



On the inventory of v and Voice

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In a nutshell

The structure of thematic domain:

- 1 What verb-phrase positions are available for the introduction of the ExtArg?
- 2 What is the inventory of v and Voice heads?
What are their functions and selectional properties?

Data: verbal predication in Kaqchikel

(Mayan; Patzún variety, Guatemala; ergative, V1/SVO, head-marking, pro-drop)

◆ **Main result:** a comprehensive inventory of v and Voice.

- Split vP-VoiceP approach, with **principally** distinct functions of vP and VoiceP
Cf. Harley 2013, 2017; Ranero 2021 on Kaqchikel.
- Two base positions for external arguments: spec,vP and spec,VoiceP
Cf. Massam 2009, Polinsky 2016, Tollan 2018, Tollan & Massam 2022.

◆ **v vs. Voice:**

- Only **v** can introduce a new thematic relation
- **Voice** never introduces a new thematic relation; it only manipulates the pre-existing argument structure (especially the external argument)
- VoiceP is an optional layer that is only added to the structure when needed
→ unergative and unaccusative vPs are Voice-less

Evidence: (1) passivization patterns, (2) ergative subjects, (3) causatives

Passivization

* **Empirical observation:** Only active transitive predicates can be passivized.

◆ **Analysis:** VoiceP_{pass} manipulates a pre-existing ExtArg relation.

It is only compatible with a 'defective' transitive/causative vP, but not with a fully saturated intransitive vP. See Legate et al. (2020) on passives of intransitives as impersonals.

(1) Passivized transitives & causatives ✓

- a. X-Ø-k'ayi-x / X-Ø-kam-isa-x ri äk'.
CMP-ABS3SG-sell-PAS CMP-ABS3SG-die-CAUS-PAS DET rooster
'The rooster was sold/killed.'
- b. [VoiceP VoiceP_{pass} [vP v_{TV}/v_{CAUS} [vP V DP]]]

(2) Passivized intransitives ✗

- a. *X-Ø-kan-un-ux. / *X-e-kan-un-ux.
CMP-ABS3SG-search-AP-PAS CMP-ABS3PL-search-AP-PAS
Intended: 'There was searching.'
- b. *X-Ø-tzaq-ox. / *X-Ø-muxan-ox.
CMP-ABS3SG-fall-PAS CMP-ABS3SG-swim-PAS
Intended: 'There was falling/swimming.'

Alternative analyses:

A1 – a single vP/VoiceP. **A2** – split vP-VoiceP but ExtArg is always in spec,vP

Problems:

- **A1** stipulating an uninformative [\pm transitive] feature
- **A2** non-uniformity of Voice heads: Voice_{TV} would take a saturated vP-complement but Voice_{pass} – an 'incomplete' one (cf. Bruening 2013)
- **A2** the look-ahead problem – no need for VoiceP if a transitive vP is saturated

Selected references: Burukina, I. & M. Polinsky. 2023. Antipassives and verbal projections. Ms. Legate, J. A., F. Akkuş, M. Šereikaitė & D. Ringe. 2020. On passives of passives. *Language* 96(4): 771–818. Massam, D. 2009. The structure of (un)ergatives. *Proceedings of AFLA 16*, 125–135. Ranero, R. 2021. Identity conditions on ellipsis. Ph.D. diss., UMD. Tollan, R. 2018. Unergatives are different: Two types of transitivity in Samoan. *Glossa* 3(1): 1–41.

Proposal: Inventory of v and Voice

	v _{TV}	v _{ITV}	v _{Unacc}	v _{CAUS}	Voice _{TV}	Voice _{pass}	Voice _{Ref}
Syn	S: V	S: V, N	S: V	S: V	S: V, N + [erg]	S: V	S: V, N + [erg]
Sem	Agent(x)	Agent(x)	–	Causer(x)	–	\exists ExtA	ExtA(x)=IntA(x)
Morph	Ø	-Vn	Ø	-isa	Ø	-x	-i'

Table 1: Inventory of v and Voice

Types of v:

- **v_{TV}** and **v_{CAUS}** introduce an Agent/Causer relation but do not project a syntactic argument
- **v_{ITV}** introduces an Agent relation and projects an ExtArg. It is also used in antipassives (Burukina & Polinsky 2023)
- **v_{Unacc}** can be considered a general verbalizer

Types of Voice:

- **Voice_{TV}** projects a DP to match an existing Agent relation
- **Voice_{pass}** existentially closes the external argument
- **Voice_{Ref}** projects an Agent DP identifying it with an existing internal argument variable (Ahn 2015, Burukina 2019)

See Burukina (2021), Levin et al. (2021), Lyskawa et al. (2021) on unacc/unerg distinction.

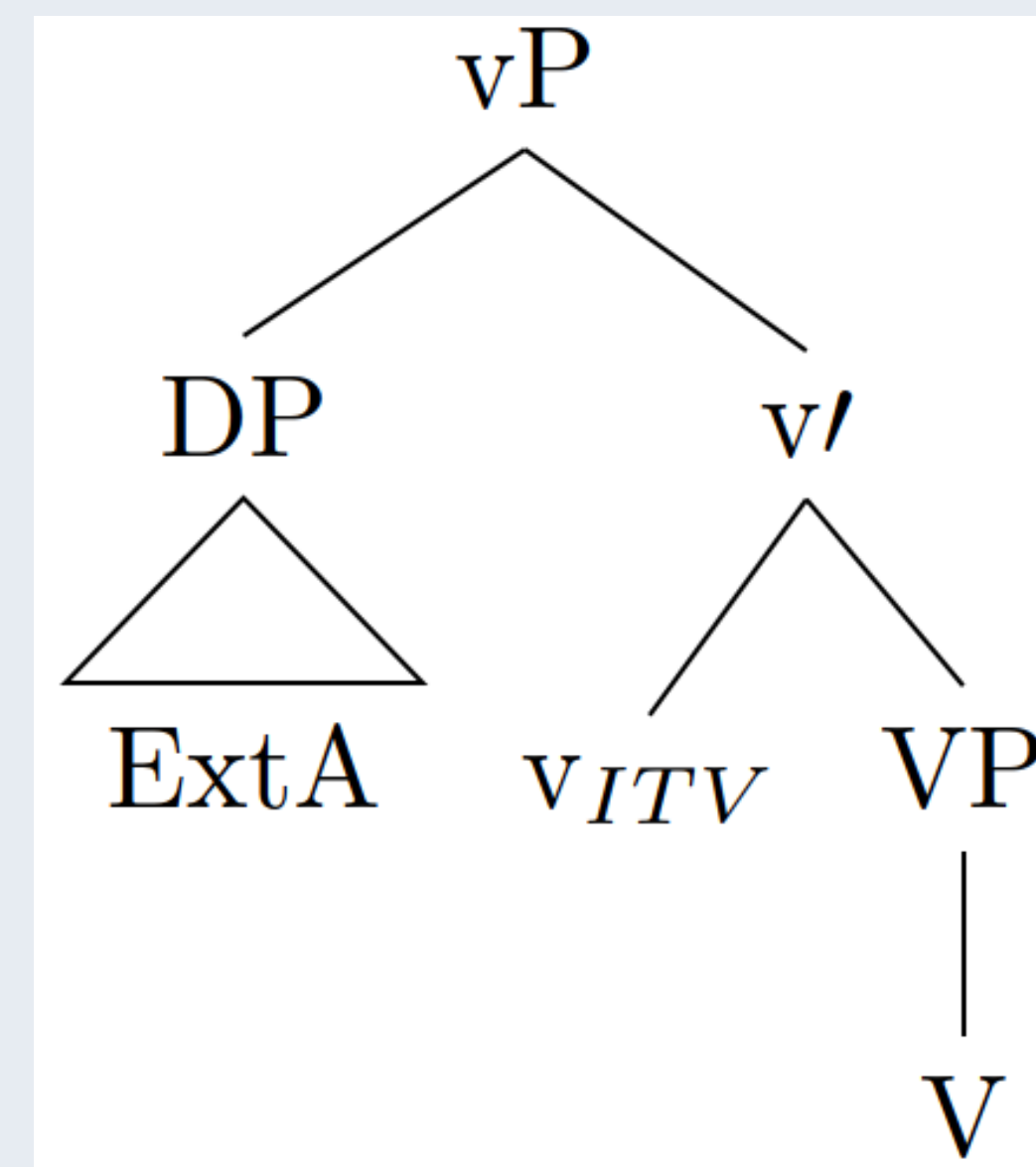


Figure 1: Unergatives (including antipassives)

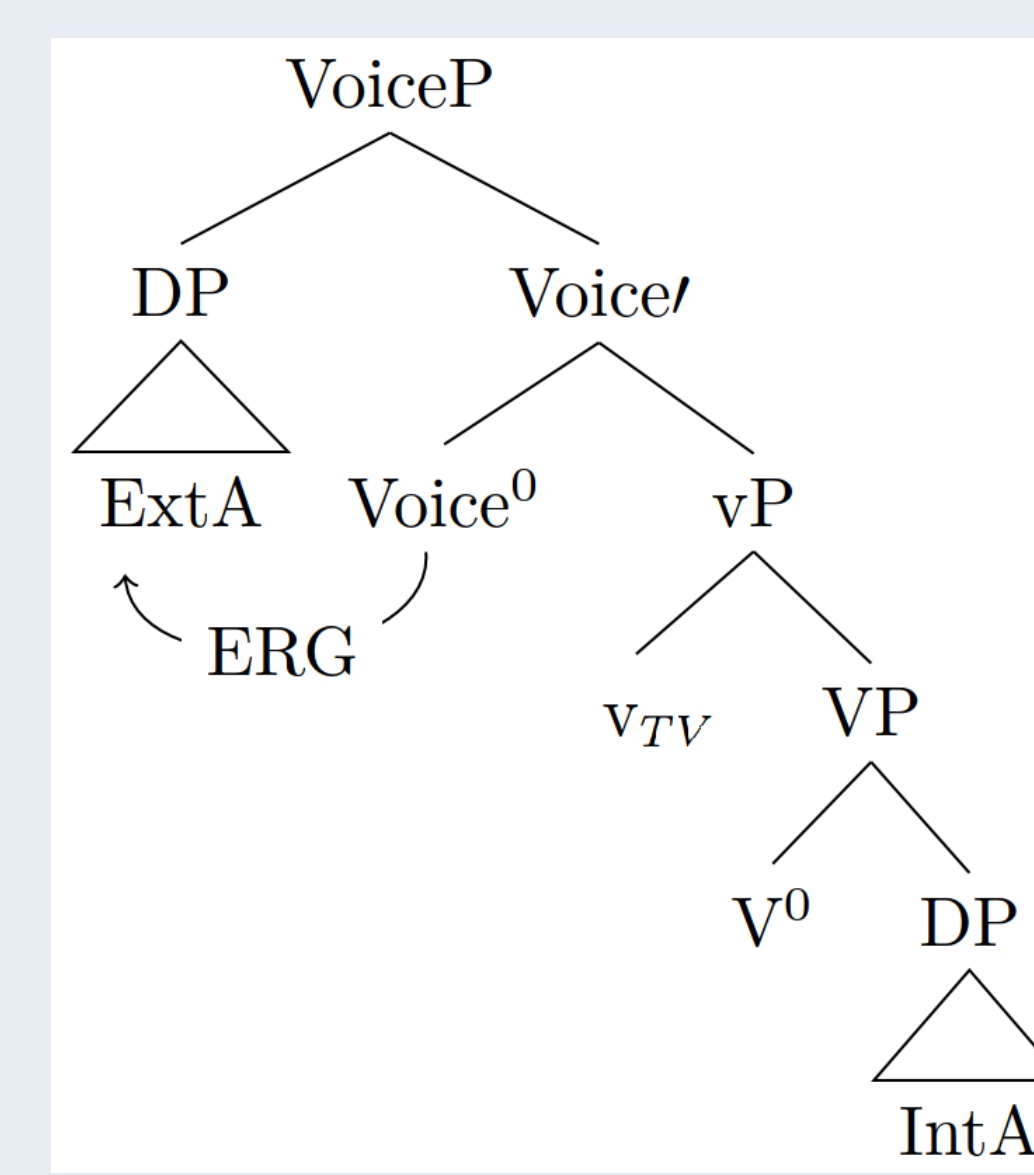


Figure 2: Active transitives

- (3) a. Y-e-qa-tz'ët / Y-e-qa-k'ayi-j ri oxi' tz'i'.
ICMP-ABS3PL-ERG1PL-see ICMP-ABS3PL-ERG1PL-sell-TV DET three dog
'We see/are selling the three dogs.'
- b. Rije' y-e-tzaq / y-e-tzopin / y-e-kem-on.
they ICMP-ABS3PL-fall ICMP-ABS3PL-jump ICMP-ABS3PL-weave-AP
'They fall/jump/weave.'

Ergative subjects

* **Empirical observation:** Only transitive, causative and reflexive predicates are compatible with ERG. No ergative subjects with intransitives in Kaqchikel and beyond.

◆ **Analysis:** All and only Voices that project an ExtArg are equipped with [erg] feature (Voice_{TV}, Voice_{Ref}). These Voices are incompatible with a fully saturated intransitive vP. ERG subjects with unergatives cross-linguistically: covert transitives, cf. Hale & Keyser (1993).

Problems with the alternative analyses (A1/A2):

treating ERG as an inherent case where only some v/Voice can assign ERG to an ExtArg.

Causativization

* **Empirical observation:** In Kaqchikel, only unergatives and unaccusatives can combine with a morphological causative.

◆ **Analysis:** vP recursion is allowed → v_{CAUS} can take a saturated (!) vP as its complement. No vP can be added on top of a VoiceP.

- (4) Causativized intransitives ✓
 - a. X-e-q-atin/kam-isa-j ri umul-a'.
CMP-ABS3PL-ERG1PL-bathe/die-CAUS-TV DET rabbit-PL
'We washed/killed the rabbits.'
 - b. [VoiceP DP [Voice' Voice_{TV} [vP v_{CAUS} [vP ... v_{Unacc}/v_{ITV} ...]]]]
- (5) Causativized transitives and passives ✗
 - a. *X-Ø-qa-tij-(i)sa-j ri Gloria.
CMP-ABS3SG-ERG1PL-eat-TV-CAUS-TV 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-PAS-CAUS-TV DET rooster
Intended: 'We made the rooster be sold.' or 'We had the rooster sold.'

Problems with analyses A1/A2: an uninformative [\pm transitive] feature

Is there v/Voice_{Appl}? Vacuous causativization

* **Novel empirical observation:** Antipassives allow vacuous (i.e. causer-less) morphological causativization.

◆ **Analysis:** -isa here spells out a high applicative head (see Pytkänen 2008):

- Appl = S: V, N; introduces a Location argument, both in semantics and in syntax
- Voice_{Appl} = S: Appl, N + [erg]. It requires movement of the ExtArg into spec,VoiceP

- (6) a. La yawa' x-Ø-u-chul-uj kik'.
DET patient CMP-ABS3SG-ERG3SG-urinate-TV blood
(i) 'The patient urinated blood.' (ii) 'The patient urinated over some blood.'
- b. La yawa' x-Ø-chul-un (*ri kik').
DET patient CMP-ABS3SG-urinate-AP DET blood
'The patient urinated.'
- (7) a. La yawa' x-Ø-u-chul-un-isa-j ri kik'.
DET patient CMP-ABS3SG-ERG3SG-urinate-AP-CAUS-TV DET blood
Only: 'The patient urinated **over** some blood.'
- b. [VoiceP Voice_{Appl} [DP_{Loc} [Appl' Appl [vP ExtArg [v' v_{ITV} [vP V]]]]]]

◆ Appl should be restricted to intransitives (incompatible with a transitive vP/VoiceP) → **correct**, *chul-isa-j 'urinate-TV-APPL-TV' is ungrammatical.

Implications

- A **uniform** description of Voices: they all combine with the same transitive vP
- A **uniform** description of vPs: they can introduce a thematic relation
- No randomly "incomplete" unsaturated vP, no uninformative [\pm transitive] feature

Open question: Antipassives are predicted only to be possible 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?

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