UCLA

Title
Towards an analysis of passive verbs in Q'antel K'iche'

Permalink
https://escholarship.org/uc/item/2t19c9kx

Author
Kim, Dong Hyun

Publication Date
2023

UNIVERSITY OF CALIFORNIA

Los Angeles

Towards an analysis of passive verbs in Q'antel K'iche'

A thesis submitted in partial satisfaction

of the requirements for the degree

Master of Arts in Linguistics

by

Dong Hyun Kim

2023

ABSTRACT OF THE THESIS

Towards an analysis of passive verbs in Q'antel K'iche'

by

Dong Hyun Kim

Master of Arts in Linguistics

University of California, Los Angeles, 2023

Professor William Torrence, Chair

We give a description of the morphology and syntax of passive verbs in the Q'antel dialect of K'iche', a Mayan language spoken in the department of Quetzaltenango (Aissen et al. 2017). Our description is based on two years of fieldwork carried out both ex situ and in situ, and is the first published work on the Q'antel dialect to our knowledge. We show that, like other dialects the Q'antel dialect has three formally-distinct patterns by which the passive is formed, each of which behave differently with regards to syntax and argument structure (Mondloch 1981). We further present new data about passives of intransitive verbs, ditransitive verbs, and verbs with anaphoric arguments. Last, we use these data to build towards an analysis that supports the traditional analysis of the passive, rather than the smuggling analysis presented in Collins 2005.

The thesis of Dong Hyun Kim is approved.

Stefan Keine

Anoop Mahajan

William Torrence, Committee Chair

University of California, Los Angeles

2023

Contents.

List of tables and figures.

Glossing abbreviations.

CMP	Completive aspect
INCMP	Incompletive aspect
IMP	Imperative
NEG	Negative
PROG	Progressive
PASS	Passive
COMP.PASS	Completive passive
PERF.PASS	Perfect passive
CAUS	Causative
ANTI	Antipassive
VBLZ	Verbaliser
NMLZ	Nominaliser
POS	Positional
PERF	Perfect
TR	Transitive
INTR	Intransitive
RTR	Root transitive
DTR	Derived transitive
A1S, A2S, A3S	Singular Set A markers
A1P, A2P, A3P	Plural Set A markers
B1S, B2S, B3S	Singular Set B markers
B1P, B2P, B3P	Plural Set B markers
PL	Plural
FORM	Formal

1 Opening and background on Q'antel K'iche'.

K'iche' is a Mayan language spoken in Guatemala. Morphologically, verbs are agglutinative, and the right-most verb morpheme, called the *status suffix*, is sensitive to the valency of the verb.

(1) a. Le lej x-e-jrob'-**ik**.

    the tortilla CMP-B3P-freeze-INTR

    'The tortillas froze.'   (unaccusative, valency=1)

   b. X-eb'-u-jrob'-s-**aj** le lej.

    CMP-B3P-A3S-freeze-CAUS-DTR the tortilla

    'She froze the tortillas.'   (transitive, valency=2)

   c. Le lej x-e-jrob'-s-äx-**ik**.

    the tortilla CMP-B3P-freeze-CAUS-PASS-INTR

    'The tortillas were frozen.'   (passive, valency=1)

In (1a), the verb is marked with the intransitive status suffix *-ik*. In (1b), the intransitive verb is causativised by the morpheme *-s*, and is hence marked with the derived transitive status suffix *-aj*. In (1c), the causativised verb is passivised by the morpheme *-äx*, and is hence again marked with the intransitive status suffix *-ik*.

However, (1c) is not the only kind of passive construction in Q'antel K'iche'. (2) shows the "completive" passive, which takes different morphology from the "simple passive" in (1c), and moreover, has different properties when it comes to argument structure, particularly the agent.

(2) Le lej x-e-jrob'-s-**tj**-ik.

   the tortilla CMP-B3P-freeze-CAUS-COMP.PASS-INTR

   'The tortillas were frozen.'

Our goal is twofold. First, we hope to describe both kinds of passive constructions in Q'antel K'iche'. We are not aware of published literature on the Q'antel dialect, and the most recent descriptive work on K'iche' passives in general is Mondloch 1981, which is over four decades old. Hence, our study is both a long overdue description, as well as of theoretical interest due to the existence of distinct passive constructions

with differences in morphology and syntax. And second, we hope to build towards an analysis of active- and passive-voice morphosyntax that tentatively supports the standard analysis (Bruening 2013; Legate 2014, 2020) in which the agent-bearing *by*-phrase is a constituent in adjunct position to the verb.

Our organisation is as follows. §1 gives background on K'iche' and the Q'antel dialect. §2 gives a description of active voice morphosyntax, and builds towards an analysis thereof. §3 gives a description of passive voice morphosyntax. §4 gives a description of the agent in the passive voice, and builds towards an analysis of the passive voice. §5 concludes.

1.1 The situation of K'iche'

K'iche'[1] belongs to the Eastern branch of the Mayan language family, which is spoken throughout Guatemala, as well as parts of Mexico and Belize (Campbell 2017). The Eastern branch itself bifurcates into the Mamean and Kichean branches, of which K'iche' belongs to the latter. K'iche's closest relative is Achi, which is variably regarded as a dialect of K'iche'. Other closely-related Kichean languages are Kaqchikel, Tz'utujil, Sakapultek, and Sipakapense; more distantly-related Kichean languages are Q'eqchi, Poqom, and Uspantek.

---

[1] [k'i.tʃeʔ] is spelled *K'ichee'* in dialects that discern vowel length. There is also the outdated Spanish spelling *Quiché*.

(3)   **Figure 1.** Family tree of Kichean languages (based on Campbell 2017).

Mayan

Huastecan   **Core Mayan**

Yucatecan

Western   **Eastern**

Mamean   **Kichean**

Q'eqchi   Uspantek   Poqom   **Core Kichean**

Sakapultek   Sipakapense

Kaqchikel   Tz'utujil   **K'iche'**
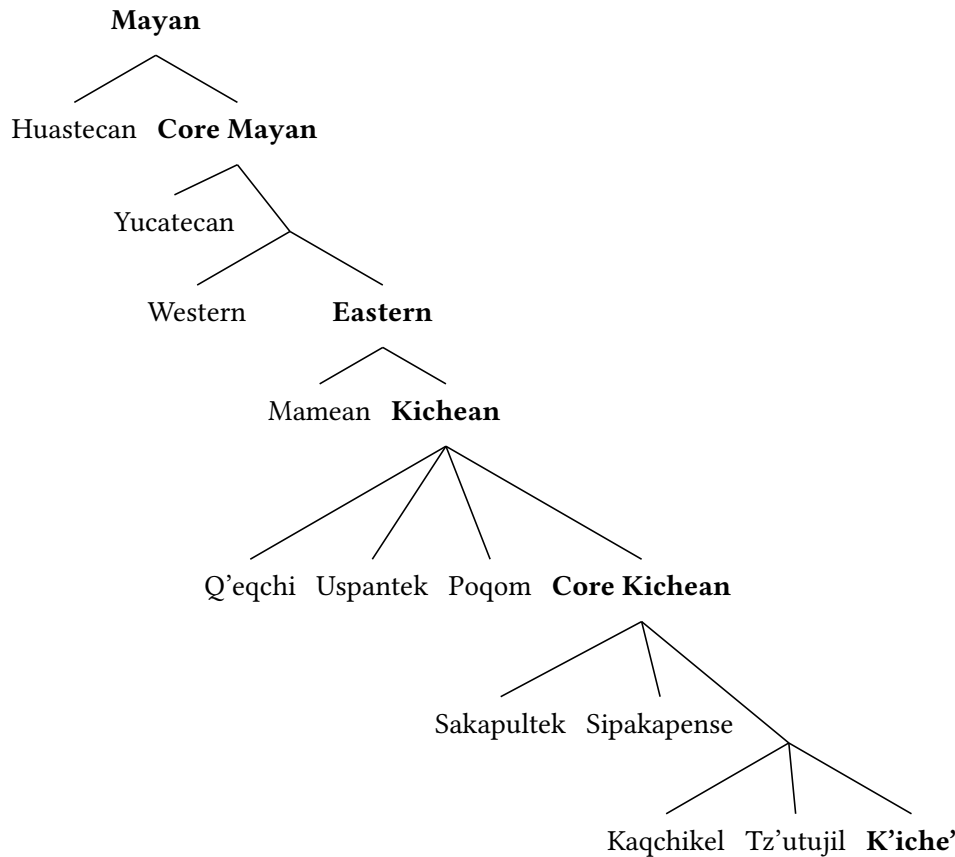
Guatemala's sole official language is Spanish, but more than twenty indigenous languages are recognised (Can Pixabaj 2017). All of these languages are Mayan, except for Xinka (isolate) and Garífuna (Arawakan). Administratively, Guatemala is divided into 22 departments (Spanish: *departamentos*), each of which are further subdivided into municipalities (Spanish: *municipios*). K'iche' is spoken in 78 municipalities across nine departments in the highlands of the country's southwest (Can Pixabaj 2017). With about a million speakers, K'iche' is the most widely-spoken indigenous language of Guatemala. The oldest literature in K'iche' include the *Popol Wuj* and the *Rabinal Achi*, both written down shortly after the Spanish conquest. Contemporary literature in K'iche' includes work by the late poet Humberto Ak'abal (1952–2019).

The Academia de Lenguas Mayas de Guatemala (ALMG) prescribes a unified orthography for the Mayan languages of Guatemala (Academia de las Lenguas Mayas de Guatemala 1988, 1991). (4) shows the differences between the ALMG orthography and the International Phonetic Alphabet (IPA). We also show the orthography used in Mondloch 1981, which is based on the Americanist Phonetic Alphabet (APA).

(4) IPA   ə   ɓ   tʃ   tʃ'   χ   ɾ   ts   ts'   ʃ   j   ʔ   Vː

     ALMG   *ä*   *b'*   *ch*   *ch'*   *j*   *r*   *tz*   *tz'*   *x*   *y*   '   VV

     Mondloch 1981   — *b'*   *č*   *č'*   *x*   *r*   *c*   *c'*   *š*   *y*   ʔ   Vː

We follow the ALMG orthography everywhere, unless noted otherwise.

1.2   Some past work on K'iche'

K'iche' is one of the best-studied Mayan languages. Aissen et al. 2017 is an overview of the Mayan languages, which includes a chapter on K'iche' (Can Pixabaj 2017). Historical and comparative work on K'iche' and Kichean languages includes Campbell 1977; Campbell and Kaufman 1985. As for synchronic work on contemporary K'iche', López Ixcoy 1997 is currently the most in-depth reference grammar, and Ajpajacá Tum 2001; Ajpajacá Tum et al. 1996 are the most complete dictionaries. (5) lists some members of the ever-growing body of dissertations on K'iche'.

(5)   a.   Pye 1980 describes L1 acquisition of K'iche'.

         b.   Mondloch 1981 describes K'iche' voice alternations, including the passive.

         c.   Larsen 1988 describes and analyses ergativity in K'iche' morphosyntax.

         d.   Duncan 2010 analyses K'iche' syntax in Optimality-Theoretic Lexical-Functional Grammar (OT–LFG).

         e.   Baird 2014 analyses the acoustics of Spanish–K'iche' bilingual intonation.

         f.   Velleman 2014 analyses focus in K'iche', and its relationship with movement.

         g.   Can Pixabaj 2015 describes and analyses complement clauses in K'iche'.

Of all of these works, Mondloch 1981 is the only one to focus on the passive voice at some length.

1.3   The dialects of K'iche'

Our data were collected over fourteen months of elicitation with a native speaker from Q'antel (Spanish: *Cantel*)[2], a municipality in the Quetzaltenango department of Guatemala. Municipalities roughly corre-

---

[2]   We use the spelling *Q'antel*, unless describing the municipality in a Spanish-language context.

spond to counties, parishes, or townships, and are the most common way in which dialects of K'iche' are identified. Q'antel K'iche' belongs to the Western family of K'iche' dialects, as do most dialects of K'iche' in past work. (6) is an incomplete list of dialects studied in book- or dissertation-length work on K'iche'; of these, only (6g) describes a Central dialect, whilst the rest describe Western dialects.

(6)   a.   Cantel, Quetzaltenango (current work)

      b.   Zunil, Quetzaltenango (Pye 1980)

      c.   Nahualá, Sololá (Can Pixabaj 2015; Mondloch 1981; Velleman 2014)

      d.   Santa Lucía Utatlán, Sololá (Can Pixabaj 2015)

      e.   Totonicapán, Totonicapán (Duncan 2010)

      f.   Momostenango, Totonicapán (Larsen 1988)

      g.   Santa Cruz del Quiché, El Quiché (López Ixcoy 1997)

      h.   San Ildefonso Ixtahuacán, Huehuetenango (Ajpajacá Tum 2001; Can Pixabaj 2015; Velleman 2014)

Each of the seven municipalities in (6) is marked on the map below. Municipality borders are shown as thin grey lines between areas of the same colour; department borders are shown as thick grey lines between areas of different colours.

(7) **Figure 2.** Map of past work on K'iche' (Wikimedia Commons 2021), labelled according to (6).
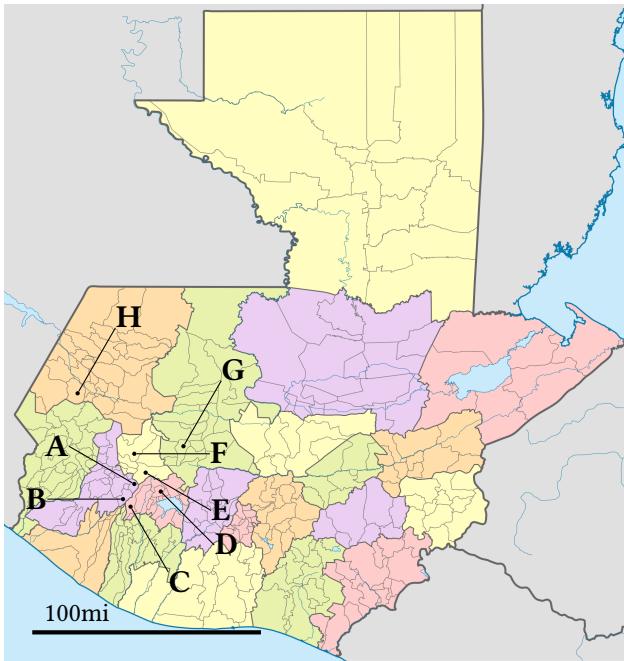
1.4 The dialect in Q'antel

Q'antel K'iche' is mutually intelligible with other dialects of K'iche', but nevertheless differs in characteristic ways. First, most K'iche' dialects have a ten-vowel system made up of five long–short vowel pairs; however, Q'antel K'iche' has a six-vowel system with no vowel length and a central vowel *ä* [ə]. This six-vowel system is mentioned in, but is not the main focus of, the dialects studied in (5). (8) shows some examples of the difference, using López Ixcoy 1997 as a point of comparison with Q'antel K'iche'.

(8) | | López Ixcoy 1997 | | Q'antel | | Meaning |
|---|---|---|---|---|---|
| a. | *ixoq* | [iˈʃoq] | *ixäq* | [iˈʃəq] | 'woman' |
| b. | *ka'iib'* | [kaˈʔiːɓ] | *keb'* | [ˈkʲeɓ] | 'two' |
| c. | *ak'alaab'* | [ak'aˈlaːɓ] | *ak'lab'* | [aˈk'laɓ] | 'children' |
| d. | *xexajawisax* | [ʃeʃaχawiˈsaʃ] | *xexjowsäx* | [ʃeʃχowˈsəʃ] | 'they were made to dance' |

Next, most K'iche' dialects use the definite article *ri(i)*; however, Q'antel K'iche' uses the definite article *le*. The use of *le* as definite article is also described in Pye 1980.

(9) a. **Le tz'i'** x-∅-u-ti'   **le ak'al**.

the dog CMP-B3S-A3S-bite the child

'The dog bit the child.'   (Q'antel)

b. X-∅-u-ti'   **rii ak'aal rii tz'i'**.

CMP-B3S-A3S-bite the child   the dog

'The dog bit the child.'   Mondloch 1981:137 (339)

Third, most K'iche' dialects use the auxiliary verb *tajin* 'PROG'; however, Q'antel K'iche' uses the auxiliary verb *jin* 'PROG'. This auxiliary does not take any tense–aspect markers, unlike in the dialects described in other works.

(10) a. (*K-)**jin**   k-eb'-en-to'-o.

INCMP-PROG INCMP-B3P-A1S-help-TR

'I'm helping them.'   (Q'antel)

b. Ka-∅-**tajin**   q'iji-n-ik   ch-u-wii   lee juyub'.

INCMP-B3S-PROG divine-ANTI-INTR to-A3S-top the mountain

'Divining is in progress on top of the mountain.'   Mondloch 1981:192 (505)

c. Ka-∅-**tajin**   jab'.

INCMP-B3S-PROG rain

'It is raining.'   Larsen 1988:164 (10)

d. Ka-**tajin**   k-e-nu-to'-o.

INCMP-PROG INCMP-B3P-A1S-help-TR

'*estoy ayudándoles (a ellos/as)* (= 'I'm helping them')'   López Ixcoy 1997:175 (230b)

2 Background on K'iche' verb morphology

The K'iche' verb is agglutinative, and orders morphemes from left to right according to the template in (11). Morphemes in (parentheses) are optional, and the asterisk * next to 'Valency' means that there may be more than one derivational suffix.

(11)   TAM > Set B > (Motion) > Set A > Root > (Valency)* > (Transitivity) > (Formal pronoun)

Set A markers express ergative agreement, and Set B markers express absolutive agreement. The example in (12) shows a single verb with all of the morphemes in (11), except for the formal pronoun.

(12)   J-eb'-e-q-nim-är-s-aj   le jäl.
       go.IMP-B3P-go-A1P-big-VBLZ-CAUS-DTR the corn
       'Let's go and grow (*lit.* 'cause to become big') the corn!'

In this section, we introduce each element of K'iche' verb morphology. We give the important descriptive generalisations and discuss some existing analyses. We note which descriptive generalisations are novel contributions, and which have been discussed elsewhere, namely the grammar López Ixcoy 1997 and the grammar sketch Can Pixabaj 2017.

2.1   Marking of tense–aspect

Finite K'iche' verbs begin with one of five markers for a combination of tense, aspect, mood, and incorporated motion (Can Pixabaj 2017; López Ixcoy 1997).

(13)   a.   **X**-at-wur-ik.
            CMP-B2S-sleep-INTR
            'You slept.'   (Completive)

       b.   **K**-at-wur-ik.
            INCMP-B2S-sleep-INTR
            'You { sleep / are sleeping / will sleep }.'   (Incompletive)

       c.   **Ch**-at-wur-äq.
            IMP-B2S-sleep-INTR
            'Sleep!'   (Imperative)

       d.   **J**-at-e-wur-äq.
            go.IMP-B2S-go-sleep-INTR
            'Go sleep!'   (Directional imperative)

e. **M**-at-wur-äq.

NEG.IMP-B2S-sleep-INTR

'Don't sleep!'   (Negative imperative)

The latter three markers *ch-*, *j-*, and *m-* respectively mark simple imperatives, imperatives with incorporated motion, and negative imperatives. In contrast, the former two markers *x-* and *k-* mark indicative-mood distinctions in tense or aspect, which have been given varying names and analyses. However, there is a general consensus that *x-* marks past or completed actions, whilst *k-* marks nonpast or incomplete actions. We summarise the differences in terminology as follows.

(14) **Table 3.** Terminology for indicative tense–aspect marking.

			x-		*k-*
Pye 1980	§3.1:68		Completive aspect		Incompletive aspect
Mondloch 1981	§3.2.1.1:81–4	COM.ASP	Completive aspect	INC.ASP	Incompletive aspect
Larsen 1988	§4.2.1.2:161	PERFV	Past Perfective	IMPERF	Imperfective
López Ixcoy 1997	§6.10:171–2	COM	*Aspecto completivo*	INC	*Aspecto incompletivo*
Velleman 2014		CPL		INC	
Can Pixabaj 2015	§2.4.2.1:48–9	COM	Completive	INC	Incompletive

Moreover, the markers *x-* and *k-* are in complementary distribution with the markers *-näq* and *-Vm*, which are traditionally called 'perfect'.

(15) a. **X**-at-wur(*-näq)   at.

CMP-B2S-sleep(*-PERF) 2SG

'You slept.'   (Nonperfect completive)

b. (*X-)at-wur-**näq**   at.

(*CMP-)B2S-sleep-PERF 2SG

'You have slept.'   (Perfect)

Whereas completiveness marking is to the left of the verb, perfectness marking is to the right. However, the semantic nuance is not fully clear to us, such that we use the terms '(in)completive' and '(non)perfect' as follows.

(16) a. A verb is called *completive* iff it begins with *x-*, and is called *incompletive* iff it begins with *k-*.

b. A verb is called *perfect* iff it ends with *-näq* or *-Vm*, and is called *nonperfect* otherwise.

2.2 Marking of person

K'iche' is a ergative–absolutive language with two sets of bound person markers, called 'Set A' and 'Set B' in the Mayanist literature, in addition to a set of free-standing independent pronouns. Set B markers are used for transitive objects, as well as all intransitive subjects (Can Pixabaj 2017; López Ixcoy 1997).

(17) a. X-**e**-b'in   le   ak'l-ab'.
CMP-B3P-walk   the child-PL.
'The children walked.'   (Unergative)

b. X-**e**-tzäq   le   ak'l-ab'.
CMP-B3P-fall   the child-PL.
'The children fell.'   (Unaccusative)

c. X-**e**-q-to'   le   ak'l-ab'.
CMP-B3P-A1P-help   the child-PL.
'We helped the children.'   (Transitive)

(18) shows the most common allomorphs of each marker.

(18) **Table 4.** Allomorphs of Set A and Set B markers.

	Set A	Set B	Pronoun
1SG	*in-, n-, nw-, uw-, w-*	*n-*	*in*
2SG	*aw-, a-*	*at-*	*at*
2FORM	*=la*	*=la*	*lal*
3SG	*r-, u-, w-*	*∅-*	*are'*
1PL	*qa-, q-*	*uj-*	*uj*
2PL	*iw-, i-*	*ix-*	*ix*
2PL.FORM	*=aläq*	*=aläq*	*aläq*
3PL	*ki-, k-*	*eb'-, e'-, e-*	*iyare'*

These markers exhaust the person distinctions in K'iche'. There are no contrasts for duality, clusivity, or any other feature. Moreover, the 2PL.FORM markers *=aläq/aläq* are exclusively plural, whilst the 2FORM markers *=la/lal* are unspecified for number, and may refer to either singular or plural arguments.

Set A markers have two uses: they mark subjects of transitive verbs as in (19a), and possessors of nouns as in (19b) (Can Pixabaj 2017; López Ixcoy 1997).

(19) a. X-e-**qa**-kun-aj.

CMP-B3P-A1P-heal-DTR

'We healed them.'   (Transitive subject)

b. le **q**-me's

the A1P-cat

'our cat'   (Possessor)

Set B markers have many more uses. Some common examples are objects of transitive verbs as in (20a), subjects of intransitive verbs as in (20b), and arguments of nominal predicates as in (20c). Moreover, free-standing independent pronouns as in (20d) are often homophonous with, or otherwise built from, the Set B markers in (18) (Can Pixabaj 2017).

(20) a. X-**uj**-ki-kun-aj.

     CMP-B1P-A3P-heal-DTR

     'They healed us.'   (Transitive object)

  b. X-**uj**-wi-k.

     CMP-B1P-eat-INTR

     'We ate.'   (Intransitive subject)

  c. N=   **uj**-me's =täj.

     NEG= B1P-cat =NEG

     'We are not cats.'   (Argument of nominal predicate)

  d. Jachin ri'? **Uj**.

     who   the B1P

     'Who is it?' 'It's us.'   (Free pronoun)

The one exception to this marking pattern is in the formal second person. If a verb takes a formal second-person argument, then it is not overtly marked on the verb (Can Pixabaj 2017; López Ixcoy 1997).

(21) a. (Lal)   X-n-il   { **la**   / **aläq** }.

     (2FORM) CMP-B1S-see   2FORM / 2PL.FORM

     '{ You (formal) / Yall (formal) } saw me.'

  b. X-nw-il   { **la**   / **aläq** }.

     CMP-A1S-see   2FORM / 2PL.FORM

     'I saw { you (formal) / yall (formal) }.'

Moreover, formal pronouns differ in exponence of possession. Recall that familiar possessors attach a Set A marker to the left of the possessed noun, as in (19b) and (22a). However, formal possessors are instead marked to the right of the possessed noun, as in (22b) (López Ixcoy 1997).

(22) a. le { **n-** / **a-** } me's

the A1s- / A2s- cat

'{ my / your } cat'

b. le me's { **la** / **aläq** }

the cat 2FORM / 2PL.FORM

'{ your (formal) / yall's (formal) } cat'

This kind of marking also applies to relational nouns. Whereas familiar pronouns always show overt possession to the left, formal pronouns usually do not.

(23) a. *(**r-**)uk le ixäq

A3s-with the woman

'with the woman'

b. (***r-**)uk la

A3s-with 2FORM

'with you (formal)'

But, some relational nouns allow variation between no marking and third-person marking.

(24) (**r-**)mal la

A3s-by 2FORM

'by you (formal)'

This last pattern in (24) has not been described in the literature to our knowledge, and behooves further investigation.

2.3 Marking of incorporated motion (verbal deixis)

There is an andative marker *e-* 'go-' that surfaces to the right of the absolutive marker (Can Pixabaj 2017; López Ixcoy 1997).

(25) a.   X-n-tuy-ik.

CMP-B1S-sit-INTR

'I sat down.'

b.   X-n-**e**-tuy-l-äq.

CMP-B1S-go-sit-POS-INTR

'I went and sat down.'

The marker *e-* also functions as an independent motion verb.

(26) Lal Mri'y x-∅-**e**   p le eskwel.

the Mary CMP-B3S-go to the school

'Mary went to school.'

If the verb is transitive, then the marker is found between the absolutive and ergative markers.

(27) X-eb'-**e**-r-il   le ak'l-ab'.

CMP-B3P-go-A3S-see the child-PL

'She went and saw the children.'

Recall from §2.1 that there is also a directional imperative marker *j-*. If this marker is present, then the marker *e-* 'go-' must also be present. We have not encountered this observation elsewhere in the literature on K'iche'.

(28) **J**-at-*(**e**-)wur-äq!

go.IMP-B2S-*(go-)sleep-INTR

'Go sleep!'   = (13d)

However, the converse implication does not hold. In other words, the marker *e-* is acceptable with the simple imperative and the negative imperative.

(29) a. **Ch**-at-(**e**-)wur-äq!

go.IMP-B2S-(go-)sleep-INTR

'(Go) sleep!'

b. **M**-at-(**e**-)wur-äq!

go.NEG.IMP-B2S-(go-)sleep-INTR

'Don't (go) sleep!'

This differs from the dialect discussed in Mondloch 1981, which also has a venitive marker *ul-* 'come'. In Q'antel K'iche', *ul* 'come' only exists as an independent motion verb much as in (26); however, the preferred verb for 'come' is *pe*, for which there is no venitive marking equivalent.
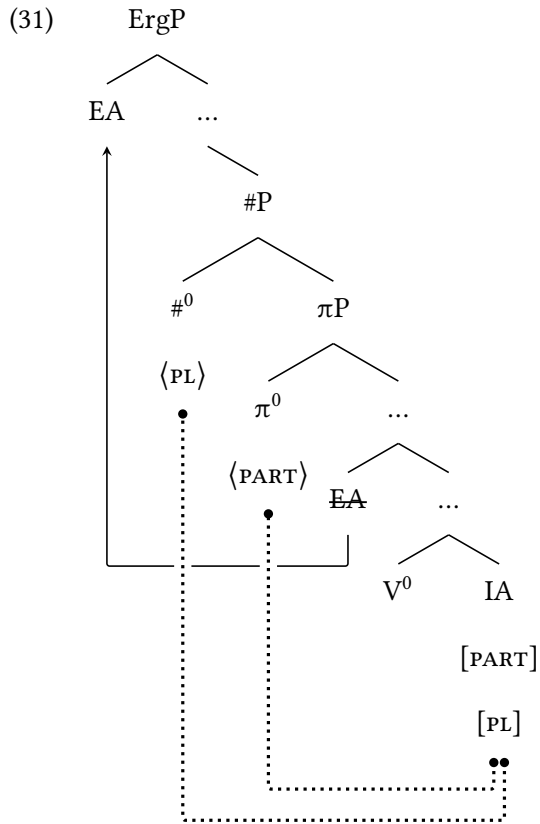
(30) a. ?Lal Mri'y x-∅-**ul**   cho ja.

the Mary CMP-B3S-come to   house

'Mary came home.'

b. Lal Mri'y x-∅-**pe**   cho ja.

the Mary CMP-B3S-come to   house

'Mary came home.'

Now, the descriptive generalisations are as follows. The morphemes are strictly ordered T > Abs (> Motion) (> Erg), with no intervening material allowed (recall that Abs and Erg respectively correspond to Set B and Set A agreement). T and Abs are always obligatory; Motion is obligatory with *j-*; Erg is obligatory with transitive verbs. These generalisations about Q'antel K'iche' are in agreement with descriptions of other dialects as given in Can Pixabaj 2017; López Ixcoy 1997; Mondloch 1981 and elsewhere. However, existing analyses of this portion of the verb complex have focused on the ergative and absolutive markers and how agreement happens, with little work on tense–aspect marking and verbal deixis. Given that verb morphology is not our main focus, we give only a short comparison of two approaches to ergative and absolutive marking.
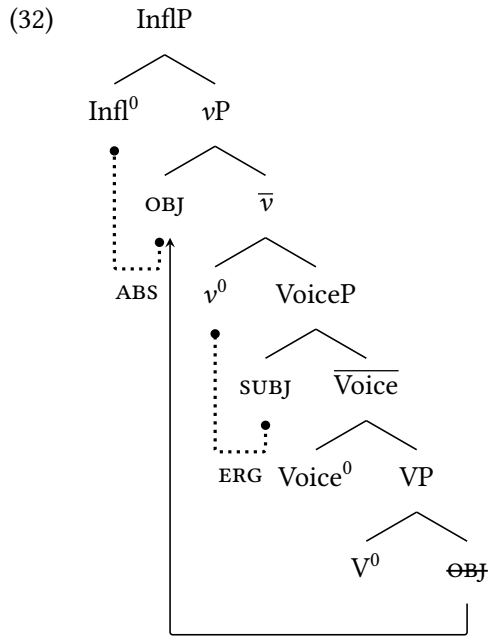
First, Preminger 2014 gives an analysis of agent focus in Kichean (Kaqchikel, K'ichee', Tz'utujil), but notes in §4.6 that the given analysis also accounts for non-agent focus constructions. Under this analysis, there is

a chain of heads Erg > # > π in which the number probe $\#^0$ c-commands the person probe π^0. The external argument (EA) begins lower than these probes, but raises into some higher ErgP so as to be assigned ergative case. This ErgP projection is not used for ergative marking, but rather simply as a landing site for the external argument (EA); the position of the ergative marker is not addressed. Once the EA has vacated, the two probes are able to agree only with the internal argument. The split agreement probes here are motivated by omnivorous agreement (Nevins 2011) in the agent-focus construction, in which the verb prioritises agreement in both person and number with a first- or second-person argument, and then prioritises agreement in number with a third-person plural agreement, and then prioritises agreement with a third-person singular agreement. The precedence of first- or second-person agreement motivates a person probe π^0 lower than the number probe $\#^0$ and relativised to probe only for [PARTICIPANT], the feature borne by first- and second-person arguments, but not third-person arguments. Nevertheless, first- and second-person agreement markers also expone number, and so they are treated as clitics that copy the full feature set (that is, both [PARTICIPANT] and [PLURAL]) of what they probe due to the coarseness of clitic doubling. (31) shows the structure of regular transitives: after the EA vacates, π^0 probes the IA for [PART] and, if it succeeds, copies both [PART] and [PL] values; otherwise, $\#^0$ probes the IA for [PL], copying only [PL] if it succeeds. The only difference with the agent focus construction in Preminger 2014 is that the EA does not raise in regular transitives like (31).

(31)

ErgP
  EA   ...
            #P
          #⁰   πP
        ⟨PL⟩   π⁰   ...
              ⟨PART⟩ EA   ...
                            V⁰   IA
                                [PART]
                                [PL]

A different approach is taken in Coon et al. 2014, which contrasts 'high-ABS' Mayan languages from 'low-ABS' ones, depending on whether absolutive agreement surfaces to the left (=high) of the verb root or to the right (=low). For high-ABS languages like K'iche' and Q'anjob'al, the latter being the focus of their investigation, the Infl^0 head (our T^0 head) assigns absolutive case, which surfaces as an enclitic on the T^0 head. Again, the syntactic position of the ergative marker is not addressed; v^0 assigns ergative case, but does not expone ergative agreement, but rather the status suffix. We show the structure of this analysis in (32).

(32)

```
                    InflP
                  /      \
              Infl⁰       vP
                        /     \
                     OBJ       v̄
                            /      \
                        ABS  v⁰      VoiceP
                                   /      \
                              SUBJ        Voicē
                                        /      \
                                   ERG  Voice⁰   VP
                                              /    \
                                           V⁰      OBJ
```

Both approaches concern Mayan languages in which the order of verb morphemes is T > Abs > Erg > VP, but differ significantly. In Preminger 2014's analysis of Kaqchikel, the EA vacates to allow the $\#^0$ and π^0 probes to undergo absolutive agreement with the IA; the T^0 head is irrelevant. On the other hand, (Coon et al. 2014)'s analysis of Q'anjob'al treats the T^0 head as the assigner of absolutive case; hence, it is the IA that raises above the EA. Both analyses also agree that some absolutive markers are clitics that undergo doubling, largely due to phonological properties (Coon 2013; Grinevald et al. 2012; Mateo-Toledo 2008; Preminger 2014; Woolford 2000).

2.4   Marking of change of valency

K'iche' has a wide array of valency-changing operations, some of which we show in (33) (Can Pixabaj 2017; López Ixcoy 1997). These markers have selectional restrictions and influence the morphosyntax of the resulting verb.

(33)   **Table 5.** Valency-changing markers.

	Marker	Valency	Example
Causative	*-s*	+1	*käm* 'die' → *käm-s* 'kill'
Passive	*-äx*	−1	*pir* 'slice' → *pir-äx* 'be sliced'
Passive	*-täj*	−1	*pir* 'slice' → *pir-täj* 'be sliced'
Antipassive	*-än*	−1	*pir* 'slice' → *pir-än* 'slice.ANTI'

The examples in (33) show that these markers are always found to the immediate right of the verb. Moreover, the causative marker *-s* licences an agent or causer as the subject, which triggers ergative agreement.

(34) a. X-e-k'at   le   lej.
          CMP-B3P-burn the tortilla

          'The tortillas burned'.   (unaccusative)

     b. **Lal Mri'y** x-eb'-**u**-k'at-**s**-aj   le   lej.
          the Mary CMP-B3P-A3S-burn-CAUS-DTR the tortilla

          'Mary burned the tortillas.'   (causativised transitive)

The causative marker can cooccur with a valency-reducing marker, as in (35) (Mondloch 1981). In these situations, the causative marker is always closer to the verb root.

(35) a. X-e-k'at-**s**-**äx**   le   lej.
          CMP-B3P-burn-CAUS-PASS the tortilla

          'The tortillas were burned.'   (simple passive)

     b. X-e-jrob'-**s-täj**   le   oj.
          CMP-B3P-freeze-CAUS-COMP.PASS the avocado

          'The avocados were frozen.'   (completive passive)

c. X-n-b'in-**s-än**   iwur.

CMP-B1S-walk-CAUS-ANTI yesterday

'I drove (*lit.* 'made something walk') yesterday.'   (antipassive)

We now present two novel generalisations that we have not found elsewhere in the literature. First, transitive verbs can also take the causative marker. However, it is not clear how the causer is exponed in these configurations, and so further investigation is needed.

(36) Lal Mri'y x-eb'-u-pir-s-aj   le   oj.

the Mary CMP-B3P-A3S-slice-CAUS-DTR the avocado

'Mary sliced the avocados.'

Second, and on the other hand, valency-lowering markers only occur with transitive verbs. Hence, an intransitive verb cannot be passivised as in (37). The only option is to passivise the causativised form, as in (35a).

(37) *X-e-k'at-**äx**.

CMP-B3P-burn-PASS

Intended: 'It was burned.'

2.5 Marking of transitivity, and the status suffix

K'iche' has a family of verb endings traditionally called 'status suffixes', which are sensitive to transitivity, morphological derivedness, mood, and deixis (Can Pixabaj 2017; López Ixcoy 1997). First, there are three overarching categories of status suffixes: intransitive *-ik*, root transitive *-o*, and derived transitive -V*j*.

(38) a. X-e-wur*(-**ik**).

CMP-B3P-sleep*(-INTR)

'They slept.'   (Intransitive)

b. X-e-q-pir*(-**o**).

CMP-B3P-A1P-slice*(-RTR)

'We sliced them.' (Root transitive)

c. X-e-q-k'at-s*(-**aj**).

CMP-B3P-A1P-burn-CAUS*(-DTR)

'We burned them.' (Derived transitive)

As the name suggests, derived transitive stems often—but not always—have overt derivational morphology, such as the causative -s in (38c). If there is overt derivational morphology, then the derived transitive ending is -aj, as in (38c); otherwise, it is conditioned by the root, as in (39).

(39) a. X-e-q-tärn-**ej**.

CMP-B1P-A3P-chase-DTR

'We chased them.'

b. X-e-q-sk'-**ij**.

CMP-B1P-A3P-call-DTR

'We called them.'

Moreover, the status suffixes have varying degrees of optionality. When clause-final as in (38), all status suffixes are obligatory. In contrast, (40) places each of these verbs clause-medially. Here, we see that the intransitive marker is forbidden in (40a), the root transitive marker is optional in (40b), and the derived transitive marker is obligatory in (40c).

(40) a. X-e-wur(*-**ik**) le ak'l-ab'.

CMP-B3P-sleep(*-INTR) the child-PL

'The children slept.' (Intransitive)

b. X-e-q-pir(-**o**) le lej.

CMP-B3P-slice(-RTR) the tortilla

'We sliced the tortillas.' (Root transitive)

c. X-e-q-k'at-s*(**-aj**)   le   lej.

CMP-B3P-burn-CAUS*(-DTR) the tortilla

'We burned the tortillas.'   (Derived transitive)

These facts about optionality hold for pronominal arguments as well.

(41) a. X-n-wur(*-**ik**)   in.

CMP-B1S-sleep(*-INTR) 1SG

'I slept.'   (Intransitive)

b. X-at-inw-il(**-o**)   at   (in).

CMP-B3P-slice(-RTR) 2SG 1SG

'I saw you.'   (Root transitive)

c. X-e-q-tärn-*(**-ej**)   iyare' (uj).

CMP-B3P-burn*(-DTR) 3PL   1PL

'We chased them.'   (Derived transitive)

Lastly, each class of status suffixes has 'plain' and 'dependent' allomorphs. The plain allomorphs are the aforementioned *-ik*, *-o*, and -V*j*; each of these has a corresponding dependent form used for imperative or deictic verbs, respectively *-äq*, *-a'*, and *-aj*, as (42) shows. All dependent allomorphs have the same optionality properties as their plain counterparts in (40).

(42) a. Ch-at-wur-**äq**.
      IMP-B2S-sleep-INTR

      'Sleep!'   (Intransitive)

b. Ch-eb'-a-pir-**a'**!
      IMP-B3P-A2S-slice-RTR

      'Slice them!'   (Root transitive)

c. Ch-eb'-a-k'at-s-**aj**!

CMP-B3P-A2S-burn-CAUS-DTR

'Burn them!' (Derived transitive)

We summarise this state of affairs in (43).

(43) **Table 6.** Status suffixes.

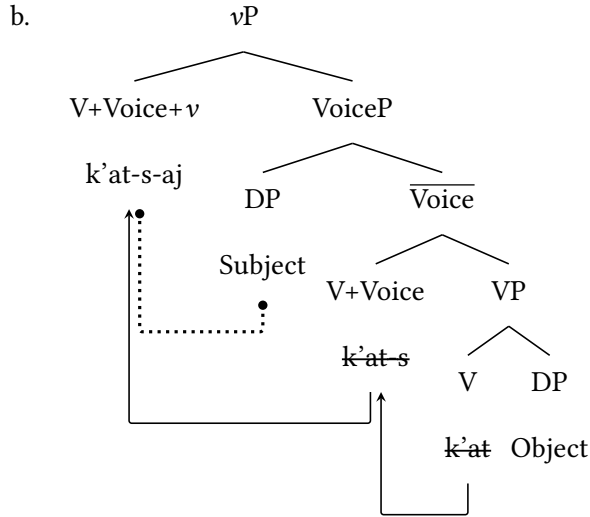|	Transitive	Intransitive
Plain (*elsewhere*)	*-o*	*-ik*
Dependent (*imperative or deictic*)	*-a'*	*-äq*

Again, we pause to quickly overview how valency changes and status suffixes have been analysed in the literature. The generalisations are as follows. In terms of morpheme order, the valency-changing morpheme is closer to the verb root than the status suffix. The actual realisation of the status suffix is conditioned by whether the verb is transitive— other than for unergative verbs, this reduces to whether there is an external argument (EA). As before, the Q'antel dialect agrees on these generalisations with other dialects found in the literature.

This state of affairs has motivated distinct vP and VoiceP projections for Mayan languages (Clemens et al. 2018; Coon 2013; Coon et al. 2014; Preminger 2014) following Harley 2013, with vP dominating VoiceP. Voice^0 corresponds to valency-changing heads, and v^0 corresponds to the status suffix. The VoiceP projection introduces the external argument in its specifier position, and the status suffix is realised by agreement between the v^0 head and the external argument. Thereafter, the right morpheme order obtains from rollup head movement of V^0 through Voice^0 and v^0 (as in Clemens et al. 2018), and the sensitivity of v^0 to transitivity obtains from its syntactic position directly above the subject (Coon et al. 2014). The specific mechanism is not elaborated on, other than that Mayan languages have a phase boundary *above* vP, rather than below (Chomsky 2000). We show an example of such a derivation in (44).

(44) a. X-eb'-u-k'at-s-aj.

        CMP-B3P-A3S-burn-CAUS-DTR

        'They burned it.'

    b.

This yields the desired morpheme order, but leaves many unanswered questions. First, there is the issue of unergative verbs that we have cast aside. Unergative verbs behave like other intransitives in taking the intransitive status suffix *-ik*. However, unergative verbs have a filled subject position in Spec,VoiceP. If the realisation of the status suffix is dependent only on whether Spec,VoiceP is filled, then unergative verbs should surface with the *transitive* status suffix.

Another unanswered question is how to derive the distinction between root and derived transitive verbs. Since most derived transitive verbs have an overt $Voice^0$ head in the form of a valency-changing marker, one possibility is to treat this as a form of agreement as well: the v^0 head also probes $Voice^0$, and surfaces as the derived transitive marker *-aj* only if it is one of the overt valency-changing markers, and as the root transitive marker *-o* otherwise. As for seemingly-underived derived transitive verbs as in (39), a makeshift solution might be to posit a null valency-changing marker. We leave for future work the questions of unergative verb structure and the root–derived distinction.

2.6 Word order

K'iche has the unmarked word order VOS (Pye 1980:35, Mondloch 1981:41, Larsen 1988:352, López Ixcoy 1997:341–2, Velleman 2014:3, Can Pixabaj 2015:136), with SVO also possible. Q'antel K'iche' follows this

pattern in most kinds of clauses.

(45) a. *Active intransitive.*

V   S

xetzäq le ak'lab'.

fell   the children

b. *Passive / antipassive.*

V   S

xekun { -äx / -än }   le ak'lab'.

{ were healed / healed } the children

c. *Active perfect.*

V   O   S

Eb'ukunam le ak'lab'   jun ixäq.

has healed the children a woman

The one exception is in clauses with non-perfect transitive verbs. Again, both VOS and SVO are possible, but here the preference is for SVO as the unmarked order. As far as we are aware, the SVO preference here is unique to the Q'antel dialect, having not been discussed elsewhere.

(46) a. S   V   O

Jun ixäq   xekunaj le ak'lab'.

a woman healed   the children

b. V   O   S

Xekunaj le ak'lab'   jun ixäq.

healed   the children a woman

These facts about basic word order also hold for other kinds of verb arguments, such as definite descriptions and pronominals.

(47) a. { S }   V   O   { S }

          { Lal Mri'y } xutij le lej   { Lal Mri'y }

            Mary   ate   the tortilla   Mary

    b. { S } V   O   { S }

        { In } xntij le lej   { in }

          I   ate   the tortilla   I

We leave for further work the investigation of the semantic and pragmatic differences between SVO and VOS orders.
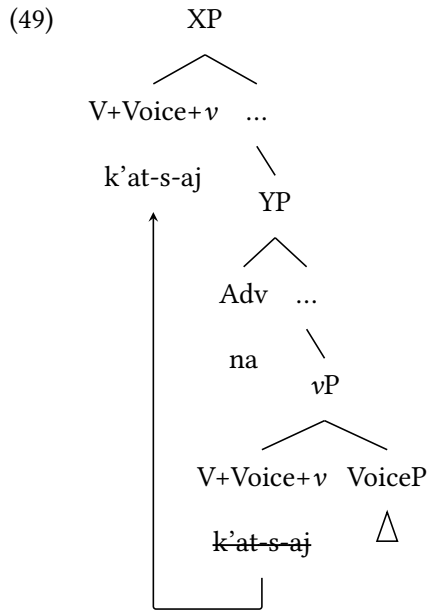
There is also a class of adverbs that strictly appears between the verb and its object, one such example being *na* 'still', shown in (48). We have not found a discussion of these adverbs elsewhere, and so it is not known whether this is unique to the Q'antel dialect.

(48) (*na) Lal Mri'y (*na) jin   k-∅-u-k'at-s-aj   **na** le lej   (*na).

        the Mary   PROG INCMP-B3S-A3S-burn-CAUS-DTR still the tortilla

    'Mary is still burning the tortilla.'

Following Pollock 1989, we interpret these facts about word order as an indication that the verb must undergo some amount of further movement[3]. Given that we assume adverbs do not base-generate inside *v*P, this means that the verb raises out of *v*P.

---

[3]   Another possibility is that the verb and adverb stay in situ, and the object raises to the right. The relative heights of the verb and its object can be probed by tests of c-commanding relationships, which we leave for future work.

(49)

```
                    XP
                  /    \
          V+Voice+v    ...
          k'at-s-aj      \
                          YP
                         /  \
                      Adv    ...
                       na      \
                               vP
                              /  \
                     V+Voice+v    VoiceP
                      k̶'̶a̶t̶-̶s̶-̶a̶j̶      △
```

Recall also from (44) that after V^0 rolls up into v^0 or higher, the spellout order is V+Voice+v Subject Object; that is, VSO. From here, either of VOS and SVO follow from raising of the subject out of vP, whether to the left (SVO) or to the right (VOS). This analysis is essentially identical to the one given in Clemens et al. 2018, with two major differences. First, we have an additional projection YP to allow for intervening adverbs such as *na* 'still'. Second, Clemens et al. 2018 proposes that VOS is derived from VSO post-syntactically by a prosodic reordering mechanism that moves the object closer to the verb than the subject, so as for the VO string to form a single phonological phrase. We do not pursue such a direction here, since VSO is never permissible.

We quickly pause to review two past analyses of Mayan word order, as they are summarised in Clemens et al. 2018. First, Aissen 1992 base-generates VOS with the subject placed in a right-side specifier above VP, and allows for a VSO alternation by raising the object to a higher right-side specifier above the subject. Clemens et al. 2018 rejects this analysis due to the existence of unalternating VSO languages such as Q'anjob'al and Mam. Second, Coon 2010 base-generates an SVO order, from which VOS surfaces by raising the vP projection to the left of the subject. This is rejected by Clemens et al. 2018 for the same reason, which is that it is unclear why such vP-raising is not permissible in VSO-exclusive languages. Returning to Q'antel K'iche', both of the analyses in Aissen 1992 and Coon 2010 are compatible, given that VSO is not the exclusive word order. To this end, SVO follows from Aissen 1992's analysis by having the subject base-generate in a *left*-side specifier, and SVO follows from Coon 2010's analysis by some mechanism that blocks

27

VP raising.

We summarise as follows. Q'antel K'iche' has a neutral word order of either VOS or SVO, depending on tense and aspect. Word order is not affected by the animacy or definiteness of the arguments. It is possible for some adverbs to intervene between the verb and object, which behooves an analysis in which the verb raises out of vP and higher than some adverb-introducing projection.

3 The K'iche' passive

In this section, we give a description of the passive in Q'antel K'iche'. We first give general background on the properties of passives in Mayan languages. Then, we show how these properties compare to Q'antel K'iche'.

3.1 Background on the Mayan passive

In this subsection, we give an introduction to the passive voice in other Mayan languages. The passive voice is canonically defined as a configuration in which the following three properties hold (Legate 2021).

(50) a.   The external argument demotes to adjunct position.

b.   An object promotes to subject position.

c.   There is morphology distinct from the active voice.

An example from English is shown in (51). (50a) is fulfilled by the demotion of *the cat* into the complement of the preposition *by*. (50b) is fulfilled by the promotion of *me* to the subject pronoun *I*. (50c) is fulfilled by the alternation between *scratched* and *was scratched*.

(51) a.   *English active.*

The cat scratched me.

b.   *English passive.*

I was scratched by the cat.

These properties can be seen to hold in Yucatec, a split-ergative Mayan language for which the completive

aspect shows ergative alignment (Dayley 1983; Vapnarsky et al. 2012). In (52), there is a stem alternation between active *jek'* 'break' and passive *jé'e* 'is broken'. Moreover, in both the active-voice (52a) and the passive-voice (52b), the theme 'it' has no overt marking, as expected for the third-person singular absolutive. In contrast, the agent in the active voice shows overt ergative marking *in-* 'A1s-' in (52a), but has demoted into adjunct position *tumèen tèen* 'by me' in (52b).

(52) a. *Yucatec active.*

T-in-**jek'**-aj-∅.

T-A1S-break-M-B3S

'I broke it.'

b. *Yucatec passive.*

jé'e-∅   (t-u-mèen tèen).

break.PASS-B3S   by   I

'It was broken (by me).'

There are a handful of additional properties common to passives in Mayan languages (Dayley 1983; Vapnarsky et al. 2012).

(53) a. Root transitives and derived transitives take different passive morphology.

b. There are multiple passives, which differ in aspect and the licensing of arguments.

The first of these properties is found in Ch'ol (Coon 2010; Dayley 1983), shown in (54). Root transitives take the passive infix ⟨*j*⟩, whilst derived transitives take the passive suffix *-tyi*. However, much as in (39), many derived transitives are identified as such only by their derived transitive morphology, and lack actual overt morphological derivation. This is the case for (54b), as well as (57c) and (63d) later.

(54) a. *Passive of root transitive.*

Tyi   **ku⟨j⟩ch**-i-yoň.

PRFV carry.PASS-INTR-B1S

'I was carried.'   (Ch'ol, Coon 2010:194)

b. *Passive of derived transitive.*

Tyi **koty**-äñ-**tyi**-yety.

PRFV help-DTR-PASS-B2s

'You were helped.' (Ch'ol, Coon 2010:195)

An example of a Mayan language with multiple passives is Jacaltec (Craig n.d.; Dayley 1983), which has at least four passive markers: *-ot* cannot occur in the future; *-lax* presupposes an agent; *-lo* is usually used in negative or restrictive senses; and *-cha* implies that the theme is helpless. These are shown below in (55).

(55) a. X-∅-maq'-**ot** ix (y-u naj).

T-B3s-hit-PASS she A3s-by him

'She was hit (by him).' (Dayley 1983:56)

b. Ch-in-**il-lax**-oj (y-u naj).

T-B1s-see-PASS-M A3s-by him

'I'll be seen (by him).' (Dayley 1983:56)

c. Matxa x-∅-'il-**la** (w-u an)

not.yet T-B3s-see-PASS A1s-by me

'It was not seen yet (by me).' (Dayley 1983:56)

d. Ch-ach-kil-**cha** (w-u an).

T-B2s-help-PASS A1s-by me)

'You are helped (by me).' (Dayley 1983:57)

To summarise, the passive is a morphosyntactic configuration most often characterised by the convergence of the three properties in (50). Within Mayan languages in particular, there are often multiple passive constructions, as well as different morphologies for root and derived transitives.

For K'iche', there are at least two[4] formally-distinct passive constructions, which are traditionally called the '(simple) passive' and the 'completive passive'. (56a) shows the transitive active voice, in contrast to

---

[4] Outside the scope of this work is the 'perfect passive', whose morphology is syncretic with the active passive, and does not allow for the TAM markers in §2.1.

the two passives in (56b–c).

(56) a. Lal Mri'y x-eb'-u-**pir** le oj.

the Mary CMP-B3P-A3s-slice the avocado

'Mary sliced the avocados.'   (active)

b. X-e-**pir-äx** le oj (r-mal lal Mri'y).

CMP-B3P-slice-PASS the avocado A3s-by the Mary

'The avocados were sliced (by Mary).'   (simple passive)

c. X-e-**pir-täj** le oj (r-mal lal Mri'y).

CMP-B3P-slice-COMP.PASS the avocado A3s-by the Mary

'The avocados were sliced (by Mary).'   (completive passive)

In the active-voice example (56a), the agent *lal Mri'y* 'Mary' is found in subject position to the left of the verb; in the passives (56b–c), the agent instead appears at the right edge, adjacent to the possessed relational noun *r-mal* 'A3s-by'. On the other hand, *le oj* 'the avocados' is to the right of the verb in (56a), as well as in (56b–c). And last, the passive markers *-äx*, *-täj*, and *-om* are only found in (56b–c), and not in (56a). Moreover, recall from §2.6 that active-voice sentences like (56a) may also be expressed in VOS word order; likewise, the passives (56b–c) allow for SV word order, though VS is the neutral order.

The contrast in (56) also highlights the ergativity of K'iche'. In the active-voice (56a), the absolutive marker *eb'-* 'B3P-' indexes the plural argument *le oj* 'avocados', and not the singular argument *lal Mri'y* 'Mary'. In the passive-voice (56b–c), the same absolutive marker *e'-* 'B3P-' still indexes the plural subject *le oj* 'avocados', and *lal Mri'y* is not marked on the verb. As for terminology, various names have been given to the various K'iche' passives. In particular, the term *completive* is used to describe both the *completive aspect* marked by *x-*, and the *completive passive* marked by *-täj*. To avoid overlap, we adopt the following convention as an addendum to (16). First, a verb is called *completive* iff it bears *x-*, and is called *incompletive* iff it bears *k-*. Second, a nonperfect passive verb is called *completive passive* iff it bears *-täj*, and is called *passive* otherwise. Hence, the word *completive* in isolation always denotes the completive *aspect*, glossed CMP. Likewise, the word *passive* in isolation always denotes the *simple* passive, glossed PASS. Only when we use the set phrase *completive passive* do we mean the completive passive, glossed COMP.PASS. When

discussing both passives together, we shall engage in a small abuse of notation and write *-äx/täj*, glossed only as '-PASS/-COMP.PASS'.

3.2 Basic morphology of the K'iche' passive

In the dialects of K'iche' described in (6), completive passives always take the marker *-taj*, but simple passives have two ways of being marked: root transitives undergo vowel lengthening, whilst derived transitives take the marker *-(V)x*. This state of affairs is shown in (57).

(57) a. *Simple passive, root transitive.*

K-in-**ch'aay**-ik.

INCMP-A1S-hit.PASS-INTR

'I will be hit.'   (Mondloch 1981:121)

b. *Simple passive, derived transitive.*

K-ix-loq'o-**x**-ik.

INCMP-B2P-love-PASS-INTR

'You.PL are loved.'   (Mondloch 1981:125)

c. *Completive passive.*

Ka-kuna-**taj**   lah.

INCMP-cure-COMP.PASS-INTR 2FORM

'You.FORM will be cured.'   (Mondloch 1981:154)

However, recall that Q'antel K'iche' lacks a vowel length distinction. Hence, instead of the straightforward division between vowel-lengthening root transitives and suffixing derived transitives, there are three separate ways of forming the simple passive stem. First, some root transitive stems have no active–passive distinction at all.

(58) a. Lal Mri'y x-eb'-u-**loq'**   le lej.

the Mary CMP-B3P-A3S-buy the tortilla

'Mary bought the tortillas.'

b. X-e-**loq'** le lej (r-mal lal Mri'y).

CMP-B3P-buy.PASS the bowl A3s-by the Mary

'The tortillas were bought (by Mary).'

Second, some root transitive stems mark the active–passive distinction with a change in vowel quality. In (59), the active root vowel ⟨ *ä* ⟩ [ə] corresponds to the passive root vowel ⟨ *a* ⟩ [a]. Likewise in (60), the active root vowel ⟨ *i* ⟩ [i] corresponds to the passive root vowel ⟨ *a* ⟩ [a].

(59) a. X-eb'-u-**yäk** le ja

CMP-B3P-A3s-build the house

'She built the houses.'

b. X-e-**yak** le ja.

CMP-B3P-build.PASS the house

'The houses were built.'

(60) a. X-∅-u-**ch'iy** le che'.

CMP-B3s-A3s-hit the tree

'She hit the tree.'

b. X-∅-**ch'ay** le che'.

CMP-B3s-hit.PASS the tree

'The tree was hit.'

Third, all other root transitive stems bear the simple passive marker *-äx*. Moreover, all derived transitive stems form the simple passive with *-äx* as well. This means that there are no derived transitives that passivise with either zero marking or a vowel change.

(61) a. *Root transitive.*

X-eb'-il-**äx**   le   ak'l-ab'.

CMP-B3P-see-PASS the child-PL

'The children were seen.'

b. *Derived transitive.*

X-e-k'at-s-**äx**   le   ak'l-ab'.

CMP-B3P-burn-CAUS-PASS the child-PL

'The children were burned.'

This morpheme *-äx* has an allomorph *-y* after a root-final glottal stop '.

(62) a. Le   Xwan x-eb'-u-su'   le   ja.
the John   CMP-B3P-A3s-clean the house
'John cleaned the houses.'

b. X-e-su'-**y**   le   ja   (r-mal   le   Xwan).
CMP-B3P-clean-PASS the house   A3s-by the John
'The houses were cleaned (by John).'

As far as we are aware, these facts about passive morphology have not been observed for other dialects of K'iche'. Within Q'antel K'iche' alone, we do not know of any way to predict which passive morphology a given verb root will take; however, the syncretic and vowel-changing passives in Q'antel K'iche' usually— but not always—correspond to the vowel-lengthening passives in other K'iche' dialects.

As for the completive passive, Q'antel K'iche' agrees with other dialects in invariably using the marker *-täj*. Hence, all four verb roots in (58), (59), and (61) mark the completive passive with *-täj*, with no distinction between root transitives and derived transitives. We show this in (63).

(63)   a.   *Root transitive, active=passive.*

        X-e-loq'-**täj**   le   läq   (r-mal   lal   Mri'y).

        CMP-B3P-buy-COMP.PASS the bowl A3s-by the Mary

        'The bowl was bought (by Mary).'

    b.   *Root transitive, vowel change passive.*

        X-∅-ch'iy-**täj**   le   che' (r-mal   lal   Mri'y).

        CMP-B3s-hit-COMP.PASS the tree   A3s-by the Mary

        'The tree was hit (by Mary).'

    c.   *Root transitive, -äx passive.*

        X-eb'-il-**täj**   le   ak'l-ab' (r-mal   lal   Mri'y).

        CMP-B3P-see-COMP.PASS the child-PL A3s-by the Mary

        'The children were seen (by Mary).'

    d.   *Derived transitive.*

        X-e-kun-**täj**   le   ak'l-ab' (r-mal   lal   Mri'y).

        CMP-B3P-heal-COMP.PASS the child-PL A3s-by the Mary

        'The children were healed (by Mary).'

The simple passive and the completive passive are in complementary distribution, since both passives cannot be simultaneously marked. In particular, the completive passive *-täj* always attaches to the *active* stem, and never to the passive stem, as in (64d).

(64)   a.   Lal Mri'y x-e-**chäj**   le   ak'l-ab'.

        the Mary CMP-B3P-wash the child-PL

        'Mary washed the children.'

    b.   X-e-**chaj**   le   ak'l-ab' (r-mal   lal   Mri'y).

        CMP-B3P-wash.PASS the child-PL A3s-by the Mary

        'The children were washed (by Mary).'

c. X-e-**chäj-täj**   le   ak'l-ab' (r-mal   lal Mri'y).

CMP-B3P-wash-COMP.PASS the child-PL A3s-by the Mary

'The children were washed (by Mary).'

d. *X-e-**chaj-täj**.

CMP-B3P-wash.PASS-COMP.PASS

Intended: 'It was washed.'

Last, recall that K'iche' has a family of status suffixes that mark transitivity (§2.5). Recall also that intransitive verbs take the status suffix *-ik*, which is obligatory in clause-final position, but forbidden in clause-medial position. Since passives are intransitives, this means that they take the status suffix *-ik*; moreover, the passive markers *-äx* and *-täj* reduce to *-x* and *-tj*, respectively.

(65) a. *Simple passive, clause-medial.*

X-at-kun-**äx**/**täj**(*-**ik**)   r-mal   lal Mri'y.

CMP-B2s-heal-PASS(*-INTR) A3s-by the Mary

'You were healed by Mary.'

b. *Simple passive, clause-final.*

X-at-kun-**x**/**tj***(-**ik**).

CMP-B2s-heal-PASS*(-INTR)

'You were healed.'

Following Coon et al. 2014, our glosses use square brackets to demarcate status suffixes that only surface when clause-final. For example, the status suffix *-ik* in (66) does not surface unless *le ak'lab'* 'the children' is elided or fronted.

(66) X-e-kun-äx[-**ik**]   le   ak'l-ab'.
CMP-B3s-heal-PASS[-INTR] the child-PL
'The children were healed.'

Below is summarised the passive morphology in Q'antel K'iche'. An incomplete list of passive stems is

given in [Appendix](#).

(67)   **Figure 7.** Passive-building operations.

	Root transitive	Derived transitive
Simple passive	no change	*-äx*[5]
	root vowel change	
	-äx ~ -y	
Completive passive	*-täj*	*-täj*

3.3   Basic syntax of the K'iche' passive

The Q'antel K'iche' passive has the unmarked word order VS, such that the subject is to the right of the verb. The agent is optionally introduced as the complement of the relational noun *mal* 'by, because', which takes a Set A possessor that agrees with the agent.

(68)   a.   X-e-pir-äx/täj   le   oj   (**r**-mal   le   ixäq).

CMP-B3P-slice-PASS/COMP.PASS   the   avocado   A3S-by   the   woman

'The avocados were sliced (by the woman).'

   b.   X-e-pir-äx/täj   le   oj   (**k**-mal   le   ixoq-**ib'**).

CMP-B3P-slice-PASS/COMP.PASS   the   avocado   A3P-by   the   woman-PL

'The avocados were sliced (by the women).'

Both the simple and completive passives allow for SV word order, as in (69a). However, neither passive allows for the *by*-phrase to be to the left of the verb, as in (69b).[6]

---

[5]   If the *-äx ~ -y* alternation is phonological, then we expect there to be derived transitives that take the *-y* allomorph. Never-
theless, we have yet to find any derived transitive stems that end in a glottal stop, so as to trigger the allomorphy.

[6]   This only holds under a broad focus reading; we leave for future work whether the *by*-phrase can be focused or topicalised.

(69) a. Le   oj   x-e-pir-äx/täj   (r-mal   la   Xwan).
        the avocado CMP-B3P-slice-PASS/COMP.PASS A3s-by the John

        'The avocados were sliced (by John).'

    b. *R-mal la   Xwan x-e-pir-äx/täj   le   oj.
        A3s-by the John   CMP-B3P-slice-PASS/COMP.PASS the avocado

        Intended: '*By John the avocados were sliced.'

There do exist passive verbs with clause-initial phrases headed by *mal* 'by', but these are not agent-bearing *by*-phrases; rather, these are adjuncts expressing cause, reason, or some other non-argument information.

(70) **Context:** *John told the children to cut some fruit, but they made him do it instead.*

    R-mal le   ak'l-ab', x-e-pir-äx/täj   le   oj   r-mal   la   Xwan.
    A3s-by the child-PL   CMP-B3P-slice-PASS/COMP.PASS the avocado A3s-by the John

    'Because of the children, the avocados were sliced by John.'

It is also unacceptable for the *by*-phrase to intervene between the verb and its subject, whether the latter two are in VS or SV order.

(71) a. X-e-pir-äx/täj   (***r-mal la   Xwan**) le   oj.
        CMP-B3P-slice-PASS/COMP.PASS   A3s-by the John   the avocado

        'The avocados were sliced (*by John).'

    b. Le   oj   (***r-mal la   Xwan**) x-e-pir-äx/täj.
        the avocado   A3s-by the John   CMP-B3P-slice-PASS/COMP.PASS

        'The avocados were sliced (*by John).'

We summarise these patterns below. The generalisation is that the verb and subject may be ordered in any fashion, so long as the *by*-phrase is to the right of both. We leave for future work the interaction of adverbs with passive word orders.

(72)   **Figure 8.** Acceptable word orders in the passive.

    a.   V   S   (ByP)

    b.   S   V   (ByP)

    c. *V   (ByP)   S

    d. *S   (ByP)   V

    e. *(ByP) V   S

    f. *(ByP) S   V

3.4   Basic semantics of the K'iche' passive

Here, the simple and completive passives differ in two main ways. First, the simple passive has specific person restrictions against first or second-person agents (Mondloch 1981), which we elaborate on in §4.4.1. And second, the completive passive is used to emphasise the result or outcome of an event (Mondloch 1981). To this end, certain adverbial expressions are only compatible with the simple passive.

(73)   a.   X-∅-tiy { -ay / *-täj }   le   me's **aq'bil**.
        CMP-B3S-bite { -PASS / -COMP.PASS } the cat   morning
        'The cat was bit this morning.'

    b.   **Jun or**   X-∅-tärn { -ex / *-täj }   le   me's.
        one hour CMP-B3S-chase { -PASS / -COMP.PASS } the cat
        'The cat was chased for an hour.'

Though the difference between the two passives is well-known, we are not aware of any work that probes the distinction using adverbial expressions, as in (73).

4   Argument structure in passives

The canonical target of passivisation is the direct object of a transitive verb (Keenan et al. 2006; Perlmutter et al. 1977). However, in various other languages, it is possible to passivise subjects of intransitives and goals of ditransitives. We are not aware of work on passives of non-transitive verbs in other Mayan languages, but

in this section, we show that Q'antel K'iche' does not allow for any kind of passive other than the canonical kind in which a transitive direct object promotes. Our generalisations about passives of ditransitives and intransitives, as far as we are aware, have not been observed in the literature on K'iche'.

4.1 Passives of ditransitives

In this subsection, we show that passivisation only targets the *theme* of a ditransitive verb, and never the goal. First, in the active voice, ditransitive verbs take markers for the theme and the agent, whilst the goal is given in a possessed relational noun.

(74) a. Le ixäq   x-**eb'-u**-ya'   le   wuj   ch-**k**-e   le   ak'l-ab'.
   the woman   CMP-B3P-A3S-give   the   book   to-A3P-to   the   child-PL
   'The woman gave the books to the children.'

   b. X-∅-**in**-k'ut   ch=**aw**-uch le   wuj.
   CMP-B3S-A1S-show   to=A2S-face   the   book
   'I showed the book to you (*lit.* to your face).'

It is unacceptable for the verb to mark the goal. Hence, the sentences in (74) do not have dative shift-like counterparts as in (75).

(75) a. *Le ixäq   x-**n**-u-ya'   le   wuj.
   the woman   CMP-B1S-A3S-give   the   book
   Intended: 'The woman gave me the books.'

   b. *X-**at**-in-k'ut   le   wuj.
   CMP-B2S-A1S-show   the   book
   Intended: 'I showed you the book.'

In the passive of the ditransitive, the theme is the subject, whilst the goal stays as the possessum of a relational noun. Hence, the absolutive marking in (76) covaries only with the plurality of the theme.

(76) X- { ∅- / **e-** } yi'   le   wuj   ch-uw-e.

CMP-   B3S- / B3P-   give.PASS   the   book   to-A1s-to

'The { book / books } were given to me.

If the passive of a ditransitive has a *by*-phrase, then it must be to the right of the goal-bearing *to*-phrase.

(77) a. X-∅-yi'   le   wuj   ch-∅-e   are' **r-mal la ali'**.

CMP-B3S-give.PASS   the   book   to-B3s-to   3SG   A3s-by   the   girl

'The book was given to him by the girl.'

b. *X-∅-yi'   le   wuj   **r-mal la ali'** ch-∅-e   are'.

CMP-B3S-give.PASS   the   book   A3s-by   the   girl   to-B3s-to   3SG

Intended: 'The book was given by the girl to him.'

Much like the lack of dative shift, there is no passive construction that promotes the *goal* to subject. Hence, the active sentences in (74) cannot passivise as in (78).

(78) a. *X-**n**-yi'   le   wuj.

CMP-B1S-give.PASS   the   book

Intended: ' I was given the books.'

b. *X-**at**-k'ut-äx/täj   le   wuj.

CMP-B1S-open-POS-PASS/COMP.PASS   the   door

Intended: 'You were shown the book.'

Indeed, the passive verbs *xnyi'* 'I was given' and *xatk'utäx* 'you were shown' in (78) can only be interpreted to have the speaker as the *theme* of the verb, and not as the goal.

4.2 Passives of intransitives

In this subsection, we show that passivisation does not target arguments of intransitive verbs. Though there do exist verbs that alternate between unaccusative and transitive, passives of these verbs are always interpreted to have the transitive meaning, albeit with a suppressed agent.

41

First, in the active voice, intransitive verbs take a single, absolutive-marked argument.

(79) a. X-**e**-b'in   le ak'l-ab'.

       CMP-B3P-walk the child-PL.

       'The children walked.'   (Unergative)

    b. X-**e**-käm   le ak'l-ab'.

       CMP-B3P-die the child-PL.

       'The children died.'   (Unaccusative)

These verbs do not have passives, as evidenced by two facts. First, they do not take passive morphology.

(80) a. *X-e-b'in-äx/täj.

       CMP-B3P-walk-PASS/COMP.PASS

       Intended: 'It was walked.'

    b. *X-e-käm-äx/täj.

       CMP-B3P-die-PASS/COMP.PASS

       Intended: 'It was died.'

Next, they do not license a *by*-phrase agent, whether or not there is any kind of passive morphology.

(81) a. *X-e-b'in(-äx/täj)   r-mal le ak'l-ab'.

       CMP-B3P-walk-PASS/COMP.PASS A3s-by the child-PL

       Intended: 'It was walked by the children.'

    b. *X-e-käm(-äx/täj)   r-mal le ak'l-ab'.

       CMP-B3P-die-PASS/COMP.PASS A3s-by the child-PL

       Intended: 'It was died by the children.'

4.2.1 Passives of verbs with transitivity alternations

There are a handful of verbs that alternate between being unaccusative and transitive.

(82) a. X-e-**tzäq**   le wuj.

        CMP-B3P-fall the book

        'The books fell.'

    b. Lal Mri'y x-eb'-u-**tzäq** le wuj.

        the Mary CMP-B3P-drop the book

        'Mary dropped the books.'

(83) a. X-e-**sa'y**   le wuj.

        CMP-B3P-float the book

        'The books floated.'

    b. Lal Mri'y x-eb'-u-**sa'y** le wuj.

        the Mary CMP-B3P-swing the book

        'Mary swung the books about.'

When these verb roots are used as passives, they have the transitive interpretation.

(84) a. X-e-**tzaq/tzäqtaj**   (r-mal lal Mri'y).

        CMP-B3P-drop.PASS/COMP.PASS A3s-by the Mary

        'They were dropped (by Mary).'

    b. X-e-**sa'y-äx/täj**   (r-mal lal Mri'y).

        CMP-B3P-swing-PASS/COMP.PASS A3s-by the Mary

        'They were swung about (by Mary).'

4.3 Passives of reflexives

In this subsection, we show that reflexive pronouns behaves like a possessed noun, and that only transitive verbs allow for reflexive pronouns. First, the reflexive pronoun is a form of the noun *ib'* that takes a Set A marker. The reflexive pronoun always triggers third-person singular agreement on the verb, irregardless of the possessor.

(85) a. X-∅-nw-il   **w-ib'**.

CMP-B3S-A1S-see A1S-self

'I saw myself.'

b. X-∅-aw-il   **aw-ib'**.

CMP-B3S-A2S-see A2S-self

'You saw yourself.'

That these are reflexive pronouns is shown by their adherence to Condition A (Chomsky 1981). In (86a), the reflexive *q-ib'* 'ourselves' is bound by the subject, whether this be the *pro*-dropped first-person plural pronoun or the ergative marker *q-* 'A1P-'; on the other hand, the pronoun *uj* 'us' is unacceptable. Likewise, (86b) shows that *q-ib'* is not acceptable without a binder, since it is not coindexed with *lal Mri'y* 'the Mary' does not coindex. And last, (86c) shows that the binding domain is the clause, since the first-person plural subject in the upper clause, marked by the ergative *q-* on the verb, fails to license the reflexive *q-ib'* in the lower clause.

(86) a. X-∅-**q**-il   { *uj / **q**-ib' }.

CMP-B3S-A1P-see   B1P / A1P-self

'We saw { *us / ourselves }.'

b. X-**uj**-r-il   { (**uj**) / *q-ib' }   lal   Mri'y.

CMP-B3P-A3S-see   B1P / A1P-self the Mary

'Mary saw { us / *ourselves }.'

c. K-∅-**q**-chom-aj   che

INCMP-B3S-A1P-think-DTR COMP

x-**uj**-il-äx/täj   { (**uj**) / *q-ib' }   (r-mal   lal   Mri'y).

CMP-B1P-see-PASS/COMP.PASS   B1P / A1P-self A3S-by the Mary

'We think that { we / *ourselves } were seen by Mary.'

However, reflexive pronouns do not occur in the passive voice. In (87a), the first-person plural subject cannot occur with a *by*-phrase containing the coindexed reflexive pronoun *q-ib'* 'A1P-self'. On the other

hand, in (87b), the *by*-phrase contains a first-person plural agent, in which case the subject of the verb cannot be a coindexed reflexive pronoun.

(87) a. X-**uj**-il-äx/täj   (*r-mal   **q-ib'**).
          CMP-B1P-see-PASS/COMP.PASS   A3S-by A1P-self
          'We were seen (*by ourselves).'

     b. X-∅-il-äx/täj   { are' / ***q-ib'** }   **q**-mal   **uj**.
          CMP-B3S-see-PASS/COMP.PASS   3SG /   A1P-self A1P-by A1P
          '{ It / *ourselves } was seen by us.'

We are not aware of any other work on reflexive pronouns in passives in K'iche'.

4.4 Agents of passives

In this subsection, we discuss various properties of semantic agents, and how they interact with the passive voice. For example, Jacaltec is a Mayan language in which transitive subjects are always animate (Craig n.d., Mondloch 1981:117), and Ch'ol also restricts *by*-phrase agents based on animacy (Coon 2017). We show that in Q'antel K'iche', the only semantic restriction on a passive agent is that the simple passive does not cooccur with first- or second-person agents. We then contextualise this restriction in terms of the universal hierarchy of animacy (Comrie 1981).

First, recall that agents of passives in Q'antel K'iche' appear as the object of a possessed relational noun *mal*.

(88) a. *Active.*

         Le   ixäq   x-eb'-u-pir   le   oj.
         the woman CMP-B3P-A3S-slice the avocado
         'The woman sliced the avocados.'

b. *Passive.*

> Le oj   x-e-pir-äx/täj   **r-mal le ixäq**.
>
> the avocado CMP-B3P-slice-PASS/COMP.PASS A3S-by the woman
>
> 'The avocados were sliced by the woman.'

(89) shows that the agent can be something without animacy, such as a natural phenomenon.[7]

(89) a. **Le käq'iq'** x-∅-u-tzap-ij   le porta.

> the wind   CMP-B3S-A3S-close-DTR the door
>
> 'The wind closed the door.'

b. S-∅-tzap-ix/täj   le porta (r-mal **le käq'iq'**).

> CMP-B3S-close-PASS/COMP.PASS the door   A3S-by the wind
>
> 'The door was closed (by the wind).'

Moreover, passives without overt agents nevertheless license agent-oriented verb modifiers.

(90) a. X-e-tzaq-äx/täj   le wuj **a propósito**.

> CMP-B3P-drop-PASS/COMP.PASS the book on purpose
>
> 'The books were dropped on purpose.'

b. **Indispwesta** x-e-k'-ix   le oj.

> unwillingly   CMP-B3P-sell-PASS/COMP.PASS the avocado
>
> 'The avocados were sold unwillingly.'

This suggests that all passives introduce an agent semantically.

4.4.1   Person restrictions

There are restrictions on what kind of persons can be the agent of a passive. In the simple passive, it is ungrammatical for the agent to be in the first- or second person (Mondloch 1981). Hence, the active-voice sentence in (91a) allows for the agent to be any speech act participant. But, the passivisation in (91b) forbids

---

[7]   We leave for future work whether this extends to inanimate concrete agents, such as *the door was hit by a rock*.

these same agents from being in the *by*-phrase.

(91) a. X-e(b')- { **n-** / **a-** / **qa-** / **i-** } kun-äx   le ak'l-ab'.

   CMP-B3P-   A1S- / A2S- / A1P- / A2P- heal-PASS the child-PL

   '{ I / you / we / yall } healed the children.

   b. *X-e-kun-äx   le   ak'l-ab' { u-mal in   / awu-mal at / q-mal uj   / iwu-mal ix }.

   CMP-B3P-heal-PASS the child-PL   A1S-by B1S / A2S-by B2S / A1P-by B1P / A2P-by B2P

   Intended: 'The children were healed { by me / by you / by us / by yall }.'

This restriction does not hold for the completive passive, which allows for any person to be expressed inside of a *by*-phrase.

(92) X-e-kun-**täj**   le   ak'l-ab' { u-mal in   / awu-mal at / q-mal uj   / iwu-mal ix }.

   CMP-B3P-heal-COMP.PASS the child-PL   A1S-by B1S / A2S-by B2S / A1P-by B1P / A2P-by B2P

   'The children were healed { by me / by you / by us / by yall }.'

Moreover, this person restriction does not hold for *formal* pronouns (Mondloch 1981). Hence, the second-person formal pronouns *la* and *aläq* can be introduced in a *by*-phrase with either passive, where they take the usual 3SG alignment.

(93) a. X-e-kun-aj   { **la**   / **aläq** }   le ak'l-ab'.

   CMP-B3P-heal-DTR   2FORM / 2.PL.FORM the child-PL

   '{ You (formal) / yall (formal) } healed the children.'

   b. X-e-kun-äx/täj   le   ak'l-ab' (r-mal   { **la**   / **aläq** }).

   CMP-B3P-heal-PASS/COMP.PASS the child-PL A3S-by   2FORM / 2.PL.FORM

   'The children were healed (by { you (formal) / yall (formal) }).'

Hence, the acceptable person configurations for passives is as follows.

(94) **Figure 9.**

↓Ag / Th→	1	2	2FORM	3
1	—	-täj	-täj	-täj
2	-täj	—	—	-täj
2FORM	-äx/täj	—	—	-äx/täj
3	-äx/täj	-äx/täj	-äx/täj	-äx/täj

There is also one configuration in which the *active* voice is unacceptable (Mondloch 1981). This is when the agent is in the third person, and the theme is a *formal* second person.

(95) a. *Le ixäq   x-∅-u-kun-aj   { la   / aläq }.
      the woman CMP-B3S-A3S-heal-DTR   2.FORM / 2PL.FORM

      Intended: 'The woman healed { you (formal) / yall (formal) }.'

   b. X-∅-kun-äx   { la   / aläq }   (r-mal le   ixäq).
      CMP-B3S-heal-PASS   2.FORM / 2PL.FORM A3S-by the woman

      '{ You (formal) / Yall (formal) } were healed (by the woman).

This is specific to the formal pronoun, since the familiar pronoun yields no such unacceptability.

(96) Le ixäq   x-**at**-u-kun-aj.
     the woman CMP-B2S-A3S-heal-DTR

     'The woman healed you.'

This restriction resembles the animacy hierarchy in Mam (England 2017), which likewise forbids transitive active verbs for which the object rank higher than the subject.

We summarise these person restrictions as follows. Simple passives require agents to be in the third-person (which includes the formal second-person), whilst completive passives have no such restriction. Both passives require that the theme and agent not corefer. And last, the active voice cannot be used with the specific combination of a third-person agent and a formal second-person theme, which frequently behooves

the passive or antipassive constructions.

4.5 Towards an analysis.

In this subsection, we attempt to adapt elements of the active-voice analysis in §2 to the passive voice, based on the empirical generalisations in §4, which are illustrated by (97).

(97) K-e-pir-äx[-ik]   le   oj   (r-mal   lal   Mri'y).
      INCMP-B3P-slice-PASS[-INTR] the   avocado A3s-by   the   Mary
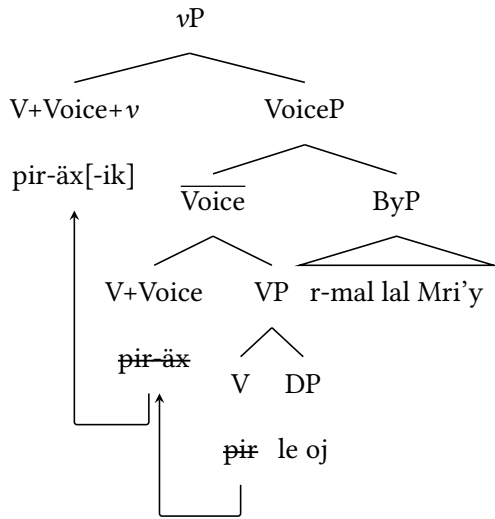   'The avocados are being sliced (by Mary).'

First, recall from §2.3–6 that Mayan languages are traditionally analysed with the structure vP > VoiceP, since the passive marker *-äx* is closer to the verb root than the status suffix *-ik*. Second, recall from §4.4 that the *by*-phrase is obligatorily to the right of the verb and the subject. These two facts minimally behoove a passive-voice derivation such as in (98), in which V rolls up through Voice and into v.

(98) Derivation of passive-voice verb morpheme order.
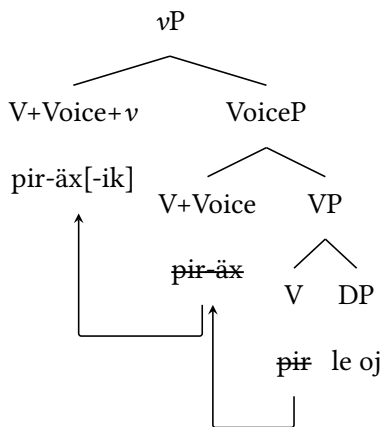
As for the *by*-phrase, there are two broad generative approaches, the "standard" analysis (Bruening 2013; Legate 2014, 2020) and the "smuggling" analysis (Collins 2005), whose main difference is in the status of the *by*-phrase. In the standard analysis, the *by*-phrase is taken at face value as an adjunct to a verbal projection such as VoiceP, shown in (99).

(99) The "standard" analysis: the *by*-phrase is an adjunct in Spec,VoiceP.

```
                          vP
              ┌───────────┴───────────┐
         V+Voice+v                  VoiceP
         pir-äx[-ik]          ┌───────┴───────┐
              ↑             Voice             ByP
              │          ┌────┴────┐      ┌────┴────┐
              │      V+Voice       VP   r-mal lal Mri'y
              │       pir-äx      ┌─┴─┐
              │                   V   DP
              └───────            pir  le oj
```
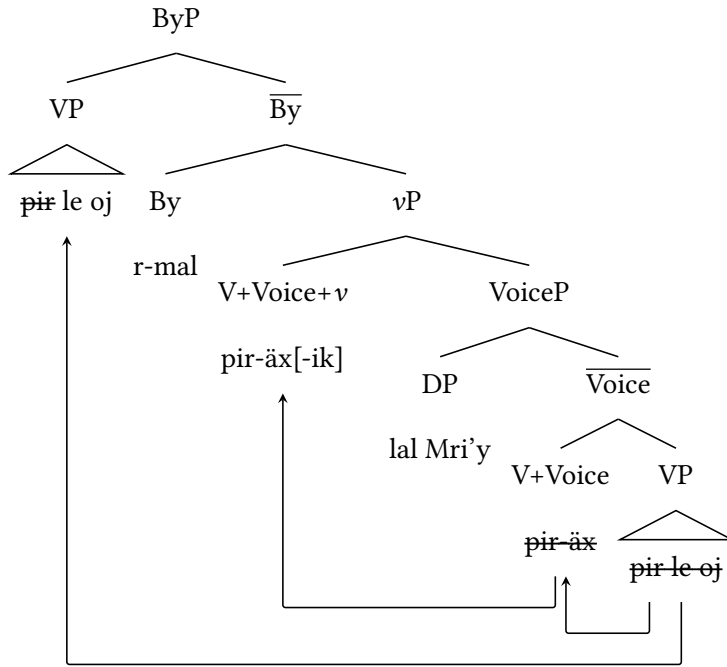
From here, the standard analysis immediately derives the impossibility of goal-promoting passives discussed in §4.1. Goals are already assigned dative case by the preposition *che* 'to', whilst the IA is caseless in the *v*P domain; hence, the Case Filter (Chomsky 1981) behooves the IA to raise to the subject position to receive case. On the other hand, the passive marker absorbs the accusative case that would be assigned to themes, such that they must raise to subject position to receive Case.

The standard analysis also derives the impossibility of passives with reflexive arguments, as discussed in §4.3. Condition A requires anaphors to be bound locally, within the clause. However, (99) shows that neither the theme *le oj* nor the agent *lal Mri'y* c-command the other; hence, no binding relationship is possible between the two DPs.

On the other hand, the smuggling analysis merges the agent in the same position as in the active voice, which for us is Spec,VoiceP. To allow for the theme DP *le oj* 'the avocado(s)' to raise to subject position, a very low containing projection such as VP is raised higher than the intervening agent DP *lal Mri'y* 'Mary'. These movements then allow for the *by*-phrase to emerge as a surface-contiguous string. (100) shows the initial steps of such a derivation.

(100) The smuggling analysis: the *by*-phrase is a surface-contiguous non-constituent.

ByP
VP $\overline{\text{By}}$
~~pir~~ le oj   By   *v*P
r-mal   V+Voice+*v*   VoiceP
pir-äx[-ik]   DP $\overline{\text{Voice}}$
lal Mri'y   V+Voice   VP
~~pir-äx~~   ~~pir le oj~~

Of course, (100) as is yields the incorrect word order **le oj rmal pir-äx[-ik] lal Mri'y*, with the v^0 head *pir-äx[-ik]* intervening between the elements of the *by*-phrase *r-mal lal Mri'y* 'by Mary'. Moreover, it is not clear how to move the v^0 head *pir-äx[-ik]* to the left of the VP remnant ~~pir~~ *le oj*, since this would need to be an instance of head movement that bypasses the By^0 head *r-mal*, in violation of the Head Movement Constraint (Travis 1984). Hence, the smuggling analysis does not allow for a straightforward derivation of the desired word order.

Moreover, it is not clear how the smuggling analysis can derive the restrictions against goal-promoting passives and reflexive passives. The tree in (100) shows that the theme DP *le oj* base-generates in a position c-commanded by the agent DP *lal Mri'y*. From there, the theme DP *le oj* raises to a position that c-commands the agent DP. Hence, smuggling wrongly predicts that the theme DP can bind the agent DP.

From these facts we preliminarily conclude that the standard analysis is preferable to the smuggling analysis. The standard analysis gives a straightforward derivation of the desired word order, from which we obtain the goal-promoting passive restriction and the reflexive passive restriction; none of these desiderata are given by the smuggling analysis as it stands. Nevertheless, we have only begun to investigate the data

51

on the syntax of passives. For example, we are not aware of any particle verbs in K'iche', which are used in Collins 2005 to argue for VP movement (as in smuggling) rather than only V head movement; nor are we aware of preposition stranding in K'iche', which would serve the same end. We have also yet to determine the syntactic category of the *by*-phrase, or even the relational noun *mal* 'by' itself, which shows properties of both nominals and prepositions. Furthermore, we have not begun to investigate whether the passive agent is in an argument position or an adjunct position, though its rigid position at the right edge of the clause is more characteristic of arguments than adjuncts.

5   Ending and outlook

We have given a description of the passive voice in Q'antel K'iche' and the beginnings of an analysis thereof. Descriptively, Q'antel K'iche' has two formally-distinct passive constructions, which differ in aspect and sensitivity to the animacy of the agent. Moreover, passivisation in Q'antel K'iche' obligatorily promotes the theme to subject position. This means that intransitive verbs do not have passives, and that ditransitive verbs only have theme-promoting passives, and not goal-promoting passives.

Analytically, we have given an overview of word and morpheme order in Mayan languages, and how these analyses can be adapted to Q'antel K'iche'. We have discussed the two main schools of thought surrounding the passive, and have tentatively concluded that the standard analysis gives a better explanation of the descriptive generalisations about word order and argument structure.

We propose many directions in which to further our proposal. The most immediate is the need for additional data, as we have scarcely begun to investigate the behaviour of passive-like configurations such as unaccusatives, impersonals, and middle voices. There also remains to be investigated the differences between the simple and completive passives, as we have largely focused on their common passive-like properties, rather than on the subtle differences therebetween. Analytically, it remains to be understood why and how the passive agent restrictions are derived. Much is to be done.

A   Appendix.

(101)

Root	Meaning	Kind	Passive stem	Morphology
loq'	'buy'	Root	*loq'*	No change
pix	'break'	Root	*pix*	No change
b'ot	'wind, roll'	Root	*b'ot*	No change
b'än	'do, make'	Root	*b'an*	Vowel change
ch'iy	'hit'	Root	*ch'ay*	Vowel change
ya'	'plant'	Root	*yi'*	Vowel change
ch'äj	'wash'	Root	*ch'aj*	Vowel change
k'yäq	'throw'	Root	*k'yaq*	Vowel change
yäj	'scold'	Root	*yaj*	Vowel change
yäk	'build'	Root	*yak*[1]	Vowel change
b'äq	'uproot'	Root	*boq*	Vowel change
to'	'help'	Root	*to'-y*	Affixation
su'	'clean'	Root	*su'-y*	Affixation
tiya'	'bite'	Root	*tiya'-y*	Affixation
tik	'plant'	Root	*tik-äx*	Affixation
il	'see'	Root	*il-äx*	Affixation
tij	'eat'	Root	*tij-äx*	Affixation
chip	'grab, start'	Root	*chp'-äx*	Affixation
sa'y	'swing'	Root	*sa'y-äx*	Affixation
yäk	'build'	Root	*yäk-äx*[2]	Affixation
aj	'want'	Root	*aj-ux*	Affixation
sol	'peel'	Root	*sol-äx*	Affixation
pir	'slice'	Root	*pir-äx*	Affixation
b'aj	'hammer'	Root	*b'aj-äx*	Affixation
wiq	'decorate'	Root	*wiq-äx*	Affixation
b'ol	'grill'	Root	*b'ol-äx*	Affixation
ch'it	'worsen, aggravate'	Root	*ch'it-äx*	Affixation
kun-aj	'heal'	Derived	*kun-äx*	Affixation
etzl-aj	'destroy'	Derived	*etzl-äx*	Affixation
sk'-ij	'call'	Derived	*sk'-ix*	Affixation
k'-ij	'sell'	Derived	*k'-ix*	Affixation
q'op-ij	'cut'	Derived	*q'op-ix*	Affixation
tzap-ij	'close'	Derived	*tzap-ix*	Affixation
tz'k-uj	'look for'	Derived	*tz'k-ux*	Affixation

References.

Academia de las Lenguas Mayas de Guatemala (1988). *Documento de referencia para la pronunciación de los nuevos alfabetos oficiales*. Guatemala City: Instituto Indigenista Nacional.

Academia de las Lenguas Mayas de Guatemala (1991). *Ley de La Academia de las Lenguas Mayas de Guatemala*. Guatemala: Maya Wuj.

Aissen, Judith (1992). "Topic and focus in Mayan". In: *Language* 68 (1), pp. 43–80.

Aissen, Judith, Nora C. England, and Roberto Zavala Maldonado, eds. (2017). *The Mayan Languages*. London and New York: Routledge.

Ajpajacá Tum, Pedro Florentino (2001). *K'ichee' Choltziij*. Guatemala City: Editorial Cholsamaj.

Ajpajacá Tum, Pedro Florentino et al. (1996). *Diccionario del Idioma Kíche'*. Antigua, Guatemala: Proyecto Lingüistico Francisco Marroquín.

Baird, Brandon O. (2014). "An Acoustic Analysis of Spanish-K'ichee' (Mayan) Bilingual Intonation". PhD thesis. University of Texas.

Bruening, Benjamin (2013). "By phrases in passives and nominals". In: *Syntax* 16, pp. 1–41.

Campbell, Lyle (1977). *Quichean linguistic prehistory*. Berkeley: University of California Press.

Campbell, Lyle (2017). "Mayan History and Comparison". In: *The Mayan Languages*. Ed. by Judith Aissen, Nora C. England, and Roberto Zavala Maldonado. London and New York: Routledge.

Campbell, Lyle and Terrence Kaufman (1985). "Mayan linguistics: where are we now?" In: *Annual Review of Anthropology* 14, pp. 187–98.

Can Pixabaj, Telma Angelina (2015). "Complement and Purpose Clauses in K'iche'". PhD thesis. UT Austin.

Can Pixabaj, Telma Angelina (2017). "K'iche'". In: *The Mayan Languages*. Ed. by Judith Aissen, Nora C. England, and Roberto Zavala Maldonado. London and New York: Routledge.

Chomsky, Noam (1981). *Lectures on government and binding*. Dordrecht: Foris.

Chomsky, Noam (2000). "Minimalist inquiries: The framework". In: *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*. Ed. by R. Martin, D. Michaels, and J. Uriagereka. Cambridge, MA: MIT Press, pp. 89–155.

Clemens, Lauren and Jessica Coon (2018). "Deriving verb-initial word order in Mayan". In: *Language* 94 (2), pp. 237–280.

Collins, Chris (2005). "A smuggling approach to the passive in English". In: *Syntax* 8 (2), pp. 81–120.

Comrie, Bernard (1981). *Language Universals and Linguistic Typology*.

Coon, Jessica (2010). "VOS as predicate fronting in Chol". In: *Lingua* 120 (2), pp. 345–78.

Coon, Jessica (2013). *Aspects of split ergativity*. Cambridge: Oxford University Press.

Coon, Jessica (2017). "Ch'ol". In: *The Mayan Languages*. Ed. by Judith Aissen, Nora C. England, and Roberto Zavala Maldonado. Routledge.

Coon, Jessica, Pedro Mateo Pedro, and Omer Preminger (2014). "The role of case in A-bar extraction asymmetries". In: *Linguistic Variation* 14 (2).

Craig, Colette Grinewald (n.d.). *The structure of Jacaltec*. Austin: University of Texas Press.

Dayley, Jon P. (1983). "Voice and Ergativity in Mayan Languages". In: *Publications of the Survey of California and Other Indian Languages*.

Duncan, Lachlan (2010). "The Syntactic Structure of K'ichee' Mayan". PhD thesis. SUNY Albany.

England, Nora C. (2017). "Mam". In: *The Mayan Languages*. Ed. by Judith Aissen, Nora C. England, and Roberto Zavala Maldonado. London and New York: Routledge.

Grinevald, Colette and Marc Peake (2012). "Ergativity and voice in Mayan languages: a functional-typological approach". In: *Ergativity, Valency and Voice*. Ed. by Gilles Authier and Katharine Haude. Berlin, Boston: De Gruyter Mouton, pp. 15–50.

Harley, Heidi (2013). "External arguments and the Mirror Principle: On the distinctness of Voice and v". In: *Lingua* 125, pp. 34–57.

Keenan, Edward L. and Matthew S. Dryer (2006). "Passives in the world's languages". In: *Clause Structure, Language Typology and Syntactic Description*. Ed. by Tim Shopen. 2nd ed. CUP.

Larsen, Thomas Walter (1988). "Manifestations of ergativity in Quiché grammar". PhD thesis. UC Berkeley.

Legate, Julie Anne (2014). *Voice and v*. MIT Press.

Legate, Julie Anne (2020). "On passives of passives". In: *Language* 96 (4), pp. 771–818.

Legate, Julie Anne (2021). "Noncanonical Passives: A Typology of Voices in an Impoverished UG". In: *Annual Review of Linguistics*.

López Ixcoy, Candelaria Dominga (1997). *Ri ukemiik ri K'ichee' chii': Gramática K'ichee'*. Guatemala City: Cholsamaj.

Mateo-Toledo, B'alam Eladio (2008). "The family of complex predicates in Q'anjob'al (Maya): Their syntax and meaning". PhD thesis. UT Austin.

Mondloch, James Lorin (1981). "Voice in Quiche-Maya". PhD thesis. SUNY Albany.

Nevins, Andrew (2011). "Multiple agree with clitics: person complementarity vs. omnivorous number". In: *Natural Language and Linguistic Theory* 29, pp. 939–971.

Perlmutter, David M. and Paul M. Postal (1977). "Toward a universal characterization of passivization". In: *Proceedings of the Berkeley Linguistics Society*. Vol. 3, pp. 394–417.

Pollock, Jean-Yves (1989). "Verb Movement, Universal Grammar, and the Structure of IP". In: *Linguistic Inquiry* 20 (3), pp. 365–424.

Preminger, Omer (2014). *Agreement and Its Failures*. MIT Press.

Pye, Clifton Lowell (1980). "The acquisition of grammatical morphemes in Quiche Mayan". PhD thesis. University of Pittsburgh.

Travis, Lisa (1984). "Parameters and effects of word order variation". PhD thesis. MIT.

Vapnarsky, Valentina, Cedric Becquey, and Aurore Monod Becquelin (2012). "Ergativity and the passive in three Mayan languages". In: *Ergativity, Valency and Voice*. Ed. by Gilles Authier and Katharine Haude. De Gruyter Mouton.

Velleman, Leah Bridges (2014). "Focus and movement in a variety of K'ichee'". PhD thesis. UT Austin.

Wikimedia Commons (2021). *File:Map of Guatemala.svg — Wikimedia Commons, the free media repository*. [Online; accessed 4 March 2023].

Woolford, Ellen (2000). "Ergative agreement systems". In: *University of Maryland Working Papers in Linguistics* 10, pp. 157–191.