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### **ARTÍCULO**

La posición de los marcadores del juego B en el proto-maya

The position of Set B markers in Proto-Mayan

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### **Abstract**

This paper discusses the position of Set B pronouns in Proto-Mayan. While previous reconstructions differ from each other with regard to the exact position that Set B pronouns occupied with respect to the predicate (always preceding, always following or sometimes preceding and sometimes following the predicate word), all of them assume that Set B pronouns attached to the predicate just as they usually do in the modern Mayan languages. Based on cases in modern and colonial Mayan languages where Set B pronouns attach either to a non-predicate or the false predicate, in this paper it is proposed that Set B pronouns were second-position enclitics (ultimately derived from free personal pronouns) in Proto-Mayan which attached to the first word of the clause regardless of the host's word class. That Set B pronouns attach to the predicate in the modern Mayan languages is an innovation that results from the common clause-initial positioning of verbs in Mayan languages.

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**KEYWORDS:** Proto-Mayan; language change; historical linguistics; Set B pronouns; second position enclitics

#### Resumen

En este artículo se discute la posición de los pronombres del Juego B en el proto-maya. Mientras que reconstrucciones anteriores se distinguen respecto a la posición exacta que los pronombres del Juego B ocupaban con relación al predicado (siempre precediendo, siempre siguiendo o a veces precediendo y a veces siguiendo el predicado), todas las reconstrucciones asumen que se agregaban al predicado, de igual manera que suelen hacerlo en las lenguas mayas contemporáneas. Basándose en casos en las lenguas mayas contemporáneas y coloniales donde los pronombres del Juego B o se agregan a un no-predicado en vez del predicado o al predicado falso, en este artículo se propone que en proto-maya los pronombres del Juego B eran enclíticos de segunda posición (últimamente derivados de pronombres personales independientes) que independientemente de la clase de palabras del anfitrión se agregaban a la primera palabra de la oración. Que en las lenguas mayas contemporáneas los pronombres del Juego B se agregan al predicado es una innovación que resulta del hecho de que los verbos suelen posicionarse en el inicio de la oración en las lenguas mayas.

Palabras clave: proto-maya; cambio lingüístico; lingüística histórica; pronombres de Juego B; enclíticos de segunda posición

### 1. Introduction

Modern Mayan languages have two different sets of bound personal pronouns: on the one hand, Set A or ergative pronouns, which mark possessors, agents of transitive verbs, and in some Mayan languages also subjects of intransitive verbs in certain constructions; on the other hand, Set B or absolutive pronouns, which mark patients of transitive verbs as well as subjects of intransitive verbs and nonverbal predicates. While Set A pronouns always precede the verb, there is some variation in the position of Set B pronouns in the different Mayan languages. This paper aims at reconstructing the original position of Set B pronouns in Proto-Mayan, the common ancestor of the around 30 Mayan languages still spoken today.

Proto-Mayan is estimated to have been spoken more than 4000 years ago in the highlands of Guatemala (Kaufman 1976: 106). Its descendant languages are subdivided into five major branches: Huastecan, Yucatecan, Greater Tzeltalan (including the Ch'olan and the Tzeltalan subgroup), Greater Q'anjob'alan (including Q'anjob'alan and Chujean), and Eastern Mayan (including Mamean and K'iche'an) (Campbell & Kaufman 1985: 188). Depending on the geographic and cultural area where they are spoken, Mayan languages are sometimes also categorized into Highland Mayan languages (including the K'iche'an and most Mamean and

<sup>&</sup>lt;sup>1</sup> Set A markers not always function as ergative and Set B markers not always as absolutive markers. Many Mayan languages have split ergative person marking systems, where Set A markers mark nominative arguments (that is, subjects of both transitive and intransitive verbs) rather than ergative arguments. Therefore, Set A and Set B marker are more neutral terms than ergative and absolutive marker.

Greater Q'anjob'alan languages as well as Tzotzil) and Lowland Mayan languages (including the Yucatecan and all Greater Tzeltalan languages except Tzotzil, the Mamean language Ixil and the Greater Q'anjob'alan language Tojolab'al), respectively (Bricker 1977: 7). This corresponds to several lexical and structural traits (among them the position of the Set B marker) which are shared by (many of) the languages within the respective areas due to language contact (Law 2020: 614–616).

Whereas previous authors have suggested that Set B pronouns were placed with respect to the predicate in Proto-Mayan as they are in modern Mayan languages, in this paper it is argued that the predicate-bound position of Set B pronouns characteristic of modern Mayan languages is an innovation. Instead, it is proposed that Set B pronouns were second-position enclitics in Proto-Mayan that were cliticized to the first word of the clause irrespective or the syntactic function of this word. These second-position clitics themselves derive from free personal pronouns, which have given rise to independent pronouns in the modern Mayan languages.

This paper is structured as follows: § 2 gives an overview of the different placement patterns of Set B pronouns that are attested in the modern and colonial Mayan languages. In § 3, previous reconstructions of the position of Set B pronouns in Proto-Mayan are reviewed; § 4 discusses some problems of one of the proposed proto-patterns, the predicate-final pattern, in explaining the verb structure in the so-called Highland Mayan languages. In § 5, some general problems for all reconstructions that argue that Set B pronouns were bound to the predicate in Proto-Mayan are presented; § 6 offers an alternative reconstruction of the position of Set B pronouns in Proto-Mayan. This is summarized in § 7.

### 2. THE POSITION OF SET B MARKERS IN MODERN AND COLONIAL MAYAN LANGUAGES

There are four different placement patterns of Set B markers in modern and colonial Mayan languages, which will be called the predicate-final, the predicate-initial, the predicate-second, and the clause-second pattern in this paper. The distinction between these four patterns is not always clear-cut, and some languages are intermediate between two patterns. In part due to the areal distribution of the patterns, the predicate-initial and the predicate-second pattern are often subsumed under a "Highland Mayan pattern", which contrasts with the predicate-final "Lowland Mayan pattern". Each of the four patterns will in turn be illustrated with one language from each subgroup where the respective pattern is found. See also Bricker (1977: 2-4), Quizar (1979: 116–122), and Kaufman (2015: 162–167) for compilations of the positions of Set B pronouns in the modern Mayan languages.

In the predicate-final pattern, the Set B marker always directly follows the predicate, irrespective of the internal structure of the predicate and regardless of whether the predicate is a finite verb or a nonverbal predicate. This pattern is typical of the Lowland Mayan languages, and is found in all Yucatecan languages (Hofling 2006: 373–374; Hofling 2018: 15) and all Ch'olan languages (Kaufman & Norman 1984: 95) as well as in the Tzeltalan language Tzeltal (Polian 2013: 125–127), the Chujean language Tojolab'al (Ramírez del Prado 2017: 573), the Q'anjob'alan language Mocho' (Palosaari 2011: 136–137, 160), and the Mamean language

Ixil (Ayres 1991: 134).<sup>2</sup> The following examples show the placement of Set B markers with verbal and non-verbal predicates in Yucatec Maya (1a & 1b), Ch'ol (2a & 2b), Tzeltal (3a & 3b), Tojolab'al (4a & 4b), Mocho' (5a & 5b) and Ixil (6a & 6b):

- (1) Yucatec Maya
  - a. lúub'-ech

fall-B.2SG

'you fell' (Bricker 2019: 51)

b. wiinik-en

man-B.1SG

'I am a man' (Bricker 2019: 51)

- (2) Ch'ol
  - a. *ya'* tyi kol-i-y-**oñ** ya'i there COMPL grow-DECL.INTR-EP-B.1SG there 'I was born there.' (Vázquez Álvarez 2011: 79)
  - b. koleñ winik-oñ
    big man-B.1sG
    'I am a big man.' (Vázquez Álvarez 2011: 79)
- (3) Tzeltal
  - a. *ya x-k'ajin-otik*INC INC-sing-B.1PL

<sup>&</sup>lt;sup>2</sup> The earliest attested Mayan language, Classic Mayan, which is considered a Ch'olan language (Houston *et al.* 2000), may also follow this pattern. All attested cases of overt Set B markers seem to follow the predicate (see Law *et al.* (2014) and Law & Stuart (2017: 143-144) for overviews on Set B markers in Classic Mayan). However, examples of Set B markers that are not in the third person (which is not overtly marked) are very rare and often appear in contexts which are not well understood, so this must be interpreted with caution.

```
'Cantamos.' (Polian 2013: 126)
    b. muk'-at
      big-B.2SG
       'eres grande' (Polian 2013: 126)
(4) Tojolab'al
    a. jak-y-on
       come.here-EP-B.1SG
       'I came here.' (Ramírez del Prado 2017: 592)
    b. ch'in-e'
      small-B.3PL
       'They are small.' (Ramírez del Prado 2017: 577)
(5) Mocho'
    a. k-ii-maak-a-qaa
       POT-A.1SG-hit-TR-B.2SG
       'I am going to hit you.' (Palosaari 2011: 140)
    b. anaat-in
       old.woman-B.1SG
       'I am an old woman.' (Palosaari 2011: 160)
(6) Ixil
    a. v-il
                   axh
       A.1SG-see
                   B.2SG
       'Te vi.' (Ayres 1991: 134)
    b. tz'il axh
       dirty B.2SG
       'Estás sucio.' (Ayres 1991: 167)
```

In the predicate-initial pattern, the Set B marker always precedes the predicate word, that is, it is pre-posed to the verb stem, adjective, noun, or participle. If the predicate contains a Set A marker, the Set B marker also precedes this. If the predicate contains a pre-posed tense / aspect / mood marker (henceforth also called TAM-marker), the Set B pronoun follows this morpheme. The predicate-initial pattern is used in the K'iche'an languages K'iche' (Can Pixabaj 2017: 466–467), Kaqchikel (García Matzar & Rodríguez Guaján 2001: 118), Tz'utujil (Dayley 1981: 84-85), Sacapultec (DuBois 1981: 160, 181–182) and Sipakapense (Barrett 1999: 74–75) as well as in Huastec (Edmonson 1988: 115; Kondić 2012: 92). (7) gives examples of verbal and non-verbal predicates in Tz'utujil and (8) gives examples from Huastec:

### (7) Tz'utujil

a. x-at-war-i

COMPL-B.2SG-sleep-DECL.INTR

'You slept.'

(Dayley 1981: 85)

b. in winag

B.1SG person

'I am a person.'

(Dayley 1981: 85)

(8) Huastec

a. **it** way-al

B.2SG sleep-INC

'You sleep.'

(Kondić 2012: 158)

```
b. wawaa' u teenek
we B.1PL Huastec
'We are Huastec.' (Kondić 2012: 158)
```

In the K'iche'an languages, there is one exception to this pattern. As illustrated by the following example from Kaqchikel, with imperatives of the irregular verb oj 'to go', which contrary to other verbs does not take a pre-posed tense / aspect / mood marker, the Set B pronoun follows rather than precedes the verb (García Matzar & Rodríguez Guaján 2001: 81–82):

```
    (9) KAQCHIKEL
    j-ix
    go-B.2PL
    'Váyanse.' (García Matzar & Rodríguez Guaján 2001: 82)
```

The predicate-second pattern is intermediate between the predicate-initial and the predicate-final pattern. In this pattern, the Set B marker takes the second position of the predicate (counting the pre-posed tense / aspect / mood marker as one element and the predicate word with ergative pronouns and status suffixes as another element), so the position of the Set B pronoun depends on the presence of a pre-posed tense / aspect / mood marker. If there is a tense / aspect / mood morpheme, the Set B pronoun follows this morpheme and precedes the predicate word as in the predicate-initial pattern. If there is no pre-posed tense / aspect / mood morpheme, on the other hand, the Set B pronoun follows the predicate word as in the predicate-final pattern. As verbs tend to be used with tense /

aspect / mood markers while nonverbal predicates do not, Set B markers are usually placed predicate-initially with verbs but predicate-finally with nonverbal predicates. However, in some languages, verbs do not have pre-posed tense / aspect / mood morphemes in certain constructions (for example, in imperative constructions), so Set B pronouns follow the verb in these constructions.

The predicate-second pattern is used in the Tzeltalan language Tzotzil (Bricker 1977: 9–12; Polian 2017: 615–616), the Chujean language Chuj (Hopkins 1967: 60–61; Royer *et al.* 2022: 222), the Q'anjob'alan languages Q'anjob'al (Mateo Toledo 2017: 538), Acatec (Zavala 1997: 443–444), and Jacaltec (Day 1973: 31), the Mamean languages Mam (England 1983: 56, 75-76), Tectitec (Kaufman 1969: 163), and Awacatec (Larsen 1983: 122–126) and in the Greater K'iche'an languages Poqomam (Smith-Stark 1983: 210-211), Poqomchi' (Brown 1979: 68–69, 83–84), modern Q'eqchi' (Stewart 2015: 28, 59–61), and Uspantec (Can Pixabaj 2007: 114, 156). The following examples show the predicate-initial position of Set B markers in (a) and the predicate-final position in (b) for Tzotzil (10), Chuj (11), Q'anjob'al (12), Mam (13), and modern Q'eqchi' (14):

```
(10) Tzotzil
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a. muk' ch-i-bat

NEG INC-B.1SG-go

'I am not going.' (Polian 2017: 623)

b. vay-em-un

sleep-PERF-B.1SG

'I have slept.' (Polian 2017: 634)

### (11) CHUJ

a. ix-ach-way-i

COMPL-B.2SG-sleep-DECL.INTR

'You slept.' (Royer et al. 2022: 222)

b. meb'a'-onh jun-el-nhej

poor-B.1PL one-NML-only

'We were simply poor.' (Royer et al. 2022: 225)

### (12) Q'ANJOB'AL

a. max-ach hin-kol-o'

COMPL-B.2SG A.1SG-help-TR

'I helped you.' (Mateo Toledo 2017: 538)

b. il-ø hin

see-IMP B.1SG

'Watch me!' (Mateo Toledo 2017: 539)

### (13) Mam

a. ma chin b'eet-a

REC B.1SG gO-ENC

'I walked.' (England 1983: 58)

b. xjaal qiin-a

person B.1SG-ENC

'I am a person.' (England 1983: 76)

### (14) Modern Q'eqchi'

a. t-in-war-q

FUT-B.1SG-sleep-FUT

'I'll sleep.' (Stewart 2015: 57)

b. *yaj-in*sick-B.1SG
'I'm sick.' (Stewart 2015: 106)

There is some variation in the predicate-second pattern which makes the placement of Set B markers in some languages more similar to either the predicate-final or the predicate-initial pattern. Thus, in Tzotzil the Set B pronoun is placed predicate-finally if a second-person singular agent acts on a first-person singular patient, and in the Huistan dialect patients of transitive verbs are not only marked with the prefixed Set B markers that are expected from the predicate-second pattern but are simultaneously also marked with suffixed Set B pronouns (Bricker 1977: 10–12). In Acatec, Set B pronouns may not only follow the aspect marker in transitive constructions, but, alternatively they can also follow the verb as in the predicate-final pattern (Zavala 1997: 444). In the Uspantec incompletive construction, Set B pronouns precede the verb stem even in the absence of an overt tense / aspect / mood morpheme (Can Pixabaj 2007: 147). Furthermore, in Pogomam (Smith-Stark 1983: 211), Pogomchi' (Brown 1979: 137-138), Awacatec (Larsen 1983: 125-126), and sometimes also in Ixil (Adell 2019: 390-391) with some types of nonverbal predicates it is not Set B markers which are used to express the subject, but rather independent pronouns which are pre-posed to the predicate.

Besides the predicate-final, the predicate-initial, and the predicate-second pattern, a fourth placement pattern of Set B pronouns has recently been identified by Vinogradov (2017a; 2017b: 219–220) in colonial Q'eqchi', which is called the clause-second pattern in this paper. This

pattern is similar to the predicate-second pattern, but crucially, the position of the Set B pronoun is not dependent on the position of the predicate. Rather than following the first element of the predicate, in the clause-second pattern, the Set B pronoun attaches to the first element of the clause, regardless of the word class of the first element (Vinogradov 2017a: 114). Thus, as shown in the following examples, the Set B pronoun may follow conjunctions (15a) or adverbs (15b):

### (15) COLONIAL Q'EQCHI'

a. <nacat chintau>

```
naq=at ch=in-taw
when=B.2SG FUT=A.1SG-come.up
'...when I come up with you.' (Vinogradov 2017a: 112)
```

b. <cebat Ehiculūc>

```
seeb'=at chi=k'ulun-q
soon=B.2SG FUT=come-SBJV.INTR
'Come soon.' (Vinogradov 2017a: 111)
```

Vinogradov (2017a: 112) still considers the adverbs and conjunctions to which the absolutive markers are attached as predicates in a biclausal construction, where the absolutive argument of the lexical verb is raised to the adverb / conjunction while the lexical verb is nominalized and connected to the adverb / conjunction with a preposition.<sup>3</sup> He argues that the more fixed verb structure of modern Q'eqchi' originated

3 3. The preposition *chi* en Q'eqchi' is homophonous with the future marker *chi*.

in a complementation or raising construction (Vinogradov 2017a: 115). This seems to be based on the assumption that any word an absolutive marker attaches to functions as a predicate (as is (nearly) always the case in modern Mayan languages). However, Vinogradov's data seem to speak against this assumption, as it is difficult to imagine a temporal adverb and even a conjunction functioning as predicates. Furthermore, as discussed in §4.2, to derive the Highland Mayan verb structure from a complementation or raising construction is problematic, and as detailed in §6, it is also unnecessary to assume that hosts of Set B markers functioned as predicates to explain the evolution of the Highland Mayan verb structure. Therefore, contrary to Vinogradov (2017a: 112), examples as in (15) are considered monoclausal in this paper.

### 3. Previous suggestions

Previous work has considered the position of Set B pronouns in Proto-Mayan to have been defined with respect to the position of the predicate. All three predicate-bound positions attested in modern Mayan languages, that is, the predicate-initial, the predicate-final, and the predicate-second position have been suggested as the original pattern, though especially with the predicate-second pattern there are some notable differences between researchers in the way the reconstruction has been formulated.

The predicate-initial pattern is reconstructed by Bricker (1977: 8).<sup>4</sup> Bricker points out that this pattern is found in Huastec, which is both geographically non-contiguous with the other Mayan languages, and the Mayan language most distantly related to the other Mayan languages. As a common (areal or genetic) innovation of the predicate-initial pattern by both the K'iche'an languages and Huastec is thus highly unlikely, Bricker suggests that Huastec and the other predicate-initial languages just independently retained this pattern from Proto-Mayan.<sup>5</sup>

In his review of Bricker (1977), Campbell (1979) claims that Set B pronouns were suffixes in Proto-Mayan, that is, that their placement followed a predicate-final pattern. In the Highland Mayan languages, they were then suffixed to the tense / aspect / mood morphemes and therefore came to precede the verb stem because the tense / aspect / mood morphemes themselves were pre-posed to the verb stem. According to Campbell, this explains why in many Highland Mayan languages (namely, the languages with the predicate-second pattern) Set B pronouns still follow the predicate word if no pre-posed tense / aspect / mood morpheme is present.

Like Campbell (1979), Robertson (1980: 85–96) suggests that Set B pronouns were suffixed to the predicate in Proto-Mayan. Building on Kurylowicz's fourth law of analogy as a general principle of language change, he argues that the prefixation of Set B pronouns arose first in the least marked predicational constructions (namely, intransitive verbal

<sup>&</sup>lt;sup>4</sup> However, Bricker does not distinguish between the predicate-initial and the predicate-second pattern but treats both patterns as the same (Highland Mayan) pattern.

<sup>&</sup>lt;sup>5</sup> According to Kaufman (2015: 188), Set B pronouns are also reconstructed as prefixes by Frank (1976). Unfortunately, Frank (1976) was unavailable to me.

predicates with tense / aspect / mood / markers), and was then extended to the more marked constructions, that is, first to transitive verbs, then to non-derived non-verbal predicates and even later also to derived non-verbal predicates such as participles.

Osborne (1989: 236-239) points out that absolutive markers, which she takes to have the same origin as ergative markers, have generally undergone less phonetic reduction than ergative markers, and attributes this to an earlier prefixation of ergative markers than of absolutive markers, which would suggest that Set B pronouns were not (yet) prefixes in Proto-Mayan. Following Robertson (1980), she argues that Set B pronouns were originally suffixes and proposes a four-stage scenario<sup>6</sup> for the development of prefixation of Set B markers. According to this scenario, prefixation arose first in certain verbal constructions, especially those involving intransitive verbs, was then applied to all other verbal constructions, and in the last stage was also extended to non-verbal predicates. The later development of prefixation with non-verbal predicates than with verbs is, according to Osborne (1989: 237-238), the reason why in languages like Kaqchikel Set B markers are more reduced when they are part of verbal than when they are part of non-verbal predicates.

More recently, Lehmann (2020: 819) has suggested that Set B pronouns were "words with a tendency to enclisis" in Proto-Mayan. He considers Set B pronouns that precede the predicate word even in the absence of

<sup>&</sup>lt;sup>6</sup> Her scenario comprises five stages, but the difference between the first and the second stage concerns only the development of Set A markers and is thus irrelevant to the development of Set B pronouns.

a pre-posed tense / aspect / mood marker as in non-verbal predications in the K'iche'an languages to derive from the Proto-Mayan independent forms of Set B pronouns. Set B pronouns following both the predicate or the tense / aspect / mood morphemes are claimed to derive from Set B pronouns that were enclitic to the predicate. The difference between the Lowland and the Highland Mayan languages is, according to this view, that in the Highland Mayan languages the Set B pronoun was raised to a tense / aspect / mood auxiliary, which was later agglutinated to the lexical verb, while in the Lowland Mayan languages, the lexical verb itself was the absolutive argument of the auxiliary (zero-marked on the auxiliary because it was a third-person argument) and the absolutive argument of the lexical verb thus continued to be marked on the lexical verb (Lehmann 2020: 820-821).

Kaufman (1972: 25) reconstructs a pattern intermediate between the predicate-initial and the predicate-final pattern to Proto-Mayan, which is similar to the pattern in Tzotzil. According to this reconstruction, Set B pronouns were prefixed with intransitive verbs and suffixed with non-verbal predicates (he does not state what he reconstructs for transitive verbs). The descendant languages then extended either the pattern originally used with intransitive verbs to non-verbal predicates (yielding the predicate-initial pattern) or the original pattern of non-verbal predicates to intransitive verbs (yielding the predicate-final pattern). This reconstruction is similar to the predicate-second pattern found in modern Mayan languages in that depending on the context the Set B pronoun may be placed either predicate-initially or predicate-finally. However, the position of Set B pronouns is defined with respect to the word

class of the predicate (verbal or non-verbal), not with respect to the presence or absence of a tense / aspect / mood morpheme.

Quizar (1979: 190–191) proposes that in Proto-Mayan Set B markers were suffixed to the first word of the predicate (called by her the left-most position), that is, to the predicate word with non-verbal predicates, which lack tense / aspect / mood / markers, and to the tense / aspect / mood auxiliary with verbal predicates, which she argues always had pre-posed tense / aspect / mood auxiliaries. According to Quizar, the reconstruction of Set B pronouns as suffixes to auxiliaries in the case of verbal predicates provides the most economical explanation of the different placement patterns of Set B markers in the modern Mayan languages because it is the pattern that requires the least changes to yield the most commonly attested patterns, while more changes are only required in the case of the rather seldomly attested patterns.

Robertson (1992: 53) claims that in Proto-Mayan Set B pronouns were prefixed when a tense / aspect / mood morpheme was used, but suffixed when the verb lacked a tense / aspect / mood morpheme, thus following a predicate-second pattern. Similarly, Kaufman (2015: 188–189) reformulates his earlier (Kaufman 1972) reconstruction such that in Proto-Mayan Set B pronouns attached to the first word of the predicate, that is, to the tense / aspect / mood marker when such a marker was present and to the predicate word when there was no tense / aspect / mood marker. He argues that this is exactly the pattern attested in the languages with the predicate-second pattern, and that the Lowland Mayan languages just

 $<sup>^7</sup>$  Note that Quizar reconstructs auxiliaries, which only later developed into the more grammaticalized tense / aspect / mood morphemes found in many modern Mayan languages.

generalized the predicate-final pattern originally restricted to predicates without a tense / aspect / mood morpheme, while the K'iche'an languages and Huastec generalized the predicate-initial pattern originally restricted to predicates with a tense / aspect / mood morpheme. Contrary to Quizar (1979) and Robertson (1992), Kaufman (2015: 188) suggests that Set B pronouns were enclitics rather than affixes in Proto-Mayan, and contrary to Quizar (1979) he does not argue that finite verbs were always preceded by auxiliaries. The same reconstruction is advocated by Schweitzer (2006: 166-168), who points out that the reconstructed position of Set B pronouns in Proto-Mayan is reminiscent of a Wackernagel position, though contrary to classical Wackernagel clitics the domain of the placement of Set B enclitics is the verb phrase rather than the clause. Furthermore, Schweitzer (2006: 167) draws a parallel between the position of Set B pronouns and the position of directional clitics in Mam, which usually directly follow the Set B pronoun, suggesting that the Set B pronoun and the directional once might have formed a clitic cluster.

### 4. The supposed evolution of the Highland Mayan verb structure from a predicate-final pattern

This section discusses some problems with the supposed derivation of the position of the Set B pronoun in the Highland Mayan languages (that is, following the tense / aspect / mood marker) from a predicate-final pattern. The general idea of predicate-final reconstructions is that the tense / aspect / mood markers in the Highland Mayan languages derive from

predicates and when these predicates were grammaticalized and ultimately prefixed to the lexical verb the absolutive markers which followed the grammaticalizing predicate retained their position and thus became situated between the tense / aspect / mood marker and the lexical verb, in roughly the following way (Pye 2009):<sup>8</sup>

$$(ERG-)Verb_1 = ABS_i$$
  $(ERG-)Verb_2 (=ABS_i) > TAM-ABS-(ERG-)Verb (=ABS_i)$ 

This schema leaves unspecified how the second verb relates syntactically to the first verb. Usually, it is argued that the two verbs formed either a complementation construction or a raising construction. A less commonly entertained possibility is that they form a serial verb construction. Each of these three approaches will be discussed in turn, and it will be shown that each of them has trouble explaining the Highland Mayan verb structure if one assumes that absolutive markers attached in Proto-Mayan only to their logical predicate or that a special construction, namely the raising construction, had to be used if the Set B marker attached to another predicate.

### 4.1. Complementation

The first construction type from which the verb structure in Highland Mayan languages might have developed is complementation

<sup>&</sup>lt;sup>8</sup> It is usually assumed that the first predicate was intransitive and thus did not have an ergative marker and that the absolutive marker of the second verb either was not realized because it was coreferential with the absolutive marker of the first predicate or was lost in the course of grammaticalization.

constructions. Complementation constructions are here understood narrowly as constructions where one predicate<sub>i</sub> functions as the syntactic argument of another predicate<sub>j</sub>, whereby predicate<sub>i</sub> is cross-referenced on predicate<sub>j</sub> either with a Set B or with a Set A morpheme. Other construction types that are often referred to as complementation constructions are here considered as raising or serialization constructions. According to the complementation theory, the Highland Mayan verb structure originated in a construction where Verb<sub>2</sub> functioned as an argument of Verb<sub>1</sub>. If one follows this, the second predicate can take any of the following three roles and thus be cross-referenced on the first predicate with the respective Set B or Set A marker:

- A) Verb<sub>2</sub> as the subject (i.e. absolutive argument) of an intransitive  $Verb_1$ .
- B) Verb<sub>2</sub> as the object (i.e. absolutive argument) of a transitive Verb<sub>1</sub>.
- C) Verb<sub>2</sub> as the subject (i.e. ergative argument) of a transitive Verb<sub>1</sub>.

Option A) and B) cannot give rise to the verb structure found in Highland Mayan languages because Verb<sub>2</sub> itself is cross-referenced by the absolutive argument of Verb<sub>1</sub>, so the absolutive argument of Verb<sub>2</sub> cannot be cross-referenced on Verb<sub>1</sub> with a Set B marker. Only option C) has a free position for the absolutive marker of the lexical verb on Verb<sub>1</sub> because Verb<sub>2</sub> is cross-referenced with an ergative marker. However, one still has to assume that the ergative marker was lost with the grammaticalization of Verb<sub>1</sub>. Given that decategorialization is typical of grammaticalization, this is not impossible, but it makes the scenario more

complicated than the supposed simple universation of an (intransitive)  $Verb_1$  (> tense / aspect / mood marker) with  $Verb_2$ .

### 4.2. Raising

A second construction type that is sometimes suggested as the source of the Highland Mayan verb structure is the raising construction. In the raising construction, one argument of the lexical verb is not expressed on the verb, but is raised to another predicate (usually an auxiliary) that is semantically unrelated to the argument. This can be illustrated with the following example of the progressive construction in Tz'utujil:

```
(16) Tz'utujil

n-in-tajin chi wa'-iim

INC-B.1SG-PROG PR eat-NMLZ
'I am eating.' (Dayley 1981: 326)
```

In this example, the subject of the lexical verb *wa* "to eat" is not cross-referenced on this verb, but is expressed as the subject of the progressive auxiliary *tajin*. The lexical verb is nominalized and the progressive auxiliary is connected to the lexical verb with the preposition *chi*.

While in Tz'utujil the nominalized lexical verb and the auxiliary are connected by a preposition in the raising construction, in other Mayan languages this is not the case (Robertson 1980). If in such a language the absolutive marker is encliticized to the auxiliary, as is still the case in the Lowland Mayan languages, and auxiliary and lexical verbs are then

univerbated, this seems to straightforwardly yield the verb structure found in the Highland Mayan languages.

However, it is important to note that the lexical verb is nominalized in the raising construction (Robertson 1992: 80; Kaufman 2015: 241). If the verb structure in the Highland Mayan languages would derive from a raising construction, one would expect reflexes of nominalizing suffixes in the place of (or as) status suffixes. Nevertheless, the status suffixes in the Highland Mayan languages are (for the most part) cognate to the status suffixes in the Lowland Mayan languages, which retain the predicate-final pattern (see Kaufman (2015: 278–296)).

Furthermore, while the raising approach easily explains the structure of intransitive verbs, with transitive verbs this explanation is much more problematic because Mayan languages usually only allow intransitive verbal nouns. Therefore, a transitive verb has to be intransitivized, which in turn may lead to a different alignment. As Robertson (1992: 78–79) notes, the pivot in a raising construction may only be a nominative argument in Mayan, that is, either the single argument of an intransitive verb or the agent of a transitive verb, but not the patient of a transitive verb. Therefore, according to Sychev (2021: 609-610), some languages of the Greater K'iche'an branch show accusative alignment in the raising construction, where Set B markers cross-reference the nominative and Set A markers the accusative. In these languages, transitive verbs are expressed as passivized verbal nouns whose agent is raised to the auxiliary (marked by a Set B marker), and whose patients are marked as the possessor of the verbal noun, which in Mayan is marked with Set A markers, as shown in the following example:

# (17) USPANTEC in tijin chi r-il-iik B.1SG PROG PR A.3SG-see-NMLZ 'Lo estoy viendo.' (Can Pixabaj 2007: 152)

In this example, the first-person singular agent of the transitive verb is raised to the progressive auxiliary *tijin* and is thus expressed with a Set B marker. The patient, on the other hand, is marked in a possessive construction on the verbal noun *iliik*, and for this reason, is cross-referenced with a Set A marker. If the Highland Mayan verb structure would derive from a raising construction, one would expect that in the Highland Mayan languages, Set B pronouns would mark nominative arguments just as in (17).

### 4.3. Serialization

A third possible source construction for the verb structure of Highland Mayan languages where the TAM-marker is etymologically a predicate is a serial verb construction. The term "serial verb construction" has been used in the literature to describe various types of constructions, so it is necessary to briefly clarify how it is used here. Here a serial verb construction is understood as a construction that involves at least two predicates that share at least one argument (whatever the syntactic role of the argument) and are not connected by any type of conjunction. There may be any functional relation between the two predicates except that they must

not be complements of each other, that is, they may be functionally coordinated or one may function as an adverbial clause.

Compared to the complementation analysis, a serialization approach to the verb structure of Highland Mayan languages offers the important advantage that the second predicate is not an argument of the first predicate, so there is a free position for an absolutive argument even if the first verb is intransitive. Furthermore, the absolutive argument of the first verb must be coreferential with one argument of the second verb. If the coreferential argument happens to be the absolutive argument of the second verb, the Set B marker of the second verb may then come to be omitted because the argument is already referenced on the first verb. With the univerbation of the first verb (which develops into a TAM-marker) with the second verb, this gives exactly the verb structure found in the Highland Mayan languages:

$$Verb_1 = ABS_i (ERG-)Verb_2 (=ABS_i) > TAM-ABS-(ERG-)Verb$$

Interestingly, although this is often described as a complementation construction, the more recently grammaticalized progressive construction in at least some K'iche'an languages seems also to be based on such a serialization pattern. While most K'iche'an languages have no overt person marking on the progressive auxiliary  $ajin \sim tajin$ , in some dialects of

<sup>&</sup>lt;sup>9</sup> As there is not an overt person marking, it is unclear if the progressive construction in these languages reflects a complementation construction (which would be cross-referenced by the non-overt absolutive marker of the third person singular) or if it derives from a serialization construction that has simply lost the absolutive marker of the auxiliary due to the auxiliary's decategorialization.

Kaqchikel and Tz'utujil overt person marking is still found on the auxiliary (García Matzar & Rodríguez Guaján 2001: 172–173). As shown in the following example from Kaqchikel, the auxiliary and the lexical verb are not connected by a conjunction, and both the auxiliary and the lexical verb have the absolutive marker of the first person singular, which rules out that the lexical verb is a complement of the auxiliary:

```
(18) KAQCHIKEL

y-i(n)-tajin y-i(n)-wa'

INC-B.1SG-PROG INC-B.1SG.SG-eat

'Estoy comiendo.' (García Matzar & Rodríguez Guaján 2001:
172)
```

However, if one wants to derive the Highland verb structure from a serial verb construction, one has to make the rather strong assumption that the serial verb construction followed an ergative alignment because according to this hypothesis the absolutive marker of a transitive verb, which marked an argument in O role, could be omitted because the argument was coreferential with an argument in S role. In principle, syntactic ergativity is well known in several Highland Mayan languages. Interestingly, there even seems to be a correlation between the presence of syntactic ergativity and the verb structure in Mayan (Tada 1993: 105; Coon *et al.* 2014: 190–191). The languages that show the typical Highland structure with the Set B marker following the TAM-marker usually also show syntactic ergativity, while the languages with the Lowland verb structure do not. If the Highland Mayan verb structure would indeed derive from

a syntactically ergative serial verb construction, this correlation could straightforwardly be explained as a result of the fact that syntactic ergativity was a prerequisite for the development of the Highland verb structure.

Nevertheless, this account is problematic because the constructions where syntactic ergativity is usually found in modern Highland Mayan languages are not serial verb constructions or coordinative constructions, but rather constructions where one argument is extracted by relativization, focusing, or questioning. At least in the more recently grammaticalized progressive construction in the K'iche'an languages illustrated in (18), the person marker of the auxiliary is coreferential with the nominative rather than the absolutive argument of the lexical verb (see García Matzar & Rodríguez Guaján 2001: 172), that is, it shows accusative rather than ergative alignment.

In sum, while the serialization approach succeeds in explaining the Highland Mayan verb structure, it has to make the rather strong assumption of a syntactically ergative serial verb construction.

### 5. Problems with predicate-bound reconstructions

This section presents two problems to reconstructions that argue that Set B pronouns were bound to the predicate in Proto-Mayan: on the one hand, the cliticization of Set B pronouns to non-predicates rather than to predicates (§ 5.1), on the other hand, the use of Set B pronouns with what is etymologically the false predicate (§ 5.2).

### 5.1. Set B pronouns attaching to non-predicates

A major problem for all predicate-bound reconstructions is that in some descendent languages, Set B pronouns that mark an absolutive argument of the predicate may attach to words that do not function as predicates. As in these languages, there are fewer restrictions on the syntactic function of the host than in the reconstructed pattern, a reconstruction of Set B pronouns as attaching to the predicate would have to assume that Set B pronouns became less host-selective in these languages. This, however, would contradict the unidirectionality of grammaticalization, according to which items nearly always become more host-selective (and thus more affix-like) in the course of language change (Hopper & Traugott 2003: 7; Siewierska 2004: 262), while the reverse development to a less host-selective item is much rarer (though see Newmeyer (1998: 265–268) and Norde (2009) for some examples of development to a less host-selective item).

The clearest case of the cliticization of Set B pronouns to non-predicates comes from colonial Q'eqchi', as described by Vinogradov (2017a). As has already been discussed in § 2 and has been illustrated in (15), Set B pronouns function as second- position clitics which may not only attach to predicates or tense / aspect / mood markers, but also to focalized adverbs or conjunctions (Vinogradov 2017a: 111–114). A further example of a Set B pronoun as an enclitic to a temporal adverb rather than to a tense / aspect / mood marker or predicate is given in (19). This time, the verb lacks a tense / aspect / mood morpheme, and for this reason, the Set B pronoun would have to follow the predicate word if the placement would follow a predicate-second pattern as in modern Q'eqchi':

```
(19) COLONIAL Q'EQCHI'

<aceexic>

ak=ex xik

already=B.2PL go

'You (pl.) go already.' (Vinogradov 2017a: 112)
```

Another case comes from Huastec. As shown in (20), in Huastec, Set B pronouns which mark verbal arguments may combine with the preposition ti 'in, at', which also functions as a subordinating conjunction (Edmonson 1987: 349; Zavala Maldonado 1994: 52–54):<sup>10</sup>

```
(20) Huastec

ne'etz t-at k'ap-ul ok'ox

Fut t-b.2sg eat-inc first

'You are going to eat first.' (Zavala Maldonado 1994: 53)
```

As usual in Huastec, the Set B pronoun still precedes the verb. For this reason, this case is not so much a problem for the reconstruction of Set B pronouns as predicate-initial, as one could still argue that Set B pronouns continue to precede the predicate, even though in some contexts they would have started to combine (probably as enclitics) with items to their left. However, this explanation is not available for the predicate-second

 $<sup>^{10}</sup>$  Set B pronouns may also combine with the subordinating particle / imperative marker ka (Edmonson 1987: 349), but I am unaware of the etymology of this particle and therefore don't know if it contradicts a predicate-bound reconstruction.

and the predicate-final reconstruction, which have to assume that any item to which the Set B pronoun attaches even though it precedes the verb stem either is part of the verb (as a tense / aspect / mood marker) or originally was an independent predicate.

In the Highland Mayan languages, Set B pronouns sometimes also attach to grammaticalized tense / aspect / mood markers which appear to derive from non-predicates, though unfortunately, their etymology is less secure due to their more advanced degree of grammaticalization. (21) shows an example of the use of the negative imperative in colonial K'iche', which is marked with the prefix m(a):

(21) COLONIAL K'ICHE'

m-e-cah-ic

NEG.IMP-B.3PL-fall-DECL.INTR

'mögen sie nicht fallen' ('may they not fall') (Dürr 2003: 47)

The negative imperative prefix m(a) in colonial K'iche' seems to be derived from one of the Proto-Mayan negative particles \*maa' or \*mii (Kaufman 2015: 274), which appear to have been non-predicates in Proto-Mayan. Again, such a case is unproblematic for the predicate-initial reconstruction, as one can argue that the position of the Set B pronoun simply continues the original position preceding the predicate word. As long as one assumes that the predicate-second pattern was still a productive pattern when the negative imperative prefix had grammaticalized sufficiently to be part of the predicate, it also conforms to the prediction of the predicate-second reconstruction that the Set B pronoun follows the

first element of the predicate. For predicate-final reconstructions, however, such cases are problematic.

### 5.2. Set B pronouns attaching to the false predicate

In several Highland Mayan languages, when used in motion-cum-purpose constructions Set B pronouns attach to what is etymologically the false predicate, that is, to a predicate they are not an argument of. In more grammaticalized motion-cum-purpose constructions, Set B pronouns, which mark the absolutive argument of the motion-cum-purpose construction, often attach themselves to the motion verb. The logical subject of the motion verb, however, is coreferential with the nominative rather than the absolutive argument of the main verb, so if the main verb is transitive, the Set B pronoun marks a referent that is not an argument of the motion verb and thus attaches to the "false" predicate (Zavala 1997: 444–445; Hober 2022: 120). This can be illustrated with the following example from colonial K'iche', where the Set B pronoun precedes the motion verb, but the subject of the motion verb is coreferential with the ergative argument. Note that the motion verb and the main verb are only loosely integrated and can be interrupted by other elements:

(22) COLONIAL K'ICHE'

qu-ix-be na cu nu-vab-a

INC-B.2PL-go PRO then A.1sG-guide-sbJV.TR

'ich gehe und führe euch' ('I go and guide you') (Dürr 2003: 102)

This is clearly problematic for reconstructions of a predicate-initial pattern, which assume that the Set B pronoun precedes the predicate whose arguments it references. Proponents of a predicate-final reconstruction might argue that it is not the motion verb but the tense / aspect / mood morpheme to which the Set B pronoun attaches. However, to explain the presence of the absolutive argument of the main verb on the tense / aspect / mood marker one still would have to assume that the tense / aspect / mood marker originally formed a (raising, complementation, or serialization) construction with the main verb rather than the motion verb, that is, marked the tense / aspect / mood of the main verb and was univerbated with the motion verb merely by coincidence. This is unconvincing for the following reasons: first, it contradicts the linear order of the tense / aspect / mood marker, motion verb, and main verb, where the main verb is separated from the tense / aspect / mood marker by the motion verb; second, it does not conform to the fact that the main verb invariably takes a subjunctive status suffix even if the tense / aspect / mood marker requires the verb to take the declarative status.

In general, it is noteworthy that in these motion-cum-purpose constructions Set B pronouns attach to the first element of the predicate complex even if the immediately adjacent predicate is not the predicate whose argument the Set B pronoun marks. This resembles most closely the predicate-second pattern, though it seems questionable if the grammaticalization of the motion-cum-purpose construction has proceeded far enough that the motion verb and the main verb can already be regarded as one predicate in examples such as (22).

### 6. SET B MARKERS AS CLAUSE-SECOND ENCLITICS IN PROTO-MAYAN

Given the problems with previous suggestions discussed in the preceding sections, which position should be reconstructed for Set B markers in Proto-Mayan? Here I assume that Set B markers were pronouns, not agreement markers in Proto-Mayan (Kaufman & Norman 1984: 90; Holtmann 2022: 10). Following Lehmann (2020: 819), I reconstruct two different forms for these pronouns: on the one hand, a free form that is the predecessor of the independent pronouns in the modern Mayan languages, which are usually just strengthened free Set B pronouns (most often, though not always, strengthened with demonstratives); on the other hand, a dependent special clitic form, which is the predecessor of most predicate-bound Set B markers found in the modern Mayan languages. Crucially, while previous reconstructions have argued that the dependent form of the Set B pronoun attached to a functionally defined word or phrase, namely the predicate, I propose that the dependent form was a Wackernagel clitic which was attached to the first word of the clause, irrespective of the host's syntactic function, as identified for colonial Q'eqchi' by Vinogradov (2017a, 2017b). This reconstruction has the important advantage that it does not presuppose a change that contradicts the general directionality of language change, namely a change from a more host-selective item that can only attach to predicates to a less host-selective item that can attach to words of any syntactic function. Furthermore, as the functional relation of the host to the Set B pronoun is irrelevant, there is also no problem if the Set B pronoun attaches to what

is etymologically the false predicate. Such cases can straightforwardly be explained as resulting from clitic climbing (Spencer & Luís 2012: 162–165). That the position of Set B markers is independent of the position of the predicate mirrors their status as pronouns in Proto-Mayan, because the formal (from an independent form to a clitic to a host-selective affix) and the functional (from pronoun to agreement marker) grammaticalization of person markers tend to be parallel cross-linguistically (Siewierska 2004: 262).

The two forms of Set B pronouns reconstructed for Proto-Mayan are reflected in different positions in the descendent languages. The free form has given rise to those Set B pronouns which precede the predicate word even though they do not follow a tense / aspect / mood marker (Lehmann 2020). As Vinogradov (2017a: 119) notes, the Set B pronouns used in nonverbal predications in colonial K'iche' were still independent words. Even in some languages where Set B pronouns are placed predicate-finally, pre-posed independent pronouns are sometimes used in nonverbal predications as an alternative to post-posed Set B pronouns. (23a) gives an example of a post-posed Set B pronoun, (23b) an example of a pre-posed independent pronoun in a nonverbal predication in colonial Tzeltal (from the *Arte de Lengua Tzendal*):

### (23) COLONIAL TZELTAL

a. <vtzex> utz=exgood-B.2PL
<vostros sois bue> (Campbell 1988: 138)

```
b. <hoon Pedro>
ho'on Pedro
I Pedro
<Yo soi Po. / ego sum Petrus> (Campbell 1988: 137-138)
```

Some languages with predicate-second placement of Set B pronouns obligatorily use pre-posed independent pronouns in nominal or adjectival predications. This is very similar to the pattern found in languages that use pre-posed Set B pronouns in such constructions. Compare the non-verbal predication with an independent pronoun in (24) from Poqomchi' with the nonverbal predication with a Set B pronoun in (25) from K'iche':

```
(24) POQOMCHI'

hin yowaab'

I sick

'I am sick.' (Brown 1979: 138)

(25) K'ICHE'

e winaq

B3.PL people

'They are people.' (Can Pixabaj 2017: 483)
```

Both constructions actually derive from the same proto-construction, which used the free form of the Set B pronoun (Lehmann 2020: 819–820). The main difference is simply that in Poqomchi' the free form of the pronoun has been strengthened in this construction, while in K'iche' it has not.

All the positions following the predicate, the tense / aspect / mood marker or a non-predicate derive from the use of the Set B pronoun as a clause-second position clitic. As Proto-Mayan was and most modern Mayan languages still are verb-initial (Norman & Campbell 1978: 146; England 1991), in Proto-Mayan the Set B pronoun frequently, though not exclusively, followed the predicate or, if the predicate itself was preceded by such a marker, the tense / aspect / mood marker. This explains why in the descendant languages Set B pronouns have been fixed to the predicate: Due to their frequent use with predicates or tense / aspect / mood markers, Set B pronouns were strongly associated with them, and for this reason ultimately began to be used with them even if the predicate did not occupy the first position of the clause. The predicate-second pattern is a direct reflection of this, as Set B pronouns continue to be placed in the second position but the domain with respect to which they are placed has narrowed from the clause to the predicate.

One may ask why Set B pronouns consistently follow the predicate in the Lowland Mayan languages even though verbs often have aspect markers which precede them. The reason for this is probably simply that the aspect markers in the modern Lowland Mayan languages have a lesser time depth than the fixation of Set B pronouns to verbs. As Quizar (1979) notes, tense / aspect / mood markers in languages where the Set B pronoun follows the tense / aspect / mood marker are generally shorter and more reduced than in languages where Set B pronouns always follow the verb, suggesting a greater degree of grammaticalization. Furthermore, contrary to tense / aspect / mood markers in Highland Mayan

languages, tense / aspect / mood markers in Lowland Mayan languages often do not have cognates in other subgroups. For the Ch'olan languages, Vinogradov (2018: 172–175) even notes a rather great diversity of different tense / aspect / mood markers, and concludes from this that they have developed after the split of Proto-Ch'olan. This suggests that the tense / aspect / mood markers in the Lowland Mayan languages may have developed only after Set B pronouns had already been fixed to the verb in these languages.

### 7. Conclusions

In the modern Mayan languages, Set B pronouns nearly always attach to their predicate. In some languages, Set B pronouns consistently precede the predicate word, in others they consistently follow it and in yet others they either precede or follow it depending on the presence or absence of a pre-posed tense / aspect / mood marker. While previous reconstructions have proposed that Set B pronouns were also attached to the predicate (though these reconstructions differ in whether they view Set B pronouns as prefixes, suffixes or enclitics), in this paper it has been argued that in Proto-Mayan the position of Set B pronouns was independent of the position of the predicate. Rather, it has been suggested that Set B pronouns were second position enclitics, which were derived from free personal pronouns that represent the predecessors of the independent pronouns in the modern Mayan languages. The reason

why Set B pronouns became bound to the predicate in the descendent languages is simply that Proto-Mayan was verb-initial, so that Set B pronouns were usually cliticized to verbs and for this reason ultimately became fixed to them.

### ABBREVIATIONS

1	first person	NEG	negation / negative
2	second person	NML	nominal suffix
3	third person	NMLZ	nominalizer
A	Set A marker	PERF	perfect
В	Set B marker	POT	potential
COMPL	completive	PL	plural
DECL	declarative	PR	preposition
ENC	enclitic	PROG	progressive
EP	epenthesis	PRO	prospective
FUT	future	REC	recent past
IMP	imperative	SBJV	subjunctive
INC	incompletive	SG	singular
INTR	intransitive	TR	transitive
INC	incompletive	SG	singular

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