

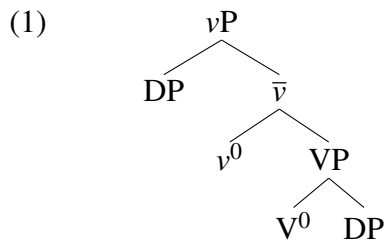
# Transitivity in Chol: A New Argument for the Split VP Hypothesis\*

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## 1. Introduction

In this paper we provide a new argument in favor of the *Split VP Hypothesis* (Chomsky 1995, Hale and Keyser 1993, Kratzer 1996, Marantz 1997, inter alia): the idea that external arguments are base-generated outside the syntactic projection of the stem, outside of VP proper, as shown in (1).<sup>1</sup>



More specifically, we provide evidence that external arguments are base-generated in the specifier of a projection that has the properties listed in (2a–c):

- (2) PROPERTIES OF  $v^0$
- endows the stem with its categorial status as *verb*
  - assigns structural Case to the complement of  $V^0$
  - assigns the external theta-role to the subject

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<sup>1</sup>To be precise, Chomsky (1995) and Kratzer (1996) discuss the interdependency of properties (2b) and (2c), while Hale and Keyser (1993) and Marantz (1997) discuss the interdependency of properties (2a) and (2c); to the best of our knowledge, the first time the interdependency of all three properties was explicitly pointed out in the literature was by Harley (2009).

Following others, we refer to this projection as  $\nu$ P (“little- $\nu$  P(hrase)”). While this proposal is not new, and while our argument shares some similarities with the one put forth by Kratzer (1996), the data we examine here establish more directly that these three properties are intrinsically interrelated.

## 2. Puzzle: Interpretive asymmetries in Chol event nominals

Chol is a language of the Mayan family, spoken in southern Mexico by around 150,000 people. Like other Mayan languages, Chol is verb-initial and morphologically ergative, with verb initial word order.<sup>2</sup> Grammatical relations are head-marked on the predicate with the two sets of morphemes shown in (3), traditionally labeled “Set A” and “Set B” in Mayanist literature. Set A marks transitive subjects (“ergative”) and possessors, while Set B marks transitive objects and intransitive subjects (“absolutive”). We adopt these theory-neutral labels for reasons which will become clear below. One important detail, that will play a role in what follows, is the absence of an overt third person Set B marker.

(3) CHOL PERSON MARKERS

	1st	2nd	3rd	
<b>Set A</b>	<i>k-lj-</i>	<i>a(w)-</i>	<i>i(y)-</i>	→ ergative/genitive
<b>Set B</b>	<i>-(y)oñ</i>	<i>-(y)ety</i>	∅	→ absolutive

The examples in (4) demonstrate the basic ergative person-marking pattern of Chol: the transitive subject in (4a) is marked with the first person Set A prefix *k-*, while both the transitive object and the intransitive subject in (4b) are marked with the second person Set B morpheme *-ety*.<sup>3</sup> Free-standing pronouns are used only for emphasis; when overt third person nominals appear, the basic word order in the language is VOS/VS, though one or both arguments appear in pre-verbal topic and focus positions. Finite eventive predicates are headed by initial aspect markers, here the perfective *tyi*.

- (4) ERGATIVE SYSTEM
- a. *Tyi k-mek'-e-yety.*  
 PRFV A1-hug-TV-B2  
 ‘I hugged you.’
- b. *Tyi wäy-i-yety.*  
 PRFV sleep-ITV-B2  
 ‘You slept.’

The puzzle we will focus on is found in the progressive aspect. In Chol, the progressive aspect is periphrastic (as in many other languages; see, for example, Bybee

<sup>2</sup>For more on Chol, see Coon 2010a, Vázquez Álvarez 2002, and works cited therein.

<sup>3</sup>Chol is written in a Spanish-based practical orthography. Abbreviations in glosses are as follows: 1, 2, 3 – 1st, 2nd, 3rd person; A – “set A” (ergative, genitive); AP – antipassive; B – “set B” (absolutive); DET – determiner; DTV – derived transitive verb; NML – nominal; ITV – intransitive verb; PREP – preposition; PRFV – perfective; PROG – progressive; TV – transitive verb.

et al. 1994).<sup>4</sup> The progressive involves an *intransitive* aspectual verb (*choñkol*), and an embedded nominal/nominalized stem (see Coon 2010a).<sup>5</sup> Like other intransitive verbs in the language, the progressive agrees with its single argument in person features via Set B (absolutive) morphology, as schematized in (5):<sup>6</sup>

- (5) SCHEMATIZED PROGRESSIVE  
*choñkol*-ABS<sub>i</sub> [ NP ]<sub>i</sub>

In (6) we observe that the aspectual verb *choñkol* may combine directly with event-denoting nominals, like *ja'al* ('rain') or *k'iñijel* ('party').

- (6) a. **Choñkol ja'al.**  
 PROG rain  
 'It's raining.'  
 b. **Choñkol k'iñijel.**  
 PROG party  
 'There's a party happening.'

The aspectual predicate precedes the DP, following the predicate-initial pattern found throughout the language. Recall that there is no overt third person Set B (absolutive) marker, so in constructions involving event-denoting nominals like (6), the aspectual predicate carries no overt person morphology. Like other stative predicates in the language, the progressive verb itself cannot co-occur with an aspect marker. Rather, temporal relations like "past" are either inferred from context, or conveyed with the addition of adverbs. Compare the progressive in (7a) with the stative predicate in (7b).

- (7) a. (\*Tyi) **choñkol** ja'al.  
 PRFV PROG rain  
 'It's raining.'  
 b. (\*Tyi) **buch-ul** jiñi x-'ixik.  
 PRFV seated-STAT DET CL-woman  
 'The woman is seated.'

Alternatively, the progressive verb may combine with a thematic subject, in which case the event-denoting stem is introduced by the preposition *tyi*, as in (8). In (8a) the subject is an overt third person nominal—*aj-Maria*. In (8b) the subject is a second person pronoun, realized by the Set B morpheme *-ety* on aspectual verb.

<sup>4</sup>We focus on the progressive for simplicity, though the same facts hold in the imperfective. The data presented here come from the Tila dialect; in the Tumbalá dialect the progressive marker is *woli*, though preliminary data suggest that it behaves similarly to *choñkol*.

<sup>5</sup>For this topic in other Mayan languages see Larsen and Norman 1979 as well as Bricker 1981 on Yukatek; Ordóñez 1995 on Jakaltek; and Mateo-Toledo 2003 and Mateo Pedro 2009 on Q'anjob'al.

<sup>6</sup>Here we represent the Set B (absolutive) suffixes as markers of agreement, for expository purposes—though our proposal is also compatible with an analysis in which these morphemes are in fact pronominal clitics.

- (8) a. Choñkol [ tyi k'ay ] **aj-Maria**.  
 PROG PREP song DET-Maria  
 ‘Maria is singing.’ (lit.: ‘Maria is engaged in song.’)  
 b. Choñkol-ety [ tyi wuts'-oñ-el ].  
 PROG-B2 PREP wash-AP-NML  
 ‘You’re washing.’ (lit.: ‘You are engaged in washing.’)

Note that in both (6) and (8) the progressive verb *choñkol* combines with a single DP argument: in (6) this argument is a situation-denoting nominal (e.g. *k'iñijel* ‘party’), while in (8) the single argument of *choñkol* is the thematic subject (e.g. *Maria*). This aspectual predicate thus follows a consistent intransitive pattern.

Now consider forms such as the pair in (9a–b). As above, the aspectual verb *choñkol* in (9a–b) combines directly with an event-denoting nominal. The difference is that both nominals in (9a–b) contain a *possessor*. Possessors in Chol follow the possessum, and trigger Set A (ergative/genitive) agreement on the possessed nominal. Compare these with a run-of-the-mill possessed nominal, as in (10) below.

- (9) THE PUZZLE: POSSESSED NOMINALS UNDER THE ASPECTUAL VERB  
 a. Choñkol [ i-juch' ixim **aj-Maria** ].  
 PROG A3-grind corn DET-Maria  
 ‘Maria is grinding corn.’  
 b. Choñkol [ i-k'ay **aj-Maria** ].  
 PROG A3-song DET-Maria  
 ‘Maria’s song is happening.’ (e.g., if a song that Maria likes is playing on the radio)  
**not:** ‘Maria is singing.’

- (10) POSSESSIVE CONSTRUCTION  
 i-bujk' aj-Maria  
 A3-shirt DET-Maria  
 ‘Maria’s shirt’

Crucially, while the transitive in (9a) permits a reading in which the possessor is the thematic Agent of the event, this reading is not available for the unergative in (9b). Instead, in order to convey ‘Maria is singing’, the construction in (8a) must be used. It is important to note, when considering these facts, the distinction between the *asserted content* of a given utterance on the one hand, and the kind of scenarios that a given utterance is *compatible* with, on the other.

To illustrate this, suppose the utterance in (9b) has just been uttered; the utterance in (11), below, cannot then be uttered as a felicitous response. This contrasts with (8a), which *can* be felicitously responded to using (11).

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(11) POSSIBLE RESPONSE

Mach ch'ujbil! Uma' aj-Maria.

NEG true mute DET-Maria

'That's not true! Maria is mute.' { ✓ as a response to (8a)  
# as a response to (9b)

In this respect, examples like (9b) differ crucially from English gerunds, for example. However, this behavior is restricted to *unergatives* (and as we will see below, antipassives); *transitive* verbs, even in a construction like (9a), are fully compatible with an asserted Agent interpretation. Compare the sentence in (12), a felicitous response to (9a):

(12) POSSIBLE RESPONSE

Mach ch'ujbil! Choñkol tyi wäy-el aj-Maria.

NEG true PROG PREP sleep-NML DET-Maria

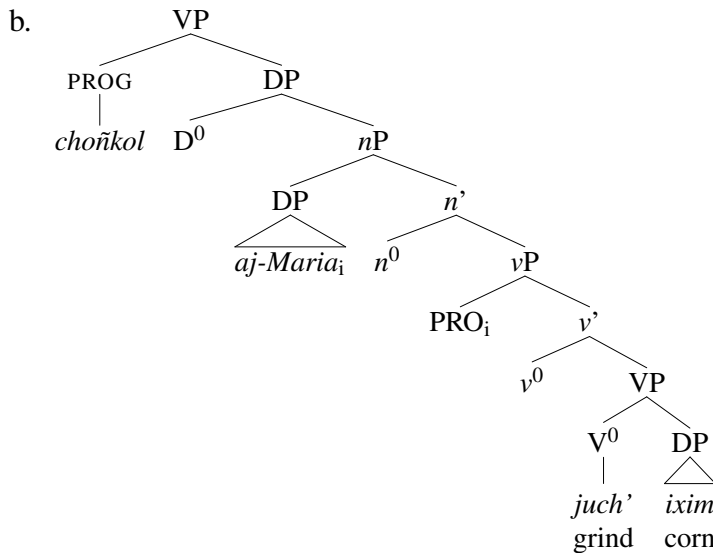
'That's not true! Maria is sleeping.' { ✓ as a response to (9a)

This contrast, which is systematic for all unergatives and transitives in the language, is what we seek to explain.

### 3. Our Proposal

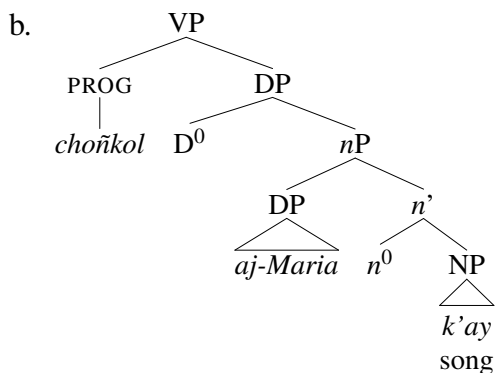
We propose that the form *juch' ixim* ('grind corn') in (9a) is a nominalized vP, and has the structure shown in (13).<sup>7</sup> We assume the subject of vP is a null PRO, controlled by an overt possessor introduced higher in the nominal structure.

- (13) a. Choñkol [ **i-juch' ixim aj-Maria** ].  
 PROG A3-grind corn DET-Maria  
 'Maria is grinding corn.' [=(9a)]



The form *k'ay* ('song') in (9b), on the other hand, crucially lacks a vP layer—as illustrated in (14b). The overt DP *aj-Maria* is once again a nominal possessor.

- (14) a. Choñkol [ **i-k'ay aj-Maria** ].  
 PROG A3-song DET-Maria  
 'Maria's song is happening.' [=(9b)]



<sup>7</sup>Here we are abstracting away from the actual surface word order, i.e. whether subjects and possessors are base-generated in right-side specifiers (Aissen 1992), or whether the possessum/predicate raises to a position above the possessor/subject (Coon 2010b).

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Following this proposal, an Agent interpretation is possible in (9a)/(13a) precisely because this construction involves a nominalized  $\nu$ P: the specifier of  $\nu$ P is occupied by PRO, which receives the Agent theta-role and which is in turn controlled by the possessor. In this respect, forms like (9a)/(13a) are akin to English *poss-ing* nominalizations (Abney 1987). Since an external-argument position (namely, [Spec, $\nu$ P]) is available for PRO to be merged in, an Agent interpretation is available.

If the possessed nominal in (9b)/(14), on the other hand, contains no  $\nu$ P layer, it follows that neither the possessor itself (*aj-Maria*) nor a controlled PRO can be merged in external argument position—since there quite literally *is no* external argument position in which such an element could be merged. As a result, only a possessive interpretation (*Maria's song*) is available. Again, while an Agent interpretation (*Maria is singing*) can be coerced, it is not asserted (see §2). Instead, in order to achieve an Agent interpretation in the progressive, the subject *Maria* must receive its Case and theta-role directly from the aspectual verb as in (15a), below.

- (15) a.  $\begin{array}{c} \theta \\ \swarrow \quad \searrow \\ \text{Choñkol} \text{ [PP } \text{tyi} \text{ k'ay ] [DP } \text{aj-Maria} \text{ ]} \\ \text{PROG} \quad \text{PREP song} \quad \text{DET-Maria} \end{array}$  [=(8a)]  
 ‘Maria is singing.’ (lit.: ‘Maria is engaged in song.’)
- b.  $\begin{array}{c} \theta \\ \swarrow \quad \searrow \\ \text{Choñkol} \text{ [DP } \text{i-k'ay} \text{ aj-Maria} \text{ ]} \\ \text{PROG} \quad \text{A3-song} \text{ DET-Maria} \end{array}$  [=(9b)]  
 ‘Maria’s song is happening.’

In (15a), *aj-Maria* stands in a predicate-argument relation with the aspectual predicate, *choñkol*, and can therefore bear an Agent role.<sup>8</sup> We can verify this particular difference in phrase structure: in a construction like (15a), varying the  $\phi$ -features of the subject will give rise to overt agreement morphology on *choñkol*, as shown in (16a). This crucially differs from (15b) (which lacks the preposition *tyi*), as demonstrated in (16b).

- (16) a.  $\text{Choñkol-ety}_i \text{ [PP } \text{tyi} \text{ k'ay ] [DP } \text{pro}_{2sg} \text{ ]}_i$ .  
 PROG-B2                  PREP song  
 ‘You are singing.’ (lit.: ‘You are engaged in song.’)
- b.  $\text{Choñkol} \text{ [DP } \text{a-juch' ixim} \text{ ]}$ .  
 PROG                  A2-grind corn  
 ‘You are grinding corn.’ (lit.: ‘Your grinding corn is happening.’)

Again, in both (16a) and (16b), the progressive *choñkol* combines with exactly one nominal argument: in (16a) it is the thematic subject, while in (16b) it is the nominalized clause. Since agreement with a nominalized clause will always reflect third person features, we do not find any overt person marking on *choñkol* in (16b) (recall the absence of an overt third

<sup>8</sup>We assume that at least certain modals and aspectual predicates can be assigners of thematic roles, in the vein of Perlmutter’s 1970 discussion of “the two verbs *begin*”.

person Set B marker; see §2). The notional subject, on the other hand, is expressed as a nominal possessor inside the nominalized clause.

As it stands, of course, we have merely recast the availability of an Agent interpretation in terms of the presence or absence of a  $vP$  layer. The strength of the proposal therefore rests on providing *independent evidence* that the presence of a  $vP$  layer is indeed the relevant difference between (9a) and (9b)—which is what we turn our attention to in the next section.

#### 4. Verbs and complementation in Chol

In this section, we show that the following phenomena are all co-extensive in Chol: (i) the presence of a Case-requiring complement of  $V^0$  (i.e., an internal argument); (ii) a stem's ability to inflect as a verb; and (iii) the presence of a special suffix on the verb root ( $=v^0$ ). In what follows, we will call event-denoting stems which subcategorize for a DP complement “*complementing forms*”, and those that do not “*complementless forms*”.

##### 4.1. Complementing vs. Complementless Stems

Complementing forms include transitives (17a), passives (17b), and unaccusatives (17c):

###### (17) COMPLEMENTING FORMS (=VERBS)

- a. Tyi i-mek'-e-yety.  
PRFV A3-hug-TV-B2  
'He hugged you.'
- b. Tyi mejk'-i-yety.  
PRFV hug.PASV-ITV-B2  
'You were hugged.'
- c. Tyi majl-i-yety.  
PRFV go-ITV-B2  
'You went.'

The forms in (17) illustrate that complementing forms inflect as verbs. In all of the forms in (17), the root (underlined) appears with a “theme vowel” suffix: a harmonic vowel for transitives, (17a), and the vowel *-i* for intransitives, (17b–c). We take these suffixes to be overt instantiations of a *verbalizing* syntactic head (Marantz 1997). As verbs, these forms inflect directly for person. The internal argument is marked via a Set B (absolutive) suffix—in this case, 2nd person (*-yety*).

Complementless forms, in contrast, include unergative roots (18a), and two types of antipassive: one indicated by the antipassive morpheme *-oñ* (18b), and the second involving incorporation of a bare NP object (18c).



(18) COMPLEMENTLESS FORMS (=NOUNS)

- a. Tyi a-cha'l-e k'ay.  
PRFV A2-do-DTV song  
'You sang.'
- b. Tyi a-cha'l-e wuts'-oñ-el.  
PRFV A2-do-DTV wash-AP-NML  
'You washed.'
- c. Tyi a-cha'l-e wuts'-pisil.  
PRFV A2-do-DTV wash-clothes  
'You clothes-washed.'

These forms behave as nouns. First, they do not take the vocalic status suffixes seen above. Second, they do not inflect directly for person. Instead, in order to predicate, these forms require a light verb. In perfective forms like those in (18), they appear as complements to the transitive light verb *cha'l*. In the non-perfective (progressive and imperfective) aspects, they appear as the single argument of the intransitive aspectual predicate; the event-denoting stem is introduced by the preposition, as in (16a), discussed earlier. There is also distributional and morphological evidence that the underlined forms in (18) are formally nouns, discussed in Coon 2010a.

#### 4.2. Further Support: Alternations

The division between complementing (*verbal*) and complementless (*nominal*) forms shown above is not a matter of idiosyncratic selection of different inflectional morphology by different stems. As shown in (19–20), a single root can manifest both behaviors, depending on the presence or absence of a Case-requiring complement. In (19a) the root *soñ* 'dance' does not take a complement and itself appears as a complement to the light verb *cha'l*. Inflecting *soñ* directly for person is ungrammatical, as shown in (19b).

- (19) a. Tyi a-cha'l-e **soñ**.  
PRFV A2-do-DTV dance  
'You danced.'
- b. \* Tyi **soñ-i-yety**.  
PRFV dance-ITV-B2  
*intended*: 'You danced.'

However, if *soñ* does take a complement—such as the Spanish loan *bals* 'waltz' in (20a)—no light verb is needed. Instead, *soñ* appears with the vocalic suffix *-i*, found on denominal verbs in the language. The resulting stem inflects directly for person.

- (20) a. Tyi a-**soñ**-i bals.  
 PRFV A2-dance-DTV waltz  
 ‘You danced a waltz.’
- b. \* Tyi a-cha’l-e **soñ**-iñ bals.  
 PRFV A2-do-DTV dance-DTV waltz  
*intended*: ‘You danced a waltz.’

Moreover, some intransitive roots (known as “ambivalents”; Vázquez Álvarez 2002) can function either as unaccusative or as unergatives. When functioning as unergatives (=complementless) they receive agentive interpretations and require a light verb—as shown in (21a). The sentence in (21a) is infelicitous, for example, in a context where the subject accidentally fell asleep on a bus. When these roots function as unaccusatives (=complementing), on the other hand, the subject can be interpreted as non-volitional, and the form inflects directly as a verb—as shown in (21b).

- (21) a. Tyi a-cha’l-e **wäy**-el.  
 PRFV A2-do-DTV sleep-NML  
 ‘You slept.’ (on purpose)
- b. Tyi **wäy**-i-yety.  
 PRFV sleep-ITV-B2  
 ‘You slept.’ (possibly accidentally)

Finally, we find alternations between transitive roots which take full Case-requiring complements, and those which incorporate bare NP complements. When taking a full Case-requiring DP (=complementing), the form inflects directly as a verb—as shown in (22). When incorporating a bare noun (=complementless), and only then, the stem requires the light verb—as shown in (23a). Note the impossibility of the determiner on the light verb construction in (23b).

- (22) Tyi k-**mel**-e jiñi waj.  
 PRFV A1-make-TV DET tortilla  
 ‘I made the tortillas.’
- (23) a. Tyi k-cha’l-e **mel**-waj.  
 PRFV A1-do-DTV make-tortilla  
 ‘I did tortilla-making.’
- b. \* Tyi k-cha’l-e **mel** jiñi waj.  
 PRFV A1-do-DTV make DET tortilla  
*intended*: ‘I did the-tortilla-making.’

These same types of contrasts can be observed with progressive forms, of the kind presented at the outset. In (24a), the light verb *cha’l* is not present; instead, the

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<sup>8</sup>This pattern has led some to characterize Chol as a “Split-S” or “active” language (Gutiérrez Sánchez 2004, Gutiérrez Sánchez and Zavala Maldonado 2005). Note, however, that the distinction in Chol is not between agentive versus non-agentive subjects, as Split-S systems are commonly characterized, but rather between forms which take internal arguments and forms that do not.

person marking attaches directly to the intransitive aspectual predicate, *choñkol*. Crucially, however, the complementless root *soñ* does not inflect directly for person. Rather, the subject is a subject of the progressive predicate, and the lexical root (*soñ* “dance”) is introduced by the preposition *tyi*. On the other hand, when *soñ* does take a complement—as in (24b)—the person marking appears directly on the nominalized stem (see also (13), above).

- (24) a. Choñkol-oñ tyi soñ.  
      PROG-B1 PREP dance  
      ‘I’m dancing.’ (lit. ~ ‘I’m engaged in dancing.’)  
      b. Choñkol k-soñ-iñ bals.  
      PROG A1-dance-DTV.SUF waltz  
      ‘I’m dancing a waltz.’

### 4.3. Complementation and Verbhood in Chol: A Bi-Conditional

The data surveyed throughout sections §4.1–§4.2 all exemplify a strong bi-conditional that exists in Chol between *verbhood* and *taking an internal argument*. Given that those stems that behave as verbs actually carry additional morphology (namely, a vocalic suffix; see (17a–c) and subsequent discussion), it is natural to assume that this morphology is the overt expression of a verbalizing head—in other words, of  $v^0$ . That these suffixes are  $v^0$  heads may receive further support from the fact that the phonological content of the morpheme in question varies depending on the transitivity of the verb—that is, it tracks the transitive/intransitive distinction.

What is unique to Chol is that the presence of this syntactic head is *co-extensive* with complement-taking. One way to capture this is by appealing to the Case-theoretic properties of internal arguments, as formalized in (25). The first requirement, that the DP receive abstract Case, is a standard part of Case Theory; the second—while operative in Chol and not in, e.g., English—recalls the *Inverse Case Filter* of Bošković (1997).<sup>9</sup>

(25) **CHOL little- $v$  BI-CONDITIONAL**

- i.** all internal arguments must be assigned (absolutive) Case by a  $v^0$  head
- ii.** all  $v^0$  heads must assign absolutive Case to an internal argument

We will see below that the generalization in (25) derives the behavior of the different constructions discussed earlier.

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<sup>9</sup>Interestingly, PPs seem never to be selected as complements to Chol verbs, also noted for Tzotzil Mayan by Aissen (1996). The equivalent of English ‘wait for Mary’ or ‘talk to John’, for example, would be ‘wait Mary’ or ‘talk John’ in Chol.

## 5. Deriving the Interpretive Difference

We now return to the original puzzle, given in (9a–b) and repeated here:

- (9) a. Choñkol [ i-juch' **ixim** aj-Maria ].  
 PROG A3-grind corn DET-Maria  
 ‘Maria is grinding corn.’
- b. Choñkol [ i-k'ay aj-Maria ].  
 PROG A3-song DET-Maria  
 ‘Maria’s song is happening.’ (e.g., *if a song that Maria likes is playing on the radio*)  
 \*‘Maria is singing.’

Note now that a crucial difference between (9a) and (9b)—independently of the availability of an Agent interpretation, which is the puzzle we aim to solve—is that the form in (9a) takes a complement (*ixim* ‘corn’), whereas the form in (9b) does not. Indeed, these forms are representative of a broader pattern in the language. In the progressive, *complementing* forms appear as *poss-ing* nominalizations. The nominalization then serves as a complement to the aspectual verb (e.g., the progressive *choñkol*).<sup>10</sup>

- (26) a. TRANSITIVE  
 Choñkol [ k-mek'-ety ].  
 PROG A1-hug-B2  
 ‘I’m hugging you.’ (lit. ~ ‘My hugging you is happening.’)
- b. UNACCUSATIVE  
 Choñkol [ k-majl-el ].  
 PROG A1-go-NML  
 ‘I’m going.’ (lit. ~ ‘My going is happening.’)
- c. PASSIVE  
 Choñkol [ k-mejk'-el ].  
 PROG A1-hug.PASV-NML  
 ‘I’m being hugged.’ (lit. ~ ‘My being hugged is happening.’)

Given the Chol LITTLE-*v* BI-CONDITIONAL (25), *complementless* forms cannot include a *vP* layer: because Chol *v*<sup>0</sup> *must* assign Case, if there is no Case-requiring complement, *v*<sup>0</sup> cannot merge. Thus, in order to receive an agentive interpretation, the notional subjects of complementless forms must receive their theta-roles directly from the aspectual verb (as shown in (15a) above). The complementless stem is then introduced separately, by the preposition *tyi*, as in (27a–b). See Laka (2006) regarding a similar construction in Basque, in which the predicate also surfaces in an oblique/adpositional context.

<sup>10</sup>In the intransitive examples (26b–c), we assume that the possessor controls a PRO in complement position. The fact that both transitive and intransitive subjects are controlled PRO, both controlled by Set A possessors, gives the appearance of split ergativity in the Chol progressive. See Coon 2010a for further discussion.

- (27) a. UNERGATIVE  
Choñkol-oñ [ tyi ty'añ ].  
PROG-B1 PREP word  
'I'm talking.' (lit. ~ 'I am engaged in talking.')
- b. ANTIPASSIVE  
Choñkol-oñ [ tyi mǎñ-oñ-el ].  
PROG-B1 PREP buy-AP-NML  
'I'm buying.' (lit. ~ 'I am engaged in buying.')

Given the discussion culminating in (25), this would lead us—independently of the different interpretive possibilities—to conclude that (9a) can involve a  $vP$  layer, while (9b) cannot. This, as shown earlier, provides a natural explanation for the contrast between the availability of an Agent interpretation in (9a), and its unavailability in (9b).

Crucially, this explanation would be unavailable if the external argument were introduced within the same syntactic projection as the lexical stem. The data in question thus constitute an argument in favor of the *Split VP Hypothesis*.

## 6. Summary

In this paper, we presented a puzzle concerning interpretive asymmetries in Chol nominalizations—specifically, the possibility versus impossibility of an Agent reading for possessors in certain progressive constructions. We proposed that this asymmetry arises as the result of the ability versus inability of different nominalizations to contain a  $vP$  layer, as outlined in §3. We next moved on, in §4, to provide independent evidence that the presence/absence of  $v(P)$  is indeed the relevant factor distinguishing the constructions in question. First, we presented the basic data showing that *verbhood* and *complement-taking* are co-extensive in Chol (§4.1). Second, we showed several alternations in which a single stem can exhibit two kinds of behavior: taking a complement and inflecting as a verb, and not taking a complement, not inflecting as a verb, and consequently being selected/introduced by a light-verb/auxiliary. These facts demonstrated that this bi-conditional, introduced in §4.2, is indeed an active part of the grammar of Chol.

We then argued, in §4.3, that the vocalic suffix found only on the *verbal/complement-taking* forms (which alternates based on the transitive-vs.-unaccusative distinction) is the realization of  $v^0$  in Chol; and that what is special about Chol is that the absolute Case on  $v^0$  must be discharged (in addition to the standard assumption that the complement of  $V^0$  must be assigned Case), yielding what we have called the *Chol little-v Bi-Conditional*. Finally, we showed in §5 how this *Chol little-v Bi-Conditional*—motivated independently of the puzzle we set out to solve, concerning interpretive asymmetries in progressive possessors—facilitates a simple account of those asymmetries. In particular, it predicts that a  $vP$  layer would be present exactly in those nominalizations where we observed that the possessor was able to receive an Agent interpretation.

## References

- Abney, Steven P. 1987. The English noun-phrase in its sentential aspect. Doctoral dissertation, MIT, Cambridge, MA.
- Aissen, Judith. 1992. Topic and focus in Mayan. *Language* 68:43–80.
- Aissen, Judith. 1996. Pied-piping, abstract agreement, and functional projections in Tzotzil. *Natural Language & Linguistic Theory* 14:447–491.
- Bošković, Željko. 1997. *The syntax of nonfinite complementation: An economy approach*. Cambridge, MA: MIT Press.
- Bricker, Victoria R. 1981. The source of the ergative split in Yucatec Maya. *Journal of Mayan Linguistics* 2:83–127.
- Bybee, Joan L., Revere D. Perkins, and William Pagliuca. 1994. *The evolution of grammar*. University of Chicago Press.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
- Coon, Jessica. 2010a. Complementation in Chol (Mayan): A theory of split ergativity. Doctoral dissertation, MIT, Cambridge, MA.
- Coon, Jessica. 2010b. VOS as predicate fronting in Chol. *Lingua* 120:354–378.
- Gutiérrez Sánchez, Pedro. 2004. Las clases de verbos intransitivos y el alineamiento agentivo en el Chol de Tila, Chiapas. Master's thesis, CIESAS, México.
- Gutiérrez Sánchez, Pedro, and Roberto Zavala Maldonado. 2005. Chol and Chontal: Two Mayan languages of the agentive type. Paper presented at *The Typology of Stative-Active Languages*, Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany.
- Hale, Kenneth, and Samuel Jay Keyser. 1993. On argument structure and the lexical expression of syntactic relations. In *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger*, ed. by Ken Hale and Samuel Jay Keyser, 53–109. Cambridge, MA: MIT Press.
- Harley, Heidi. 2009. The morphology of nominalizations and the syntax of vP. In *Quantification, Definiteness, and Nominalization*, ed. by Anastasia Giannakidou and Monika Rathert, number 24 in Oxford Studies in Theoretical Linguistics, 321–343. Oxford: Oxford University Press. URL <http://ling.auf.net/lingBuzz/000434>.
- Kratzer, Angelika. 1996. Severing the external argument from its verb. In *Phrase structure and the lexicon*, ed. by Johan Rooryck and Laurie Zaring, 109–137. Dordrecht: Kluwer Academic Publishers.
- Laka, Itziar. 2006. Deriving split ergativity in the progressive: The case of Basque. In *Ergativity: Emerging issues*, ed. by Alana Johns, Diane Massam, and Juvenal Ndayiragije, 173–196. Dordrecht: Kluwer Academic Publishers.
- Larsen, Tomas W., and William M. Norman. 1979. Correlates of ergativity in Mayan grammar. In *Ergativity: Towards a theory of grammatical relations*, ed. by Frans Plank, 347–370. London: Academic Press.
- Marantz, Alec. 1997. No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. In *Proceedings of the 21<sup>st</sup> Penn Linguistics Colloquium (PLC 21)*, ed. by Alexis Dimitriadis, Laura Siegen, Clarissa Surek-

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- Clark, and Alexander Williams, Vol. 4 of *University of Pennsylvania Working Papers in Linguistics*, 201–225. Philadelphia, PA: Penn Linguistics Club.
- Mateo Pedro, Pedro. 2009. Nominalization in Q'anjob'al Maya. In *Kansas working papers in linguistics*, ed. by Stephanie Lux and Pedro Mateo Pedro, Vol. 31, 46–63. University of Kansas.
- Mateo-Toledo, B'alam Eladio. 2003. Ergatividad mixta en Q'anjobal (Maya): Un reanálisis. In *Proceedings of the Conference of Indigenous Language of Latin America 1*.
- Ordóñez, Francisco. 1995. The antipassive in Jacalteco: A last resort strategy. *CatWPL* 4:329–343.
- Perlmutter, David M. 1970. The two verbs *begin*. In *Readings in English Transformational Grammar*, ed. by Roderick A. Jacobs and Peter S. Rosenbaum, 107–119. Waltham, MA: Blaisdell.
- Vázquez Álvarez, Juan J. 2002. Morfología del verbo de la lengua Chol de Tila Chiapas. Master's thesis, CIESAS, México.

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