Nominalizations and the structure of progressives in Chuj Mayan[*]

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Abstract: This paper investigates the structure of progressives and nominalizations in Chuj, an understudied Mayan language of Guatemala. Like many other Mayan languages, Chuj shows aspect-based split ergativity: the otherwise ergative head-marking pattern in the language disappears in the progressive aspect. In other Mayan languages—for example Chol (Coon 2010, 2013) and Yucatec (Bricker 1981)—the appearance of a non-ergative pattern in the progressive has been attributed to nominalization. In Chuj, however, there is no clear morphological reflex of nominalization, as is found in other languages in the family. Using data from negation, particle placement, and agreement, we show that Chuj progressives nonetheless involve an aspectual matrix predicate and a nominalized embedded verb. This provides a clear structural explanation for the split pattern. Finally, we distinguish different types of nominalizations in Chuj: those which are nominalized directly from a root, and those which are nominalized above verbal projections.

Keywords: nominalization, split ergativity, Mayan, Chuj, progressives

1   Introduction

In this paper we investigate the structure of progressive clauses in Chuj, an understudied language from the Q'anjob'alan branch of the Mayan family, spoken in the department of Huehuetenango in Guatemala. We provide evidence that progressive clauses involve an

aspectual predicate and an embedded nominalized clause, and that this nominalization is the source of split ergativity in the language. Following previous work on other Mayan languages (Larsen and Norman 1979; Bricker 1981; Coon 2010), split ergativity in Chuj may thus be seen as structurally based.

This result is important because the nominal nature of Chuj progressive predicates is not at all obvious from their surface form. This contrasts with Mayan languages like Chol, in which there is morphological evidence of nominalization in progressive stem forms (Coon 2010). In fact, while Chuj *does* have stem forms that are very clearly nominalized, these are impossible in progressive constructions. We provide evidence first that there is nevertheless a structural difference between progressive and non-progressive constructions, and second, that nominalizations in Chuj may be small (formed directly from a root) or large (nominalized above the projection of verbal material). Only the latter type may appear in the progressive construction.

The remainder of this paper is organized as follows: Section 2 provides background on split ergativity in the Mayan family, along with details of Chuj's split pattern. As little descriptive material exists in Chuj—and virtually none in English—section 3 gives a brief overview of the major characteristics of the language. The core of the proposal is presented in sections 4 and 5. In section 4 we argue that the progressive aspect markers are stative predicates. In section 5 we demonstrate that the stems which they embed are nominalized verbs, and discuss differences in possible sizes of nominalizations in the language. We conclude in section 6.

2   Aspect-based split ergativity in Chuj

Like many other Mayan languages, Chuj exhibits aspect-based split ergativity, seen via two sets of markers on the predicate. Clauses in non-progressive aspects—along with aspectless nonverbal predicates discussed below—exhibit an *ergative-absolutive* alignment via head-marking on the predicate. Transitive subjects are co-indexed with an ergative prefix, known as "Set A" in Mayan linguistics. In (1a), this is the 1st person plural *ko-*. Transitive objects and intransitive subjects are cross-referenced with a set of absolutive clitics, *-ach* in the

forms in (1), called "Set B".[1]

(1) a. Ix-**ach**-**ko**-chel-a'.
        PRFV-B2-A1P-hug-TV
        'We hugged you.'

    b. Ix-**ach**-b'ey-i.
        PRFV-B2-walk-ITV
        'You walked.'

In the progressive aspect, as in (2), we find the split: both transitive and intransitive subjects are now cross-referenced with the Set A prefix series; Set B is impossible on progressive intransitives, as in (3). Note that the Set B form is now represented as a free-standing morpheme, a fact which we return to below.

(2) a. Lan **hach ko**-chel-an-i.
        PROG B2   A1P-hug-SUB-ITV
        'We're hugging you.'

    b. Lan **ko**-b'ey-i.
        PROG A1P-walk-ITV
        'We're walking.'

(3) * Lan **hach**-b'ey-i.
        PROG B2-walk-ITV
        intended: 'You're walking.'

In the terminology of Dixon 1979, 1994, the split pattern in (2) represents an "extended ergative" pattern. We might call it "nominative-accusative" insofar as both transitive and intransitive subjects pattern alike, but note that there are no new "nominative" or "accusative" morphemes; rather, the Set A marker has been *extended* to mark subjects of certain intransitive predicates. This is schematized in (4) and (5).

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[1]Unless otherwise noted, all data are from our elicitation notes. Abbreviations in glosses are as follows: A – Set A (ergative/possessive); B – Set B (absolutive); CL – nominal classifier; DEM – demonstrative; DET – determiner; DIR – directional; FOC – focus; IMPF – imperfective; IRR – irrealis; ITV – intransitive verb suffix; MASC – masculine; NEG – negation; NML – nominal suffix; P – plural; PRFV – perfective; POS – positional suffix; PROG – progressive; PROSP – prospective; SUB – subordinating suffix; TV – transitive verb suffix. Chuj is written in a Spanish-based practical orthography; see Domingo Pascual 2007.

(4) ERGATIVE-PATTERNING
    transitive: **B-A**-stem
    intransitive: **B**-stem

(5) "EXTENDED ERGATIVE"
    transitive: **B-A**-stem
➡ *intransitive*: **A**-stem

Analogous splits are found in other Mayan languages, described for example in Chol (Coon 2010, 2013), Yucatec (Bricker 1981), and Q'anjob'al (Mateo-Toledo 2003); see also Larsen and Norman 1979 for an overview. Compare the Chol perfective and progressive forms in (6) and (7) below. Building on previous work in Mayan, Coon (2010) explains Chol's "extended ergative" split as follows: the progressive aspect marker (*choñkol*) is a *predicate*, which takes a nominalized clause as its complement (in brackets).

(6) PERFECTIVE

  a. Tyi   **i**-jats'-ä-**yoñ**.
     PRFV A3-hit-TV-B1
     'She hit me.'

  b. Tyi   majl-i-**yoñ**.
     PRFV go-ITV-B1
     'I went.'

(7) PROGRESSIVE

  a. Choñkol [$_{NP}$ **i**-jats'-**oñ**].
     PROG   A3-hit-B1
     'She's hitting me.'

  b. Choñkol [$_{NP}$ **i**-majl-el   ].
     PROG   A3-go-NML
     'She's going.'

This type of proposal is represented for Chuj in (8).

(8) a. Lan   [$_{NP}$ hach **ko**-chel-an-i   ].
     PROG   B2   A1P-hug-SUB-ITV
     'We're hugging you.' (lit.∼ 'Our hugging you is happening.')

  b. Lan   [$_{NP}$ **ko**-b'ey-i   ].
     PROG   A1P-walk-ITV
     'We're walking.' (lit.∼ 'Our walking is happening.')

Crucially, across most of the Mayan family, Set A markers cross-reference not only transitive subjects, but also *possessors*. Compare the 1st person plural Set A markers in the progressives in (8) with the possessive form in (9). The notional subjects of progressive forms like those in (8), under a nominalization analysis, are grammatical possessors, as indicated by the suggested literal translations above.

(9) **ko**-nun
A1P-mother
'our mother.'

In Chol, we find clear initial support for the nominalization hypothesis in the morphological form of the complement clause predicates, shown in (10) below. For example, while an intransitive verbal stem appears with the verbal "status suffix" *-i*, as in (10), intransitives in the progressive aspect appear instead with the suffix *-el*; suffixes of the form *-Vl* appear on nominals throughout Chol and other Mayan languages (see e.g. Bricker 1981), discussed in more detail in Coon 2010, 2013 and in section section 5.4 below.

(10)   CHOL INTRANSITIVES

    a. Tyi   wäy-**i**-yety.
        PRFV sleep-ITV-B2

       'I slept.'

    b. Choñkol [a-wäy-**el**   ].
        PROG   A2-sleep-NML

       'I'm sleeping.'

As the Chuj forms in (11) illustrate, there is no difference between stems appearing in perfective and progressive aspects, aside from the change in person marking.

(11)   CHUJ INTRANSITIVES

    a. Ix-ach-| way-**i** |.
        PRFV-B2-sleep-ITV

       'You slept.'

    b. Lan   [ha-| way-**i** |].
        PROG   A2-sleep-ITV

       'You're sleeping.'

Below we provide evidence that these forms are nonetheless structurally different. First, we turn to general background on Chuj.

3 Chuj background

As in other Mayan languages, predicates in Chuj can be divided into two types: "verbal predicates" and "nonverbal predicates" (see Grinevald and Peake 2012; Coon 2014). The former generally denote events and require a TAM marker, as in examples seen so far above. nonverbal predicates, like those in (12), denote states and never appear with a TAM marker; adjectival and nominal predicates fall into the latter type and do not appear with an overt copula, as shown by the examples in (12b–c). In these examples, temporal distinctions may be made through the addition of adverbial material, or inferred from context. TAM-less nonverbal predicate constructions will be relevant to the discussion of the progressive below.

(12) a. Hin-gana pastel.
         A1-want cake
         'I want cake.'

      b. K'ayb'um-in.
         teacher-B1
         'I am a teacher.'

      c. Te   tzalajnak-onh.
         very happy-B1
         'We are happy.'

A template for a Chuj verbal predicate is given in (13); these components are discussed in turn below.

(13) TAM — Set B — Set A — Root — VOICE — STATUS SUFFIX

As in other Mayan languages, core nominal arguments are cross-referenced by Set A and Set B markers on the predicate and may be dropped; when overt they appear either post-verbally, or in preverbal topic/focus positions (Bielig 2015). Both VOS and VSO orders are possible, and further work is needed to determine the factors governing this distribution (see England 1991; Aissen 1992). As described for other Q'anjob'alan languages (e.g. Craig 1986 for Popti' and Zavala 2000 on Akatek), Chuj possesses a series of nominal classifiers which appear either preceding nominals (14a), or alone as pronouns (14b); see Bielig 2015.

(14)   a. Ix-way   **ix**   unin.
          PRFV-sleep CL.FEM child
          'The girl slept.'

       b. Ix-way   **ix**.
          PRFV-sleep CL.FEM
          'She slept.'

Chuj Set A and Set B markers are given in (15). As is common throughout Mayan, Set A (ergative markers) are prefixes, while Set B (absolutive markers) are clitics (Maxwell 1976). The initial *h-* of these markers is not pronounced, but is an orthographic convention used to indicate that there is no initial glottal stop, as occurs with other vowel-initial forms in Chuj (Buenrostro 2004). Contrast for example *onh* [ʔoŋ] 'avocado' with *h-onh* [oŋ] 'your avocado'. For this reason, we use *h-* only word-initially, though some authors do not transcribe it. As in other Mayan languages, note that there is no overt 3rd person absolutive marker, a fact which will be relevant below. 3rd person plural for both ergative and absolutive arguments is indexed with the plural marker *heb'*, restricted to humans and possibly some other high animates.

(15)   CHUJ PERSON MARKERS

Set B (absolutive)		**Set A** (ergative/possessive)		
			__C	__V
1S	*hin*	1S	*hin-*	*w-*
2S	*hach*	2S	*ha-*	*h-*
3S	Ø	3S	*s-*	*y-*
1P	*honh*	1P	*ko-*	*k-*
2P	*hex*	2P	*he-*	*hey-*
3P	*heb'*	3P	*s- heb'*	*y- heb'*

Preverbal TAM markers in Chuj are shown in (16), and discussed in more detail in Buenrostro 2007 and Carolan to appear. The past perfective marker *ix* may also be dropped, as in Q'anjob'al (Mateo Toledo 2011); in Chuj the alternation between *ix* and Ø appears to indicate a difference in recent vs. more distant past, discussed in Carolan to

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appear.[2] Though the perfective is restricted to the past tense, we refer to these as "aspects" below.

(16) CHUJ TAM MARKERS

tz	imperfective
ix	past perfective
ol	prospective
lan	progressive

Chuj intransitive and transitive forms in each of the first three aspects are provided in (17)–(18). In both imperfective and perfective stem forms, intransitives appear with the status suffix *-i* and transitives appear with the transitive suffix *-V'*, here *-a'*.[3] These status suffixes are typically dropped when not in phrase final position, as in many other Mayan languages (see e.g. Henderson 2012). In the prospective forms in (17c) and (18c), the pattern is similar except that intransitives appear with the irrealis suffix *-ok*, discussed further below.

(17) INTRANSITIVES

    a. IMPERFECTIVE

        Tz-ach-b'ey-i.

        IMPF-B2-walk-ITV

        'You walk.'

    b. PERFECTIVE

        Ix-ach-b'ey-i.

        PRFV-B2-walk-ITV

        You walked.'

    c. PROSPECTIVE

        Ol-ach-b'ey-**ok**.

        PROSP-B2-walk-IRR

        'You will walk.'

(18) TRANSITIVES

    a. IMPERFECTIVE

        Tz-ach-in-chel-a'.

        IMPF-B2-A1-hug-TV

        'I hug you.'

    b. PERFECTIVE

        Ix-ach-in-chel-a'.

        PRFV-B2-A1-hug-TV

        'I hugged you.'

    c. PROSPECTIVE

        Ol-ach-in-chel-a'.

        PROSP-B2-A1-hug-TV

        'I will hug you.'

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[2]Carolan notes that the distinction between Ø in the past perfective and the absence of a TAM marker as in nonverbal predicates can be determined by the stem form, as well as interpretation, also discussed by Mateo Toledo (2011) for Q'anjob'al.

[3]Vowel quality of the transitive status suffix depends on the root. So-called "non-root" or derived transitives in Chuj appear with the suffix *-ej*, not discussed here, though see Buenrostro 2013 for more on the Chuj verb stem.

Contrasts between imperfective, perfective, and prospective constructions in (17) and (18), on the one hand, and progressives in (19) and (20), on the other, will be the focus of the remaining sections. First, note that unlike in the perfective, imperfective, and prospective aspects, the stem in the progressive is written orthographically as a separate word (see e.g. Buenrostro 2004, 2007; Domingo Pascual 2007), an intuition shared by speakers we have consulted. As noted above, intransitives appear with Set A marking cross-referencing their subjects, rather than the Set B marking found on intransitives elsewhere in the language. Finally, note that in the transitive form the verb stem appears with a suffix *-an*, glossed following Buenrostro 2004 as 'SUB' for "subordinate clause", and then the *intransitive* suffix *-i*.

(19) PROGRESSIVE INTRANSITIVE
    Lan   ha-b'ey-i.
    PROG A2-walk-ITV
    'You're walking.'

(20) PROGRESSIVE TRANSITIVE
    Lan   hach hin-chel-**an-i**.
    PROG B2   A1-hug-SUB-ITV
    'I'm hugging you.'

In section 4 we show that *lan* behaves as a nonverbal predicate, while the aspect markers *ix*, *tz*, and *ol* do not. Next, in section 5 we provide evidence for our proposal that the embedded form, underlined in (19) and (20) is a nominalization.

4 Progressives as predicates

This section investigates the behavior of the progressive aspect marker in Chuj. We provide evidence from negation (§4.1), particle placement (§4.2), and finally, in section 4.3, we compare *lan* to other embedding verbs in the language and discuss a likely origin for the marker *lan* as originating from a positional predicate; see also Pascual 2007 on Q'anjob'al.

4.1 Negation

In non-progressive aspects, negation in Chuj is expressed by a preverbal particle, here *man*, and a particle *laj* which follows the verb stem, as shown by the transitive and intransitive

sentences in (21). Recall that transitive and intransitive status suffixes only appear phrase finally and are thus absent from the verb stems here.

(21) a. **Man** ol-ach-in-chel   **laj**.
          NEG PROSP-B2-A1-hug NEG
          'I will not hug you.'

      b. **Man** ol-in-b'ey   **laj**.
          NEG PROSP-B1-walk NEG
          'I will not walk.'

In the imperfective aspect *man* and *tz* combine to *max*, and in the perfective aspect *man* and *ix* combine to form *maj*, shown in (22). Despite this difference, *laj* consistently follows the verb stem in these forms.

(22) a. **Max**   hin-chi' **laj** arros.
          NEG.IMPF A1-eat   NEG rice
          'I don't eat rice.'

      b. **Maj**   honh-y-il **laj** winh   ewi.
          NEG.PRFV B1P-A3-see NEG CL.MASC yesterday
          'He didn't see us yesterday.'

In the progressive aspect, however, *laj* appears following *lan* and before the stem, as shown in (23). These examples also show that in negated progressives *lan* appears with the irrealis marker *-ok*, found on negated nonverbal predicates.

(23) a. **Man** lan-**ok**   **laj** hach hin-chel-an-i.
          NEG PROG-IRR NEG B2   A1-hug-SUF-ITV
          'I'm not hugging you.'

      b. **Man** lan-**ok**   **laj** hin-b'ey-i.
          NEG PROG-IRR NEG A1-walk-ITV
          'I'm not walking.'

Compare the *lan* forms in (23) with the negated stative intransitive predicate *k'ayb'um* 'teacher' in (24). Under the generalization that *man* and *laj* appear surrounding the predicate, and that *-ok* attaches to predicates, we may conclude that the progressive behaves as a predicate, while the other aspect markers do not.

(24) **Man** hin k'ayb'um-**ok laj**.
      NEG B1 teacher-IRR   NEG

      'I'm not a teacher.'

Craig (1977, 93) reports similar facts for related Popti' (Jakaltek), also from the Q'anjob'alan branch. A Popti' negated progressive is shown in (25a), and can be compared with the negated intransitive stative predicate in (25b). Craig notes that "[t]he fact that *lanhan* is a higher predicate and a stative verb is indicated by the negative construction."

(25) POPTI'

      a. Mat <u>lanhan</u>-oj ha-wayi.
          NEG PROG-IRR A2-sleep

          'You are not sleeping.'

      b. Mat <u>sonlom</u>-oj   hach.
          NEG marimba.player-IRR B2

          'You are not a marimba player.'   (Craig 1977, 94)

4.2 Particles

The particles =*xo* 'already' and =*to* 'still' provide additional evidence for a structural difference between progressive and non-progressive verbal predicates. In the progressive aspect, these particles attach directly to the progressive predicate, as shown in (26) and (27).

(26) a. Lan=**xo**   hach ko-chel-an-i.
          PROG=ALREADY B2   A1P-hug-SUB-ITV

          'We're already hugging you.'

      b. Lan=**xo**   ko-b'ey-i.
          PROG=ALREADY A1P-walk-ITV

          'We're already walking.'

(27) a. Lan=**to**   hach ko-chel-an-i.
          PROG=STILL B2   A1P-hug-SUB-ITV

          'We're still hugging you.'

b. Lan=**to**   ko-b'ey-i.
PROG=STILL A1P-walk-ITV
'We're still walking.'

In non-progressive aspects, however, these particles must appear sentence-initially attached to a morpheme *to*; they cannot attach to the aspect marker.[4] The morpheme *to* is also a complementizer used to embed finite clauses, and we tentatively suggest that it is inserted here to host the clitic.

(28) a. To=**xo**   ix-ach-ko-chel-a'.
C=ALREADY PRFV-B2-A1P-hug-TV
'We already hugged you.'

b. To=**xo**   ix-onh-b'ey-i.
C=ALREADY PRFV-B1P-walk-ITV
'We already walked.'

Whatever the ultimate analysis of this contrast is, note that the progressive marker *lan* behaves like other nonverbal predicates in its ability to combine directly with the particle.

(29) a.   K'ayb'um-in=xo.
teacher-B1=ALREADY
'I am already a teacher.'

b.   * To=xo   k'ayb'um-in.
C=ALREADY teacher-B1
intended: 'I'm already a teacher.'

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[4]Though Buenrostro (2013, 121) reports that =*to* and =*xo* may appear after all aspect markers, our consultant only accepts them after the progressive marker; in other aspects, they must appear initially. More work is needed to determine if this is a more general point of variation.

(i)   * Ol=**xo**=onh-k'och-ok.
PROSP=ALREADY=B1P-arrive-IRR
intended: 'We are already arriving.'   (our notes)

(ii) ✔ Ol=**to**=in-mujlaj-ok.
PROSP=STILL=B1-work-IRR
'I will still work.'   (Buenrostro 2013, 121)

Note that forms like (ii) are not a problem for the analysis of *lan* as a predicate—we might simply say that =*to* and =*xo* are second-position clitics and do not care about the predicate status of the aspect marker.

4.3 Progressives and positional predicates

Finally, we compare the progressive marker *lan* with other embedding verbs. Note that the stem forms embedded under the progressives aspect marker in (30a) and (31a) are identical to stem forms which appear under elements that are clearly matrix predicates, like *yamoch* 'begin' in (30b) and (31b). We propose that the underlined forms below are nominalizations, saturating an argument slot of the matrix predicate, in boldface. We compare different sizes of nominalizations and complement clauses in section 5.4 below.

(30) a. **Lan** <u>hin-munlaj-i</u>.
          PROG A1-work-ITV
          'I'm working.'

      b. **Ix-in-yamoch** <u>hin-munlaj-i</u>.
          PRVF-A1-begin A1-work-ITV
          'I began to work.'

(31) a. **Lan** <u>hach</u> <u>hin-chel-an-i</u>.
          PROG B2   A1-hug-SUB-ITV
          'I'm hugging you.'

      b. **Ix-in-yamoch** <u>hach</u> <u>hin-chel-an-i</u>.
          PRVF-A1-begin B2   A1-hug-SUB-ITV
          'I began to hug you.'

Though *lan* is the most common progressive we have encountered in our work with Chuj, Domingo Pascual (2007, 155) also lists *wan*, Hopkins (2012) has both *wan* and *wal*, and Buenrostro (2004) adds *leman*; examples from Buenrostro are in (32).

(32) a. **Lan** y-il-an   heb'.
          PROG A3-see-SUB 3PL
          'They are seeing it.'

      b. **Wan** s-way   winh.
          PROG A3-sleep CL.MASC
          'He is sleeping.'

      c. **Leman**=to y-ak'-an   lesal winh.
          PROG=STILL A3-give-SUB pray CL.MASC
          'He is still praying.'   (Buenrostro 2004, 262)

While we have yet to determine whether there is any semantic difference among these markers, we suggest that the fact that there are several is consistent with the progressive being expressed as a *lexical stative verb*—not as a functional aspectual particle (in contrast with *tz*, *ix*, and *ol*).[5]

Finally, note that *lan* can appear with the positional suffix *-an*, forming a stative predicate meaning something like 'extended (over some space)', as in (33a). A positional function is also reported for the cognate progressive marker in related Q'anjob'al (Pascual 2007, 150). Compare this with the positional root *linh* 'standing' in (33b). Cross-linguistically, it is unsurprising to find a locative basis for progressive expressions. Just as the shirt in (33a) is extended over space, the event in the progressive is extended over time; see Bybee et al. 1994 for cross-linguistic similarities between locative and progressive constructions, and discussion for Mayan in Coon 2013.

(33) a. **Lan**-an   ek' kamix sat lu'um.
        extended-POS DIR shirt   on ground
        'The shirt is lying (extended, carelessly) on the ground.'

     b. Linh-an   ek' nok'   chej.
        standing-POS DIR CL.ANIMAL horse
        'The horse is standing.'   (Domingo Pascual 2007, 190)

Just as the stative predicate *lanan* in (33a) combines with a nominal complement—*kamix* 'shirt'—we argue that the reduced progressive form *lan* is also a nonverbal predicate, and that the stem form it embeds is a nominalized verb. In the following section, we review evidence in favor of treating the complement of *lan* as a nominalization.

5   Complements as nominalizations

In this section we discuss evidence that the stem form embedded under the progressive predicate is a nominal. Like other nominals, these stems may: serve as sentential subjects (§5.1) and trigger agreement (§5.2). We provide an analysis of the structure of these forms in §5.3, where we argue that these forms are nominalized above *v*P and that the

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[5]Hopkins (2012) notes that *wal* is used for past progressive while *wan* is used for present progressive. We have not yet found these forms in our own work.

Set A agreement cross-references the grammatical possessor. The possessor controls a null argument in the subjects's base thematic position. Finally, we compare them with other nominal stems in §5.4.

5.1 As arguments

Recall the stem forms we're looking at, in brackets in (34) and (35). In (34) we observe the main facts that need to be explained: (i) the intransitive stem in (34a) appears with Set A (ergative/possessive) marking co-indexing the thematic subject, and (ii) the transitive stem appears with a suffix *-an*, followed by what appears to be the intransitive suffix *-i*.

(34) a. Lan [hin-b'ey-i   ].
          PROG A1-walk-ITV
          'I'm walking.'

      b. Lan [hach hin-chel-an-i   ].
          PROG B2   A1P-hug-SUB-ITV
          'I'm hugging you.'

Recall that the suffix *-i* drops when it is not in phrase final position, as shown by the forms in (35) with overt postverbal arguments.

(35) a. Lan [s-way   winh   ].
          PROG A3-sleep CL.MASC
          'He's sleeping.'

      b. Lan [ko-xik-an   te'   k'atzitz].
          PROG A1P-chop-SUB CL.WOOD wood
          'We're chopping wood.'

Like other nominals, the bracketed possessive stem forms in (34) and (35) can appear as sentential subjects. The nonverbal predicate in (36) has a regular possessed noun as its subject. Recall that as in other Mayan languages, there is no overt equative copula in Chuj.

(36) Man te   wach'-ok laj [_NP **ko-kape**   ].
      NEG very good-IRR NEG   A1P-coffee
      'Our coffee isn't very good.'

Progressive stem forms may also appear as subjects, as in (37).

(37) a. Man te   wach'-ok laj [_{NP} **s-way   winh   **].
NEG very good-IRR NEG   A3-sleep CL.MASC
'His sleeping isn't very good.'

b. Man te   wach'-ok laj [_{NP} **ko-xik-an   k'atzitz**].
NEG very good-IRR NEG   A1P-chop-SUB wood
'Our chopping wood isn't very good.'

As with nominalizations in English, not all nominalizations are appropriate as subjects to all predicates (some sound unnatural or awkward), but with the right context, these are perfectly acceptable. Another set of examples is discussed in Buenrostro 2004, shown in (39).

(38) Ix-lajw-i   [_{NP} **hin-wakax**].
PRFV-finish-ITV   A1-cow
'My cows finished (e.g. died).'

(39) a. Ix-lajw-i   [_{NP} **hin-munlaj-i**].
PRFV-finish-ITV   A1-work-ITV
'I finished working.'

b. Ix-lajw-i   [_{NP} **ko-xik-an   k'atzitz**].
PRFV-finish-ITV   A1P-chop-SUB wood
'We finished chopping wood.'

5.2 Triggering agreement

In the forms above, the bracketed nominalization serves as the *intransitive* subject of either a nonverbal predicate (37), or an intransitive subject in the perfective aspect (39). If these bracketed forms are true arguments, we expect them to trigger *absolutive* person marking, but recall that 3rd person absolutive agreement is null in Chuj (and throughout Mayan). Compare, for example, the perfective intransitives in (40); we represent a null morpheme in (40c) for clarity, but this is not intended to represent an analysis in favor a null morpheme as opposed to the absence of any morpheme at all. Rather, we include it to demonstrate that the absence of an overt morpheme is expected for 3rd person absolutive arguments.

(40) a. Ix-**in**-way-i.
          PRFV-B1-sleep-ITV
          'I slept.'

      b. Ix-**ach**-way-i.
          PRFV-B2-sleep-ITV
          'You slept.'

      c. Ix-Ø-way   **winh**   **unin**.
          PRFV-B3-sleep CL.MASC boy
          'The boy slept.'

Under the analysis presented here, the intransitive predicate *lajwi* 'finish' in (39) "shows" null agreement with its subject, whether it be a regular nominal, as in (39a) or a nominalized clause as in (39b). Analogously, if the progressive aspect marker *lan* is the predicate, and its complement is a nominal argument, we don't expect to find any overt reflex of this relationship. Compare the progressive form in (41a) with the nonverbal predicate in (41b). Here again, we use the null 3rd person morpheme to represent the claim that the bracketed NP is saturating the argument slot of an intransitive matrix predicate.

(41) a. Lan-Ø$_i$ [$_{NP}$ ko-mixnaj-i   ]$_i$.
          PROG-B3   A1P-bathe-ITV
          'We're bathing.' ($\sim$ 'Our bathing is happening.')

      b. Te   tzalajnak-Ø$_i$ [$_{NP}$ winh   winak]$_i$.
          very happy-B3   CL.MASC man
          'The man is happy.'

While the absence of morphology in the forms above is consistent with our account, it is hard to draw conclusions from missing morphology. If these nominalizations are true arguments, we expect them to also govern the appearance of *overt* 3rd person Set A morphology. This prediction is borne out. Compare the more complex perfective and progressive forms in (42) below. The appearance of 3rd person Set A morphology in the example in (42b) initially comes as a surprise; it is absent from the perfective form in (42a), and note that the subject is 1st person plural.

(42) a. Ix-numx-i   ko-mixnaj-i.
          PRFV-stop-ITV A1P-bathe-ITV
          'We stopped bathing.'

b. Lan **s**-numx-i   ko-mixnaj-i.
PROG A3-stop-ITV A1P-bathe-ITV
'We're stopping bathing.'

Our analysis of these two sentences is shown in (43). In (42a)/(43a), the intransitive matrix verb *numxi* takes the possessed nominal *komixnaji* 'our bathing' as its single absolutive argument. Since (like all other nominalized verbs) the argument is 3rd person singular, we see no overt agreement morphology. The progressive in (42b)/(43b) is more complex. As usual under this analysis, *lan*—unlike *ix*—must take a nominal complement. Here it is a complex possessive construction *snumxi komixnaji*, literally 'our bathing's stopping'. We propose that *komixnaji* 'our bathing' is the grammatical possessor of the nominal *numxi* 'stopping'. Note that the nominal form of 'stop' in (43b) is homophonous with the verbal form in (43a); we return to this below.

(43) a. Ix-numx-i   [$_{NP}$ ko-mixnaj-i   ].
PRFV-stop-ITV   A1P-bathe-ITV
'We stopped bathing.' (lit.∼ 'Our bathing stopped.')

────── *agree* ──────
b. Lan [$_{NP}$ **s**-numx-i   [$_{NP}$ **ko-mixnaj-i**   ]].
PROG   A3-stop-ITV   A1P-bathe-ITV
'We're stopping bathing.' (lit.∼ 'Our bathing's stopping is happening.')

Like other possessors, *komixnaji* follows the possessum and triggers Set A marking on it: here 3rd person *s-*. Compare the complex possessive construction in (43b), repeated in (44a), with the uncontroversial complex possessive form in (44b).

(44) a. [$_{NP}$ **s**$_i$-numx-i   [$_{NP}$ ko-mixnaji]$_i$]
A3-stop-ITV   A1P-bathe
'our bathing's stopping'

b. [$_{NP}$ **s**$_i$-pat   [$_{NP}$ ko-nun   ]$_i$]
A3S-house   A1P-mother
'our mother's house.'

Thus, while there is no overt morphological evidence for the nominalization of forms embedded under the progressive aspect morpheme, we argue that the distributional facts

here lends support to an analysis of these forms as nominal. In particular, our account provides a natural explanation for the otherwise surprising appearance of 3rd person Set A agreement on complex progressive constructions like (42b).

Nonetheless, the progressive forms do not pass all nominal tests in the language. In section 5.3 we propose a structure of the progressive stem forms as nominalizations that include (possibly complex) internal verbal structure. We suggest that differences in behavior between the progressive stem forms and other nonderived nominals fall out from differences in the size of the nominalization.

5.3 Transitives and intransitives

In this section, we present a specific proposal for the structure of the nominalized intransitive and transitive forms. First, it is worth noting that Buenrostro (2007) has discussed these constructions, and concluded that the forms embedded under *lan* are not nominal:

> *"One of the most frequent explanations for [the progressive] complement clause consists in saying that these are nominalized verbs. The explanation is based in the idea that the ergative marker of the intransitive verb is interpreted as possessive. However, when we see [transitive examples] this hypothesis is not sustainable, since the transitive verb stem has both of its person markers"* (Buenrostro 2007, 255).[6]

Chuj perfective and progressive forms are presented in (45) and (46) for comparison. Note that Buenrostro's concern is with the embedded transitive in (46a), which appears with a Set A marker co-indexing the subject, and an absolutive morpheme coindexing the object.

(45)   a. Ix-ach-ko-chel-a'.
           PRFV-B2-A1P-hug-TV
           'We hugged you.'

       b. Ix-ach-b'ey-i.
           PRFV-B2-walk-ITV
           'You walked.'

---

[6]Our translation from Spanish.

(46) a. Lan   [NP **hach ko**-chel-an-i   ].
          PROG   B2   A1P-hug-SUB-ITV
          'We're hugging you.'

      b. Lan   [NP ko-b'ey-i   ].
   PROG   A1P-walk-ITV
          'You're walking.'

The assumption underlying Buenrostro's concern is that nominalizations must be intransitive. Indeed, based on comparison with many other Mayan languages, this is a reasonable expectation. In languages like Mam (England 2013) and Q'eqchi' (Berinstein 1985), nonfinite embedded forms must first be detransitivized—i.e. passivized or antipassivized—in order to undergo embedding. In the Q'eqchi' form in (47a), the embedded verb is an "incorporation antipassive"; an antipassive morpheme appears on the transitive root, and the object must be bare and non-referential. In the nominalized form in (47), only the notional object is expressed on the embedded verb, cross-referenced with Set A marking (see also Imanishi 2014 for this type of construction in Kaqchikel).

(47) a. Laa'in t-inw-aj   [lo'-o-k   tul   ].
          PRON1 ASP-A1-want   eat-AP-NF banana
          'I want to eat bananas.'

      b. T-inw-aj   [aaw-il-bal   ].
          ASP-A1-want   A2-see-NML
   'I want to see you.' (lit.: 'I want your seeing.')   (Q'eqchi'; Berinstein 1985, 265–269)

Following Chomsky (2000, 2001) (and much preceding work), we assume that nominals must be assigned Case in order to be licensed in the derivation, and that Case is assigned by functional heads, e.g. v^0 and finite Infl^0. Coon et al. (2015) argue that Q'eqchi' and Mam are examples of what Legate (2008) refers to as *absolutive=nominative* (ABS=NOM) languages—languages in which absolutive arguments are licensed via agreement with finite T/Infl^0 (see also Bok-Bennema 1991; Campana 1992; Murasugi 1992, and others). Ergative is assigned inherently by transitive v^0 to the external argument in its thematic position (Woolford 1997). In a transitive clause, finite Infl^0 skips over the inherently-licensed subject in order to assign Case to the object. This type of system is

schematized in (48) for transitives and (49) for intransitives.[7]

(48) TRANSITIVE
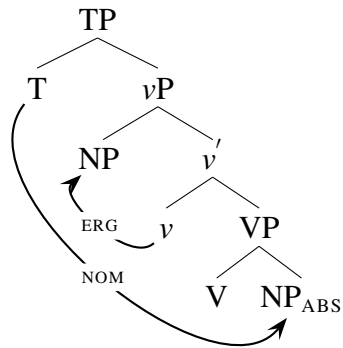
(49) INTRANSITIVE
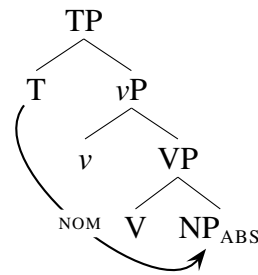
As Legate notes, in this type of system absolutive arguments are predicted to be uniformly absent in nonfinite embedded clauses, which lack Infl^0.[8] Though Coon et al. do not discuss Chuj in any detail, Chuj fits the pattern of its close relative Q'anjob'al, which is argued to be an ABS=NOM language, like Mam and Q'eqchi'.[9]

Building on work on cognate suffixes in Popti' by Ordóñez (1995), and Q'anjob'al by Coon et al. (2015), we argue that the suffix *-an* present in Chuj nonfinite embedded transitives is the realization of a functional head capable of licensing the internal argument. In other words, *-an* may be thought of as an "accusative" Case assigning head, insofar as it licenses transitive objects, or, in Ordoñez' terms, as an incorporated (Case-assigning) preposition.[10] What is crucial for us here is that an analysis of *-an* as a Case-assigner both (i) explains its presence in nonfinite embedded transitives (but not intransitives); and (ii) explains the ability for an absolutive argument to appear in an embedded clause. We propose that the nominal stem forms embedded under the progressive aspect marker are nominalized *above* the *v*P containing *-an*, explaining the possibility for full transitives to appear in

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[7]An unaccusative intransitive is represented in (49). For our purposes, we may assume that unergative subjects would be licensed in the same way, though further work is needed on the unergative/unaccusative distinction in this language.

[8]This type of ergative system contrasts with an *absolutive=default* (ABS=DEF) system, in which absolutive is a morphological default, collapsing two different underlying mechanisms of syntactic licensing: transitive objects are licensed by v^0 (i.e. accusative), while intransitive subjects are licensed by Infl^0 (i.e. nominative). Chol is an example of the latter type of language: absolutive arguments are possible in embedded transitives—since they are licensed by v^0—but impossible in embedded intransitives. See Coon et al. 2015 for extensive discussion.

[9]Specifically, Chuj is a "HIGH-ABS" language and the extraction of transitive subjects generally requires the use of an "Agent Focus" construction. In the interest of space, we set these facts aside here, but see discussion in Coon et al.

[10]Ordoñez likens the presence of *-an* in Popti' to *of*-insertion in English.

nominalizations.

For concreteness we assume, following Coon et al. that the suffix *-an* occupies a head we label Voice^0, and that this head assigns Case to the transitive object and merges the thematic subject in its specifier position, as shown in (51). Probing by Voice^0 results in clitic-doubling of the absolutive argument and the resulting clitic, here 2nd person *hach*, attaches outside the stem (see e.g. Anagnostopoulou 2006; Harizanov 2014 for different possible formulations). We propose further that the *-a'* and *-i* suffixes on the non-progressive forms in (45) above are instances of transitive and intransitive v^0 respectively (Coon 2013). Crucially, while transitive v^0 assigns (ergative) Case to a transitive subject—reflected by the Set A agreement morpheme—intransitive v^0 does not. We propose that presence of the intransitive *-i* suffix in nonfinite embedded transitives reflects the fact that a null subject, PRO, is merged in the thematic position. This subject does not receive Case and therefore intransitive v^0 is merged. The verb root—here *chel* 'hug'—undergoes head-movement through Voice^0 and v^0, resulting in the stem *chelani*, in line with Baker's Mirror Principle (Baker 1988).

(50) Lan [$_{NP}$ hach **ko**-<u>chel-an-i</u>   ].
      PROG   B2   A1P-hug-SUB-ITV
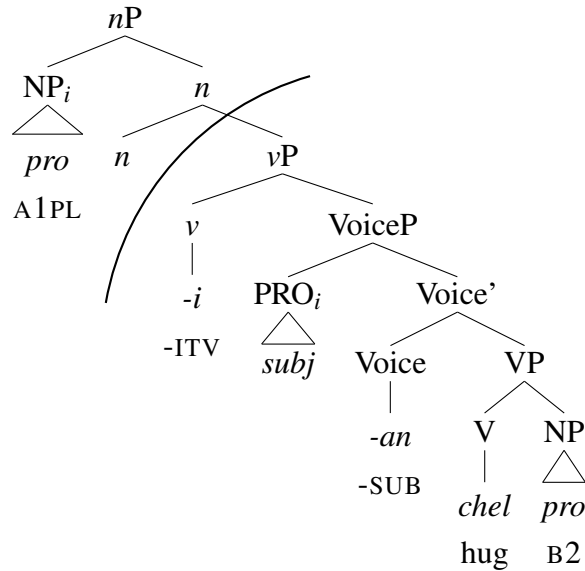   'We're hugging you.' (lit.~ 'Our hugging you is happening.')

(51) STEP 1: THE EMBEDDED VERB STEM
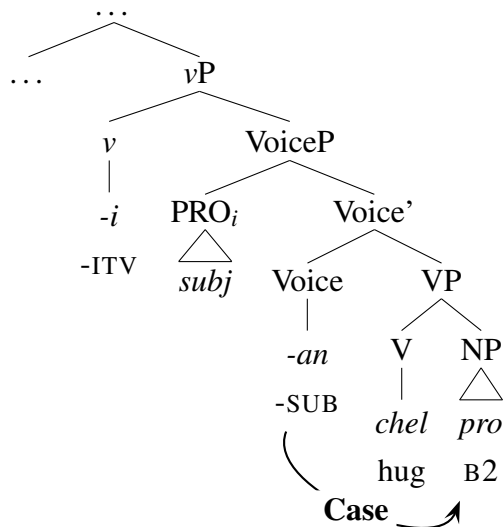
Nominalization occurs above the vP level, as shown in (52). A possessor is merged in Spec,nP, controlling the null embedded subject. We assume that just as Set A marking in
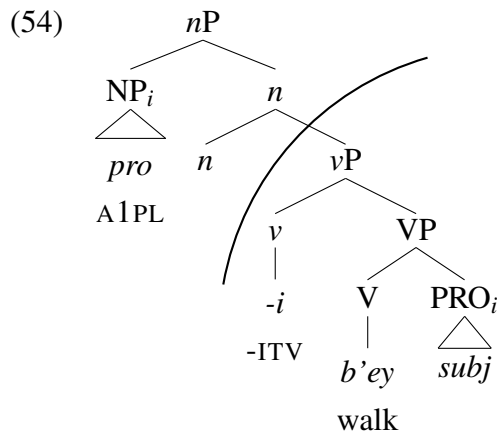
22

the verbal domain reflects an agreement relation between transitive v^0 and the external argument, Set A marking in the nominal domain reflects an isomorphic relationship between possessive n^0 and the possessor.

(52) STEP 2: NOMINALIZATION

```
                    nP
              ┌──────┴──────┐
           NP_i            n
           △         ┌─────┴─────┐
          pro        n          vP
          A1PL            ┌──────┴──────┐
                          v          VoiceP
                          │       ┌─────┴─────┐
                         -i     PRO_i       Voice'
                        -ITV     △      ┌─────┴─────┐
                                subj  Voice        VP
                                       │        ┌───┴───┐
                                      -an       V      NP
                                     -SUB       │       △
                                              chel    pro
                                              hug     B2
```

The structure for intransitives is somewhat simpler, as there is no need for an additional licensing mechanism. The single argument of the intransitive is a controlled PRO, which is controlled by the possessor merged in Spec,*n*P above the *v*P layer. A structure for the sentence in (53) is shown in (54).

(53) Lan   [_NP **ko**-<u>b'ey-i</u>   ].
       PROG   A1P-walk-ITV
       'You're walking.' (lit.~ 'Your walking is happening.')

(54)

```
                 nP
           ┌──────┴──────┐
         NP_i           n
         △        ┌──────┴──────┐
        pro       n            vP
        A1PL           ┌────────┴────────┐
                       v                VP
                       │           ┌─────┴─────┐
                      -i           V         PRO_i
                     -ITV          │           △
                                  b'ey        subj
                                  walk
```

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The proposed structures for transitive and intransitive progressive stems accounts for the core facts we sought to explain. First, both transitive and intransitive subjects are cross-referenced by Set A marking. Under our approach, this is because both subjects are controlled PRO; the overt argument is a co-indexed grammatical possessor. Second, the presence of a special suffix *-an* in embedded transitives is connected to the fact that transitives subjects are normally licensed by finite $Infl^0$. In languages such as Mam and Q'eqchi', transitives are simply impossible in nonfinite embedded contexts. Languages of the Q'anjob'alan branch, however, have a special morpheme inserted in exactly those environments in which transitive objects require Case. The appearance of the intransitive status suffix *-i* is connected to the fact that the embedded subject does not receive Case; see Ordóñez 1995; Coon et al. 2015 for extensive discussion of these constructions.

A final issue remains: in both transitive and intransitive progressive stems in (52) and (54), we represent a null nominalizing head, n^0. Recall that Chuj contrasts with some other split-ergative Mayan languages in having no clear morphological evidence of nominalization. Compare, for example, the Chuj progressive intransitive in (55a) with the Chol progressive intransitive in (55b).

(55)   a.   CHUJ

    Lan   [$_{NP}$ ha-<u>way</u>-**i**   ].
    PROG   A2-sleep-ITV

    'You're sleeping.' (lit.∼ 'Your sleeping is happening.')

   b.   CHOL

    Choñkol [$_{NP}$ a-<u>wäy</u>-**el**   ].
    PROG   A2-sleep-NML

    'You're sleeping.' (lit.∼ 'Your sleeping is happening.')

We propose that both languages share the underlying structure in (54). However, while Chuj has a null n^0 and an overt v^0, Chol exhibits the reverse. The fact that we do not find two overt morphemes is perhaps unsurprising, given (i) the tendency for status suffixes to delete in non-phrase-final position in many Mayan languages, and (ii) the fact that vowel hiatus is frequently resolved by syncope (Bennett 2014). One possibility is that the choice of whether to realize v^0 *-i* (Chuj) or n^0 *-el* (Chol) is simply a morphological accident.

A plausible alternative is that the suffix *-i* found in Chuj progressive stems is in fact a n^0 head, which is accidentally homophonous with the intransitive v^0. In his discussion of

Q'anjbo'al, Mateo Pedro (2009) notes formal similarity between the Q'anjob'al progressive stem suffix *-i* and the nominalizer *-Ik* in Kichean-branch languages. Here we do not take a strong stance on whether *-i* in progressives is the -ITV marker, or an accidentally homophonous nominalizer, but simply note that either possibility is compatible with the analysis presented above.

5.4 Types of nominalization: *-i* vs. *-el*

In section 5 above we reviewed evidence for the nominal nature of the stem forms analyzed in the preceding section. Specifically, these stems may appear as sentential subjects and may trigger 3rd person singular Set A agreement in certain constructions. However, the progressive stem forms do not pass all distributional tests for nouns in the language, and indeed we find certain deverbal stems which are more transparently nominal than the progressive stems above. Compare the forms in (56) below, discussed in Buenrostro 2007.

(56) a. Ix-in-b'at [wa'-**el**].
          PRFV-B1-go eat-NML
          'I went to eat.'

      b. Ol-ach-b'at [mol-**oj** kape].
          PROSP-B2-go gather-NML coffee
          'You will gather coffee.'   (Buenrostro 2007, 262)

Here we focus on the intransitive forms in (56), which provide a more direct comparison with intransitive *-i* forms discussed above, though we return briefly to *-oj* forms like (56b) below. As noted above, suffixes of the form *-Vl* are found on nominals across Mayan (see e.g. Bricker 1981). If our analysis above is on the right track, we then have two types of nominalized intransitive stems in Chuj:

	Root		*-el* nominals	*-i* nominals
	wa'	'eat'	*wa'-el*	*wa'-i*
(57)	*munlaj*	'work'	*munlaj-el*	*munlaj-i*
	lolon	'speak'	*lolon-el*	*lolon-i*
	…	…	…	…

25

The *-el* forms are very clearly nominals. Both *-el* and *-i* nominals may appear as subjects, for example of the nonverbal predicate in (58); we return to the differences in translations below.

(58) a. Man te   wach-ok-laj   [ko-munlaj-el   ].
        NEG very good-IRR-NEG   A1P-work-NML
        'Our work isn't very good.'

     b. Man te   wach-ok-laj   [ko-munlaj-i   ].
        NEG very good-IRR-NEG   A1P-work-ITV
        'Our working isn't very good.'

However, as shown in (59), the *-el* forms may also appear with the indefinite *jun*, the demonstrative particle *tik*, and as shown in (59a), may be fronted to preverbal focus position.[11] While the *-i* forms may appear as postverbal subjects (see (37) and (58b) above), they do not appear with *jun*, demonstratives, or focus particles, as in (59b).

(59) a.   [A   jun munlaj-el tik   ] ch'oklaj.
              FOC one work-NML DEM   strange
            'This work is strange.'

     b. * [A   jun munlaj-i tik   ] ch'oklaj.
              FOC one work-ITV DEM   strange
            intended: 'This work is strange.'

With certain aspectual verbs, such as *yamoch* in (60), either form is possible.

(60) a. Ix-a-yamoch   [ha-munlaj-el   ].
        PRFV-A2-begin   A2-work-NML
        'You began to work.'   (Buenrostro 2013, 152)

     b. Ix-in-yamoch   [hin-munlaj-i].
        PRFV-A1-begin   A1-work-ITV
        'I began to work.'

However, *-el* forms are banned in progressive environments (61a), which require the *-i* forms discussed in section 5.3 (61b).
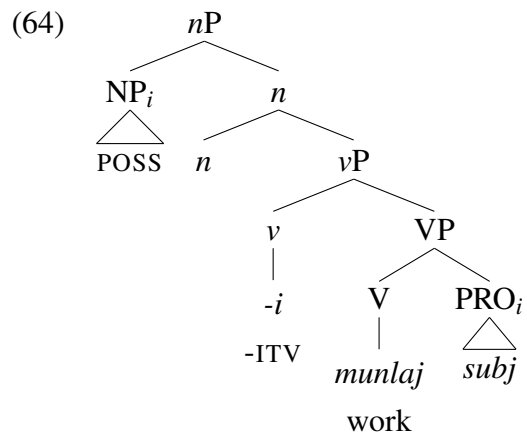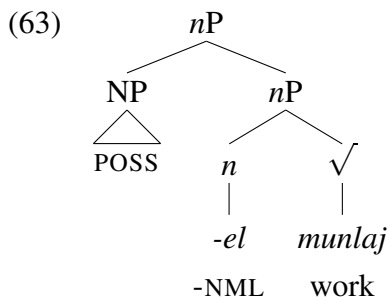
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[11]Like other Q'anjob'alan languages, Chuj has a series of nominal classifiers (see e.g. Craig 1986; Zavala 2000; Hopkins 2012), which have a determiner-like function. However, these generally do not appear on abstract nouns and are correctly predicted to be absent from nominalizations.

(61) a. * Lan   [ko-munlaj-el   ].
          PROG   A1P-work-NML

          intended: 'We're working.'

     b.   Lan   [ko-munlaj-i   ].
          PROG   A1P-work-ITV

          'We're working.'

These properties are summarized in the table in (62).

		-el nominal	*-i* nominal
a.	be a subject	✔	✔
(62) b.	*jun*, *tik*, FOC	✔	*
c.	complement of *yamoch*	✔	✔
d.	complement of PROG	*	✔

We propose that the differences here fall out naturally from an analysis in which *-el* forms are nominalized lower in the structure, as in (63), while *-i* forms are nominalized above the verbal projection, as in (64). Crucially, the *-i* forms project a thematic subject (PRO), while the *-el* forms do not. Either form may then appear with a possessor, but in the more complex *-i* nominalization, the possessor controls a null PRO in thematic subject position.

(63)

```
              nP
            /    \
          NP      nP
          /\     /  \
        POSS    n    √
               |     |
              -el  munlaj
              -NML  work
```

(64)

```
              nP
            /    \
         NP_i     n
         /\      /  \
       POSS     n    vP
               |    /  \
              -i   v    VP
             -ITV  |   /  \
                   v  V   PRO_i
                  -ITV |    /\
                    munlaj subj
                     work
```

First, note that the appearance of the nominal suffix *-el* only in the smaller form is consistent with our suggestion in section 5.3 above that in the more complex *-i* forms, as in (64), n^0 and v^0 are effectively "competing" for a single morphological slot; in Chuj, *-i* happens to

win.[12] However, with no v^0 present in the smaller structure in (63), *-el* surfaces.

This analysis also makes a clear prediction: because the *-i* nominalizations contain a verbal projection, we might expect to find verbal valence-altering morphology, such as a passive, internal to these *-i* stems. On the other hand, we propose that *-el* nominalizations are nominalized directly from the root, and these should therefore not be compatible with passives. This prediction is borne out. Recall from (60) above that either *-el* or *-i* forms may appear as the complement of the matrix verb *yamoch* 'begin'. However, while the passive stem in (65b) behaves like other intransitive nominalized forms (i.e. the subject is co-indexed with Set A morphology, and this stem may also appear under the progressive *lan*), *-el* is impossible on the passive stem in (65a).

(65)   a.   * Ix-in-yamoch   [hin-chel-chaj-el   ].
             PRFV-B1-begin   A1-hug-PASV-NML
             intended: 'I began to be hugged.'

       b.   Ix-in-yamoch   [hin-chel-chaj-i   ].
             PRFV-B1-begin   A1-hug-PASV-ITV
             'I began to be hugged.'

Though we do not examine the *-oj* forms from (56b) above in any detail here, note that these also appear to have a reduced structure. For example, while a bare non-referential object may appear as the complement, as in (56b), repeated in (66a) below, a full referential DP *te kape* 'the coffee', is impossible, as in (66b).[13] This is the consistent with the proposal from section 5.3 above that the morpheme *-an* is required in embedded transitives to license the direct object.

(66)   a.   Ol-ach-b'at   [mol-**oj**   kape].
             PROSP-B2-go   gather-NML coffee
             'You will gather coffee.'

---

[12]We do not claim that this competition is part of the synchronic grammar, but simply suggest this as a possible diachronic explanation for the difference between these forms. Coon (2013) discusses different sizes of nominalizations in Chol, both of which appear with *-el*. Chuj may then provide morphological evidence for a difference in nominalization size.

[13]Recall from section 3 above that nominal classifiers have a determiner-like function in Q'anjob'alan languages and are restricted to occurring with referential NPs.

b. * Ol-ach-b'at [mol-**oj** te' kape].
  PROSP-B2-go gather-NML CL.WOOD coffee
  intended: 'You will gather the coffee.'

Returning to the properties in (62), the fact that either nominal may serve as a subject—see (62a)—is consistent with the fact that both forms are ultimately nominal in nature. The appearance of D^0-level elements only with smaller *-el* forms, i.e. property (62b), has some cross-linguistic precedent. Compare the ungrammaticality of determiners and demonstratives with English *poss*-ing gerunds (see Borsley and Kornfilt 2000). Under the analysis presented here, the Chuj *-el* forms are analogous to English nominals like *criticism*, which do not project verbal functional material. The *-i* forms are comparable to English gerund forms, like the one in (67b). While nothing in the present analysis predicts the fact that one form should appear with D^0 elements and the other should not, we suggest that our analysis gains support from this cross-linguistic parallel.

(67) a. We discussed this/that/the **criticism of the book**.
    b. * We discussed this/that/the **criticizing the book**.

The difference in the presence or absence of an embedded PRO in these two types of nominalizations may also provide an explanation of the different translations suggested by our consultant in (58) above: 'our work' for the smaller *-el* nominal and 'our working' for the larger *-i* nominal. Note also that while Buenrostro translates (60a) as 'You began to work' (*Empezaste a trabajar*), our consultant offered instead 'You began your work' (*Empezaste tu trabajo*) as a literal translation. Again, this is comparable to English nouns vs. gerunds, as in (67).

Turning to property (62c), we note that aspectual verbs like 'begin' are frequently optional *restructuring* verbs (Wurmbrand 1998, 2001). Crucially, restructuring verbs are verbs which combine with smaller embedded elements, generally taken to lack an embedded (e.g. PRO) subject. If this is on the right track, *yamoch* could be considered an optional restructuring verb in Chuj. In (60a) it combines with a small complement (restructuring), while in (60b) it combines with a larger complement (non-restructuring).

Finally, this presence or absence of an embedded PRO subject may also explain why only the larger *-i* forms may appear in progressive constructions (property (62d) above). A matrix verb like *yamoch* 'begin' assigns a thematic role to an external argument—2nd

person singular *a-* in (60) above. The progressive *lan*, on the other hand, is an intransitive nonverbal predicate which takes only a single argument: the possessed nominalized clause. Assuming that the subject must receive a thematic role in some position, we would expect forms like (61a) to be ungrammatical since no thematic role is assigned internal to the nominalization.[14]

6   Conclusions

In this paper, we examined progressive constructions in Chuj, an understudied Mayan language of Guatemala. Building on work on other Mayan languages, we suggested that the appearance of a split in person marking in the progressive aspect is due to differences in structure between progressive and non-progressive aspects. Namely, the progressive aspect marker behaves as an intransitive stative predicate, taking a nominalized verb form as its complement.

First, in section 4, we showed that the progressive aspect marker behaves unlike perfective (*ix*), imperfective (*tz*), and prospective (*ol*) aspects in a number of respects, and instead patterns with nonverbal predicates in terms of the appearance of negation and aspectual particles. Next, in section 5 we provided evidence that the complement to the progressive marker shares certain properties with other nominals in the language. In particular, it may saturate the argument position of a predicate and may trigger overt 3rd person singular agreement on a head.

In section 5.3 we proposed that these progressive stems are nominalized above the *v*P layer. Following work on Chol by Coon (2010, 2013), we proposed that subjects are null PROs, controlled by possessors generated in the nominalizing *n*P layer. This analysis

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[14]Note that the progressive predicate in Chol may take a bare complement, as in (i). Such constructions presumably have no PRO internal to the nominalization (i.e. are structurally equivalent to Chuj *-el* forms) and receive an impersonal interpretation.

(i)   Choñkol e'ty-el.
      PROG   work-NML
      'Work is happening.' (i.e. some people are working)

  Our consultant does not like equivalent constructions in Chuj, and further work is needed to explain this difference.

both accounts for the presence of Set A marking on embedded intransitives, as well as the appearance of the suffix *-an* in embedded transitives (required to Case-license the embedded object in the absence of finite Infl^0).

Finally, in §5.4 we examined a different "more noun-like" type of nominal stem form. Though more work is needed to fully understand the range of differences between intransitive *-i* and *-el* nominals, the proposal that *-i*-nominalizations occur above *v*P and contain a thematic PRO, while *-el*-nominalizations are smaller, accounts for a range of facts and makes clear connections between nominalization in Chuj and nominalization in other languages (see e.g. discussion in Borsley and Kornfilt 2000).

While the core analysis of Chuj's progressive aspect builds on existing work in Mayan, the result that Chuj progressive stems are nominalized is not trivial, since—unlike other languages for which such studies have been conducted—there is no overt morphological difference between intransitive verbal stems and intransitive nominal stems in Chuj. We thus hope to have shown how the careful investigation of distribution of forms can result in differences which are not apparent on the surface.

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