The morphosyntax of imperatives in Chuj (Mayan)

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Abstract

In this paper, I provide a typological description of the morphosyntactic structure of imperatives in Chuj using my original data. I then look at imperative structure in other Mayan languages. I find that absolutive markers in Chuj and the overall Q'anjob'alan branch do not follow the pattern described in other branches of Mayan. While Mayan languages typically select either a preverbal or postverbal position for set B markers in every context, the position of set B markers in Chuj varies. This variation is highlighted when examining imperatives. The variation in set B marker position is a topic that urges further study.

1 Introduction

Imperative sentence structure is a topic that has not been given enough attention in Mayan; previous studies with a focus on imperatives exist (Armstrong, 2017; Hofling & Ojeda, 1994; Vinogradov, 2019), but knowledge on this topic is still incomplete. Significant variation between individual Mayan languages, especially across different branches of Mayan, calls for further research. Additionally, Chuj in particular is an understudied language, and the variety I examine in this paper is underrepresented among studies of this language.

In addition to prior studies focusing on imperative structure in Mayan, grammars of Chuj have previously been written (Buenrostro, 2013; Domingo Pascual, 2007; García Pablo & Domingo Pascual, 2007; Hopkins, 1967; Maxwell, 1982). While these grammars cover imperative structure, they do not describe every imperative construction. This paper thus provides a more in-depth and complete description of imperative structure in Chuj, while contributing original data from the San Sebastián Coatán variety of Chuj. Discussions of 1sG imperatives and object marking in imperatives are particularly lacking in the literature. Additionally, this paper serves to point out the variation in set B marker position in Chuj, a topic worthy of further study.

In this paper, I describe the morphosyntactic structure of imperatives in Chuj. I use my original data from San Sebastián Coatán Chuj, collected during 18 elicitation sessions from March 2019 to January 2020. Next, I compare imperatives in Chuj to imperatives in other Mayan languages using previous studies. Then, I discuss the variation in set B marker position in Chuj and Q'anjob'al that is highlighted by imperative structure. These findings urge further study on set B marking in the Q'anjob'alan branch of Mayan.

This paper is organized into the following sections: Section 1 provides general information about the Chuj language, as well as my methodology. Section 2 describes the structure of imperatives in Chuj. Section 3 discusses imperatives and the patterns of set B marking across the Mayan family. Section 4 provides conclusions and directions for further research.

1.1 Language background

Chuj is a Mayan language of the Q'anjob'alan branch (ISO 639:cac). Chuj has 62,120 speakers and is considered stable, as opposed to endangered. It is a level 5, or developing, language on the Expanded Graded Intergenerational Disruption Scale (EGIDS), meaning that it is in widespread use (Eberhard et al., 2022). Despite this, Chuj is considered a vulnerable language in the *Atlas of the World's Languages in Danger* (Moseley, 2010, map 4). Chuj is split into two major dialects: San Mateo Ixtatán (SMI) and San Sebastián Coatán (SSC). San Mateo Ixtatán Chuj is spoken in the towns San Mateo Ixtatán and Nentón, located in Huehuetenango, Guatemala, as well as in parts of Chiapas, Mexico. San Sebastián Coatán Chuj is spoken in the municipality of San Sebastián Coatán, Huehuetenango, Guatemala. The data in this paper is from San Sebastián Coatán Chuj.

Like most Mayan languages, Chuj is an ergative-absolutive language, meaning that the agent of transitive verbs is marked one way, while the subject of intransitive verbs and the object of transitive verbs are marked differently. In Mayan linguistics, ergative and absolutive person markers are referred to as set A and set B markers, respectively. Ergative-absolutive marking is illustrated in Table 1. Table 2 shows the morphemes used in SSC Chuj to mark ergative and absolute case on verbs.

Transitive Agent Ergative (set A)

Intransitive Subject
Absolutive
(set B)

Table 1: Ergative-absolutive person marking

Person	Ergative (Set A)		Absolutive (Set B)
	_C	_V	
1sg	W	(h)in	(h)in
1 _{PL}	k	ki	(h)onh
2sg	(h)	(h)a	ach
2 _{PL}	(h)ey	(h)e	(h)ex
3sg	y	S	Ø
3pl	y	S	Ø

Table 2: Ergative-absolutive person markers in SSC Chuj

Additionally, SSC Chuj follows verb-initial word order. The verbal complex in Chuj consists of an aspect marker, an object agreement marker (absolutive or set A marker), a subject agreement marker (ergative or set B marker), a verb root, and a status suffix. This basic structure is shown in the template in (1) and illustrated in (2).

1. Aspect-Set B-Set A-Root-Status

(2) shows a declarative sentence in Chuj. The first morpheme, tz, expresses an imperfective aspect. Next, the set B marker in marks object-verb agreement for 1sG. Then, the set A marker ey marks subject-verb agreement for 2pl. The aspect and person markers are followed by the verb root ab' ('listen'). Lastly, the verb root is followed by a status suffix, which is typically a vowel, in this case i. Status suffixes appear after verb roots when the verb is sentence final, and they vary depending on whether the verb is intransitive, root transitive, or derived transitive.

I use standard Mayan orthography, established by the *Academia de Lenguas Mayas de Guatemala*, to transcribe examples in this paper. This is the writing system that is generally used in transcription in linguistic work on Mayan languages. Table 3 provides the IPA conversion for symbols that are not the same in both systems. Note that only sounds present in Chuj are included. While previous work on Chuj describes the realization of b' as a voiced bilabial implosive (Maxwell, 1982; Royer et al., 2022), in my data it was realized as a voiceless bilabial ejective. The

¹The following is a list of abbreviations used to gloss examples: **CLF: Classifier** A: Set A **ACC:** Accusative B: Set B **IMP:** Imperative IMPF: Imperfective aspect **INTRNS:** Intransitive **NEG:** Negation P: Plural PRON: Pronoun PRF: Perfective Aspect S: Singular STAT: Status suffix TRAN: Transitive 1: 1st person 2: 2nd person 3: 3rd person

allophones of w shown in the table appear to be in free variation (Maxwell, 1982; Royer et al., 2022). Lastly, while h is used to represent a voiceless glottal fricative, it is also used prevocalically at the beginning of words to represent the lack of a glottal stop that otherwise appears in this position (Royer et al., 2022).

Standard Mayan Orthography	IPA
b'	р'/б
ch	t∫
j	χ
nh	ŋ
tz	ts
W	b/w/v/β
X	ſ
У	j
,	?

Table 3: Standard Mayan orthography conversion to IPA

1.2 Methods

The majority of the data was collected in traditional elicitation sessions², the method standardly used to document understudied languages (Bowern, 2015). In the elicitation sessions, I met with a speaker one-on-one, and I prompted them to translate sentences from Spanish to Chuj. Each elicitation session was recorded and transcribed. The speakers that participated in the study were four native speakers of Chuj and Spanish that grew up in San Sebastián Coatán, Guatemala, and moved to the US as adults. A total of 18 elicitation sessions were conducted, from March 2019 to January 2020.

Data was also collected via grammaticality judgement tests. In these, a speaker was shown examples in Chuj constructed by the researcher, and speakers were asked if the sentence was correct.

2 Imperative structure in Chuj

In this section, I will describe the structure of imperatives in Chuj. This section is organized into the following subsections: 2SG imperatives, 2PL imperatives, 1PL imperatives, Object marking in imperatives, Negative imperatives, and a summary.

²I received IRB approval to conduct the elicitation sessions (IRB00111016), and I received grant funding from Emory University Program in Linguistics and the Emory College Language Center.

2.1 2sG imperatives

Affirmative 2sG imperatives are formed with just the verb root and a status suffix or intransitive imperative suffix, in contrast to declarative sentences, which include a preverbal person marker and aspect marker. When an intransitive imperative verb appears in phrase-final position, the suffix *anh* is added. Example (3) compares a declarative and an imperative formed with the same verb root. The suffix *anh* has been previously described by Hopkins (1967), Maxwell (1982), and Buenrostro (2013).

3. (a) Declarative

(b) Imperative

Note that the declarative sentence in (3a) has the imperfective aspect marker tz and the 2sg subject marker ach before the verb root b itn, but the imperative in (3b) lacks these two markers. Furthermore, (3b) has the intransitive imperative suffix anh instead of the status suffix i seen in (3a).

2.2 2PL imperatives

Affirmative 2PL imperatives are similar to 2SG imperatives, but a postverbal person marker *ek* is added. This differs from 2PL declarative predicates, since the person marker is typically preverbal, and the declarative 2pl markers are *ey*, *e*, and *ex*. In intransitive imperatives, *ek* follows the intransitive imperative suffix *anh*. *Ek* does not appear in other context in my data. (5) shows *ek* in a transitive imperative. Since *ek* is used with both ergative and absolutive subjects, it is not specified for case. This morpheme has been previously described by Hopkins (1967), Maxwell (1982), and Buenrostro (2013).

4. (a) Declarative

```
(axtik) tz-ex-ba'-i (392D)
2PL.PRON IMPF-B2P-eat-STAT
'You eat.'
```

(b) Imperative

ba-anh-ek (446C) eat-IMP.INTRNS-IMP.2PL 'Eat.'

5. Transitive Imperative

Similar to the previous section, (4a) shows a declarative verb with the preverbal aspect marker tz and subject marker ex, as well as the status suffix $extit{i}$. The imperative in (4b) does not have these morphemes, and instead has the intransitive imperative suffix $extit{anh}$ and the postverbal 2pl marker $extit{ek}$. (5) shows a transitive imperative that also has the postverbal subject marker $extit{ek}$, which is preceded by a postverbal object marker $extit{in}$. Object marking in imperatives will be further discussed in section 2.4.

2.3 1PL imperatives

1PL imperatives present a notable difference from 2SG and 2PL affirmative imperatives. Transitive 1PL imperatives mark subject-verb agreement preverbally using the subject marker ki, which occurs in the same position in declarative sentences. As shown in (6), the principal difference between the 1PL imperative and declarative is that the imperative lacks an aspect marker.

6. (a) Declarative

(b) Imperative

(6a) shows a 1PL declarative sentence, and (6b) shows an imperative. The verb root *man* 'buy' in (6a) is marked with a preverbal aspect marker *tz* and subject marker *ki*. Meanwhile, the verb in (6b) lacks an aspect marker and is marked with the same preverbal subject marker *ki*. Recall that 2SG and 2PL imperatives lack an aspect marker as well, but 2PL imperatives mark subject-agreement post-verbally with a suffix not specified for case, and 2SG imperatives lack subject markers.

³I assume that the set B marker occurs post-verbally in this context based on the general pattern of object marking in imperatives, discussed in section 2.4.

Next, intransitive 1PL imperatives mark subject post-verbally with the suffix *konh*. Though this suffix does not appear in any other context in my data, it resembles the 1PL set B marker *onh*, which would be the appropriate person marker for an intransitive subject in a declarative sentence (see (7)).

- 7. b'ey-konh⁴
 walk-IMP.1PL
 'Let's walk.'
- (7) shows an intransitive imperative, which contains the verb root *b'ey*, followed by the 1PL subject marker *konh*. Buenrostro (2015, p. 63) found this morpheme in SMI Chuj, describing it as the exhortative marker. Note that intransitive 1PL imperatives mark subject-agreement differently from transitive 1PL imperatives, which use a preverbal 1PL marker. This is due to case; set A (ergative) markers always appear preverbally, while set B (absolutive) markers appear postverbally in affirmative imperatives, as well as other contexts.

However, in Buenrostro's (2015) data, *konh* appears before the verb root (see (8)). This difference may be due to dialectal variation or an indication of a change in progress in Chuj. More data must be collected in order to better understand this.

```
8. konh = lolon = ok (Buenrostro, 2015, p. 63; SMI Chuj)

EXH = speak = IRR

'Let's talk.'
```

It is also notable that intransitive 1PL imperatives do not have the same intransitive suffix *anh* seen in 2SG and 2PL imperatives.

2.4 Object marking

As was shown in section 1.1 (see example (2)), verbs show object agreement in Chuj using set B absolutive markers, and object marking occurs preverbally in declarative predicates. However, in imperatives, object marking occurs post-verbally (see (9) below).

9. (a) Declarative

```
(axtik) tz-in-ey-il-a (430C)
2PL.PRON IMPF-B1S-A2P-look-STAT
'You look at me.'
```

(b) Imperative

⁴This example was obtained from a speaker via written correspondence rather than oral elicitation.

```
il-t-in-ek (366D)
look-?<sup>5</sup>-B1S-IMP.2PL
'Look at me.'
```

(9a) shows a declarative sentence. Notice the object-agreement marker *in* that occurs preverbally. This same object marker occurs directly after the verb root *il* ('see') in the imperative in (9b).

According to Zagona (2002), it is common for clitics to follow the verb in imperatives cross-linguistically, occurring in languages such as Spanish and Classical Greek (Han, 1998). Compare the structure of the sentences in example (10) with (9) above. In both Spanish and Chuj, the object marker is preverbal in declaratives and postverbal in imperatives.

10. (a) Spanish declarative

```
me = mir-as
1s.ACC = look-PRES.2s
'You look at me.'
```

(b) Spanish imperative

```
mír-a = me look-IMP = 1s.ACC 'Look at me.'
```

Although it is common to see object markers follow the verb in imperatives cross-linguistically, this shift in the position of set B markers in Chuj does not follow the structure seen in other Mayan languages, which select either a preverbal or postverbal position for set B markers in every context (Aissen et al., 2017). This discrepancy will be further discussed in section 3.2.

2.5 Negative Imperatives

Declarative verbal predicates in SSC Chuj mark negation with the preverbal morpheme ma. Imperatives are typically negated with the preverbal particle manh, which is also used in nonverbal predicates and can cooccur with the postverbal negation marker ok, also known as the irrealis marker (Buenrostro, 2015). Ok was not used in every negative imperative, so I conclude that it is optional. (12) shows a negative imperative that does not use ok. Although the expected subject markers do not appear in affirmative second person imperatives, they do appear in negative imperatives. The subject markers appear after the negation morpheme, similar to the order in declaratives (11c).

 $^{^{5}}$ It is unclear if the t here is part of the root and showing allomorphy with the root in (9a), or if this is a separate morpheme. A reviewer suggested it could be a derivational suffix.

11. (a) Affirmative 2sG imperative

ba'-anh (404D) eat-IMP.INTRNS 'Eat.'

(b) Negative 2sG imperative

manh-ach-ba' ok (427D) NEG-B2S-eat NEG 'Don't eat.'

(c) Negative 2sG declarative

12. manh-in-ey-il-a (418D)
NEG-B1S-A2P-look-STAT
'Don't look at me.'

Notice the 2sG subject marker *ach* in the negative imperative in (11b). As discussed in section 2.2, this subject marker does not appear in affirmative imperatives. Furthermore, the intransitive imperative suffix *anh* does not appear in negative imperatives.

Additionally, a second strategy for negating imperatives was seen in Chuj, though in very few instances. In this strategy, the negation markers x and ta are placed before and after the verb root, respectively. This is striking because these morphemes did not appear in any other context, and they do not resemble other negation markers in Chuj. This second negation strategy was only used with the verbs fall and get sick, though these verbs were also negated with the first negation strategy in other instances⁶.

13. (a) x-ex-yab'il ta (259C)
NEG-B2P-get.sick NEG
'Don't get sick.'

(b) manh-ex-yab'iln ok
NEG-B2P-get.sick NEG
'Don't get sick.'

⁶ It is possible that this is an example of the preventative mood, which is seen in Yucatec and also used with the verb *fall* (Pye et al., 2017) (see example below).

i. **bik** lúub-uk-ech (Yucatec; Pye et al., 2017, p. 235) NEG fall-DEP_{IV}-B2
'Don't fall'

Example (13) shows two separate instances in which the same negative imperative ('Don't get sick') was presented during elicitation. In (13a), the speaker used the second negation strategy. The negation morpheme x was placed before the verb root, and the negation morpheme ta appears after the root. In (13b), the same sentence was formed using the first negation strategy for imperatives. The negation morpheme manh was placed before the verb root, and the negation morpheme ok was placed after the root. (14) shows another example of both negation strategies being used for the same sentence, and it is the only other instance in which the second negation strategy was employed in my data.

Hopkins (1967) described a construction using what appear to be the same two morphemes in SMI Chuj, but he describes the x morpheme as a durative marker and ta as an uncertainty marker. As shown in (14), the resulting sentence indicates an event that may happen.

15. **x**-ach-in-mak'-ta (SMI Chuj; Hopkins, 1967, p. 62) DUR-B2S-A1s-hit-UNCERTAIN 'Maybe I'm going to hit you.'

2.6 Summary

In this section, I described the structure of imperatives in Chuj. Each person (2SG, 2PL, 1PL) showed variation in the position of morphemes in the verbal complex. Table 4 provides a summary of the position and presence of morphemes in these contexts, while comparing imperatives to declaratives. As shown in Table 4, there is significant variation in the presence and position of morphemes in each context. I will focus on discussing the varying position of set B markers in the rest of the paper. In the context of imperatives, set B markers are primarily used in object marking.

3 Other Mayan languages

In this section, I will compare my findings in Chuj to previous studies on other Mayan languages. First, I will discuss imperatives in other Mayan languages. Then, I will discuss the distribution of set B markers.

		Aspect	Object	Subject	Intransitive suf- fix	Template
e	2sg	-	Verb_	-	Verb_ (anh)	V-INTRNS/O
Ę	2PL	-	Verb_	Verb_ (ek)	Verb_ (anh)	V-INTRNS/O-S
era	1PL trans.	-	Verb_	_Verb (ki)	-	S-V
imperative	1PL intrans.	-	-	Verb_ (konh)	-	V-S
.=	Neg.	-	_Verb	_Verb	-	NEG-(O)-S-V
	Declarative	_Verb	_Verb	_Verb	-	ASPECT-(O)-S-V
		_				
l	Impera	atives				
l 3 i	-		n typically fol	llow the same ba	asic structure	as Chuj: a v
3 i	- mperative	s in Mayaı	· · ·	llow the same bar. (16) shows 6		

3

2srb ro ve im ne sa en in both Itzaj and Chontal). (17) shows examples of transitive 2SG imperatives from the same three languages. In this case, Itzaj (17b) exhibits the transitive imperative suffix u', and Chontal (17c) exhibits the transitive imperative suffix o. However, Chuj (17a) does not have an overt transitive imperative suffix. Based on my data, I conclude that Chuj only has an intransitive imperative suffix. The pattern in Chuj does not seem to follow the general pattern in Mayan, as the presence of both transitive and intransitive imperative suffixes is seen in other Mayan languages, such as Yucatec (Hofling & Ojeda, 1994), Tsotsil (Vinogradov, 2019), and K'iche' (Romero, 2012).

16. 2sg Intransitive imperatives

(a) b'itn-anh (Chuj; 731C) sing-IMP.INTRNS 'Sing.' (b) wen**-en** (Itzaj; Hofling, 1998, p. 215) sleep-IMP.INTRNS 'Sleep.' (c) t'ib-en (Chontal; Knowles-Berry, 1987, p. 343) climb-IMP.INTRNS 'Climb.'

17. 2sg Transitive imperatives

(a) ilt-in (Chuj; 421D) look-B1s 'Look at me.'

```
(b) juch'-u'-Ø (Itzaj; Hofling, 1998, p. 215) grind-IMP.TRANS-B3S 'Grind it.'
(c) čon-o (Chontal; Knowles-Berry, 1987, p. 334) sell-IMP.TRANS 'Sell it.'
```

3.2 Set B marking

As I mentioned in section 2.4, Aissen et al. (2017) claim that all Mayan languages select either a preverbal or postverbal position for set B markers in every context. This pattern is shown in the following examples. Notice that in (18), the 1sG set B marker *on* is placed after the verb root in both the declarative and imperative example. It is also notable that the Chontal imperative has an imperfective aspect marker (*e*?). This aspect marking in imperatives seems to be isolated to the Ch'olan-Tseltalan branch of Mayan (see Vinogradov, 2019). The lack of variation in set B position in declaratives and imperatives is also seen in Yucatec (Hofling & Ojeda, 1994).

18. (a) Chontal Declarative

```
?a toh-e?-on (Chontal; Knowles-Berry, 1987, p. 335)
A2 pay-IMPF-B1s
'You pay me.'
```

(b) Chontal Imperative

```
toh-e?-on (Chontal; Knowles-Berry, 1987, p. 334) pay-IMPF-B1s 'Pay me.'
```

However, recall that Chuj shows a notable variation in set B marker position. In the declarative in (19a), the set B marker *in* is placed preverbally, but in the imperative in (19b), it is placed post-verbally. The same phenomenon also occurs in Q'anjob'al (see (20a)), which is in the Q'anjob'alan branch of Mayan along with Chuj, suggesting that this pattern in set B markers may be exclusive to this branch.

19. (a) Chuj Declarative

```
axtik tz-in-ey-il-a (Chuj; 430C)
2PL.PRON IMPF-B1S-A2P-look-STAT
'You look at me.'
```

(b) Chuj Imperative

```
ilt-in-ek (Chuj; 366D) look-B1S-IMP.2PL 'Look at me.'
```

```
20. (a) Q'anjob'al Declarative
```

```
max-ach y-il-a' (Q'anjob'al; Mateo Pedro, 2010, p. 23) perf-B2s A3s-see-STAT 'S/he saw you.'
```

(b) Q'anjob'al Imperative

```
kol-in (Q'anjob'al; Mateo Pedro, 2010, p. 32)
help-B1s
'Help me.'
```

Furthermore, the variation in set B marker position in Chuj is also exhibited in nonverbal predicates (NVPs), which are typically nominal or adjectival and cannot take an object or aspect marker. Set B markers are used to mark the subject in NVPs. In my data, speakers placed the set B marker before the root in some cases and after the root in other cases. In grammaticality judgement tests, speakers did not judge that it was grammatical to vary set B marker position in every NVP, suggesting that there is a motivation for placing the marker before or after the root, though there is not a clear explanation for this variation in my data. This leaves a question worthy of further study.

```
21. sonum-ach (Chuj; 196C) marimba.player-B2S 'You're a marimba player.'
```

Examples (21) and (22) show NVPs with different set B marker positions. In (21), the set B marker *ach* appears before the root *sonum*, while in (22), *ach* appears before the root, *u'utak* in this case.

Jessica Coon (2019) analyzed set B markers in Chuj as enclitics that attach to the first host in a phrase. This analysis seems to account for the position of set B markers in imperatives and declaratives: they attach to the aspect or negation marker when it is present and to the verb root when there are no preverbal elements present. However, this does not account for the NVPs I showed in (21) and (22) above. Therefore, I propose a reconsideration. Set B markers may behave similarly to clitic pronominals in languages such as Spanish and Greek (Han, 1998). Under this analysis, the set B marker exhibits an alternation between proclisis and enclisis, and it always attaches to the verb root. More work is necessary, however, in order to confirm this analysis.

4 Conclusions

In this paper, I have presented a description of imperative structure in SSC Chuj, which has been addressed in previous grammars of Chuj (Buenrostro, 2013; Domingo Pascual, 2007; Hopkins, 1967; Maxwell, 1982) (García Pablo, 2007) but has not been previously described in depth. I described subject marking, object marking, and negation in imperatives. Then, I briefly described the general patterns of basic imperative structure in Mayan and compared them to Chuj. Next, I discussed a notable pattern in set B marking in Chuj that does not seem to be present in Mayan languages outside of the Q'anjob'alan branch. In Chuj, set B markers occur preverbally in some contexts and post-verbally in other contexts. This is the case in Q'anjob'al as well. However, in other Mayan languages, set B markers always appear in the same position (Aissen et al., 2017).

Further research should seek to provide a more generalized description of the position of set B markers across Q'anjob'alan languages and across Mayan. The variation in set B marker position in Chuj should be further analyzed, since it is currently not clear what conditions it. Lastly, further research should fill the gaps in knowledge on imperatives across Mayan.

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