishi 2020; Burukina 2021; Ranero 2021; see also Harley 2013, 2017)
- Voice assigns ERG
- Infl uniformly assigns ABS (Kaqchikel is a high-absolutive Mayan language, Coon et al. 2014)

(24) active transitives



5.2.2 Voice and v: an inventory

Main points:

1. Strict division of labor between v^0 and Voice^0 such that v^0 always introduces an external argument (Agent/Actor), while Voice^0 manipulates a preexisting thematic relation.
2. No VoiceP in AP and AF

(25) Inventory of Voice and v (see Appendix for complete list)

| | Syntax | Semantics | Spell-out |
|-----------|----------------------|------------------|----------------|
| vTV | Select: V | Agent(x) | \emptyset |
| vITV | Select: V, N | Actor(x) | $-Vn$ |
| vAF | Select: V, N | Actor(x) + [ABS] | $-o/u/Vn$ |
| vUnacc | Select: V | - | \emptyset |
| VoiceTV | Select: V, N + [ERG] | - | $-j/\emptyset$ |
| VoicePass | Select: V | \exists ExtA | $-x/\emptyset$ |

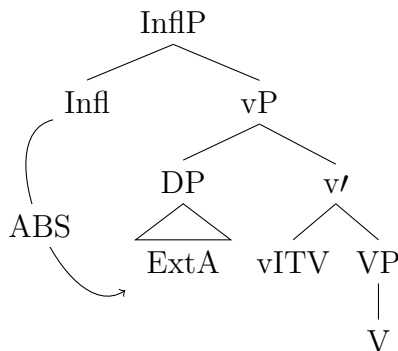
5.2.3 Unergatives, including antipassives and AF

Main points:

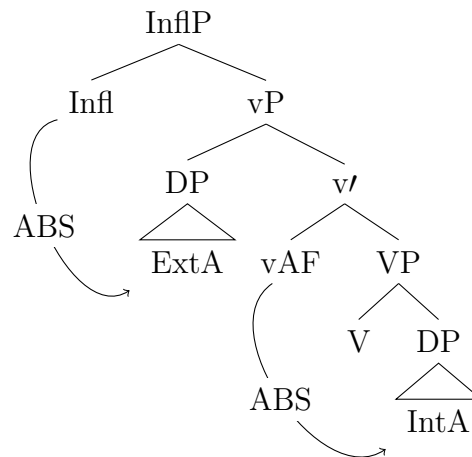
The external argument in the antipassive/unergative/AF and in the transitives is merged in different positions: spec,vP and spec,VoiceP respectively

(see Appendix for discussion and evidence; cf. Massam 2009, 2020; Tollan 2018).

(26) antipassives and unergatives



(27) Agent Focus



Results:

Implicit objects may emerge through several pathways within a given language.

- AF and TV can Case-license the internal argument → The internal argument can be an overt DP or a silent *pro*. The ImpOs in the two constructions show the same syntactic and semantic behavior.
- In AP the internal argument cannot be Case-licensed:
 - ! vITV projects an external argument → vP is fully saturated → VoiceP is unnecessary.
 - ! no VoiceP → no ergative case can be assigned → the external argument is licensed by Infl as the DP closest to it → the internal argument is left unlicensed → The internal argument is **entailed** but **not projected**.

6 Conclusions

Back to the core questions:

1. Do the implicit objects in Kaqchikel transitive, Agent Focus, and antipassive constructions form a uniform class?
 - ! **No.** There are two types of implicit objects in Kaqchikel: null pronominals, i.e., full DPs, licensed in the active transitive and AF constructions, and semantically entailed objects in the antipassive, which are not projected syntactically
2. What do we learn about the structure of transitives, Agent Focus, and antipassives based on these results?
 - ! These constructions **differ in the size of the verb phrase** and licensing properties of the v head
 - ! These results support the conjecture by Wood and Tyler (to appear): "While antipassive is a voice phenomenon in the typological sense, it is... very much an open question whether antipassive alternations involve alternations in the Voice head in any meaningful way."

(28) Comparing TV, AF and AP

| | active transitive | Agent Focus | antipassive |
|---------------------|-------------------|-----------------|-----------------|
| Voice head | projected | not projected | not projected |
| Type of v | vTV | vAF | vITV |
| Properties of v | Agent role | Actor role & DP | Actor role & DP |
| ExtA merge position | spec, VoiceP | spec, vP | spec, vP |
| IntA status | DP/ <i>pro</i> | DP/ <i>pro</i> | entailed only |

Outstanding questions:

1. Can the analysis of Kaqchikel antipassives be extended cross-linguistically?

Our proposal for Kaqchikel null antipassive: the internal argument is not projected in the syntax. Does the same intransitive structure underlie oblique antipassives or antipassive with a (pseudo-incorporated) NP object? (These are not productive in Patzún Kaqchikel, but are attested in other Mayan languages and in antipassives cross-linguistically.)

2. What is the full inventory of implicit objects cross-linguistically, and does this inventory correlate with the availability of antipassives?

As other possible instances of ImpOs, consider lexically-restricted conatives and transitive/intransitive alternation in English (e.g., *eat*); topic-drop licensed by a null operator at the clausal periphery (Dutch; German; null objects in Chinese (Huang 1995)).

3. What is the connection between antipassivization and Voice/v splitting?

Current generalization that follows from our proposal: antipassives are possible (not necessary) in languages with split Voice and v. Languages with bundled Voice and v appear to lack antipassives (e.g., Basque). How robust is this correlation and what other independent properties can predict the antipassives in a language?

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A Existing approaches to antipassive

Main analytical approaches to antipassives:

1. AP directly manipulates the **theta-grid** of the predicate
 e.g. Baker (1988): the AP morpheme absorbs both the ACC/ABS case and the thematic role that normally license the internal argument DP
 → this approach misses parallels between antipassives and unergatives; Baker’s approach is further challenged by the examples of AP with a bare NP complement (21)
2. AP manipulates **projections** in the verbal domain:
 - (a) AP **allows** object licensing but its structural locus is not the same as in active TV clauses
 → similar to our analysis of AF
 see Alexiadou (1999); Johns (2001); Schmidt (2003)
 - (b) AP **constrains** the licensing properties of v
 → similar to our analysis of AP_{null}
 see Coon (2019); Aissen (2011); Aldridge (2012)

However, these approaches typically assume that the antipassive v is Case- or feature-deficient as compared to vTV (needed to prevent the generation of an internal argument). For us, the restricted licensing in AP does not constitute its defining property, but is a **side effect** of the antipassive/unergative v.

3. **Our proposal:** AP has an unergative vITV, which indirectly causes the absence of an internal argument

! vITV projects an external argument \rightarrow vP is fully saturated \rightarrow VoiceP is unnecessary.

! no VoiceP \rightarrow no ergative case can be assigned \rightarrow the external argument is licensed by Infl as the DP closest to it \rightarrow the internal argument is left unlicensed and is not projected.

B Splitting vP and VoiceP

B.1 The inventory of v and Voice heads

(29) Inventory of Voice and v

| | Syntax | Semantics | Spell-out |
|-----------|-------------------------|------------------|-----------------|
| vTV | Select: V | Agent(x) | \emptyset |
| vCaus | Select: V | Causer(x) | -isa |
| vITV | Select: V, N | Actor(x) | -Vn |
| vAF | Select: V, N | Actor(x) + [ABS] | -o/u/Vn |
| vUnacc | Select: V | - | \emptyset |
| VoiceTV | Select: V, N + [ERG] | - | -j/ \emptyset |
| VoicePass | Select: V | \exists ExtA | -x/ \emptyset |
| VoiceRefl | Select: V, N + [ERG] | ExtA = IntA | -i' |
| Appl | Select: V, N + [ABS] | Location(x) | -isa |
| VoiceAppl | Select: Appl, N + [ERG] | - | \emptyset |

See Burukina (2019) on VoiceRefl. See below on Appl and VoiceAppl, attested in some idiolects of Kaqchikel.

Main points:

1. Strict division of labor between v^0 and Voice^0 such that v^0 always introduces an external argument relation (Agent/Actor/Causer), while Voice^0 manipulates a preexisting thematic relation.
2. No VoiceP in AP and AF
3. The external argument in the antipassive/unergative/AF is merged lower, in spec,vP. The external argument in the transitives/causatives is merged higher, in spec,VoiceP; cf. Massam 2009, 2020; Tollan 2018).

B.2 Empirical support for the proposed analysis

Our proposal: in unergatives and unaccusatives, the vP is fully saturated; the transitive vP has an unbound external argument relation. Voice manipulates the unsaturated external argument relation and is only added to the structure when needed.

Empirical facts in support of this proposal:

- ☞ The subjects of unergatives (excluding covert transitives), antipassives, and Agent Focus predicates are never ergative.
← VoiceTV is not projected over a ‘complete’ saturated vP.
- ☞ Unergatives, antipassives, and Agent Focus predicates are incompatible with reflexives and passivization (30).
← VoiceRefl/VoicePass is not projected over a ‘complete’ saturated vP. A vP cannot be merged on top of VoiceRefl/Pass.

Note: seemingly passivized antipassives are attested in Classical Nahuatl (Launey 1979); see also passivized unergatives in German, Dutch, Russian, a.o. We suggest that such forms could be analyzed as idiosyncratic lexicalizations (which may explain their rare occurrence and lack of productivity) or impersonal constructions (see Legate et al. 2020, contra Dikmen et al. 2022).

- (30)
- a. X-Ø-pon-ox.
CMP-ABS3SG-bake-PASS
 - b. *X-Ø-pon-ox-on. / *X-e-pon-ox-on. /
CMP-ABS3SG-bake-PASS-AP CMP-ABS3PL-bake-PASS-AP
*X-Ø-pon-on-ox. / *X-e-pon-on-ox.
CMP-ABS3SG-bake-AP-PASS CMP-ABS3PL-bake-AP-PASS
 - c. X-Ø-ch’aj-ox.
CMP-ABS3SG-wash-PASS
 - d. *X-Ø-ch’aj-ox-on. / *X-e-ch’aj-ox-on. /
CMP-ABS3SG-wash-PASS-AP CMP-ABS3PL-wash-PASS-AP
*X-Ø-ch’aj-on-ox. / *X-e-ch’aj-on-ox.
CMP-ABS3SG-wash-AP-PASS CMP-ABS3PL-wash-AP-PASS

- ☞ Morphological causativization is restricted to unergative and unaccusative predicates (31). Transitive and passive predicates cannot be causativized (32).
← vCaus in Kaqchikel can take another vP as its complement (vP recursion) but it cannot be added on top of VoiceP.

- (31) Causativized intransitives ✓
- a. X-e-q-atin-isa-j ri umul-a’.
CMP-ABS3PL-ERG1PL-bathe-CAUS-DTV DET rabbit-PL
‘We washed the rabbits.’
 - b. X-e-qa-war-sa-j ri ak’wal-a’.
CMP-ABS3PL-ERG1PL-sleep-CAUS-DTV DET child-PL
‘We made the children sleep.’
 - c. X-Ø-qa-kam-isa-j ri äk’.
CMP-ABS3SG-ERG1PL-die-CAUS-DTV DET rooster
‘We killed the rooster.’

- (32) Causativized transitives ✕
- a. *X-Ø-qa-tij-(i)sa-j ri Gloria.
CMP-ABS3SG-ERG1PL-eat-TV-CAUS-DTV DET Gloria
Intended: ‘We made Gloria eat it/something.’

- b. *X-Ø-qa-k'ayi-x-(i)sa-j ri äk'.
 CMP-ABS3SG-ERG1PL-sell-PASS-CAUS-DTV DET rooster
 Intended: 'We made the rooster be sold.' or 'We had the rooster sold.'

☞ Causatives can be reflexivized and passivized (33).

← Just as vTV, vCaus is compatible with VoiceTV/VoiceRefl/VoicePass

(33) Passivized causatives ✓

- X-Ø-kam-isa-x ri äk'.
 CMP-ABS3SG-die-CAUS-PASS DET rooster

'The rooster was killed.'

☞ Some idiolects allow **vacuous causativization** restricted to intransitives: apparent morphological causativization without the causative semantics (35).

← The 'causative' suffix spells out a high applicative head (Appl) that introduces a Location argument; this head selects only a saturated vP as its complement.

(34) Intransitive and transitive baseline

- a. Ri yawa' x-Ø-chul-un.
 DET patient CMP-ABS3SG-urinate-AP
 'The patient urinated.'
- b. La yawa' x-Ø-u-chul-uj kik'.
 DET patient CMP-ABS3SG-ERG3SG-urinate-DTV blood
 (i) 'The patient urinated blood.' (ii) 'The patient urinated over some blood.'
- c. La yawa' x-Ø-u-chul-uj ri ch'akät.
 DET patient CMP-ABS3SG-ERG3SG-urinate-DTV DET chair
 'The patient urinated over the chair.'

(35) Vacuous causativization

- a. La yawa' x-Ø-u-chul-un-isa-j la chaqät.
 DET patient CMP-ABS3SG-ERG3SG-urinate-AP-CAUS-DTV DET chair
 'The patient urinated all over the chair.'
- b. La yawa' x-Ø-u-chul-un-isa-j kik'.
 DET patient ICMP-ABS3SG-ERG3SG-urinate-AP-CAUS-DTV blood
 'The patient urinated all over some blood.'
- Not available: 'The patient urinated blood.'

A special VoiceAppl is projected on top of the ApplP, to avoid a categorial mismatch between the latter and the higher functional projections, which select a complement of the category V.

(36) Applicatives in comparison to causatives

| | Syntax | Semantics | Spell-out |
|-----------|-------------------------|-------------|-----------|
| Appl | Select: V, N + [ABS] | Location(x) | -isa |
| VoiceAppl | Select: Appl, N + [ERG] | - | Ø |
| vCaus | Select: V | Causer(x) | -isa |
| VoiceTV | Select: V, N + [ERG] | - | -j/Ø |

Crucially, vacuous causativization is only possible with intransitive, not with transitive, forms: **chul-isa-j* ‘urinate-APPL/CAUS-DTV’.

← **Expected** under our approach: adding Appl on top of a transitive vP with an unbound external-argument variable leads to uninterpretability; and adding Appl on top of a transitive VoiceP is impossible because of Appl’s selectional properties.

← **Unexpected** under an analysis whereby all external arguments are projected in the same position (spec,vP): a transitive vP is no different from an intransitive one in being fully saturated. It is then unclear why transitive vP should not be able to combine with Appl.

B.3 Theoretical considerations

Relativized external-argument positions lead to a more **uniform** explanation of the selectional properties of Voice heads; both VoiceTV and VoicePass combine with the **same** transitive vP.

On the alternative analysis whereby the external argument is always generated in spec,vP, several problems arise:

1. Overgeneration: Nothing prevents the transitive VoiceP (with [ERG]) from being added on top of an intransitive vP.
2. The incompleteness problem: VoiceTV must take a fully saturated vP as its complement, but VoicePass can only select an “incomplete” unsaturated vP.
→ Can an unergative vP be incomplete too? If so, why do unergatives in Kaqchikel (and elsewhere) generally resist passivization?
3. The look-ahead problem: The transitive vP is already fully saturated and, in principle, does not require a VoiceP.