Two ways to nominalize in Kaqchikel

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1 Overview

Data: **Deverbal nominalization** patterns in the Patzún variety of Kaqchikel (Mayan, Guatemala; ergative, VOS/VSO, pro-drop).

Goals:

1. Examine the patterns of deverbal nominalization in Kaqchikel, focusing on result and event nominals
   Contribution: The paper contributes to the discussion of nominalization in Mayan languages, continuing the line of research in Coon (2013), Imanishi (2020), Coon and Royer (2020), and Burukina (2021), i.a.
2. Compare them to nominalizations in better-studied languages to expand the theory.

☞ Result I:
Where in English the same morpheme can be used to create result and event nominals, Kaqchikel disambiguates between the two uses:

- the nominalizer -on existentially closes the event argument to create result nominals,
  -*on* is used in Patzún Kaqchikel, -*om* in other varieties, Patal Majzul et al. 2000
- the nominalizer -oy/j existentially closes the internal argument to create event nominals.

☞ Result II:
Both nominalizers select either a root projection or a larger vP.
Regarding the nominalizer -on: In both cases it has the same function – to close the event argument – but the result nominals can be interpreted either as objects or as agents.

☞ Result III:
In Kaqchikel, two nominalizers can be combined to create an agentive nominal.

2 Theoretical background

- Distributed Morphology framework,
- Grimshaw's (1990) Result vs (complex/simple) Event nominals distinction
- Moulton's (2014) analysis for nominalization in English whereby a nominalizer head:
  - selects either an Aspect/Event phrase or a root projection as its complement,
  - existentially closes either the internal argument or the event argument within it, which results in an event/result nominal, respectively.

In English and other well-documented Indo-European languages, the same nominalizer often performs both functions: *assign**ment** of problems in an hour* (event) vs *the assign**ment** is on the table* (result).

3 Deverbal nominalization

3.1 Morphosyntax

The nominalizer -on typically creates object result nouns out of transitive stems.

(1) Result nominals used as arguments

a. X-Ø-qa-tz'ët [ri oxi' **ru-loq'-on** ri Maria].
CMP-ABS3SG-ERG1PL-see DET three ERG3SG-buy-NMZ DET Maria
(i) 'We saw the three things that Maria had bought.' (Poss = Agent)
(ii) 'We saw three Maria's things that someone had bought.' (Poss ≠ Agent)

b. X-Ø-u-k'waj el [r-onojel **ru-ch'ajo'-n** ri ixoq].
CMP-ABS3SG-ERG3SG-carry DIR ERG3SG-all ERG3SG-wash-NMZ DET woman
(i) 'The woman carried all the things that she had washed.' (Poss = Agent)
(ii) 'The woman carried all her things washed.' (Poss ≠ Agent)

The nominalizer -oj creates event nouns out of transitive stems:

(2) Event nominals used as arguments

a. N-Ø-qa-rayi-j [ri **loq'-oj** pa ka'i' ramaj].
ICMP-ABS3SG-ERG1PL-desire-TV DET buy-NMZ PREP two time
'We want to buy something in two hours.'

b. N-Ø-qa-ray-i-j [ri **ru-loq'-oj** ri Maria pa ka'i' ramaj].
ICMP-ABS3SG-ERG1PL-desire-TV DET ERG3SG-buy-NMZ DET Maria PREP two time
'We want Maria to buy something in two hours.' (Poss = Agent)

**pa k'ai' ramaj 'in two hours'/'at two o'clock'*

Table 1. Result vs event nominals in Kaqchikel

	event reading	**Ext Argument**	**Int Arg**	**Temporal modifiers**	**Count nouns**
-on Result	×	= Possessor	*	×	✔
-oj Event	✔	= Possessor	×	✔	×

Compare to deverbal nominalization in English (Grimshaw 1990; Borer 2003; Moulton 2014):

Table 2. Result vs simple event vs complex event nominals in English

	event reading	Ext Argument	Int Arg	*frequent, constant*	aktionsart	Count nouns
Result	×	×	*	×	×	✔
Simple Event	✔	×	×	✔	×	×
Complex Event	✔	= Possessor	✔	✔	✔	×

(3) a. The new construct**ion** he built was tall. – *result*
b. The constant construct**ion** next door will bother me. – *simple*
c. His deliberate construct**ion** of the building took forever. – *complex*

→ **-ion** in simple events selects a root projection and existentially closes off the internal argument; **-ion** in complex events selects an extended verbal projection and changes its category (Moulton 2014).

-oj nominals in Kaqchikel: between simple and complex events.
-oj has always the same function – to existentially close the internal argument, however it can combine with either a root projection or a vP.

3.2 Derivation

➤ Assumption I: **Transitive roots**, i.e. roots that form transitive stems without additional derivational morphology, have an **event**(uality) **argument** and an **internal argument**. For the sake of simplicity, I mark transitive root projections as VP. The internal argument is denoted as x_{int}.

➤ Assumption II: **Agent** is not a syntactic argument of the stem but is introduced by a higher functional head, **v** (Chomsky 1995; Kratzer 1996). The external argument is denoted as y_{ext}.

3.2.1 Result nominals

The nominalizer -on existentially closes the **event argument**.

(4) Existential closure of an event argument (Moulton 2014)
$[\![[n\exists]]\!] = \lambda P_{<e<s,t>>}.\lambda x.\exists e[P(x)(e)]$

The result nominals such as *-loq'on* are derived when a root (*-loq'*) that has an internal argument and an event argument is combined syntactically with a nominalizer -on.

The nominalizer -on existentially closes the event argument.

→ An **interpretation** 'x such as there was an event of V-ing it'.

The argumental -on nominals normally appear with a determiner ← the addition of a determiner renders the nominal type e.

(5) $[_{DP}\ D\ [_{nP}\ \underbrace{\text{-on}\ [_{VP}\ \text{Root}}_{\exists}\ x_{int}\ ]]]$

3.2.2 Event nominals

The nominalizer -oj existentially closes the Internal Argument variable.

(6) Existential closure of an internal argument (Moulton 2014)
$[\![[n\exists]]\!] = \lambda P_{<e<s,t>>}.\lambda e.\exists x[P(x)(e)]$

The nominalizer -oj existentially closes the internal argument

→ An **interpretation** 'an event e of V-ing something'.

(7) $[_{DP}\ D\ [_{nP}\ \underbrace{\text{-oj}\ [_{VP}\ \text{Root}\ x_{int}}_{\exists}\ ]]]$

4 External arguments

In Kaqchikel -on & -oj nominals a Possessor often is interpreted as Agent.

Kaqchikel nominalizers can select not only a root projection but also a larger vP with an external argument introduced in Spec,vP.

(8) $[_{DP}\ D\ [_{nP}\ \text{-on/oj}\ [_{vP}\ y_{ext}\ [_{v'}\ v\ [_{VP}\ \text{Root}\ x_{int}\ ]]]]]$

➤ Case-licensing problem in nominalizations:

When the nominalizer -on selects a vP complement with an external argument licensed in Spec,vP, it existentially closes the event argument of the root and we are left with a Theme/Patient argument and an Agent.

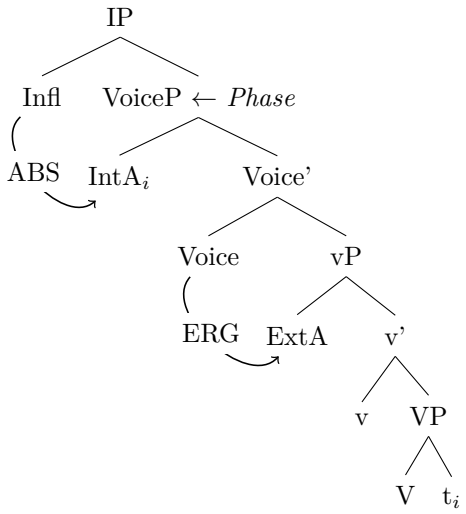
No Case is available yet within a vP: ERG is assigned by the transitive Voice head above it and ABS is assigned by Infl.[1]

[1] The *-on/oj* nominals in Kaqchikel are incompatible with Voice morphology. An ERG marker that appears on some nominals should be analyzed as the result of agreement with Poss, not with Voice.

In Kaqchikel, Possessor marking is identical to Agent marking, both ERG. However, there is one exception: 1SG = *nu-/ w-* only for possessors but not for external arguments in a finite clause (Patal Majzul 2007).

Nu-/w- are compatible with *-on* (and *-blue*oj) nominals → agreement with Poss, not with a verbal functional head.

(9) Transitive clause structure (Coon et al. 2014, a.o.)



→ a DP base-generated in the internal argument position (Comp,VP) or the external argument position (Spec,vP) remains Case-less and unlicensed (Case Filter) and such a derivation crashes.

Three strategies to solve the problem:

1. PRO external argument
2. Bare NP internal argument
3. Combining the nominalizers

(i)
a. **nu**-tz'i'
ERG1SG-dog
'my dog'

b. e **nu-loq'-on**
ABS3PL ERG1SG-buy-NMZ
'They are the result of my buying.'

c. x-e-**n/*nu**-loq'
CMP-ABS3PL-ERG1SG-buy
'I bought them.'

d. **w**-achib'äl
ERG1SG-photo
'my photo'

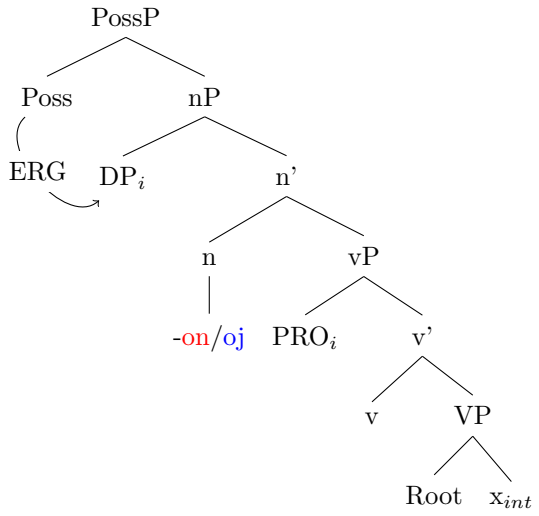
e. e **w-atin-isa-n**
ABS3PL ERG1SG-bathe-CAUS-NMZ
'They are the result of my washing.'

f. x-e-**nw/*w**-atin-isa-j
CMP-ABS3PL-ERG1SG-bathe-CAUS-TV
'I washed them.'

4.1 PRO external argument

➤ Option 1: The external argument is a PRO controlled by a possessor.[2]

(10) Control in nominals



(11) a. X-Ø-qa-tz'ët [ri oxi' **ru-loq'-on** ri Maria].
CMP-ABS3SG-ERG1PL-see DET three ERG3SG-buy-NMZ DET Maria
'We saw the three things that Maria had bought.' (Poss = Agent)

b. N-Ø-qa-ray-i-j [ri **ru-loq'-oj** ri Maria pa ka'i' ramaj].
ICMP-ABS3SG-ERG1PL-desire-TV DET ERG3SG-buy-NMZ DET Maria PREP two time
'We want Maria to buy something at two o'clock.' (Poss = Agent)

4.2 Bare NP internal argument

➤ Option 2 (Result nominals): the internal argument is a bare case-less NP.[3]

[2]See Burukina (2021) for a detailed discussion of control in deverbal nominals. An alternative analysis is to propose that the Agent DP is Case-licensed directly by the Poss head via raising/long-distance Agree.

[3]A similar pattern observed in Chuj by Coon & Royer (2020).

(i) a. Ix-w-il ix chonh-**um** *(wa'il/ ixim/ k'apak).
CMP-ERG1SG-see CLF sell-NMZ tortilla corn clothes
'I saw the tortilla-/corn-/clothes-seller.' [Coon & Royer 2020:158]

b. Ix-w-il ix chonh-**um** (*ixim/ *s-) wa'il.
CMP-ERG1SG-see CLF sell-NMZ CLF ERG3 tortilla
'I saw the tortilla-seller.' [ibid.]

(12) a [**pon-on** (*ri) wäy]
ERG2SG bake-NMZ DET bread
'You are bread baker.'

(13) $[_{nP}$ -on $[_{vP}$ y_{ext} $[_{v'}$ v $[_{VP}$ Root NP]]]]
∃

4.3 Combining the nominalizers

➤ Option 3: combining -oj and -on

It seems plausible to suggest that -oj is allomorphic to -oy, an item that also selects a transitive stem as its complement and existentially closes the internal argument.

The two nominalizers, -oy and -on, can be combined in a single item.[4]

When the nominalizer -oy takes a transitive vP as its complement and existentially closes the internal argument, the nominalizer -on is added on top of it to existentially close the event argument.

→ An **agentive** nominal with an **interpretation** 'y such as there was an event of V-ing something by them that affected some object'.

(14) $[_{nP}$ -on $[_{nP}$ -oy $[_{vP}$ y_{ext} $[_{VP}$ Root x_{int}]]]]
∃ ∃

(15) a. (Röj) **oj-loq'-oy-on**.
we ABS1PL-buy-NMZ-NMZ
'We are buyers of something.'

b. X-Ø-in-tz'ët ri **ch'ajo'-y-on**.
CMP-ABS3SG-ERG1SG-see DET wash-NMZ-NMZ
'I saw the one who washed (something).'

5 Summary

- Kaqchikel nominalizers -on and -oj have clearly distinct semantic functions.
- Kaqchikel deverbal nominalizers can select either a root projection or a larger vP. This gives rise to varying interpretations of the derived nominals (object vs agent, simple vs complex event).
- Two nominalizers can be combined in a single item.

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Selected references:

Borer, H. 2003. The forming, formation and the form of nominals. Ms. University of Southern California. **Burukina, I. 2021**. On the nature of arguments in event nominals. *Proceedings of the Linguistic Society of America* 6(1): 996–1008. **Coon, J. 2013**. *Aspects of split ergativity*. Oxford: Oxford University Press. **Coon, J., P. Mateo Pedro, & O. Preminger. 2014**. The role of case in A-bar extraction asymmetries: Evidence from Mayan. *Linguistic Variation* 14(2): 179–242. **Coon, J., & J. Royer. 2020**. Nominalization and selection in two Mayan languages. In *Nominalization: 50 Years on from Chomsky's Remarks*, eds. A. Alexiadou & H. Borer, 139–168. Oxford: Oxford University Press. **Grimshaw, J**. 1990. *Argument structure*. Cambridge, MA: MIT Press. **Imanishi, Y**. 2020. Parameterizing split ergativity in Mayan. *Natural Language & Linguistic Theory* 38: 151–200. **Moulton, K**. 2014. Simple event nominalizations: Roots and their interpretation. In *Cross-linguistic Investigations of Nominalization Patterns*, ed. I. Paul, 119–144. John Benjamins. **Patal Majzul, F., L. P. García Matzar, & C. I. Espantzay Serech. 2000**. *Rujunamaxik Ri Kaqchikel Chi': Variación Dialectal En Kaqchikel*. Guatemala: Editorial Cholsamaj. **Patal Majtzul, F. 2007**. *Rusoltzil ri Kaqchikel: Diccionario bilingüe estándar Kaqchikel illustrado*. Guatemala: OKMA.