

Null Complement Anaphora cannot involve transitivity alternations: A novel argument from Mayan¹

Rodrigo Ranero
University of California, Los Angeles
ranero@ucla.edu

Justin Royer
Université de Montréal
justin.royer@umontreal.ca

December 9, 2024

1 Introduction

We propose a novel morphosyntactic argument that supports one analysis of the silent element in the construction known as Null Complement Anaphora (henceforth NCA). Specifically, we argue on the basis of data from Chuj (Mayan) that the missing verbal complement in NCA is simplex and syntactically active, providing new support for the classic analysis of NCA as a "deep anaphor" (Hankamer and Sag 1976; see Depiante 2001, 2019; Moulton 2013; Tyler 2022). The data are difficult (if not impossible) to capture under analyses that propose instead that NCA involves a transitivity alternation (Shopen 1972, 1973; Williams 1977; Grimshaw 1979; Napoli 1983, 1985; Saeboe 1996; Xiang et al. 2019).

In a nutshell, we contend that Chuj's rich morphological marking, which encodes transitivity in multiple ways, reveals the *universal* syntax of NCA. This underlying syntax is not detectable in languages that have previously served as the empirical basis for arguing about the representation of NCA. We end by discussing (a) why the crosslinguistic implications of the Chuj facts should be interpreted in the strongest fashion possible—i.e., as reflecting the universal syntax of NCA—and (b) why a different conclusion that would take the syntax of NCA to be parameterized is not desirable. In other words, we argue that a What-You-See-Is-What-You-Get (henceforth WYSIWYG) approach should not be maintained for NCA in other languages either. Methodologically, then,

¹Authors share first-authorship and are listed alphabetically. We are very grateful to the Chuj collaborators who participated on this project: Matin Pablo, Petul Gómez, Matal Torres, Xapin Torres, and Elsa Velasco. We also thank Irina Burukina, Victoria Mateu, Gilles Polian, Maria Polinsky, Harold Torrence, the audiences at SCAMS 3 and CILLA X, as well as the members of AIS at UCLA for feedback. For funding, we thank the Explorers Club, the UC President's/Chancellor's Postdoctoral Fellowship Program, and the Banting Postdoctoral Fellowship program of the Social Sciences and Humanities Research Council of Canada.

we provide an illustration of how a well-controlled set of facts from an understudied language can open the door for a reappraisal on the representation of one flavor of silent syntax.

Section 2 provides brief background on NCA. Section 3 provides information about Chuj, focusing on (in)transitivity marking. Section 4 discusses NCA in Chuj. We argue that it consistently involves transitive verbs, and thus that there is a complement of the relevant verbs that must be a simplex *pro-form*. Section 5 concludes with a discussion of crosslinguistic implications.

2 NCA and the argument in a nutshell

The phenomenon of interest here involves instances where a verb's non-nominal complement is missing on the surface. Consider how a speaker can utter an overt non-nominal complement of the verb *agree*, as in (1)b-c below. Importantly, the context suffices to license the speaker's utterance of the minimally different (1)a, where nothing follows *agree* overtly.

- (1) **Context:** A speaker is defending a controversial analysis of NCA.
- a. Do you agree? (=NCA)
 - b. Do you agree **with what they're saying**? (PP complement)
 - c. Do you agree **that this is a reasonable analysis**? (CP complement)

Constructions akin to (1)a will be our concern here. Discussions of this configuration date back to Freidin 1970 according to Napoli (1985). Its most relevant treatment for our purposes appears in Hankamer and Sag 1976, which analyzes the silence as a *null complement anaphor*. This account gave birth to the phenomenon's name in current parlance.

The proposal that there is a silent element in examples like (1)a was influential, yet it is only one of three possible analytical options, which are summarized below:²

²Napoli 1983 refers to analysis (2)a as DEL (for Deletion), (2)b as BASE (for Base Generated Analysis), and (2)c as NCA.

(2) *Analytical options for the status of the silent element in NCA*

- a. NCA involves the ellipsis of an XP (see Napoli 1985 and Aelbrecht 2010)
- b. NCA involves a null *pro*-form (Depiante 2001, 2019; Cinque 2004; Moulton 2013; Tyler 2022; see Hankamer and Sag 1976).
- c. NCA involves nothing at all, i.e., (in)transitivity alternations / WYSIWYG (Shopen 1972, 1973; Williams 1977; Grimshaw 1979; Napoli 1983, 1985; Saeboe 1996; Xiang et al. 2019).

Option (2)a has largely been disregarded since at least Hankamer and Sag 1976 and Napoli 1983, 1985, though see van Craenenbroeck and Merchant (2013) and Depiante’s (2019) discussions of Aelbrecht 2010 for suggestions regarding this approach. We will provide evidence (in section 4) that this alternative does not hold water in Chuj.

Given the generalized rejection of an ellipsis analysis of NCA, the literature has sought to adjudicate between the two remaining options: whether NCA verbs have a simplex *pro*-form complement (2)b, or whether cases that appear to lack a complement in fact involve an intransitive verb (2)c. The resulting debates, however, have been based on languages where the predicate itself would not overtly mark transitivity alternations in the NCA configuration. We will argue that, in contrast to these languages, Chuj provides the right ingredients for a novel morphosyntactic adjudication between options (2)b-c, ultimately favoring (2)b.

Our arguments center on the appearance of (a) ergative agreement and (b) a final suffix that signals the transitive status of the NCA configuration:

- (3) **Context provided to speaker:** A politician is spurring a bunch of lies. In this case, can you ask your friend:

¿Tom tz-Ø-a-mek’-a?
YNQ IPFV-ABS3-ERG2S-agree-TV
‘Do you agree?’

Let us now delve deeper into Chuj to contextualize the above data within our debate of interest.

3 (In)transitivity in Chuj

Chuj belongs to the Q'anjob'alan sub-branch of Mayan languages (Kaufman 1974, Law 2014). It is spoken by 70,000-80,000 speakers (Piedrasanta 2009; Buenrostro 2013), primarily in Huehuetenango (Guatemala) and Chiapas (Mexico), but also in diasporic communities across North America. There are two main dialects: San Mateo Ixtatán and San Sebastián Coatán (Maxwell 1981; García Pablo and Domingo Pascual 2007). Here, we discuss data from the former dialect, which were elicited by the authors using context-based and hypothesis-driven fieldwork methodology (Matthewson 2004; Davis et al. 2014; Bochnak and Matthewson 2020).³

Mayan languages are notoriously explicit about marking (in)transitivity status, often multiple times on the same verb (England 2001, Grinevald and Peake 2012; Coon 2016, Aissen et al. 2017, Coon 2019). Grinevald and Peake (2012: 21) summarize this idiosyncrasy of Mayan as follows:

[...] transitivity is heavily marked in the morphology of the verbal complex of Mayan languages. As expected, the choice of person markers and the presence of voice markers are the essential elements for the determination of the level of transitivity of the construction. However, in this family of languages, transitivity may be signaled by the choice of particular tense/aspect/mood and voice markers sensitive to the nature of the verb itself (as either transitive or intransitive, whether by root or derivation). And as if to top it off, the final thematic suffix, when it appears, adds to this rather typically Mayan insistence on indicating the level of transitivity of the whole verb complex.

Chuj is no exception to this defining property of the Mayan family; all of the transitivity indicators listed above apply. Transitive and intransitive verbal templates, as well as examples, are provided below for illustration. Notice that third person absolutive is null, indicated as \emptyset throughout.⁴

³For additional information about Chuj, including grammars, see Hopkins 1967, 2021, Maxwell 1981, García Pablo and Domingo Pascual 2007, Buenrostro 2013, and Royer et al. 2022.

⁴Note that the morpheme set that is used to signal ergative agreement is also used to cross-reference possessors (Zavala Maldonado 2017). We depart here from the Mayanist convention of labelling ergative agreement markers as “Set A” and absolutive ones as “Set B”. We make this choice in order to highlight in a transparent manner the nature of each set of markers, which will be crucial for our analytical points.

(4) *Transitive verb template*

- a. ASP–ABS–**ERG**–ROOT–{voice suffixes}–**TV/DTV**
- b. Ix- ach- w- il -a'.
PFV- ABS2S- ERG1S- see -TV
'I saw you.'
- c. Ix- Ø- ey- anh -t -ej heb' anima'.
PFV- ABS3- ERG2P- remedy -CAUS -DTV PL person
'Y'all cured the people.'

(5) *Intransitive verb template*

- a. ASP–**ABS**–ROOT–{voice suffixes}–**IV/IRR**
- b. Ix- onh- b'at -i.
PFV- ABS1P- go -IV
'We went.'
- c. Ol- ex- anh -t -aj -ok.
PROSP- ABS2P- remedy -CAUS -PASS -IV.FUT
'Y'all will be cured.'

Three properties of the Chuj verbal complex serve to signal transitivity status, sometimes redundantly. First, transitive verbs are distinguished from intransitives in showing ergative agreement.⁵ Second, derivational voice morphology signals changes in valency (passive, antipassive, Agent Focus, etc.; see Hopkins 1967, ch. 2), allowing verbs to be used in transitive or intransitive frames. Third, so called “status suffixes” (sometimes called “thematic suffixes”) directly track the (resulting) transitivity status of the verbal complex. There are four status suffixes, each observed in (4)-(5), which are sensitive to aspect and/or the underlying root of the verbal stem (see Coon 2019):

⁵Chuj exhibits aspect-based split ergativity: in the progressive aspect, transitive and intransitive subjects are both co-indexed with Set A marking (see previous footnote). However, Mayan split ergative clauses have long been analyzed as involving possessed nominalizations (see Zavala Maldonado 2017 and references therein), where Set A does not co-index a transitive subject, but a possessor (see Coon and Carolan 2017 and Coon and Royer 2020 for Chuj specifically).

(6) STATUS SUFFIXES IN CHUJ

Verb type	Root/aspect	Status suffix	Gloss
Transitive	Transitive root, all aspects	<i>-a', -o', -u'</i>	TV
	Non-transitive root, all aspects	<i>-ej</i>	DTV
Intransitive	Any root, non-future	<i>-i</i>	IV
	Any root, future	<i>-ok</i>	IV.FUT

Three of the four status suffixes (TV, IV, IV.FUT) are deleted in certain phonological environments, namely when they are not at the right edge of an intonational phrase, which roughly corresponds to the right edge of a CP (see also Henderson 2012 for similar phenomena in other Mayan languages). Note, however, that the suffixes are retained in such an environment if their deletion would result in an illicit consonant cluster (Royer 2022). For instance, observe the absence of the status suffix when an overt DP argument follows the verb:

- (7) Ix-Ø-y-il [o nok' tz'i'] [s ix unin].
 PFV-ABS3-ERG3-see CLF dog CLF.F girl
 'The girl saw the dog.'

In sum, like other Mayan languages, Chuj signals transitivity alternations in a multiplicity of ways. This marking will serve in what follows as our window into the syntax of NCA.

4 NCA in Chuj

A Chuj NCA verb different from the one in (3), this time involving the root *tak'* (translated as 'to accept'; see Hopkins 2012), is provided in (8):

- (8) Ix-Ø-a-tak'-a' [to tz-ach-b'at k'atzitz].
 PFV-ABS3-ERG2S-accept-TV COMP IPFV-ABS2S-go log
 'You accepted to go cut wood.'

This verb does not take nominal complements, regardless of person specification.

- (9) a. *Ix-Ø-in-tak' nok' tz'i'.
 PFV-ABS3-ERG1S-accept CLF dog
Int: 'I accepted the dog.' (i.e., 'I agreed to have the dog in my life.')
- b. *Ix-ach-in-tak'-a'.
 PFV-ABS2S-ERG1S-accept-TV
Int: 'I accepted you.'

The observation that this verb (and the others that we use in this paper) cannot take nominal complements is important, since this behavior is unlike the behavior of other verbs that may participate in NCA, but can take nominal and non-nominal complements (see Depiante 2019).⁶ Thus, the absence of an overt complement for our test verbs should therefore signal NCA (and not, e.g., a null DP *pro*; see footnote 7).

NCA uses of the verb *tak'* are provided in (10) and (11). Importantly, notice that NCA does not require an overt linguistic antecedent: the context in (11) suffices to allow the absence of an

⁶The NCA verbs that we use throughout *can* combine with *wh*-free relatives, which are generally assumed to have the same distribution as nominals (Caponigro 2003).

- (i) ✓ Ix-Ø-in-mek [tas ix-Ø-k'anb'a-j-i].
 PFV-ABS3S-ERG1S-agree what PFV-ABS3S-inquire-PASS-IV
 Literal translation: 'I agreed with what was inquired.'

While this may be surprising at first glance, we note again that these verbs cannot combine with nominal complements that have a comparable meaning to the one expressed by the equivalent free-relative. The following example thus forms a minimal pair with the previous one:

- (ii) * Ix-Ø-in-mek k'anb'alil.
 PFV-ABS3S-ERG1S-agree question
 Intended: 'I agreed with the question.'

Compare the pair of examples just discussed with the behavior of verbs like *ab'* 'hear'/'understand', which are well-formed with either kind of expression as a complement:

- (iii) ✓ Ix-Ø-w-ab' tas ix-Ø-k'anb'a-j-i.
 PFV-ABS3S-ERG1S-hear what PFV-ABS3S-inquire-PASS-IV
 'I heard/understood what was inquired.'
- (iv) ✓ Ix-Ø-w-ab' k'anb'alil.
 PFV-ABS3S-ERG1S-hear question
 'I heard/understood the question.'

The overall picture suggests, then, that free relatives and nominals have a different featural makeup (contra standard assumptions; see Caponigro 2003, as well as Kotek and Erlewine 2019 and Royer 2021 specifically on Chuj). That is, NCA verbs like *mek* 'agree' (which cannot combine with straightforward DPs) can nevertheless combine with free-relatives in Chuj, a restriction that we do not observe with nominal taking verbs like *ab'* 'hear/understand'. We thank a reviewer and the editors for questions that led to our investigation of free-relatives in this context.

overt complement. This was also shown in (3) above.

- (10) Hayik' ix-Ø-w-al t'ay-ach to tz'-ach-b'at k'atzitz,
 when PFV-ABS3-ERG1S-say PREP-ABS2S COMP IPFV-ABS2S-go woodlog,
 ix-Ø-[a]-tak'-[a'].
 PFV-ABS3-ERG2S-accept-TV
 'When I asked you to go cut wood, you accepted.'
- (11) Context: Axul's boss is always giving her new orders, and she's been complaining to Malin about this situation. One day, Malin sees that the boss is asking Axul to do additional things again. Malin asks Axul:
 ¿Tom ix-Ø-[a]-tak'-[a']?
 YNQ PFV-ABS3-ERG2S-accept-TV
 'Did you accept?'

Notice crucially that the verb in (10) and (11) bears (a) ergative agreement and (b) the transitive status suffix. Moreover, and just as crucially, using this verb (and other NCA verbs) in the language without ergative agreement and with an intransitive status suffix is judged unacceptable. For example, using an intransitive version of the verb *tak'* renders (10) and (11) ill-formed:

- (12) [...] *ix-ach-tak'-i. / [...] *ix-ach-tak'-i?
 PFV-ABS2S-accept-IV PFV-ABS2S-accept-IV
Int: '[...] you accepted.' / '[...] accept?'

In sum, NCA in Chuj is consistently expressed with verbs that exhibit the key transitive markers discussed in section 3. We thus conclude that the silent element in NCA cannot be due to the wholesale absence of a complement. This entails in turn that the WYSIWYG approach (2)c, which analyzes NCA verbs as intransitive, cannot be right for Chuj (more on this in Section 5).

Having ruled out the approach in (2)c, let us now return to the two remaining analytical possibilities of the three highlighted in section 2: either NCA involves ellipsis of a complex constituent (2)a or it involves a null *pro-form* (2)b. As already widely assumed in work on NCA, we argue that (2)a is not a viable option, leaving (2)b as the only viable analytical possibility.

Recall that NCA is possible under pragmatic control, as in (11). This is one ingredient that led previous work to propose that the silent element in NCA should not be treated as an elided constituent (Hankamer and Sag 1976). This is because ellipsis generally requires "syntactic control";

i.e., the presence of an overt linguistic antecedent. In sluicing, for example, the silent element must exhibit some level of syntactic/semantic identity with this antecedent (defined differently in different works Merchant 2019; see Ranero 2021 for sluicing in Mayan). This is true cross-linguistically and the same result goes through in Chuj as well.

A second reason to believe that NCA does not involve ellipsis comes from sub-extraction facts. Consider how this argument goes in languages like English: unlike in VP-ellipsis, for example, a *wh*-word cannot be extracted from the silent element in NCA (Merchant 2013):

(13) *No sub-extraction in NCA (English)*

- a. Which films did she refuse to see and which films₁ did she agree to <see __₁> ?
 (=sub-extraction out of ellipsis site)
- b. *Which films did she refuse to see and which films did she agree?
 (=no sub-extraction out of NCA)

This argument also goes through for NCA in Chuj. An example like (13-b) above is replicated for Chuj in (14). A *wh*-word cannot be sub-extracted from the silence in NCA:

- (14) a. ¿Mach pelikula maj-Ø-s-tak'-laj b'at waj Xun to
 which movie NEG.PFV-ABS3-ERG3-accept-NEG DIR.go CLF Xun COMP
 tz-Ø-y-il winh...
 IPFV-ABS3-ERG3-see he
 'Which movie did Xun not accept to see...'
- b. ... *y mach pelikula ix-Ø-s-tak' winh?
 and which movie PFV-ABS3-ERG3-accept he
 Int: '...and which movie did he accept?'

We can contrast the above with clear cases of ellipsis in Chuj, where sub-extraction from the silent element is, as expected, possible. The construction we will use as a point of comparison is sluicing, which is traditionally analyzed as *wh*-movement followed by deletion/non-insertion of complex syntax (Ross 1969, Merchant 2001). First, consider some baseline examples. In (15)a, an *in-situ* phrase involving a relational noun (RN) and its complement exhibits RN+complement

ordering.⁷ Note, however, that Chuj exhibits ‘pied-piping with inversion’ (PPI): in cases of extraction, the complement and relational noun are inverted from their canonical order (complement+RN); see Aissen 1996, Ewing 2022. This is illustrated in (15)b with a *wh*-question:

- (15) a. Ix-Ø-s-pol anh seboya winhaj Pab’lu [**yet’ k’en kuchilub’**].
 PFV-ABS3-ERG3S-cut CLF onion CLF Pab’lu with CLF knife
 ‘Pab’lu cut the onion with the knife.’
- b. ¿ [**Tas yet’**] ix-Ø-s-pol anh seboya winhaj Pab’lu?
 what with PFV-ABS3-ERG3S-cut CLF onion CLF Pab’lu
 ‘With what did Pab’lu cut the onion?’

Regardless of the cause of PPI, it is a fact about Chuj’s grammar that such an ordering alternation occurs only in cases of extraction. Now, consider the case of sluicing in (16). What we see is that PPI occurs here as well: the *wh*-item and relational noun ‘with’ are inverted.

- (16) Ix-Ø-s-pol anh seboya waj Xun, pero machekel [**tas yet’ok**]₁ < ... ___₁ ... >.
 PFV-ABS3-ERG3-cut CLF onion CLF Xun, but unknown what with
 ‘Xun cut onions, but I don’t know what with.’

Given that PPI only ever occurs in cases of extraction, this entails that extraction out of an elided complement is possible in Chuj (see Ranero and Royer to appear for other asymmetries between ellipsis and NCA in Chuj; see also Ranero 2021 for an in-depth analysis of sluicing in Kaqchikel and similar considerations). Thus, we are led to the conclusion—building on Hankamer and Sag (1976) and others—that the unavailability of extraction out of the silence in Chuj NCA (14) means that it does not involve ellipsis. Having discarded two of the three analytical possibilities from section 2, we are left with only one analytical option, namely (2)b: NCA must involve a silent *pro-form*.⁸

Next, we discuss how broadly we should interpret the Chuj facts as bearing on the crosslin-

⁷Relational nouns are used as adpositional elements in Mayan (see e.g., Coon 2016, Aissen et al. 2017)

⁸Determining the makeup of this *pro-form* is outside the scope of this paper. What is clear, however, is that this *pro-form* will pick up CPs, PPs, or maximal free-relatives (see footnote 5), but crucially not run-of-the-mill DPs. The existence of *pro-forms* of different structural sizes is not controversial in itself (see Déchaine and Wiltschko 2002), but we concur with authors like Napoli (1983) that our analysis for the NCA configuration leaves as an open question what the precise identity is of our superficially missing element that is nevertheless structurally present. An ergative-absolutive language that is not *pro-drop*, but shares the transitivity marking pattern of Chuj, may shed light on this question in ways that Chuj cannot.

guistic status of NCA. We argue that the Chuj facts should be taken to reflect the universal syntax of NCA.

5 Crosslinguistic implications

This paper has argued in favor of one analysis of NCA through the lens of novel data from Chuj: the silent element is a null *pro-form*. As we argued, alternative analyses are not viable. First, NCA does not show the properties expected of ellipsis (Hankamer and Sag 1976, Ranero and Royer to appear). Second, NCA verbs display the morphological markers that are expected if they are transitive: (i) ergative agreement and (ii) a transitive status suffix. Thus, NCA cannot be the result of transitivity alternations (contra what is proposed or assumed for other languages; Shopen 1972, 1973; Grimshaw 1979; Napoli 1983, 1985; Xiang, Grove, and Merchant 2019; see Culicover and Jackendoff 2012).

At this juncture, the following question deserves to be raised in order to contextualize our findings: how broadly should we interpret the Chuj results regarding the representation of NCA? Our answer will speak to the validity of doing cross-linguistic comparison to make claims about universal or variable representations. As is often the case in this matter, there are two possibilities:

- (17) a. **Stronger conclusion:** NCA *universally* involves simplex syntax.
- b. **Weaker conclusion:** NCA *in Chuj* involves simplex syntax.

If (17)a is correct, it implies that Chuj is the right language to reveal the syntax of NCA across all languages. On the other hand, if (17)b is right, it implies that the syntax of NCA can vary—i.e., that it is parameterized. We argue in these closing paragraphs that the Chuj data suggest that the stronger conclusion in (17)a is on the right track.

In order to argue for the stronger conclusion, let us consider what a possible parameterization of the syntax of NCA could look like, or in other words, let us assess the prospects of (17)b. Assume that NCA is parameterized as follows: transitivity alternations exist for NCA verbs in other languages, but they do not exist in Chuj. That is, the locus of the parameter lies in the

featural compatibility of NCA verbs with structure encoding (in)transitivity. Since we are dealing with linguistic variation, we must first determine what data learners are exposed to as they build their grammar. One crucial difference among populations is that Chuj learners receive explicit input that the complement of NCA verbs is filled (2)b as opposed to involving nothing at all (2)c.

- (18) ¿Tom tz-Ø-a-mek'-a'?
 YNQ IPFV-ABS3-ERG2S-agree-TV
 ‘Do you agree?’

In other words, NCA verbs show the hallmarks of run-of-the-mill transitive verbs in Chuj, and it is reasonable to assume that learners pick up on this similarity. In contrast, no such evidence is available to acquirers of languages such as English or Italian (the languages discussed in Napoli 1983, 1985), since there is no visible alternation regarding agreement or status suffixes in their input.

Let us assume, then, that learners posit that NCA involves simplex syntax if faced with positive evidence for this, whereas learners of languages where no such evidence is available conclude instead that the absence of signal entails the absence of structure (i.e., WYSIWYG). Put differently, the default for learners is to posit that NCA involves nothing at all:

(19) *Describing cross-linguistic variation in the syntax of NCA*

- a. NCA = simplex syntax (2)b (Chuj)
 b. NCA = nothing at all (2)c (English; default)

To formalize (19), let us propose as a first alternative that the parameter is encoded as follows:

(20) *Parameterizing the syntax of NCA: version I*

- a. NCA verbs are incompatible with valency alternations (Chuj)
 b. NCA verbs are compatible with valency alternations (English; default)

The above would mean that certain roots in Chuj—i.e., those that participate in NCA—are incompatible with syntactic structure specifying intransitivity. We could encode this cross-linguistic

variation featurally, in line with the general conjecture that parameters are related to featural specifications of lexical items (Borer 1984). What is crucial in evaluating this version of the parameter is the question of what would constitute independent evidence for its existence. One piece of support would be if we found that NCA verbs in Chuj resisted transitivity/valency alternations.

This is not the case. The NCA verb ‘accept’ *can* be antipassivized (21) and *can* also appear in the Agent Focus construction, where an intransitive status suffix appears and ergative agreement does not (22) (Aissen 2017b):

(21) Ix-Ø-tak’-w-i ix Malin.
 PFV-ABS3-accept-AP-IV CLF Malin
 ‘Malin responded.’

(22) ¿Mach ix-Ø-tak’-an-i to ol-s-xik’ k’atzitz?
 who PFV-ABS3-accept-AF-IV COMP PROSP-ERG3-chop log
 ‘Who accepted to cut wood?’

This suggests that a general approach that would consider the syntax of NCA to vary in the manner encoded in (20) is on the wrong track.

Furthermore, observe that in the NCA configuration—when there is no surface-detectable complement—Agent Focus is required for questioning the subject. This shows again that the NCA configuration involves a null *pro-form* in complement position, since only transitive subject extraction leads to Agent Focus in Chuj (and in other Mayan languages that exhibit syntactic ergativity; see Aissen 2017a):

(23) ¿Mach ix-Ø-tak’-an-i?
 who PFV-ABS3-accept-AF-IV
 ‘Who accepted?’

Nevertheless, if one wanted to maintain the weak interpretation of the Chuj results, one could respond that the specific parameter in (20) is not the account that needs to be evaluated. Instead, the parameter lies in the availability of the null *pro-form* in a language’s lexicon: languages that lack the *pro-form* would need to resort to transitivity alternations. Consider this second version of a parameter:

(24) *Parameterizing the syntax of NCA: version 2*

- a. There is a null *pro-form* available in NCA constructions (Chuj).
- b. There is no null *pro-form* available in NCA constructions (English; default).

A non-trivial challenge for this version of the parameter is that we would need to additionally stipulate that languages that have a *pro-form* have to use it in NCA configurations, as opposed to using an intransitive verb form instead. In other words, the question that arises is the following: why is (12) an impossible utterance in Chuj? Crucially as well, we would expect to find languages where NCA verbs *do* show the hallmarks of intransitivity, something that has not yet been shown (to our knowledge). The burden of proof for proponents of WYSIWYG approaches to NCA thus lies in showing—through the right kind of language—that intransitive NCA verbs can and do exist. Put differently, a reliable way to adjudicate the syntax of NCA involves studying languages that are morphosyntactically explicit about transitivity alternations, as is the case with Mayan languages like Chuj.

References

- Aelbrecht, Lobke. 2010. *The syntactic licensing of ellipsis*. John Benjamins.
- Aissen, Judith. 1996. Pied-piping, abstract agreement, and functional projections in Tzotzil. *Natural Language and Linguistic Theory* 14:447–491.
- Aissen, Judith. 2017a. Agent Focus and passive in Tsotsil. In *Asking the right questions: Essays in honor of Sandra Chung*, eds. Jason Ostrove, Ruth Kramer, and Joseph Sabbagh, 143–161. UC Santa Cruz.
- Aissen, Judith. 2017b. Correlates of ergativity in Mayan. In *Oxford Handbook of Ergativity*, eds. Jessica Coon, Diane Massam, and Lisa Travis. New York: OUP.
- Aissen, Judith, Nora C. England, and Roberto Zavala Maldonado, eds. 2017. *The Mayan Languages*. Routledge Language Family Series. New York: Routledge.
- Bochnak, Ryan, and Lisa Matthewson. 2020. Techniques in complex semantic fieldwork. *Annual*

- Review of Linguistics* 6:261–283.
- Borer, Hagit. 1984. *Parametric Syntax*. Dordrecht: Foris Publications.
- Buenrostro, Cristina. 2013. La voz en Chuj de San Mateo Ixtatán. Ph.D. dissertation, El Colegio de México, Mexico City.
- Caponigro, Ivano. 2003. Free not to ask: On the semantics of free relatives and wh-words cross-linguistically. Ph.D. dissertation, University of California, Los Angeles.
- Cinque, Guglielmo. 2004. Restructuring and functional structure. In *Structures and Beyond*, ed. Adriana Belletti, volume 3 of *The Cartography of Syntactic Structures*, 132–191. New York, NY: Oxford University Press.
- Coon, Jessica. 2016. Mayan morphosyntax. *Language and Linguistics Compass* 10:515–550.
- Coon, Jessica. 2019. Building verbs in Chuj: Consequences for the nature of roots. *Journal of Linguistics* 55:35–81.
- Coon, Jessica, and Elizabeth Carolan. 2017. Nominalization and the structure of progressives in Chuj Mayan. *Glossa* 2:1–35.
- Coon, Jessica, and Justin Royer. 2020. Nominalization and selection in two Mayan languages. In *Nominalization: 50 years on from Chomsky's Remarks*, eds. Artemis Alexiadou and Hagit Borer, 139–168. Oxford University Press.
- Culicover, Peter W., and Ray Jackendoff. 2012. Same-except: A domain-general cognitive relation and how language expresses it. *Language* 82:305–340.
- Davis, Henry, Carrie Gillon, and Lisa Matthewson. 2014. How to investigate linguistic diversity: Lessons from the Pacific Northwest. *Language* 90:180–226.
- Déchaine, Rose-Marie, and Martina Wiltschko. 2002. Decomposing pronouns. *Linguistic Inquiry* 33:409–442.
- Depiante, Marcela. 2001. On null complement anaphora in Spanish and Italian. *Probus* 13:193–221.
- Depiante, Marcela. 2019. Null complement anaphora. In *The Oxford Handbook of Ellipsis*, eds. Jeroen van Craenenbroeck and Tanja Temmerman, 657–680. Oxford University Press.

- England, Nora. 2001. *Introducción a la Gramática de los Idiomas Mayas*. Guatemala: Cholsamaj.
- Ewing, Caleb. 2022. Pied-piping and wh-movement: A syntactic analysis and comparison of Kaqchikel and K'iche'. Ph.D. dissertation, University of Florida.
- Freidin, Robert. 1970. Interpretive semantics and the syntax of English complement constructions. Ph.D. dissertation, Indiana University.
- García Pablo, Gaspar, and Pascual Martín Domingo Pascual. 2007. *Stz'olalil Sloloni-Spaxtini heb' Chuj: Gramática Descriptiva Chuj*. Academia de Lenguas Mayas de Guatemala.
- Grimshaw, Jane. 1979. Complement selection and the lexicon. *Linguistic Inquiry* 10:279–326.
- Grinevald, Colette, and Marc Peake. 2012. Ergativity and voice in Mayan: A functional-typological approach. In *Ergativity, Valency and Voice*, eds. Gilles Authier and Katharina Haude, 15–49. Berlin: Mouton de Gruyter.
- Hankamer, Jorge, and Ivan Sag. 1976. Deep and surface anaphora. *Linguistic Inquiry* 7:391–428.
- Henderson, Robert. 2012. Morphological alternations at the intonational phrase edge: The case of K'ichee'. *Natural Language and Linguistic Theory* 30:741–787.
- Hopkins, Nicholas. 1967. The Chuj language. Ph.D. dissertation, University of Chicago, Chicago, IL.
- Hopkins, Nicholas. 2012. Noun classifiers of the Chuchumatán Mayan languages: A case of diffusion from Otomanguean. *International Journal of American Linguistics* 78:411–427.
- Hopkins, Nicholas A. 2021. *Chuj (Mayan) Narratives: Folklore, History, and Ethnography from Northwestern Guatemala*. Boulder, CO: University Press of Colorado.
- Kaufman, Terrence. 1974. *Idiomas de Mesoamerica*. Guatemala: Editorial Jose De Pineda Ibarra.
- Kotek, Hadas, and Mitcho Erlewine. 2019. Wh-indeterminates in Chuj (Mayan). *Canadian Journal of Linguistics* 64:62–101.
- Law, Danny. 2014. *Language contact, inherited similarity and social difference: The story of linguistic interaction in the Maya lowlands*. Amsterdam: John Benjamins.
- Matthewson, Lisa. 2004. On the methodology of semantic fieldwork. *International Journal of American Linguistics* 70:369–415.

- Maxwell, Judith. 1981. How to talk to people who talk *chekel* ‘different’: The Chuj (Mayan) solution. Ph.D. dissertation, University of Chicago, Chicago, IL.
- Merchant, Jason. 2001. *The syntax of silence: Sluicing, islands, and the theory of ellipsis*. Oxford: Oxford University Press.
- Merchant, Jason. 2013. Diagnosing ellipsis. In *Diagnosing syntax*, eds. Lisa L.-S. Cheng and Norbert Corver. Oxford University Press.
- Merchant, Jason. 2019. Ellipsis: A survey of analytical approaches. In *The Oxford Handbook of Ellipsis*, eds. Jeroen van Craenenbroeck and Tanja Temmerman. Oxford University Press.
- Moulton, Keir. 2013. Not moving clauses: Connectivity and clausal arguments. *Syntax* 16:250–291.
- Napoli, Donna Jo. 1983. Missing complement sentences in English: A base analysis of Null Complement Anaphora. *Linguistic Analysis* 12:1–28.
- Napoli, Donna Jo. 1985. Complementation in Italian: Phoneticall null vs. totally absent complements. *Language* 61:73–94.
- Piedrasanta, Ruth. 2009. *Los Chuj, Unidad y rupturas en su espacio*. Guatemala City, Guatemala: Amrar Editores.
- Ranero, Rodrigo. 2021. Identity conditions on ellipsis. Ph.D. dissertation, University of Maryland.
- Ranero, Rodrigo, and Justin Royer. to appear. Deep and surface anaphora: A Mayan reappraisal. In *Proceedings of NELS 54*, eds. Nawal Bahrani, Shaunak Phadnis, Carla Spellerberg, and Brynne Wilkinson.
- Ross, John R. 1969. Guess who? In *Papers of the 5th regional meeting of the Chicago Linguistic Society*, eds. Robert Binnick, Alice Davison, Georgia Green, and Jerry Morgan.
- Royer, Justin. 2021. Headless relative clauses in Chuj. In *Headless relative clauses in languages of Mesoamerica*, eds. Ivano Caponigro, Harold Torrence, and Roberto Zavala, 327–361. Oxford, UK: Oxford University Press.
- Royer, Justin. 2022. Prosody as syntactic evidence: The view from mayan. *Natural Language & Linguistic Theory* 40:239–284.

- Royer, Justin, Pedro Mateo Pedro, Elizabeth Carolan, Jessica Coon, and Matal Torres. 2022. Atz'am k'ik' atz'am: The story of Xuwan and a grammatical sketch of Chuj. *Tlalocan* 27:215–286.
- Saeboe, Kjell Johan. 1996. Presuppositions and zero anaphora. *Linguistics and Philosophy* 19:187–209.
- Shopen, Timothy. 1972. A generative theory of ellipsis: a consideration of the linguistic use of silence. Ph.D. dissertation, UCLA.
- Shopen, Timothy. 1973. Ellipsis as grammatical indeterminacy. *Foundations of Language* 10:65–77.
- Tyler, Matthew. 2022. CP complement of *er*-nominalisations in English. *English Language and Linguistics* 27:45–65.
- van Craenenbroeck, Jeroen, and Jason Merchant. 2013. Ellipsis phenomena. In *The Cambridge Handbook of Generative Syntax*, ed. Marcel den Dikken, 701–745. Cambridge University Press.
- Williams, Edwin. 1977. On 'deep and surface anaphora'. *Linguistic Inquiry* 8:692–696.
- Xiang, Ming, Julian Grove, and Jason Merchant. 2019. Structural priming in production through 'silence': An investigation of verb phrase ellipsis and null complement anaphora. *Glossa* 4:1–25.
- Zavala Maldonado, Roberto. 2017. Alignment patterns. In *The Mayan Languages*, eds. Judith Aissen, Nora C. England, and Roberto Zavala Maldonado, 226–258. New York: Routledge.

List of abbreviations:

*	ungrammatical construction
< >	elided segment
1	first person
2	second person
3	third person
ABS	absolutive marker
AP	antipassive suffix
AF	agent focus suffix or prefix
ASP	aspect marking
CLF	noun classifier
COMP	complementizer
DTV	derived transitive status suffix
ERG	ergative marker
IPFV	imperfective aspect
IRR	irrealis clitic
IV	intransitive status suffix
NEG	negation
P	plural person in agreement markers
PASS	passive
PFV	perfective
PL	plural marker
PREP	preposition
S	singular agreement marking
TOP	topic marker
TV	transitive verb
YNQ	yes-no question particle