

# Proto-Ch'olan as the Standard Language of Classic Lowland Mayan Texts

Paper to be submitted to *Current Anthropology*

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**Abstract.** In this paper I examine morphosyntactic data relevant to the reconstruction of the historical stage of the standard language of Classic Lowland Mayan (CLM) hieroglyphic texts (A.D. 200-900). Recent debate has centered on the specific affiliation and historical stage of the Ch'olan language that served as the standard of the texts. Based on the morphosyntactic evidence analyzed in this paper (markers unique to Eastern Ch'olan or Western Ch'olan, markers reconstructible to Common Ch'olan through backward reconstruction, markers reconstructible to Proto-Ch'olan through forward reconstruction), I propose a Proto-Ch'olan language as the standard language of CLM texts.

Keywords: Maya, historical linguistics, epigraphy, archaeology

## Introduction

Many specialists now agree that Classic Lowland Mayan (CLM) texts (ca. A.D. 200-900) are written in a standard language based on some form of Ch'olan. Some linguists had already posited Ch'olan as the most likely language for the texts prior to the more detailed epigraphic scrutiny of the texts that began in earnest in the 1980s and 1990s (Josserand 1975; Kaufman 1976). And various scholars had succeeded in finding a Ch'olan motivation for the origin of various structural components of the script, such as the acrophonic origin of syllabograms, the spellings of calendrical signs, and the spellings of a few inflectional markers (Thompson 1978; Campbell 1984; MacLeod 1984; Justeson 1985, 1989).

Major efforts to determine the linguistic geography of the Mayan lowlands through the evidence from CLM texts were begun, and it has become clear that the most conservative and standardized components of CLM texts pointed to a Ch'olan affiliation. Moreover, various researchers also noted that linguistic innovations suggestive of non-standard, local vernaculars were also attested, and sometimes indicative of specific Ch'olan (e.g. Ch'ol, Chontal, Ch'orti', Ch'olti') and Yukatekan (Yukatek, Mopan, Lakantun, Itzaj) languages (Fox and Justeson 1984; Justeson et al. 1985; Justeson and Fox 1989); indeed, this line of research is still continuing, and a more detailed and complex map of local vernaculars is now being drawn (Lacadena and Wichmann 1999, 2000; Wichmann 2001; Josserand and Hopkins 2004).

Nevertheless, the precise linguistic affiliation (i.e. Eastern Ch'olan vs. Western Ch'olan) and historical stage (e.g. Proto-Ch'olan vs. Proto-Western Ch'olan vs. Proto-Eastern Ch'olan) of the language that served as the standard of CLM texts remain the subjects of intense debate. There are three well-defined proposals. One sees the standard as based on a form of Ch'olan that preceded the breakup of Proto-Ch'olan into its Eastern and Western branches (Justeson et al. 1985; Justeson and Fox 1989; Justeson and Campbell 1997). Another sees it as based on a form of Ch'olan that postdates that breakup, more specifically a Pre-Eastern Ch'olan ("Classic Ch'olti'an") language (Houston et al. 2000; Lacadena and Wichmann 1999, 2000). And yet another set of proposals finds evidence supporting a

Western Ch'olan affiliation (Hopkins 1985; Josserand et al. 1985). The answer to this question will have significant implications for the study of the ethnolinguistic distribution and political history of the Mayan lowlands, and indeed of the Mayan region in general.

With all this in mind, in this paper I offer an overview of some of the major pieces of the puzzle. After a review of the preceding proposals, I present new linguistic evidence and reanalyze previous evidence, after which I propose the following conclusions:

1. the evidence presented in support of the Pre-Eastern Ch'olan model by Houston et al. (2000) is insufficient to support a Pre-Eastern Ch'olan affiliation for the standard language of CLM texts;
2. the evidence presented in support of the Western Ch'olan model (i.e. Ch'ol) by Hopkins (1985) and Josserand et al. (1985) is also insufficient to support a Pre- or Proto-Western Ch'olan affiliation for the standard language of CLM texts; and
3. a Proto-Ch'olan model is a more convincing and simpler model that requires the acceptance of fewer linguistic discontinuities.

I also show that morphosyntactic innovations that are exclusively attributable to either Western Ch'olan or Eastern Ch'olan are relatively few and late in appearance. Such traits are also quite limited in geographic distribution; they do not constitute cases of pan-regional standardization, but instead, they provide evidence for the development of interdialectal, but

perhaps not interlinguistic, boundaries. Consequently, such temporally late and geographically limited deviations from the standard CLM language support the view that the written language was standardized prior to the diversification of Ch'olan.

## **Preliminaries**

Before carrying out the main tasks a very brief overview of the CLM script and Lowland Mayan civilization is necessary, as well as a description of the methodology employed in this paper.

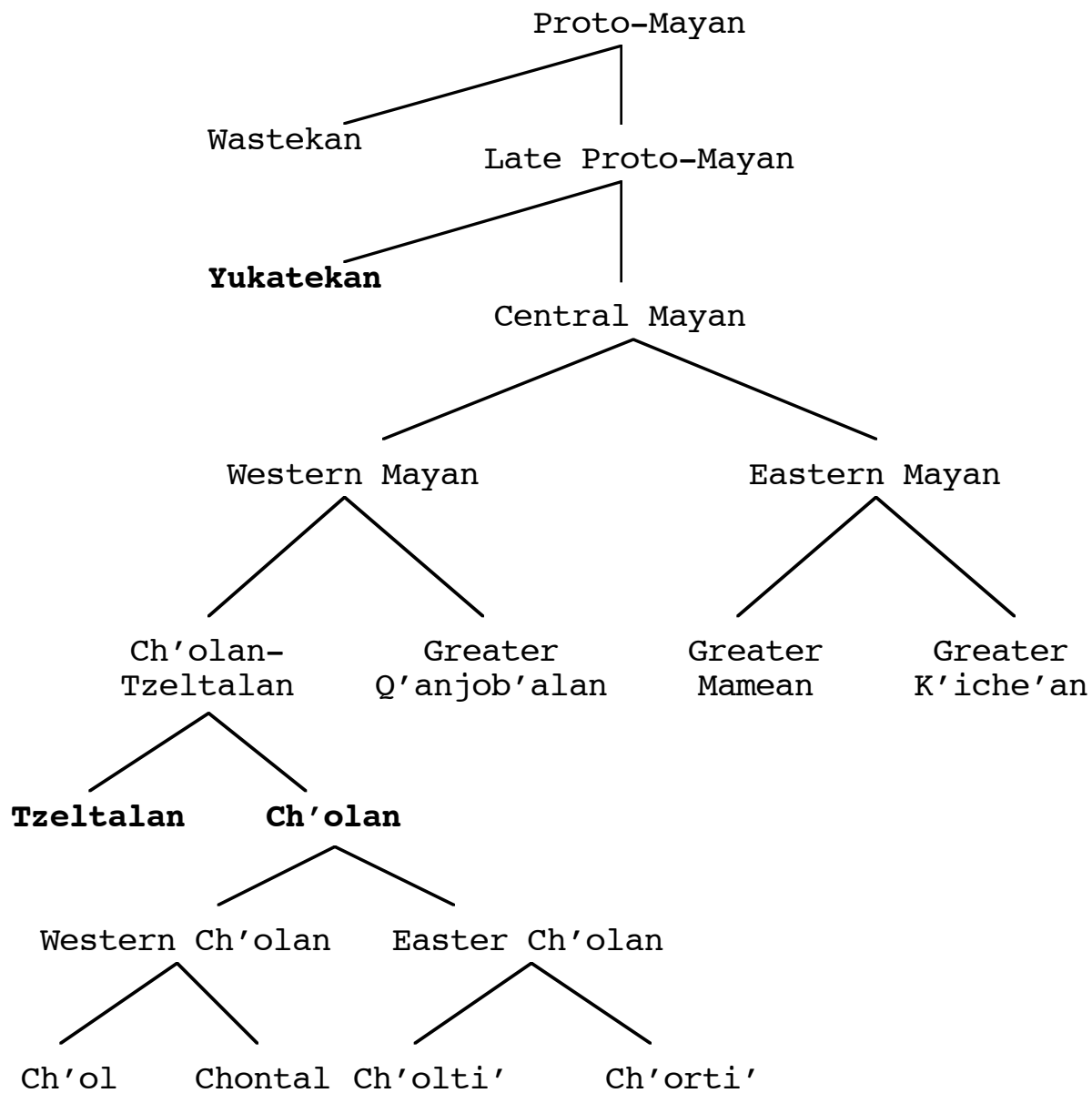
### **Cultural and Linguistic Background**

Prehispanic Lowland Mayan civilization (**figure 1**) is conventionally defined in terms of three culture-historical periods: Preclassic (1000 B.C.-A.D. 200), Classic (A.D. 200-900), and Postclassic (A.D. 900-1521).

INSERT FIGURE 1 (map with distribution of sites)

The Lowland Mayan script, in use from ca. 400 B.C.-A.D. 1700, utilizes logograms and syllabograms to represent a typically agglutinating, head-marking, head-initial, ergative language with CVC root shapes and VOA basic word order (Schele 1982; Bricker 1986; Justeson 1986; Mora-Marín 2001, 2004). I assume Kaufman's (1976, 1989, 1990) model of the diversification of Mayan languages (**figure 2**), but I discuss Robertson's (1992, 1999) model when appropriate and point out whenever the two disagree significantly.

Figure 2. Kaufman's (1976, 1989, 1991) Mayan Diversification Model.



For now, suffice it to say that I assume that Proto-Mayan split into Wastekan and the rest (Late Proto-Mayan), followed by Yukatekan and the rest (Central Mayan), followed by the split of Central Mayan into Eastern Mayan and Western Mayan, the split of Western Mayan into Greater Q'anjob'alan and Ch'olan-Tzeltalan, and the split of Ch'olan-Tzeltalan into

Ch'olan and Tzeltalan.<sup>1</sup> Additional details of historical reconstruction and genetic classification are presented below as needed.

I assume that the Mayan lowlands region was likely inhabited by Ch'olan and Yukatekan speakers during the Classic period, and that together they were responsible for the development of CLM civilization (Josserand 1975; Kaufman 1976; Hopkins 1985; Justeson et al. 1985). Their close interaction following the diversification of Ch'olan-Tzeltalan led to intense linguistic diffusion that defines the Lowland Mayan linguistic contact area (Justeson et al. 1985:9-12). Exclusive Ch'olan phonological innovations evident in their shared ritual vocabulary, much of which is attested in CLM texts (**Table 1**) (Justeson et al. 1985; Justeson and Fox 1989), suggest that Ch'olan speakers were generally the donors:

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<sup>1</sup> Kaufman (1984, 1989) uses the term Greater Tzeltalan instead of Ch'olan-Tzeltalan to refer to the subgroup made up by the Tzeltalan (Tzeltal, Tzotzil) and Ch'olan (Ch'ol, Chontal, Ch'olti', Ch'orti') languages. I prefer Ch'olan-Tzeltalan due to its transparency.

Table 1

Examples of lexical items also attested in glyphs	Ch'olan source
1) <b>LAHUN-CHAN</b> Ch'olan <i>*lahu(u)n cha(')n</i> 'Ten Sky (name of a god)'	Ch'olan <i>*k &gt; ch</i> shift (Yukatekan retained the <i>k</i> of Proto-Mayan <i>*ka'n</i> 'sky', while Ch'olan developed <i>*cha'n &gt; *chan</i> ) (Justeson et al. 1985)
2) <b>(tu-)TUN(-ni)</b> for Ch'olan <i>*tu(u)n</i> 'stone'	Ch'olan <i>*oo &gt; *uu</i> shift (cf. Proto-Mayan <i>*tooN</i> , borrowed by Yukatekan as <i>*tùun</i> from Ch'olan <i>*tuun</i> ) (Justeson et al. 1985)
3) <b>CHAK(-ki)</b> and <b>cha-k(i)</b> for <i>*chahk</i> 'thunder, lightning'	Ch'olan <i>*k &gt; ch</i> shift (cf. Proto-Mayan <i>*kahoq</i> 'thunder', borrowed by Yukatekan as <i>*cháak</i> for the Rain God, retained as <i>*kawak</i> for the day name 'thunder'; Ch'olan developed <i>*chahuk &gt; *chahk</i> )
4) <b>ku-tz(u)</b> for <i>*kùutz</i> 'turkey'	Ch'olan <i>*oo &gt; uu</i> shift (cf. Proto-Mayan <i>*kootz</i> , which would have been retained in Yukatekan as <i>kòotz</i> )
5) <b>b'u-lu-ch(u)</b> for <i>*b'uluch</i> 'eleven'	Ch'olan <i>*k &gt; ch</i> shift (cf. Yukatek has also <i>b'uluk</i> , and borrowed <i>b'uluch</i> from Ch'olan, attested in forms like <buluchcan> 'bálsamo o liquidámba')

These data point to Ch'olan speakers as the more powerful and influential group responsible for much of CLM elite culture, including perhaps the conventionalized orthography, lexicon, grammar, and genres of ritual and political discourse present in CLM texts.

## Methodology

The linguistic affiliation and historical stage of the standard written language of CLM texts is a complex problem. The Mayan lowlands was a region with intricate sociolinguistic interactions; there were likely several languages, and each language likely had several dialects. Yet the format, orthography, and grammar of CLM texts remained largely uniform

throughout the Classic period, and across the Mayan lowlands. Thus, I assume here, for the purposes of methodological and analytical simplification, that there was a standard written language, and that such language was based on a single dialect of Ch'olan.<sup>2</sup> The primary concern of this paper is to assess which Ch'olan hypothesis (Proto-Ch'olan, Common Ch'olan, Eastern Ch'olan, Western Ch'olan) can account for key linguistic markers with the least effort.

I proceed as follows. First, I present an overview of the three major proposals for the affiliation and historical stage of the standard written language of CLM texts, as well as the evidence for the vernacular languages. And second, I introduce new evidence to test the three major proposals. Testing the viability of each alternative requires more assumptions and procedures. I use linguistic markers that are either temporally and geographically pervasive, or temporally and geographically restricted. The pervasive markers are assumed to be standard traits by default. The restricted markers, because of the nature of their linguistic form, may be either historical retentions, and thus likely standard features (i.e. especially if other retentions of presumably the same source and historical stage are indeed shown to be standard), or more recent innovations of one specific

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<sup>2</sup> Thus, I assume that it was not an amalgamation of bits and pieces from a number of different dialects or languages, but a single dialect of a language that existed at some point in time, quite possibly a dialect that existed when the script first made its spread throughout the Mayan region during the Late Preclassic period.



dialect or language and thus not likely standard.<sup>3</sup>

The problem at hand, therefore, lies in assessing whether the linguistic markers generally fit into one of the following categories:

1. markers that are innovations exclusive to one of the two Ch'olan branches;
2. markers that are innovations exclusive to the common ancestor of the two Ch'olan branches (i.e. Common Ch'olan) as determined through backward reconstruction alone;
3. markers that are innovations exclusive to Pre-Ch'olan as determined through internal reconstruction; and
4. markers that are retentions reconstructible to Proto-Ch'olan but not to Common Ch'olan as determined by forward reconstruction based on comparisons between CLM texts and non-Ch'olan Mayan languages.

In the last case, the technique of forward reconstruction, a term used by Kaufman (1989), can be applied: if a marker is attested in CLM texts, assumed to be in a form of Ch'olan, yet no extant Ch'olan language contains evidence for such a marker (not even through the application of internal reconstruction), then it is necessary to look outside of the Ch'olan languages. Chances are that some extant non-Ch'olan Mayan language will preserve a cognate of such marker. If this is the case, it may be possible to

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<sup>3</sup> In the case of the former type, the poor attestation of such markers may be attributable to the differential preservation of texts of different genres and media. Below I discuss an example of this type, the case of the representation of the first person ergative and possessive marker *ni-* in CLM texts, spelled with T116 **ni**.

attempt the process of reconstruction by comparing the marker attested in the non-Ch'olan language and the marker attested in CLM texts. This would lead to a Proto-Ch'olan status for such a marker, rather than a Common Ch'olan status; the last type would require backward reconstruction from the extant Ch'olan languages.

Forward reconstruction is used whenever the alternative, backward reconstruction, would lead to a proposal involving more discontinuities (i.e. presumed losses or innovations) than necessary. For example, the markers *-aj* ~ *-ij* 'uncertain/generic possession' are not attested in any of the extant or ethnographically documented Ch'olan languages. Yet they are clearly attested in CLM texts, assumed to represent a standard based on some form of Ch'olan. Could it be that one form of Ch'olan subsequent to the breakup of Common Ch'olan (e.g. Western Ch'olan or Eastern Ch'olan) innovated such markers, and later lost them? Not necessarily. These markers are attested in other subgroups of Mayan (e.g. Greater Q'anjob'alan, Greater K'iche'an) that together make up the group called Proto-Central Mayan by Kaufman (1976, 1989), to which Ch'olan-Tzeltalan belongs. Consequently they can be reconstructed to Proto-Central Mayan (Proto-Mayan minus Wastekan and Yukatekan). This means that it is possible that Proto-Ch'olan-Tzeltalan and later Proto-Ch'olan may have inherited such markers. While it is possible that such markers may have survived even into Common Ch'olan, Western Ch'olan, or Eastern Ch'olan, it is not economical to assume so. Keeping in mind that CLM texts represent *some* form of Ch'olan

all we can assume is that Proto-Ch'olan still had those markers, and therefore also earlier Proto-Ch'olan-Tzeltalan, even though the markers are absent from the extant Tzeltalan languages (Tzeltal and Tzotzil). It is not economical to assume that Proto-Ch'olan had retained the markers because then we would have to propose that *both* Western Ch'olan and Eastern Ch'olan lost them after inheriting them from Proto-Ch'olan. This would mean that two major discontinuities took place: the independent loss of the same markers in two branches of Ch'olan.<sup>4</sup> And while this scenario is certainly possible, a scenario that involves only one episode of loss of these markers during a Pre-Ch'olan stage is simpler, and therefore more likely, since the markers would not have existed in Proto-Ch'olan, and therefore would not have been inherited by either branch of Ch'olan after the breakup. Thus, I follow an approach based on simplicity: the fewer the discontinuities involved, the more likely the model is.

### **Previous Proposals**

There are three distinct positions on the issue of the standard written language of CLM texts, as well as two comprehensive attempts at determining the linguistic affiliations of the vernacular languages of different cities across the Mayan lowlands. These are discussed next.

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<sup>4</sup> Even less seemly, but still possible, would be a model whereby the markers were retained by Western Ch'olan and Eastern Ch'olan, followed by their independent loss prior to breakup of each of the branches (i.e. two discontinuities) or after the breakup of each of the branches (i.e. four discontinuities, one for each of the descendant languages that in theory could have inherited these markers but did not). Such a scenario would be very unlikely, compared to one in which the markers simply were lost once, in Proto-Ch'olan, prior to the breakup of Common Ch'olan into its two branches.

## The Ch'olan(-Tzeltalan) Proposal

The Ch'olan or Ch'olan-Tzeltalan proposal is most clearly articulated in two unpublished manuscripts by John Justeson and James Fox (Fox and Justeson 1982; Justeson and Fox 1989) that were circulated during the 1980s and cited in various other articles since then (Houston 1988; Justeson 1989; Sharer 1995; Justeson and Campbell 1997; Houston et al. 2000). This proposal suggests that Mayan writing was innovated by speakers of a Ch'olan or Ch'olan-Tzeltalan language prior to the breakup of Proto-Ch'olan into its Eastern and Western branches between ca. A.D. 400-700, an estimate based largely on (controversial) glottochronological estimates by Kaufman (1976, 1990). These Ch'olan or Ch'olan-Tzeltalan innovators of the script conventionalized its structure, i.e. its spellings, orthographic practices, and grammatical structure, at an early time, possibly by the beginning of the Classic period (ca. A.D. 200).

Fox and Justeson (1984) and Justeson and Fox (1989) have used primarily two types of evidence, examples of which are described in **Table 2** (some supportive examples by other authors are also listed below):

1. lexical and phonological innovations attested in the oldest and most conservative components of the script (i.e. calendrical cycle, period names, origin of phonetic signs) that can be ascribed exclusively to one language or language subgroup as evidence of the affiliation of the standard written language (e.g. **Table 2a-e**); and
2. departures from standard spellings as evidence for lexical or

phonological innovations indicative of local vernaculars, whether Ch'olan or Yukatekan (**Table 2f-m**).

Table 2

TYPE OF EVIDENCE	PROPOSED SOURCE
ACROPHONIC ORIGIN OF PHONETIC SIGNS	
a) T117 <b>wi</b> , depicts ROOT	Ch'olan/Yukatekan <i>*wi</i> 'root', <i>*iib</i> in other Mayan languages (Justeson and Fox 1989:7)
b) T62 <b>yu</b> , depicts BEAD	Ch'olan <i>*uhy</i> 'bead, necklace', from Proto-Mayan <i>*u'h</i> (Mora-Marín 2001)
STANDARD SPELLINGS	
c) <b>UNIW(-ni-wa)</b> for <uniw> 'fourteenth month'	Ch'olan <i>*ee</i> > <i>*ii</i> shift (cf. Q'anjob'al <onew>) (Justeson and Fox 1989)
d) <b>(tu-)TUN(-ni)</b> for <i>*tu(u)n</i> 'stone, year (ending)'	Ch'olan <i>*oo</i> > <i>*uu</i> shift (cf. Proto-Mayan <i>*tooN</i> ) (Justeson et al. 1985)
NON-STANDARD SPELLINGS	
e) <b>-wa-ni</b> for <i>*-w-an(-i)</i> 'positional suffix'	Unique to Ch'olan (cf. MacLeod 1984; Justeson 1985; Justeson and Fox 1989)
f) <b>i-chi-l(a) ~ ICH(IL)(-la)</b> for <i>*ich(-il)</i> 'in, inside'	Based on Yukatekan <i>*ich</i> 'in, inside' 'eye/face/fruit' (Justeson and Fox 1989)
g) <b>-(C)i-b'(i)</b> for <i>-ib'</i> 'instrumentalizer of positionals'	Ch'orti' innovation; otherwise Ch'olan has <i>*-l-ib'</i> (Wichmann 2002)
h) <b>K'AN-K'IN</b> for <i>k'an=k'iin</i> 'fourteenth month'	Yukatekan innovation (Justeson and Fox 1989; Lacadena and Wichmann 1999)
i) T206 SNAKE (anterior date indicator) as <b>CHAN</b> for <i>cha'an</i> 'for, from, so that, because of'	Ch'ol innovation (Justeson and Fox 1989)
j) <b>HOUSE-chu</b> for <i>*otóoch</i> 'house'	Yukatekan <i>*t</i> > <i>ch</i> shift (Justeson et al. 1985; Justeson and Fox 1989)
k) <b>yo-HOUSE-che</b> for <i>*y-otóoch</i> 'house'	Yukatekan <i>*t</i> > <i>ch</i> shift (Lacadena and Wichmann 1999)
l) <b>PENIS-cha</b> for <i>*ach</i> 'penis'	Yukatekan <i>*t</i> > <i>ch</i> shift (Grube in Chase et al. 1991; Mora-Marín 2001), cf. Ch'olan <i>*at</i>
m) <b>AJ-chi</b> for <i>*aj-chi'</i> 'drunkard'	Ch'olan <i>*k</i> > <i>ch</i> shift, in contrast with Proto-Yukatekan <i>*aj-ki'</i> 'drunkard'
n) T228/229 <b>a</b> for <i>a+</i> < Proto-Ch'olan <i>*aj+</i> 'male proclitic'	Possible Chontal innovation (Justeson and Fox 1989)

Consequently, these authors succeeded not only in demonstrating a Ch'olan-based standard of the written language of CLM texts, but also the presence of local vernaculars at various sites that were of Ch'olan (Western Ch'olan) or Yucatekan affiliation. And although they did not find evidence for Eastern Ch'olan innovations, they regarded the evidence for Western Ch'olan lexical items as cases of innovations indicative of local vernaculars, not of the affiliation of the standard language of the texts; the reason for this lies in the limited number of these traits, and their narrow geographic distribution and lateness.

### **More Recent Vernacular Proposals**

More recently, Lacadena and Wichmann (1999) and other authors have contributed with several additional features that can be attributed to Yucatekan- and Ch'olan-specific vernaculars, as seen in **Table 3**.

Table 3

TYPE OF EVIDENCE	PROPOSED SOURCE
ACROPHONIC ORIGIN OF PHONETIC SIGNS	
a) T77 <b>k'i</b> , depicts WING	Yukatekan <i>*xïik'</i> 'wing' (Mora-Marín 2000)
b) T287 <b>ch'o</b> , depicts half-closed eyes	Yukatekan <i>*ch'op'</i> 'to blind temporarily' (Macri 2000)
NON-STANDARD SPELLINGS	
c) <b>yo-HOUSE-che</b> for <i>*y-otóoch</i> 'his/her/its house' (standard <b>yo-HOUSE-ti</b> for <i>*y-otot</i> )	Yukatekan <i>*t &gt; ch</i> shift (Lacadena and Wichmann 1999)
d) <b>PENIS-cha</b> for <i>*ach</i> 'penis' (standard <b>PENIS-ta/ti</b> for <i>*at</i> )	Yukatekan <i>*t &gt; ch</i> shift (Grube in Chase et al. 1991; Mora-Marín 2001), cf. Ch'olan <i>*at</i>
e) <b>jo-ch'o-b'i-ya</b> for <i>joch'-b'-iy-Ø</i> (drill-PASS-CMP-3sABS) 'it was drilled' with passivizer <i>*-b'</i> (standard unrepresented <i>-h-</i> or explicit <b>-Ca-ja</b> to spell intransitivizing passive/mediopassive suffix)	Yukatekan passivizer <i>*(a)b'</i> (< Proto-Mayan)
f) <b>u-TUN-ni-le</b> for <i>u-tuun-il+e'</i> '(as for) his stone' with topical marker <i>+e'</i> (standard spelling <b>u-TUN-ni-li</b> )	Possible Yukatekan <i>*+e'</i> 'topical marker' (Lacadena and Wichmann 1999)
g) <b>AJAW-le-l(e)</b> for <i>ajaw-l-el</i> 'rulership' with <i>-lel</i> 'abstractive' (older more widespread spelling <b>AJAW-li</b> )	Possible Western Ch'olan innovation of <i>-l-el</i> (Lacadena and Wichmann 1999)
h) <b>WINIK-la</b> for <i>winal(?)</i> 'month' (slightly older <b>WINIK-ki</b> )	Not clear, but possibly Eastern Ch'olan innovation, according to authors (Lacadena and Wichmann 1999)
i) <b>K'AN-a-si</b> for '17th month' (standard spelling <b>K'AN-a-si-ya</b> )	Not clear, but possibly an indication of loss of vowel length following disharmony hypothesis, according to authors (Lacadena and Wichmann 1999)
j) <b>-wa-ja</b> for <i>-w-aj</i> 'passivizer' (Ch'orti')	Likely Eastern Ch'olan innovation (Lacadena and Wichmann 1999)

Some of these proposed vernacular markers require some caution.



Lacadena and Wichmann point to the presence of linguistic markers attested today in Yukatekan languages, but not in Ch'olan languages. One case is made up by spellings of the Proto-Yukatekan passivizer *\*(aa)b'* (i.e. **jo-ch'o-b'i-ya** for *joch'-b'-iy-Ø* drill-PASS-CMP-3sABS 'it was drilled', Casa Colorada Hieroglyphic Band, blocks 13-14) at sites like Chichen Itza and Xcalumkin. However, this marker is not a Yukatekan innovation; it is reconstructible to Proto-Mayan as *\*-a-(a)b'* 'passivizer of root transitives' ~ *\*(a)b'* 'passivizer of derived transitives' by Kaufman (1989:Part C:5), and it is thus an inherited trait that may have survived in some form of Ch'olan.<sup>5</sup> But the fact is that no form of Ch'olan can be reconstructed with this trait through backward reconstruction, whereas Proto-Yukatekan must be. Another case is that of spellings such as **u-TUN-ni-le** for *u-tuun-il+e'* '(as for) his stone', that seem to represent the topical enclitic *\*+e'* attested in modern Yukatekan languages but not (clearly) in modern Ch'olan languages. The same reservation as before applies to this set of examples: the topical enclitic *\*+e'* is present in Tzeltalan, as seen in the following example (Hurley and Ruíz Sánchez 1978:125):

- |     |                        |                 |            |
|-----|------------------------|-----------------|------------|
| (1) | Li                     | s-pets'-ul      | ch'o+e     |
|     | DET                    | 3sERG-trap-POSS | mouse+ENCL |
|     | va'an-b'il             | ta              | ton        |
|     | stand/erect-PASS.PARTC | PREP            | stone      |

'La trampa de la rata está preparada con una piedra'

<sup>5</sup> As a matter of fact, it is possible that the term *ch'uyäbä* 'llevado en hamaca (carried in hammock)' of Chontal (Keller and Luciano G. 1997:112). This term can be analyzed as *ch'uy-äb-ä(l)* raise/hang-PASS-ST, where *-äb* may very well be a frozen reflex of Proto-Mayan *\*-*

(lit. The trap of the rat/mouse is prepared/erected/built with a stone')

This example suggests that *+e*(') might have been present in some form of Ch'olan at some point in time.<sup>6</sup> But again, this marker cannot be reconstructed to any stage of Ch'olan subsequent to the breakup of Ch'olan-Tzeltalan, given that it is not clearly attested in any Ch'olan language, whereas it must be reconstructed to Proto-Yukatekan. In both cases, this fact and the geographic distribution of the spellings provides strong, but not unambiguous support for a Yukatekan vernacular affiliation.

Lacadena and Wichmann also suggest a series of traits indicative of a geographical divide between Western Ch'olan and Eastern Ch'olan (e.g. **WINAL-la** vs. **WINIK-ki**, **AJAW-le-le** vs. **AJAW-li**, **K'AN-a-si-ya** vs. **K'AN-a-si**). The attribution to either Western Ch'olan or Eastern Ch'olan in these cases is based largely on geography; in some cases it is not based on the correlation of the observed differences in spellings with observed differences in the modern Ch'olan languages. One case in which the authors provide a possible linguistic basis for the differentiation is not clear. This is the example of the spellings **K'AN-a-si-ya** and **K'AN-a-si**. Lacadena and Wichmann argue for a difference in vowel length in the last vowel of this word based on the presence or absence of T126 **ya** at the end of the glyph. Following the disharmony principle for expressing vowel complexity (i.e. *V*;

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<sup>6</sup> There is evidence, which I defer to a future paper, that *+e*' is still present in Ch'olan, albeit in a frozen state, in forms like Ch'olti' <haine> ~ <ne> ~ <e> and Ch'orti' *e* 'the'. In any case, an enclitic *\*+e* 'that/there; the' is reconstructed to Proto-Mayan by Kaufman (1989:Part B:51).

*V'*, *Vh*, *Vj*) by Houston et al. (1998), Lacadena and Wichmann argue that the disharmonic phonetic sign **ya**, which differs in vocalic quality from the preceding phonetic sign **si**, serves as a diacritic and indicates that the vowel *i* expressed by **si** is long, i.e. ...*sii*..., rather than short, i.e. ...*si*..., which is what the spelling without T126 **ya** would indicate. Even if the disharmony principle were correct, and there are various authors, including the present one, who find serious problems with Houston et al.'s (1998) approach (Mora-Marin 2003; Kaufman 2003). The fact is that Lacadena and Wichmann (1999:18) do not provide an etymology for the term, much less of the morphemes that make it up, and without such information it is not possible to know whether there would be a difference in any linguistic feature (e.g. vowel length) between Western Ch'olan and Eastern Ch'olan for the morpheme contained in the last syllable of this word.

Lacadena and Wichmann (1999:15-16) also suggest that *-l-e/* 'abstractive' (e.g. **AJAW-le-l(e)** for *ajaw-l-e/* 'rulership' from *ajaw* 'lord') is a Western Ch'olan innovation, saying simply that "The Ch'olti' data indicate that the Eastern Ch'olan form is *ajaw-il*," and that "The Colonial (Acalan) Chontal data show *ajaw-le/* [i.e. <ajauel>], where *-e/* has been added to the proto-Ch'olan *\*ajaw-il* form." There are some problems with this assessment that lead to a different conclusion. For one, the marker *-il* is a retention from Proto-Mayan *\*-iil* (Kaufman 1989), and thus no linguistic affiliation can be based on a retention. Also, Lacadena and Wichmann do not comment on the detailed discussion of the *\*-l-e/* marker by Mathews and

Justeson (1984:230-231), in which it is pointed out that the form has a Colonial Tzeltal cognate spelled <-lel> as in <aghaulel>, supporting a possible Proto-Ch'olan-Tzeltalan reconstruction of *\*-/el/*. In fact, Tzotzil also attests to the same form. Laughlin (1978:151) includes the following entry, among several related ones: *'ajvalel* 'kingdom, nobility, prelacy'. This term can be analyzed as */ajav-al-el/*, given the entries *'ojov* 'king, lord, master of slaves, prelate' and *'ajval* 'master, person who afflicts or kills us' (Laughlin 1978:151). The Tzeltal and Tzotzil entries support a Proto-Tzeltalan suffix *\*-(V)l-el* 'abstractive'. Given its presence in Ch'ol and Chontal, this suffix may have existed in Proto-Ch'olan-Tzeltalan. This would require that the suffix must have existed in Proto-Ch'olan. Lacadena and Wichmann claim that the suffix is absent from Eastern Ch'olan. And while its presence in Tzeltalan and Western Ch'olan could support a reconstruction, the fact is that Tzeltalan and Western Ch'olan have exchanged certain linguistic traits (vocabulary, pronominal markers) with each other but not with Eastern Ch'olan, so there is a possibility that the presence of *\*-(V)l-el* in Tzeltalan and Western Ch'olan was the result of linguistic contact. In fact, I have been unable to find examples of *-el* in Tzotzil or Tzeltal with terms other than *'ajvalel*, which clearly is a politically loaded term, and may have been diffused in the context of Greater Lowland Mayan civilization (Justeson et al. 1985).

Nevertheless, there is linguistic and epigraphic support for the suggestion that *-(V)l-el* is a retention from Proto-Ch'olan, and possibly from Ch'olan-Tzeltalan. A search in Stross' (1992) online compilation of Wisdom

(1950:478) shows the following Ch'orti' entries: *ik'* 'air, atmosphere [used only in compounds]', *e ik'ar* 'the wind', *ik'arer* 'vertigo, condition of "wind" in the body (Sp. *ventosidad*)', *ik'arer u hor* 'dizziness, vertigo, insanity, hydrophobia', *ik'arer u nak* "'windiness" of the stomach', *ik'arer k'opot* 'yerba de la rábia (small wild herb)'. These entries show the root *ik'* 'air' (Proto-Ch'olan *\*ik'*) and derived forms like *ik'-ar* 'wind' and *ik'-ar-er* 'vertigo'. The last form shows a cognate with the *-(V)l-el* suffix of Tzeltalan and Western Ch'olan, and supports the suggested Proto-Ch'olan and Proto-Ch'olan-Tzeltalan reconstruction of *\*(V)l-el* 'abstractive'. Innovated *\*(V)l-el* and ancestral *\*-il* (see above) were likely in coexistence given that modern Ch'olan languages exhibit such coexistence, as the following example of *-ar-ir* from Ch'orti' shows when compared to the one below with *-ar-er* (Wisdom 1950:702): *chich* 'soft bone, hard flesh, cartilage, muscle, gristle, tendon, vein or artery, grain (in wood), tough herb or stalk, tough latex (as rubber)', *chichar* 'muscle, mass of cartilage', *chicharir* 'pertaining to the muscles'.

The epigraphic evidence supports at least a Proto-Ch'olan reconstruction. Lacadena and Wichmann (1999) point out that the first clear attestation of *-l-el* is found by A.D. 526 on Yaxchilan Lintel 47:B4. It spread very quickly throughout the Mayan lowlands: Tortuguero (A.D. 669) and Palenque (A.D. 683), although records at these sites begin rather late; Yaxchilan (A.D. 526) and Piedras Negras (A.D. 667); Tikal (A.D. 695) and Dos Pilas (A.D. 724), although records at this last site begin late; Pomona (A.D. 751) and Naranjo (A.D. 713); and Copan (ca. A.D. 682). Thus, if one were to

argue that this was a Western Ch'olan innovation (subsequent to the breakup of Proto-Ch'olan), one would have to conclude that the standardization of *-/e/* would support Western Ch'olan as the standard written language. Instead, given that Ch'ol, Chontal, and Ch'orti' attest to *-(V)/-e/*, it is possible to propose that this marker was present in Proto-Ch'olan or Common Ch'olan as *\*-(V)/-e/*, and that its spread between ca. A.D. 500-750 in CLM texts simply shows an innovation of Common Ch'olan and its spread throughout the area of Common Ch'olan speech and writing. This would suggest that Proto-Ch'olan had not diversified yet by at least A.D. 682 (or shortly thereafter), the date when the suffix is found at the opposite end of the Mayan lowlands with respect to Yaxchilan, where the marker is first attested by A.D. 526.

Interestingly, this first clear attestation at Yaxchilan postdates the first explicit evidence of exclusive Ch'olan phonological innovations by ca. A.D. 400, as discussed above. If *\*-(V)/-e/* was innovated by ca. A.D. 500, then its presence in Tzeltalan could suggest diffusion as the process involved; this is supported, again, by the fact that *-(V)/-e/* in Tzeltal and Tzotzil seems to be restricted to the one term, a term of significant political significance that may very well have been diffused (**AJAW-le(-le)** is the most frequent spelling with the marker *\*-(V)/-e/* in CLM texts). This diffusion would have been between Tzeltalan and Proto-Ch'olan. The appearance of this marker at Yaxchilan, in an area relatively close, though not immediately adjacent to the Tzeltalan speech area, could suggest that diffusion to Tzeltalan from Proto-Ch'olan, or vice versa, from Tzeltalan to Proto-Ch'olan,

may have taken place early on. As I show below, the innovation and distribution of *\*-wan* ‘positional marker’ (defined as ‘completive status of positionals’ by Kaufman and Norman [1984], but as ‘intransitivizer of positionals’ by Robertson in Houston et al. [2000]) strongly supports the scenario posited here for *\*-(V)l-el*.

Lacadena and Wichmann also distinguish what appear to be innovations of just one branch of Ch’olan. One example is spelled T130.181 **-wa-ja** for *-w-aj* ‘passivizer’ in Eastern Ch’olan, preserved in Ch’orti’). This marker is attested at Tikal (Lintel 2, Temple IV) by ca. A.D. 727, and at Copan (Altar Z) by ca. A.D. 769. Likewise, Wichmann (2003:16-17) provides support for an Eastern Ch’olan innovation at Copan in the form of a marker spelled with T585 **b’i** (presumably) for *-ib’* ‘instrumentalizer of positionals’ (i.e. Proto-Ch’olan probably had *\*-l-ib’* ‘instrumentalizer of positionals’). This marker is attested on an inscribed bench dated to A.D. 780. With examples like these in mind, Lacadena and Wichmann (1999) have prepared a series of maps indicating the approximate Classic geographic distribution of Western Ch’olan, Eastern Ch’olan, and Yukatekan (Lacadena and Wichmann 1999:Figures 11, 21-23). However, their map may not be a map of interlinguistic boundaries, at least as far as the differences between Eastern and Western Ch’olan are concerned. As already shown, some of their proposed diagnostic markers are problematic. Some are more likely cases of Proto-Ch’olan innovations, a possibility explored further below. And the more reliable ones, like *-w-aj* and *-ib’* are rather late in appearance and limited in

geographic distribution: they are more indicative of local vernacular *dialectal* innovations than of widely standardized script components. Thus, the maps provided by these authors need to be revised to distinguish between Proto-Ch'olan innovations and innovations of the Eastern and Western branches. Part of the problem with their approach is that they assume the correctness of Houston et al.'s (2000) Pre-Eastern Ch'olan hypothesis. This could be a problem should the Pre-Eastern Ch'olan hypothesis be shown to be incorrect. And as I show below, there are flaws with the data and analysis by Houston et al. (2000).

### **The Classic Ch'olti'an (Pre-Eastern Ch'olan) Proposal**

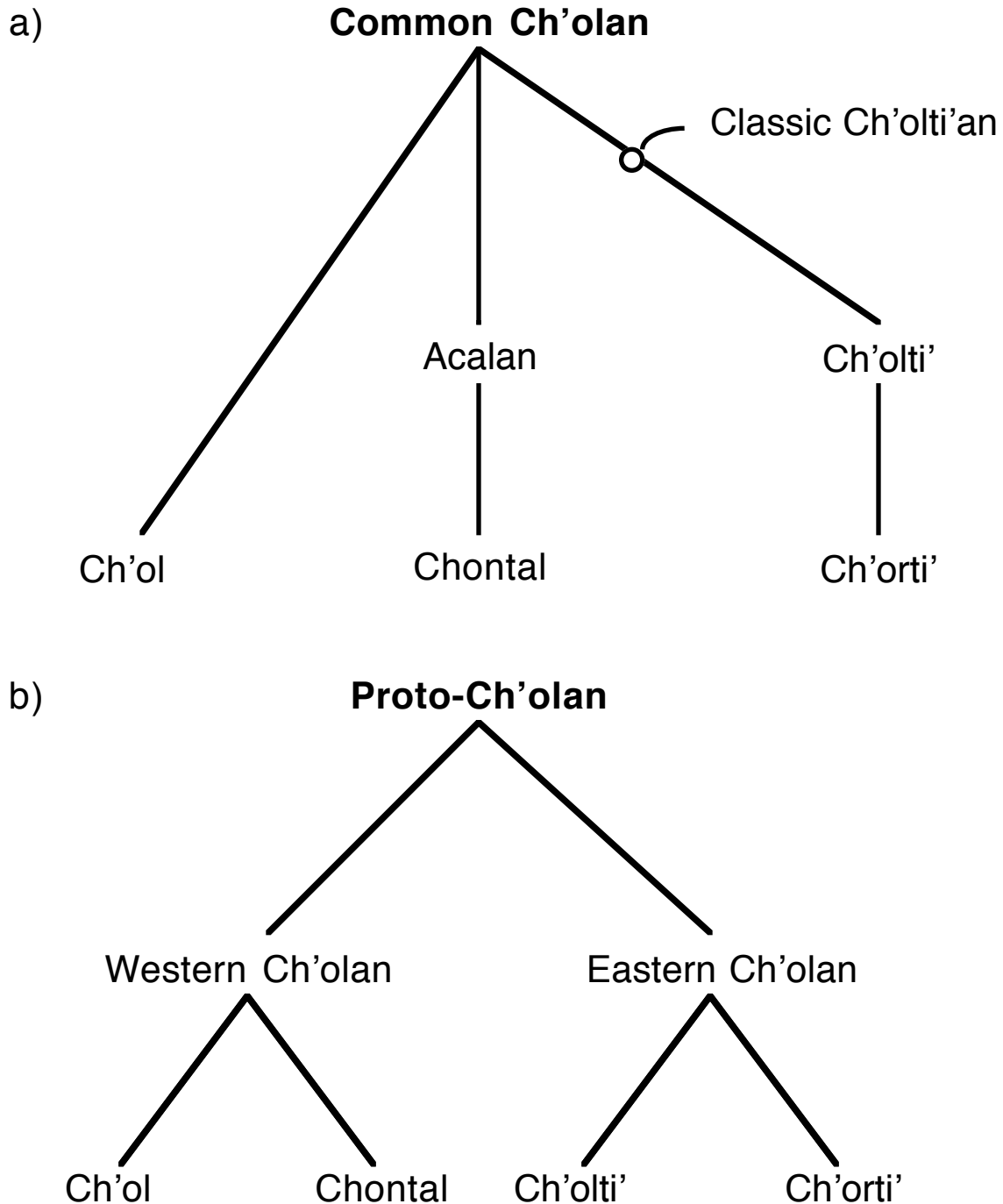
Houston et al. (2000) have proposed a language they call “Classic Ch'olti'an” to be the standard language of CLM texts. Given Robertson's (1992, 1998) hypothesis that Ch'olti' gave rise to Ch'orti', Classic Ch'olti'an would correspond to a form of Ch'olti' that preceded the form attested in Morán's colonial manuscript (ca. A.D. 1695), making the language of CLM texts a Proto-Ch'olti' language (hence Proto-Eastern Ch'olan in Kaufman's model).<sup>7</sup> Proto-Ch'olti' would have been spoken during the Classic period, hence Houston et al.'s term “Classic Ch'olti'an” (**Figure 4a**). Kaufman and Norman (1984), in contrast, have proposed Ch'olti' and Ch'orti' to be sibling Eastern Ch'olan languages (**Figure 4b**).

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<sup>7</sup> I have previously used the term Pre-Ch'olti' interchangeably with Pre-Eastern Ch'olan to refer to Houston et al.'s (2000) hypothesis, as have other scholars I know, like Hopkins (personal communication 2003). However, to maintain consistency with the use of “Proto-” and “Common” explained above, it is preferable to use Proto-Ch'olti' or Proto-Eastern Ch'olan.



Figure 4. a) Ch'olan diversification model by Robertson (1992, 1998). b) Ch'olan diversification model by Kaufman and Norman (1984).



The evidence for Proto-Eastern Ch'olan or Classic Ch'olti'an as the standard written language of CLM texts is based on three linguistic markers

which the authors in question argue constitute exclusive Eastern Ch'olan innovations: *-V1y* 'mediopassivizer', *-h-...-aj* 'passivizer', and *-b'u* 'transitivizer of positionals'. At this point I will not discuss these markers in detail. Instead I will use a different trait (i.e. split ergativity) mentioned by Stuart et al. (1999) and Houston et al. (2000) to highlight a general problem with their approach. I will address the three markers in more detail below.

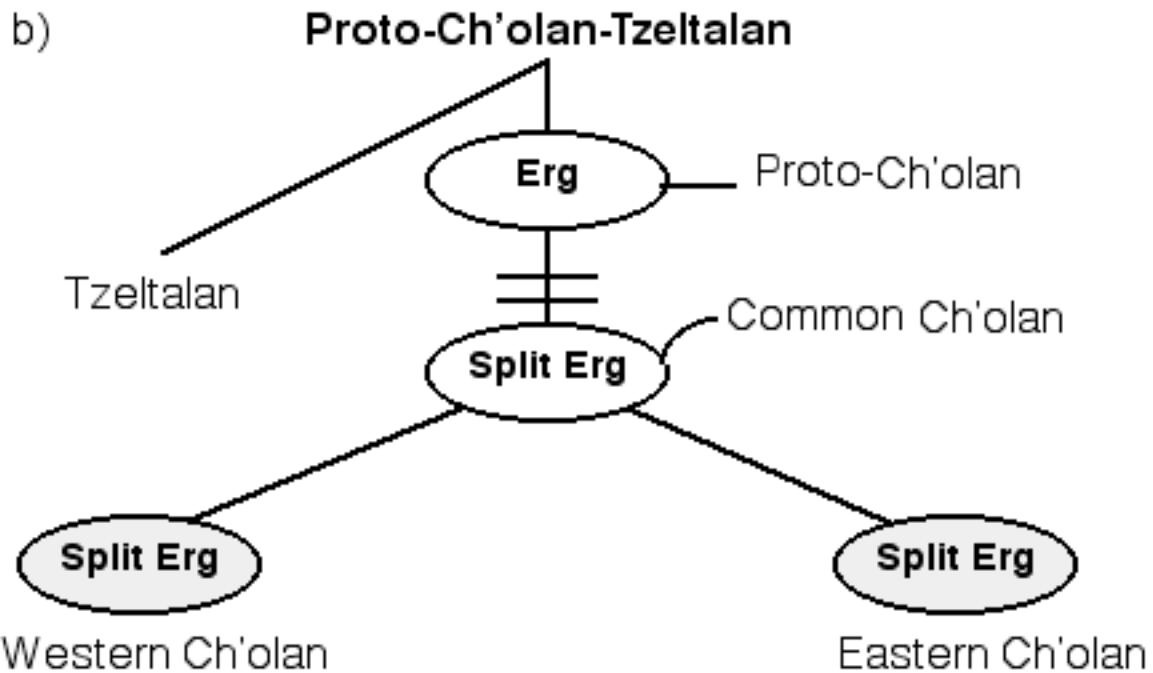
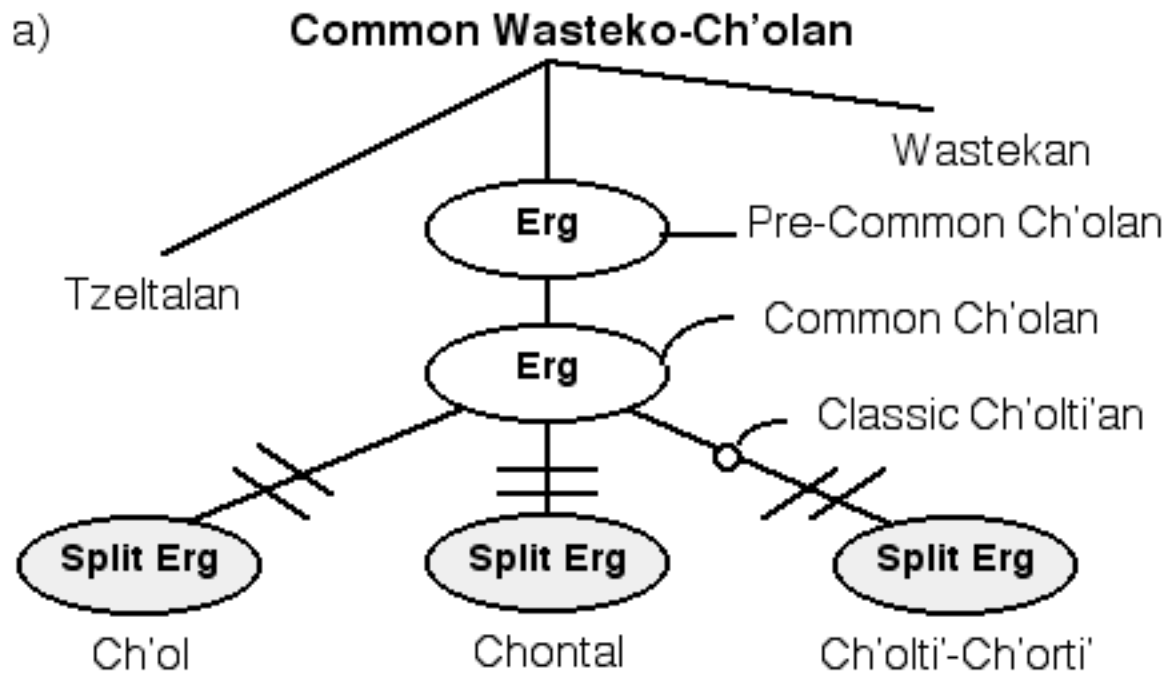
Stuart et al. (1999) and Houston et al. (2000) suggest that CLM texts do not exhibit split ergativity, but instead that they exhibit "straight ergativity," or more simply, ergativity, in Dixon's (1979, 1994) terms.<sup>8</sup> If this is correct, it amounts to saying, in Robertson's model and terminology, that Common Ch'olan lacked split ergativity, and that Ch'ol, Chontal, and Ch'olti'an developed split ergativity independently of each other, or through diffusion from one language to the other, after their split from Common Ch'olan. CLM texts would represent a stage of Ch'olti'an prior to that innovation, since the authors argue CLM texts lacked split ergativity. While this is certainly possible, it assumes three discontinuities: the independent innovation of split ergativity out of "straight ergativity" in Ch'ol, Chontal, and Ch'olti'an, as seen in **Figure 5a**.

Figure 5. Origin of Split Ergativity: a) in Robertson's (1992,

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<sup>8</sup> In a language with ergativity the subject of an intransitive verb (S) and the direct object of a transitive verb (O) receive equal treatment, while the two are distinguished from the subject of a transitive verb (A). The first two may be marked as 'absolutive', and distinguished from the third one which may be marked as 'ergative'. Thus, there is a distinction between S/O 'absolutive' and A 'ergative'. Many familiar Indo-European languages, like English, work differently. In them the subject of an intransitive verb (S) and the subject of a transitive verb (A) receive equal treatment, while the two are distinguished from the direct object of a transitive verb (O), leading to an S/A 'nominative' versus O 'accusative' distinction. Mayan languages are typically of the ergative-absolutive type.

1998) model. b) Kaufman and Norman's (1984) model.



The more widely accepted model by Kaufman and Norman (1984:81, Figure 2) suggests instead that Common Ch'olan innovated split ergativity (or

borrowed it from Yukatekan or Poqom), and therefore that both Ch'olan branches inherited this trait, as seen in **Figure 5b**. It assumes only one discontinuity (i.e. one episode of innovation of split ergativity) between Common Ch'olan and its descendants, which makes it a more likely model. As this paper shows, the Proto-Eastern Ch'olan model by Houston et al. (2000) does not take into account simplicity as an analytical tool, and many of its assumptions lead to unnecessary discontinuities. In addition, I show below, Houston et al. (2000) also avoid the task of reviewing possible alternatives to their hypothesis; their proposal is an unstated challenge for other scholars to provide a more thorough test of the data.

### **Review of the Previous Proposals and New Evidence**

Here I discuss the evidence presented by Houston et al. (2000) for the Pre-Eastern Ch'olan (i.e. Classic Ch'olti'an) hypothesis, as well as additional evidence that has been proposed in support of Eastern Ch'olan or Western Ch'olan linguistic markers by a variety of authors.

### **Eastern Ch'olan Markers**

Houston et al. (2000) propose the existence of three morphological markers which they claim are innovations of Proto-Eastern Ch'olan, i.e. "Classic Ch'olti'an":  $-V_1y$  'mediopassivizer',  $-h\text{---}aj$  'passivizer', and  $-b'u$  'causative of positionals'. As I show next, the first two do not stand a thorough evaluation, and the third one may not be an Eastern Ch'olan innovation, given the comparative data from Tzeltal and Tzotzil presented

below.

First, Houston et al. (2000:332-333) claim that the  $-V_1y$  marker of CLM texts is used as a mediopassivizer in Eastern Ch'olan and CLM texts. However, Kaufman and Norman (1984:103-104) have shown that Proto-Eastern Ch'olan  $*-V_1y$  was a status marker, and not a voice marker, as seen in **Table 4a**.<sup>9</sup>

Table 4

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<sup>9</sup> The verbs and markers in question are always spelled phonetically as **CV<sub>1</sub>-CV<sub>1</sub>-yi**, e.g. **pu-lu-yi, jo-mo-yi, ja-tz'a-yi**, et cetera. See Houston et al. (2000:334, Figure 5) for examples.

Evidence for the *-V <sub>1</sub> y marker	
a) Status Marker (Kaufman and Norman 1984:103-105)	
CH'OLTI'    -V <sub>1</sub> y vs. -el	
1) Completive/Indicative:	<van-ai> 'to sleep', <och-oi> 'to die'
2) Incompletive:	<van-el>, <och-el>
CH'ORTI'    -V <sub>1</sub> y vs. -en	
1) Completive/Indicative:	num-uy 'pass', ekm-ay 'go down'
2) Incompletive:	num-en 'pass!', ekm-en 'go down!'
b) Change-of-State and Motion	
CH'OLTI'    -V <sub>1</sub> y	
1) Change-of-state:	<van-ai> 'to sleep', <cham-ai> 'to die'
2) Motion:	<och-oi> 'enter', <loc-oi> 'go out'
3) Root transitive:	<pul-ui> 'burn'
CH'ORTI'    -V <sub>1</sub> y ~ -ay	
1) Change-of-state:	cham-ay 'die', kar-ay 'get drunk'
2) Motion:	lok'-oy 'go out', t'ab'-ay 'go up', ekm-ay 'go down'
3) Root Transitive:	pur-uy 'burn'
CH'OL        -äy ~ -iy	
1) Change-of-state:	wäy-äy-on (sleep-CMP-1sABS) 'I have already slept' (Schumann 1973:26) chäm-el-äy-el 'to be about to die' (Aulie and Aulie 1978:52) (no usage examples provided with entry)
2) Motion:	yajl-iy-on (fall-CMP-1sABS) 'I fell' (Schumann 1973:26)

The paradigmatic relationship between -V<sub>1</sub>y, -el 'incompletive status marker', and -en 'imperative status marker' in Ch'olti' and Ch'orti' strongly suggests that -V<sub>1</sub>y is not a 'mediopassivizer' (voice derivation) but a 'completive status marker' (tense/aspect inflection), as proposed by

Kaufman and Norman (1984).<sup>10</sup> Houston et al. (2000:333) also claim that Proto-Eastern Ch'olan \*-V<sub>1</sub>y was originally a mediopassivizer which later became extended to mark change-of-state (e.g. **pu-lu-yi** for *pul-uy(-i)-Ø* burn-?(-CMP)-3sABS 'it burned') and motion (e.g. **hu-b'u-yi** for *hub'-uy(-i)-Ø* descend-?ST(-CMP)-3sABS 's/he/it descended') verbs, and that these changes were exclusive to "the Ch'olti'an [Eastern Ch'olan] subgroup." The examples of -äy and -iy in **Table 4b** for modern Ch'ol are in fact cases of change-of-state and motion verbs. Though at present I lack sufficient data to determine whether these two allomorphs are part of a more systematic -V<sub>1</sub>y morpheme, the limited evidence is consistent with such hypothesis. Thus, pending further (field) research to test for the possible presence of -V<sub>1</sub>y in Ch'ol, the use of \*-V<sub>1</sub>y (as a status marker) with change-of-state and motion verbs may very well have been a Common Ch'olan trait.

Kaufman and Norman (1984) do not offer an etymology for \*-V<sub>1</sub>y, only arguing that in Proto-Eastern Ch'olan it was a status marker of some intransitives. Kaufman (1989:Part B:150, 178; 1989:Part C:6, 28) does reconstruct \*-e(y) ~ \*-V<sub>1</sub>y 'versive (i.e. to become X)' to Proto-Ch'olan-Tzeltalan [his Proto-Greater Tzeltalan], which he reconstructs all the way

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<sup>10</sup> The marker -V<sub>1</sub>y was used on root transitives in CLM texts. However this does not necessarily mean -V<sub>1</sub>y was a 'mediopassivizer', a kind of marker that usually is used with transitives. Both Ch'ol and Chontal have some root transitives that are bivalent, among them *pul* 'to burn' (Aulie and Aulie 1978:96), a change-of-state verb, which happens to be the most common root transitive in CLM texts that takes -V<sub>1</sub>y (spelled **PUL-yi** and **pu-lu-yi**). Thus, it is possible that the marker may have been used not as a mediopassivizer but more generally as a change-of-state marker, since it is likely that Proto-Western Ch'olan had such a class of bivalent verbs. Aissen (1987:92) describes a class of bivalent verbs in Tzotzil. Unless this is a development due to language contact between Tzeltalan and Western Ch'olan, it is possible that bivalent verbs constitute a Proto-Ch'olan category.

back to Proto-Mayan as *\*-er* ‘versive (i.e. to become X)’. Robertson, in Houston et al. (2000:332), reconstructs the Proto-Mayan ancestor of their proposed CLM *-V<sub>1</sub>y* ‘mediopassivizer’ as *\*-er*, only as a ‘positional intransitivizer’. Kaufman (1989:Part C:38, 40) suggests that Proto-Ch’olan-Tzeltalan *\*-e(y) ~ \*-V<sub>1</sub>y* ‘versive’ changed to *\*-e(y)* ‘passive of root transitives’ in Tzotzil, while in Tzeltal it changed to *\*-V<sub>1</sub>y* ‘frozen intransitivizer’. The evidence from CLM texts suggests that Ch’olan retained *\*-V<sub>1</sub>y* after the breakup of Proto-Ch’olan-Tzeltalan; furthermore, this marker was preserved in Ch’ol (at least as *-äy ~ -iy*), Ch’olti’ (*-V<sub>1</sub>y*), and Ch’orti’ (*-V<sub>1</sub>y ~ -ay*). The Ch’ol form *-iy* is equivalent in function to Ch’orti’ *-ay*; both suggest the existence of a specific default *-Vy* form used on roots with CVCC shapes such as *yajl* in Ch’ol and *ekm* in Ch’orti’ examples above. Thus, Proto-Ch’olan probably had *\*-V<sub>1</sub>y ~ \*-Vy*, where the second form might have been specifically *-ay* or *-iy* or even *-ey*, given Proto-Ch’olan-Tzeltalan *\*-e(y)*.

Equally strong objections can be presented against the *-h...-aj* ‘passivizer’ proposed by Houston et al. (2000:330). These objections are illustrated in **Table 5**.

Table 5



<p>a)</p> 	<p><b>CHOK-(k)a-j(a)</b>  cho[h]k-aj-Ø-Ø <i>or</i> chok-aj-Ø-Ø  throw.down([PASS])-?-?CMP-3sABS  ‘It was/got thrown down’</p>
<p>b)</p> 	<p><b>CHOK</b>  cho[h]k-Ø-Ø  throw.down[PASS]-?CMP-3sABS  ‘It was/got thrown down’</p>
<p>c)</p> 	<p><b>AK'T-ta-j(a)</b>  ahk'[o]t-aj-Ø-Ø  dance-IVZR-CMP-3sABS  ‘He danced’  (Dos Pilas Stela 15)</p>
<p>d)</p>  <p><b>K'AL-ja-HUN</b>  k'al-[a]j-Ø-Ø=hu(*)n  wrap-IVZR-CMP-3sABS-paper  ‘<i>Sihjyaj Chan K'awil</i> (Sky-borne K'awil) paper[headband]-wrapped’  (Tikal Stela 31)</p>	 <p><b>SIJYAJ-CHAN-K'AWIL</b>  sihj-yaj-chan-k'awil  be.born-PRTC-sky-k'a(h)wil  ‘<i>Sihjyaj Chan K'awil</i> (Sky-borne K'awil) paper[headband]-wrapped’</p>

For one, CLM texts do not represent preconsonantal *h* (Justeson 1989; Lacadena and Wichmann 2004), which means that there can be no fully explicit representation of a *CVhC...* stem, whether passive or otherwise. In other words, **CHOK-ka-ja** (Table 5a) could spell either *chok-aj* or *cho[h]k-aj*. Moreover, *-h-* and *-aj* do not need to be bound to one another, as Houston et

al.'s proposed *-h-...-aj* would make it seem. For example, **CHOK-ka-ja** (Table 5a), used as an intransitivized form of *chok* 'to throw down', can represent either *chok-aj* or *cho[h]k-aj*, but **CHOK** (Table 5b), most likely represents *cho[h]k*, where the infix *-h-* is a 'passivizer', showing that *-aj* need not be present at the same time as *-h-*, and furthermore, that Kaufman and Norman's (1984:109) proposed Proto-Ch'olan *\*-h-* 'passivizer' (< Proto-Mayan *\*-h-* 'mediopassivizer') was in fact present in CLM texts. Additionally, other derived intransitives (root transitives and action nouns) may take *-aj* in CLM texts, as pointed out by Lacadena (1996). The verb **AK'(O)T-(t)a-j(a)** (Table 5c) for *ahk'(o)t-aj-Ø-Ø* (dance-IVZR-CMP-3sABS) 's/he danced' is an intransitive verb derived from the noun *ahk'ot* 'dance'. It is possible that the same suffix was used in examples like **K'AL-ja=HUN** (Table 5d), followed by the name phrase of the verb's subject (in this case the doer of the action), *Sihjyaj Chan K'awil*, must be analyzed as an antipassive verb based on the root transitive verb *k'al* 'to wrap' given that the act alluded to (self-coronation by the acceding king) requires an interpretation in which the actor is acting on himself (yet the verb is not reflexive): *k'al-aj-Ø-Ø=hu(')n* (wrap-IVZR-CMP-3sABS=paper) 'he paper-wrapped'. In fact, in modern Ch'orti' the suffix *-a* is not only attested with *-h-...-a* 'passivizer', but also with other kinds of intransitives derived from active nouns (e.g. *akt-* 'dance') and transitives (*k'ech* 'to lead'), as seen in Table 6:

Table 6

Uses of Ch'orti' *-a*:

<i>akt-a</i>	dance-IVZR	'to dance'
<i>xan-a</i>	walk-IVZR	'to walk'
<i>k'ech-p-a</i>	guide-PASS-IVZR	'to be led'
<i>k'ech-m-a</i>	guide-APASS-IVZR	'to lead'

The reflex of this marker in modern Ch'ol (*-ij* ~ *-uj*) is in fact used as an intransitivizer of root transitives with antipassive (i.e. agent-focused) meaning. Consequently, this *-aj* suffix was some sort of intransitivizer. Kaufman (1989:Part B:155, 1989:Part C:30) has proposed a Proto-Mayan *\*-aj* 'mediopassivizer of derived transitives' which would be the source of the suffix that Kaufman and Norman (1984:109) reconstruct as *\*-aj* 'intransitivizer' in Proto-Ch'olan-Tzeltalan. Houston et al. (2000:330) do not carefully evaluate other proposals, but simply state the following in the form of a footnote:

Kaufman and Norman (1984:109) propose that an *-aj* intransitivizer was suffixed to the root transitive passive *CV-h-C* to form the bipartite *-h-...-aj* in Ch'olti'an. We do not of course believe this, but it is a possible etymology for the intransitive positional that we reconstruct from Common-Wasteko-Ch'olan.

The fact that Ch'orti' uses *-a* (attested as <*-a*> ~ <*-aj*> in Ch'olti') as a suffix of derived intransitives strongly supports Kaufman and Norman's (1984) analysis. Should Houston et al. (2000) have attempted to test Kaufman and Norman's hypothesis they would have surely come across these

lines of evidence in its support.

Houston et al. (2000) also argue that the suffix *-b'u* 'transitivizer of positionals', which is attested in CLM texts (e.g. **u-TZ'AK-b'u**), is an Eastern Ch'olan innovation.<sup>11</sup> They propose that CLM texts (i.e. "Classic Ch'olti'an") exhibit *-b'u/-b'a/-chokon* 'positional transitivizers', although they do not provide hieroglyphic evidence to support the *-b'a* and *-chokon* examples (Houston et al. 2000:331, Table 5). Examples for *-b'u* and *-b'a* provided by Stuart et al. (1999:II-32) and Houston et al. (2001:28, 30, Figure 12a, Table 7) usually include the following stems: *tz'ak-b'u* based on *\*tz'ak* 'to follow' (e.g. **u-TZ'AK-b'u**), *pat-b'u* based on *\*pat* 'to form/build' (e.g. **u-PAT-ta-b'u-ji**) and *kuch-b'a* based on *\*kuch* 'to carry' (e.g. **u-KUCH-b'a(-li)**).<sup>12</sup> The authors cite Ch'olti' for *-b'u/-chokon*, and Ch'orti' for *-b'u/-b'a*. They note the presence of *-chokon* in Ch'ol, and the absence of a cognate of any of these suffixes in Acalan Chontal (i.e. "Classical Chontal"). They reconstruct *\*-b'a*: (henceforth *\*-b'aa*) back to Proto-Ch'olan (i.e. "Common Ch'olan") given that a marker of the form *\*-b'aa* can be reconstructed to Proto-Mayan (i.e. "Common Mayan"), and that evidently Ch'orti' inherited such marker. And last, for the purposes of this paper, it is worth mentioning that the authors reconstruct *\*-h-...-an* 'transitivizer of positionals' for Proto-

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<sup>11</sup> The *-b'u* marker was identified independently by Stephen Houston and Barbara MacLeod, as noted by Lacadena (1998:31-32, Endnote 11) and Zender (1999:96, Footnote 72).

<sup>12</sup> I do not know of any examples of the suffix *-chokon* (or *-choki*, see below) in CLM texts. Moreover, most examples of the stems with *-b'a* are in nominalized contexts, or at least are analyzed and interpreted as such by the scholars who have studied them in detail. I know of no examples of active transitive stems with this marker, which makes it difficult to assess whether they are correctly identified.

Tzeltalan (i.e. “Common Tzeltalan”) as functionally or semantically equivalent to, but not cognate with *-b’u/-b’a/-chokon* in Ch’olan.

A few minor revisions are in order here before proceeding. For one, as Kaufman and Norman (1984:106) and Wichmann (2002:32) have noted, Ch’olti’ shows both <-bu> and <-bi>, and furthermore, Ch’olti’ attests to <-choki>, not <-chokon>; the last point suggests that Proto-Ch’olan may have had *\*-chok(-o/i)*, and that the *-n* of *-chokon* in Ch’ol may correspond to a derived transitive incomplete status marker. And for another, despite citing *-chokon* (i.e. *-chokon*, *-choki*) in both Ch’ol and Ch’olti’, Houston et al. (2000:331, Table 5) do not reconstruct this marker to Proto-Ch’olan.

Here I will merely discuss the following claims by Houston et al. (2000) regarding this marker. First, they claim that *-b’u* and *-b’a*, present in both CLM texts and Ch’orti’, are reflexes of “Common Mayan” (i.e. Proto-Mayan in Kaufman’s terms) *\*-b’aa* ‘transitivizer of positionals’. Second, they claim that Proto-Tzeltalan used *\*-h-...-an* as the equivalent of Proto-Ch’olan *\*-b’a* and *\*-chok(-V)*. Third, they claim that the allomorph *-b’u* is an Eastern Ch’olan innovation, with no outside cognates. And fourth, they reconstruct only *\*-b’aa* to Proto-Ch’olan. Because the comparative study of the history of this marker, and of functionally similar markers attested in the Ch’olan languages, the current objective is only to provide evidence for an alternative to Houston et al.’s (2000) claim pertaining the Eastern Ch’olan innovation of *-b’u*.

I generally agree with the Proto-Ch'olan reconstruction of *\*-b'aa* by Houston et al. (2000:331, Table 5), although it may have been *\*-b'a* instead. The authors reconstruct *\*-b'aa* to Proto-Mayan, given evidence from various languages representing a variety of subgroups (Ch'olan, Q'anjob'alan, Mamean, K'iche'an). Kaufman (1989:Part D:6, 24) reconstructs *\*-V<sub>1</sub>b'a'* as 'depositive (to put into X position)' for Proto-Mayan, and *\*-V<sub>1</sub>b'a'* for Proto-Western Mayan, and notes that this marker applied to positional roots only. He does not reconstruct it to Proto-Ch'olan-Tzeltalan, Proto-Tzeltalan, or Proto-Ch'olan. Kaufman (1989:Part B:226) notes the presence of *-h---an* 'depositive' in Tzeltal; Houston et al. (2000:331, Table 5) list *-h---an* for Tzeltal and *-an* for Tzotzil. Kaufman (1989:Part C:39) in fact reconstructs *\*-h---an* 'depositive' to Proto-Tzeltalan, which is of course comparable to Houston et al.'s (2000) reconstruction of *\*-h---an* 'positional transitivizer' to Proto-Tzeltalan. However, Houston et al.'s definition as 'positional transitivizer' is too broad and does not distinguish between the 'depositive (to put into X position)' and 'portative (to carry in X position)' functions defined by Kaufman. Indeed, Kaufman (1989:Part B:226) reconstructs this marker to Proto-Mayan as *\*-h---a/e* 'portative'. Kaufman does reconstruct *\*-V<sub>1</sub>b'a'* to Proto-Western Mayan, the ancestor of Proto-Ch'olan-Tzeltalan and Proto-Greater Q'anjob'alan, but he argues it was lost already by Proto-Ch'olan-Tzeltalan times.<sup>13</sup>

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<sup>13</sup> He does leave open the question of what may have taken over the function of 'portative' after Tzeltalan reanalyzed *\*-h---an* < *\*-h---a/e* as 'depositive', and he is uncertain about when this change might have taken place (Kaufman 1989:Part C:40).

The Proto-Mayan reconstructions of the marker by Kaufman (1989) and Houston et al. (2000) can be revised. First of all, it is implicit in Houston et al.'s (2000) argument that the  $-V_1$  that forms part of the marker in some languages is thought to be part of a separate suffix, probably part of the  $*-V_1/$  'stative' suffix of positionals (i.e.  $*-V_1/ + *-b'a(a)(') = *-V_1b'a(a)(')$ ). I agree with this implicit analysis, and prefer to reconstruct the marker as  $*(V_1-)b'a(a)(')$ , in other words, as a set of allomorphs  $*-b'a(a)(') \sim *-V_1-b'a(a)(')$ .<sup>14</sup> Second, I agree with Kaufman in that it is preferable to reconstruct the marker with a final glottal stop, which would result in  $*-b'a(a)' \sim *-V_1-b'a(a)'$ . In addition, neither Kaufman (1989) nor Houston et al. (2000) make use of more recent data on this marker's reflexes. Neither lists Yukatekan among the subgroups with reflexes of the suffix. Nevertheless, recent data from Itzaj supports its survival in Proto-Yukatekan as  $*-b'aj$ . Indeed, in Itzaj, this suffix can be described as capable of deriving positionals into transitives, which can in turn undergo intransitivizing operations (e.g. antipassivization):  $k-u-näk-b'aj-Ø-Ø$  (ASP-3sERG-sit-TRVZR-INC-3sABS) 's/he seats (someone)' and  $näk=b'aj[-n-aj]-ij$  (sit=self[-APASS]-3sABS:CMP) 's/he sat (someone) (down)' (Hofling and Tesucún 1997:16).<sup>15</sup> And when one takes into account data such as the reflexes in Q'anjob'al listed by Montejo and Nicolas Pedro (1996:95),  $-b'ay \sim -$

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<sup>14</sup> Perhaps some Proto-Mayan had both allomorphs  $*-b'a(a)' \sim *-V_1-b'a(a)'$ , in free variation or in complementary distribution. Some languages subsequently may have preserved only one of the allomorphs.

<sup>15</sup> While Hofling (1997:16) analyzes  $-b'aj$  as the reflexive root  $b'aj$ , and he therefore analyzes the previous examples as  $k-u-näk=b'aj-Ø$  's/he seats (someone)' and  $näk=b'aj-n-aj-ij$  's/he sat (someone) (down)', it seems clear that we are dealing with a reflex of  $*-V_1b'a$ .

*b'aj*, the match between Q'anjob'al *-b'aj* and Itzaj *-b'aj* could support a Late Proto-Mayan (Proto-Mayan minus Wastekan) reconstruction of a *\*-b'aj* allomorph, and hence of Proto-Yukatekan *\*-b'aj*. These data, in turn, could suggest a Proto-Mayan set of allomorphs *\*(V<sub>1</sub>-)b'a(a)' ~ \*(V<sub>1</sub>-)b'a(a)j*.

Regarding the Tzeltalan marker *\*-h-...-an*, Kaufman (1989) argues that it descends from Proto-Mayan *\*-h-...-a/e* 'portative', but that it became redefined as 'depositive' in Tzeltalan, taking the place of the former 'depositive' marker, a descendant of Proto-Mayan *\*-V<sub>1</sub>b'a'* (my proposed *\*(V<sub>1</sub>-)b'a(a)' ~ \*(V<sub>1</sub>-)b'a(a)j*) which he reconstructs to Proto-Western Mayan as *\*-V<sub>1</sub>b'a'*. This original 'depositive' marker, he argues, may have been lost in Ch'olan-Tzeltalan, and thus, it may not have been present in either Proto-Tzeltalan or Proto-Ch'olan. Nevertheless, Houston et al.'s (2000) point is clear: Ch'olti' and Ch'orti' attest to this marker. Therefore it must have been present in Proto-Ch'olan and Proto-Ch'olan-Tzeltalan. But what was its shape at those stages? Could it be present to this day in Tzeltal or Tzotzil? Houston et al. (2000:331, Table 5) reconstruct it as *\*-b'aa* to Proto-Ch'olan, since Ch'orti' has *-b'a*, which is a direct cognate with markers found in other Mayan subgroups. An example of *-h-...-an* in Tzeltal illustrates the 'depositive' meaning (Slocum and Gerdel 1999:120):

- |     |     |                              |             |
|-----|-----|------------------------------|-------------|
| (2) | La  | s-te[h]c'-an                 | s-na        |
|     | CMP | 3sERG-stand[DEPOSITIVE]-TVZR | 3sERG-house |
|     | te  | winiqu+e                     |             |



‘El hombre erigió su casa/The man erected the house (lit. The man put the house in a standing position)’.

(3) ts'eh-p'u-j-Ø  
sidle-DEP-IVZR-3sABS  
'Se puso de lado (lit. S/he/it put her/him/itself on her/his/its side)'.  
[10]

Consequently, it is clear that *-h...-a-n* is not unique as a ‘depositive’ marker in Tzeltal. It shares this function with other markers, including *-p’u-n*. And

also, it is clear that the depositive marker itself is really *-h...-a*, not *-h...-an*, since *-h...-a* is the basis for either transitive (*-h...-a-n*) or intransitive (*-h...-a-j*) depositive stems. The same seems to be true for *-p'-u-n* and *-p'-u-j* (see below for explanation of morphemic divisions of these markers). These additional depositive markers are also present in Tzotzil, and as I show next, they represent a closer match to the Proto-Ch'olan marker *\*-b'a(a)(')*.

The depositive markers of Tzeltal just mentioned can be either transitive or intransitive; a transitivizing suffix, *-(V)n*, or an intransitivizing suffix, *-(V)j*, is needed to form a verbal stem. (Presumably, a nominal stem could be formed by adding a nominalizing suffix after the depositive marker, but I do not have evidence for this at this point.) Furthermore, it seems that the marker is composed of three segments, not just two: *-p'-V-(n/j)*, with the vowel being either *-u* or *-i*. Interestingly, even though Tzeltal thematic vowels used on root transitive and positional verbs usually include *-a*, *-u*, and *-i* (Slocum 1948:82), when the stem-forming suffix is *-p'*, then the vowels are only *-u* or *-i*, resulting in *-p'-u(-n/j) ~ -p'-i(-n/j)*. The data from Tzeltal and Tzotzil in **Table 7** illustrate these markers:

Table 7

- a) TZELTAL (Slocum and Gerdel 1999:6, 19, 24, 59, 84, 116, 133)  
*al-p'-u-j-el* (vi) 'calmar, disminuir, mitigar' (cf. *al* (ve) 'estar pesado')  
*cot-p'-i-j-el* (vi) 'recibir empujón' (cf. *cot* (ve) 'estar parado (cuadrúpedo)')  
*cot-p'-i-n-el* (vt) 'empujar'  
*joy-p'-i-j-el* (vi) 'girar' (cf. *joyol* (ve) 'estar en un círculo')  
*joy-p'-i-n-el* (vt) 'hacer girar'  
*c'at-p'-u-j-el* (vi) 'cambiarse, transformarse' (cf. *c'atal* (ve) 'estar atravezado')  
*c'at-p'-u-n-el* (vt) 'alterar, cambiar en, convertir en'  
*say-p'-u-j-el* (vi) 'pandear, flaquear' (cf. *saya* (ve) 'estar abatido')  
*say-p'-u-n-el* (vt) 'hacer pandear, flaquear'  
*ts'eh-p'-u-j-el* (vi) 'ladearse' (cf. *ts'ehel* (ve) 'estar de lado')  
*ts'eh-p'-u-n-el* (vi) 'poner de lado'  
*nij-p'-u-j-el* (vi) 'caerse de frente' (cf. *nijil* = *jol* (ve) 'estar inclinada la cabeza, estar cabizbajo')  
*nij-p'-u-n-el* (vt) 'hacer inclinar'  
*sut-p'-i-j-el* (vi) 'voltearse' (cf. *sutel* (vt) 'devolver')  
*sut-p'-i-n-el* (vt) 'voltear, girar'
- b) TZOTZIL (Hurley and Ruíz 1978:68, 91, 209, 210),  
Laughlin 1988:208-9, 181, 272, 299-300)  
*jel-p'-u-n* (tv) 'toss arms of one's shirt over one's shoulders' (cf. *jel* (tv) 'atajar pasando adelante; pasar sin topar; privar, quitar de oficio, privar a otro')  
*tz'ot-p'-i-j* (vi) 'become twisted, twist' (cf. *tz'ot* (tv) 'turn (candle, stick), twist, twist between fingers')  
*tz'ot-p'-i-n* (vt) 'make rebound, straighten, twist'  
*sut-p'-i-j* (vi) 'be converted or transformed, turn around' (cf. *sut* (iv) 'return')  
*sut-p'-i-n* (vt) 'comment, explain'  
*nij-p'-u-j* (vi) 'stray off the line or path'  
*nij-p'-u-n* (*yalel*) (vt) 'push down head first' (Aissen 1987:88)  
*joy-p'-i-j-el* (San Andrés) ~ *joybijel* (Cham., Ch'en.) (vi) 'dar una vuelta'  
*joy-p'-i-n* (San Andrés) ~ *joybin* (Cham., Ch'en.) (vt) 'hacer dar vueltas' (cf. *joyel* 'rodear, cercar')  
*ts'ep'-u-j* (vi) 'se pone de lado'  
*ts'ep'-u-n* (San Andrés) ~ *ts'ebun* (Cham., Ch'en) (vt) 'lo pone de lado, lo ladea' (cf. *ts'eel* 'estar de lado')

First, the ‘depositive’ marker is  $-p'-V(-n/j)$ . The quality of the thematic vowel depends on the vowel of the root: root vowels *i*, *e*, *a*, require *-u* as theme, while root vowels *u*, *o*, require *-i* as theme. The suffixes *-n* and *-j* transitivize and intransitivize, respectively. Second, in Tzotzil, the Chamula and Chenalhó dialects do not have  $-p'-V(-n/j)$ , but  $-b'-V(-n/j)$ . Almost all cases of *p'* in Tzeltalan and Ch'olan originate in earlier  $*b'$ ; this is due to the split of Proto-Mayan  $*/b'/*$  into  $/b'/*$  and  $/p'/*$  which took place in Tzeltalan, Ch'olan, and Yukatekan, but Yukatekan is not of relevance here. It is reasonable to assume that Tzeltalan  $*-p'-V(-n/j)$  started out as  $*-b'-V(-n/j)$ . In fact, this was certainly the case given that the Chamula and Chenalhó Tzotzil dialects exhibit  $-b'-V(-n/j)$  instead of  $-p'-V(-n/j)$ ; such dialects show conservatism, having retained  $*/b'/*$  unaffected by the split. There is additional evidence in support of this, as seen in **Table 8**.

Table 8

a) TZOTZIL (Hurley and Ruíz 1978:18, 21, 23, 89, 93, 103, 105, 117)  
*p'ajel* (San Andrés) ~ *bajel* (Cham, Ch'en) 'gotear; escurrir; despreciar'  
*p'isel* (San Andrés) ~ *bisel* (Cham, Ch'en) 'medir, pesar'  
*p'is* (San Andrés) ~ *bis* (Cham, Ch'en) 'copa'  
*p'ejel* 'puesto o tirado (cosas redondas)' (San Andrés)  
*bejel* 'una unidad (granos, frutas, etc.)' (Cham, Ch'en)  
*p'itel* (San Andrés) ~ *bitel* (Cham, Ch'en) 'brincar'  
*p'olesel* (San Andrés) ~ *bolesel* (Cham, Ch'en) 'criar, multiplicar'  
*p'olomal* (San Andrés) ~ *bolomal* (Cham, Ch'en) 'comercio, mercancía'  
*p'osiel* (San Andrés) ~ *bosiel* (Cham, Ch'en) 'tropezar'  
*p'up'* (San Andrés) ~ *bub* ~ *bup'* (Cham, Ch'en) 'polvo'  
*p'us* (San Andrés) ~ *bus* (Cham, Ch'en) 'cangrejo'  
*p'us-pat* (San Andrés) ~ *bus-pat* (Cham, Ch'en) 'jorobado'  
*nupel* 'encontrar, unir, pegar' (perhaps related to *nap'el* 'pegar')  
*nupunel* 'casamiento' (no variant with *b'* or *p'*)  
*sip* 'garrapata' (no variant with *b'* or *p'*)

b) CH'ORTI' (Pérez Martínez et al. 1996:19, 21, 76, 179, 180, 186-7)  
*b'ejt* 'olla'  
*b'oro* 'aumentó', *b'orojseyaj* 'multiplicación'  
*u-b'a'x-i* 'maldijo'  
*b'ixir* 'vivo, despierto'  
*sip* 'garrapata'

c) PROTO-CH'OLAN (Kaufman and Norman 1984)

<i>*p'äj</i> 'maldecir'	<i>*näp'</i> 'pegar (stick to)'
<i>*p'el</i> 'aserrar/rebanar'	<i>*nejep'</i> 'viejito, sazón'
<i>*p'en</i> 'fornicar'	<i>*nup'</i> < <i>*nup</i> 'casarse'
<i>*p'eht</i> 'olla'	<i>*sep'</i> 'pellizcar'
<i>*p'ich</i> 'hacer tacos'	<i>*sip'</i> < <i>*sip</i> 'hincharse'
<i>*p'is</i> 'medir'	<i>*sop'</i> 'light and frothy'
<i>*p'ix</i> 'despertarse'	<i>*tep'</i> 'envolver'
<i>*p'ol</i> 'abundar'	<i>*top'</i> 'quebrar, romper, explotar'
<i>*p'ul</i> 'empachado/amontonado'	
<i>*p'us=pat</i> , <i>*b'us=pat</i> 'corcovado, jorobado'	

The Tzotzil data (Table 8a) shows that some dialects remained immune to

the shift. Interestingly, Ch'orti' (Table 8b) apparently was immune to the shift too. Kaufman and Norman (1984) reconstruct the split as present in Proto-Ch'olan, but point out a few instances where Proto-Ch'olan *\*p'* comes from *\*p* (*\*nup'* < *\*nup*, *\*sip'* < *\*sip*) and one instance where Proto-Ch'olan shows free variation between *\*p'* and *\*b'* (i.e. *\*p'us=pat* ~ *\*b'us=pat*). Although Kaufman and Norman (1984:86) suggest that Ch'orti' may have experienced a merger of /*p'*/ and /*b'*/ back into /*b'*/ after the diversification of Proto-Ch'olan, the evidence from Tzotzil could suggest that maybe the shift was not as pervasive, and perhaps not as early as Kaufman and Norman (1984) propose. Rather than a shared innovation of Ch'olan-Tzeltalan, the shift may have been diffused through contact after the diversification of Ch'olan-Tzeltalan; if Ch'orti' is conservative and never underwent the split, one could entertain the possibility that the diffusion took place between Tzeltalan, Western Ch'olan (and Yucatekan), leaving Eastern Ch'olan and some Tzeltalan dialects unaffected.<sup>16</sup> In any case, it seems clear now that Proto-Tzeltalan had *\*-b'-V(-n/j)* ~ *\*-p'-V(-n/j)*

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<sup>16</sup> The implications for historical linguistics would be clear: Proto-Ch'olan may not need to be reconstructed with both *\*/b'/\** and *\*/p'/\** from Proto-Mayan *\*/b'/\**. Instead, it may have preserved *\*/b'/\** roughly unscathed. Proto-Western Ch'olan and Proto-Tzeltalan (minus a few dialects that eventually became the Chamula and Chenalhó Tzotzil varieties) then experienced the spread of the split, which may have originated in Proto-Western Ch'olan or Proto-Yucatekan, since neither of these can be reconstructed without the split, whereas Proto-Tzeltalan can be reconstructed with only *\*/b'/\** in light of the Tzotzil data presented here. The implications for Mayan epigraphy would not be as clear: CLM texts could represent a standard language that did not yet distinguish between *\*/b'/\** and *\*/p'/\**. If so, it is likely that **b'V** signs would represent *p'V* sequences even for some time after the split took place. If Eastern Ch'olan never underwent the split, and evidence for a split were found to be a standard feature of CLM texts (i.e. widespread distinction between **b'V** vs. **p'V** signs), then Eastern Ch'olan would no longer be a viable candidate for the standard language of CLM texts. But absence of evidence for a graphemic distinction between *b'V* and *p'V* sequences would not necessarily indicate a Proto-Eastern Ch'olan dialect or language; such a feature would be ancestral, and thus not an innovation that can be used to assign linguistic affiliation.

‘depositive’, with the shapes  $*-b'-u/i(-n/j) \sim *-p'-u/i(-n/j)$ . This marker is very likely cognate with Ch’olti’  $\langle -bu \rangle \sim \langle -bi \rangle$  and Ch’orti’  $-b'a \sim -b'u$ . What was the Proto-Ch’olan-Tzeltalan marker like?

It is time to consider in more detail the evidence from extant Ch’olan languages and CLM texts. The data in **Table 9** shows the data from Ch’olan:

Table 9

-b'u/-b'a/-b'i 'transitivizer of positionals'	
a)	<p>CH'ORTI'</p> <p><i>wa'-b'u</i> 'to stand' (Pérez Martínez 1994:79)</p> <p><i>pak-b'u</i> 'to place face down' (Pérez Martínez 1994:79)</p> <p><i>t'uch-b'a</i> 'to make crouch' (Pérez Martínez 1994:79)</p> <p><i>kot-b'a</i> 'to make kneel' (Pérez Martínez 1994:79)</p> <p><i>jek'-b'a</i> 'to make open' (Pérez Martínez 1994:79)</p> <p><i>sik'-b'u</i> (cf. <i>sik'ir</i> 'amontonado', <i>sik'wan</i>, <i>sik'b'u</i>) (Pérez Martínez et al. 1996:186)</p>
b)	<p>CH'OLTI'</p> <p>&lt;lech-bu-n&gt; 'hang' (Fought 1984:51)</p> <p>&lt;cat-bu-n&gt; 'to place crosswise' (Moran 1695:2)</p> <p>&lt;much-bi-n&gt; 'pile up' (Moran 1695:3)</p> <p>&lt;nuc-bi-n&gt; 'lay face down' (Fought 1984:51)</p> <p>&lt;chui-bi-n&gt; 'hang up' (Fought 1984:51)</p>
c)	<p>CH'OL</p> <p><i>jex-ba-n</i> drag-CAUS-INC (or <i>jex-b-a-n</i> drag-CAUS-TH-INC) 'arrastrar (viga, persona, animal)' (Aulie and Aulie 1978:64)</p> <p><i>c'ux-bi-n</i> eat-CAUS-INC (or <i>c'ux-b-i-n</i> eat-CAUS-TH-INC) 'amar; querer' (Aulie and Aulie 1978:44) (cf. <i>c'ux</i> 'comer')</p> <p><i>ch'uj-bi-n</i> holy-CAUS-INC (or <i>ch'uj-b-i-n</i> holy-CAUS-TH-INC) 'obedecer; tomar en cuenta; creer' (Aulie and Aulie 1978:55-56) (cf. <i>ch'uj-ul</i> 'permanente; santo')</p> <p><i>ch'uy-ba-n</i> ?whistle-CAUS-INC (or <i>ch'uy-b-a-n</i> ?whistle-CAUS-TH-INC) 'chiflar' (Aulie and Aulie 1978:55-56) (cf. <i>ch'uyub</i> 'silbido')</p> <p><i>puj-ba-n</i> ?sprinkle-CAUS-INC (or <i>puj-b-a-n</i> ?sprinkle-CAUS-TH-INC) 'rocear líquido con la mano' (Aulie and Aulie 1978:96)</p> <p><i>xix-ba-n</i> ?sleepy-CAUS-INC (or <i>xix-b-a-n</i> ?sleepy-CAUS-TH-INC) 'adormecer' (Aulie and Aulie 1978:137)</p>

These data show that in Ch'orti' (Table 9a) the suffix *-b'a* is used with roots with vowels *e*, *u*, *o*, while *-b'u* is used with roots with vowels *i*, *a*. In Ch'olti' (Table 9b) one finds <-bu> with *CaC* and *CeC* roots, and <-bi> with



*CuC* roots.<sup>17</sup> The distribution of <-bu> and <-bi> in Ch'olti' partly coincides with that of *-b'u* and *-b'a* in Ch'orti', respectively. It is possible that Ch'ol has cognates of *-b'a* ~ *-b'u* ~ *-b'i*. The data (Table 9c) show at least one plausible candidate that seems to be based on a root transitive verb that could also serve as a positional verb: *jex-b'a-n* 'arrastrar (to drag)'. The other verb stems included require further research. The Tzotzil and Tzeltal data (Tables 7 and 8) show the following distribution: *-p'-u(-n/j)* ~ *-b'-u(-n/j)* with roots with vowels *i*, *e*, *a*, and *-p'-i(-n/j)* ~ *-b'-i(-n/j)* with roots with vowels *u*, *o*. There is partial agreement between the Tzeltalan data and the Ch'olan data. Assuming for the moment that Ch'ol *jex-b'a-n* is correctly analyzed as having a cognate of Ch'orti' *-b'a*, then this instance agrees with Ch'orti' usage of *-b'a* with *CeC* roots. The Ch'olti' data suggests that <-bi> was used with at least *CuC* roots (e.g. <much-bi>). This is consistent with Tzeltalan *-p'-i(-n/j)* ~ *-b'-i(-n/j)*, which are used with *CuC* roots. It is possible that Proto-Ch'olan-Tzeltalan once had *\*-b'-a* ~ *\*-b'-u* ~ *\*-b'-i* 'depositive'. The existence of thematic vowels in Ch'olan-Tzeltalan probably influenced the form that the inherited Proto-Mayan suffix *\*(V<sub>1</sub>)b'a(a)()* 'depositive' would have. Ch'olan-Tzeltalan may have reanalyzed the suffix as *\*-b'-a* based on the numerous examples of stem formers of the shape *-C* that require a thematic vowel *-V* before they can be inflected for status and person. And Ch'olan-Tzeltalan had several vowels to choose from. Both Ch'olan and

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<sup>17</sup> Fought (1984:51, Table 3-6) also shows a form <-b-en> that goes with roots such as <choh> 'love', <noh> 'help', and <tzih> (probably for) 'renew'. These roots are not clearly positional roots, and therefore I leave them out of my discussion for now. If this stem-forming suffix <-b-e-n> is indeed in a paradigmatic relationship with <-b-un> and <-b-in> some of the facts about Ch'olti' would have to be reformulated differently.

Tzeltalan have thematic vowels *-i*, *-a*, *-u*, for example, and both Ch'olan and Tzeltalan have transitivity markers *-(V)n* and intransitivity markers *-(V)j*. The Ch'ol example (*jex-b'-a-n*) points to the presence of *-n*, also present in the Tzeltalan and Tzotzil examples. In fact, Fought (1984:51, Table 3-6) shows that the suffixes *<-bi>* and *<-bu>* in Ch'olti' were part of a set of stem-forming markers with the longer shapes *<b-in>* and *<-b-un>* (i.e. *<-b-i-n>*, *<-b-u-n>*).

The hieroglyphic evidence suggests that the *-b'u* marker, at least, may have been ambitransitive; in other words, its meaning 'depositive' may have been ambiguous as far as transitivity was concerned. This is evident in the following sentence, **Figure 1**:



Figure 6. Palenque Sarcophagus Lid. Drawing by Linda Schele (famsi.org).

The passage may be transliterated and analyzed as follows:

(5) **PAT-b'u-ya**

pat-b'u-Ø[+ij+i]y(+a)

form-DEP-3sABS+already+here

u-KUCH-TUN-li

IK'(N)(AL)

ik'(-n)(-al)

3sERG-carry=stone-POSS      wind/air/spirit

'The carrying-stone of Ik'(-n)(-al) is/was/got [already] formed/built [here]'.

Here, **PAT-b'u-ya** is the verb of the sentence, and **u-KUCH-TUN-li IK'NAL** is most likely the subject, rendering something along the lines of *pat-b'u-Ø+[ij+i]y(+a) u-kuch=tun-il ik'(n)(al)* 'the carrying-stone of *Ik'(n)(al)* was/got/is (?already) formed/built(?) (?here)'. Ch'orti' verbs with *-b'u ~ -b'a* are passivized with *-n-a*, as the following examples show (Pérez Martínez 1994:79): *jaw-b'u-na* 'fue arqueado', *tur-b'a-na* 'fue sentado', *kot-b'a-na* 'fue arrodillado (boca abajo)', *jek'-b'u-na* 'fue abierto'. But there is nothing resembling T23 **na**, for example, used to spell *-n-aj* 'passivizer' (Lacadena 1996) in the hieroglyphic passage just shown. And as Lacadena (1998) has shown, positional verbs with *-b'u* may be antipassivized with the addition of *-n*, as in **PAT-b'u-ni-ya** (Vase K1398, Kerr Archive, famsi.org); but there is no T116 **ni** present for representing *-n(-i)* either. Only T126 **ya** is present, but it may represent a deictic enclitic based on Proto-Ch'olan-Tzeltalan *\*+eej+eey* > Proto-Ch'olan *\*+ij+iy* 'already' (Fox and Justeson 1984; Wald and MacLeod 1999). This example suggests that *-b'u* may not be strictly a transitivizer in CLM texts, but perhaps a transitivity neutral suffix with the meaning 'depositive' (Kaufman 1989).

Finally, the split of Proto-Mayan *\*/b'/\** may not have taken place during the Proto-Ch'olan-Tzeltalan stage, but later, after the split of Proto-Ch'olan-

Tzeltalan into Proto-Ch'olan and Proto-Tzeltalan. The split affected the *\*-b'-u ~ \*-b'-i* markers in Tzeltalan, though not completely; the Chamula and Chenalhó dialects of Tzotzil retained the older forms. Tzeltalan lost *\*-b'-a* after the breakup of Proto-Ch'olan-Tzeltalan; whether it was affected by the spreading influence of the */b'/'* vs. */p'/'* split is anybody's guess, since its loss leaves no traces either way. The split of Proto-Mayan *\*/b'/'* into */b'/'* and */p'/'* may very well have started after the split of Proto-Ch'olan into Eastern Ch'olan and Western Ch'olan, and it may not have affected Eastern Ch'olan, since Ch'olti' and Ch'orti' shows no evidence of it.

In any case, the evidence presented in this section is sufficient to propose that:

1. Proto-Ch'olan-Tzeltalan had a suffix *\*-e(y) ~ \*-V<sub>1</sub>y* that served as a passivizer or intransitivizer;
2. Proto-Ch'olan probably had a suffix *\*-V<sub>1</sub>y* that served as a marker for verbs of motion, change of state, and some root transitives (e.g. *pul* 'to burn');
3. Proto-Ch'olan *\*-V<sub>1</sub>y* became a status marker of some intransitives in Proto-Eastern Ch'olan (cf. Kaufman and Norman 1984);
4. Proto-Ch'olan-Tzeltalan had a passive or mediopassive in *\*-h-* and an intransitivizer in *\*-aj*, the second one giving rise subsequently to Proto-Eastern Ch'olan *\*-a(j)* 'intransitive thematic vowel'; and
5. Proto-Ch'olan-Tzeltalan had a set of markers *\*-b'-a ~ \*-b'-u ~ \*-b'-i*

‘depositive’, which may have been transitivized or intransitivized with the addition of appropriate suffixes (e.g. *\*-Vn*, *\*-Vj*).





This evidence suggests that it is premature to suggest that suffixes *-V<sub>1</sub>y*, *-h-...-aj*, and *-b’u* are Eastern Ch’olan innovations. The best example yet of an exclusive Eastern Ch’olan morphological innovation attested in CLM texts has been proposed by Wichmann (2002:16-17) and involves Ch’orti’ *-ib’* ‘instrumentalizer of positionals’ (*\*-l-ib’* in Proto-Ch’olan), attested at Copan (Carved Bench, Group 10K), ca. A.D. 780. Other examples include the suffix *-w-aj* ‘passivizer’ described by Lacadena and Wichmann (1999) and attested at Tikal (Lintel 2, Temple IV) and Copan (Altar Z), and thus dating to A.D. 747 and A.D. 769, respectively. These innovations are much too late and much too restricted, to my knowledge, to be classified as standard features of CLM texts in general. They may be indicative of emerging Eastern Ch’olan dialectal innovations, but not necessarily of an Eastern Ch’olan language area. In fact, below I make a tentative case for the presence of split ergativity in a text from Copan dated to A.D. 783. This may be the earliest attestation of split ergativity. If so, and following Kaufman and Norman (1984) in reconstructing split ergativity to Proto-Ch’olan (see above), the contemporaneity of the earliest appearance of such a trait with traits thought to be Eastern Ch’olan innovations would lessen the case for Ch’olan diversification, and strengthen instead the case for continuing Ch’olan unity by this time. As I discuss in the next section, there is evidence in support of the continuing spread of Proto-Ch’olan features throughout the Late Classic

period. Presumably, one would require many more innovations before lack of mutual intelligibility between dialect boundaries results in the definition of two languages. And there may yet be many more Eastern Ch'olan innovations present in the texts at Copan and other sites in the Eastern Lowlands, whatever the threshold one imposes on the mutual intelligibility criterion. But the comprehensive and systematic research to identify them and analyze them has yet to be conducted.

### **Western Ch'olan Markers**

There are at least four markers unique to Western Ch'olan attested in CLM texts, two of which are standard in CLM texts, as seen in **Table 10**.

Table 10

Markers of CLM Texts Attested Exclusively in Western Ch'olan		
a)	cha'an	'for/since/because/by'
		
b)	hin+a (3sPRO+PROX)	'this one'
		
c)	hin+i (3sPRO+DIST)	'that one'
		
d)	u-B'AH(IL) + t(i/ä)+TV-(i/e)l	'progressive of transitives'
		

The first one (**Table 10a**) is the T206 SNAKE sign used for *cha'an* 'from, since; about, because' in counts of time attested at Tortuguero and Palenque by ca. A.D. 669 (Tortuguero Monument 6) in the western lowlands primarily (Justeson and Fox 1989:23, 44). This term is found in modern Ch'ol exclusively; given its Late Classic and geographic distribution limited to the western lowlands, this may be a case of an innovation by a Western Ch'olan dialect or language, one that ultimately developed into Ch'ol.

The second and third markers (**Table 10b,c**), *hin+i* ~ *hin+a*, are clear cases of Western Ch'olan innovations, but are by no means standard

features. The Proto-Ch'olan demonstrative and third person independent pronoun reconstructed by Kaufman and Norman (1984:139) is *\*ha'-in* 'this, that', from Proto-Mayan *\*ha'* 'he/him/she/her/it' (Kaufman 1989:Part D:75). Several questions must be addressed in order to show how **hi-ni** and **hi-na** represent Western Ch'olan innovations:

1. What was the Proto-Ch'olan-Tzeltalan form?
2. What was the Proto-Ch'olan/Common Ch'olan form?
3. What were the Proto-Western Ch'olan and Proto-Eastern Ch'olan forms?
4. How do the CLM forms relate to the modern Ch'olan forms and the historically reconstructed forms?

The reflexes of Proto-Mayan *\*ha'* 'he/him/she/her/it' in modern Ch'olan languages pose too complex a problem, and cannot be dealt with properly in the space allotted here. Instead, I discuss them in more detail in a paper still in progress (Mora-Marin n.d.). However, a few words are necessary here.

First, the Proto-Mayan determiner *\*ha'* serves as the base for independent determiners and pronouns in most Central Mayan languages (Kaufman 1989:Part B:53). To this base each language adds the appropriate absolutive person agreement marker in order to produce the appropriate independent pronoun. Kaufman and Norman's (1984:139) reconstruct the Proto-Tzeltalan form as *\*ha'*; based on this form one can confidently reconstruct the form *\*ha'* for Proto-Ch'olan-Tzeltalan as well. And the



Proto-Ch'olan reconstruction of *\*ha'-in* by Kaufman and Norman (1984:139) is consistent with the data those authors provide: Acalan <hain>, Ch'olti' <haine>, and Ch'ol *jini*. The reconstruction of *\*ha'-in* is clear if one breaks up these forms into <ha-in>, <ha-in-e>, and *j-in-i* (i.e. *j[a']-in-i*) respectively. But the question of how one gets from Proto-Ch'olan-Tzeltalan *\*ha'* to Proto-Ch'olan *\*ha'-in* is more complex, as suggested by the data in **Table 11**.

Table 11

	<u>Ch'ol</u> <sup>1 8</sup>	<u>Acalan</u> <sup>1 9</sup>	<u>Chontal</u> <sup>2 0</sup>	<u>Ch'olti'</u>	<u>Ch'orti'</u> <sup>2 1</sup>
1s	jo-n-on	<nadzon>	ka-nde käne käjin <sup>2 2</sup> no7on <sup>2 3</sup>	<natz-en>	ne7en
2s	ja-t-et	?	ande ane a-jin	<natz-et>	ne7et
3s	jin-i	<hain>	u-nde une hin-i <sup>2 5</sup> hinda <sup>2 7</sup>	<haine> <sup>2 4</sup> <ne> <ne> <sup>2 6</sup>	ja7ax
1pi	jo-n-on la	?	ka-nde-la no7on-la <sup>2 8</sup>	<natz-on>	no7on
1px	jo-n-on l(oj)-on	?	ka-nde-t'ok-op'		
2p	ja-t-et la	?	7a-nde-la	<natz-ox>	no7ox
3p	jin-ob'	<hainob>	7u-nde-lop' u-ne-job'	<natz-ob>	ja7(a)x-op'

<sup>18</sup> Bricker (1986:25) shows 1s as *hoñon*, 1pi as *hoñon-la*, 1px as *hoñon-lohon*, 2s as *hat<sup>y</sup>et*, 2p as *hat<sup>y</sup>et-la*, and 3p as *hino7*.

<sup>19</sup> These data are taken from Bricker (1986:25).

<sup>20</sup> Bricker (1986:25) shows initial glottal stops and no morpheme breaks, while Kaufman (1989:Part D, 76) does not show initial glottal stops and does show the morphemic break up of the pronouns.

<sup>21</sup> Bricker (1986:25) shows *CV<sub>1</sub>7V<sub>1</sub>C* as the shape of these pronouns; Kaufman (1989:Part D, 76) shows them as *CV7C*.

<sup>22</sup> This datum and the forms *a-jin*, *u-jin*, and *u-ne-job'* are from Keller and Luciano G. (1997:16, 57, 269, 271).

<sup>23</sup> This datum is from Schumann (1978:97).

<sup>24</sup> This datum is based on Moran's (1965:4) vocabulary section.

<sup>25</sup> This datum is from Knowles (1984:166-167, 208) and Schumann (1978:97).

<sup>26</sup> This datum is based on Moran's (1965:4) vocabulary section.

<sup>27</sup> The form *hinda* means 'this one', while *hini* ~ *une* mean 'that one' according to Schumann (1978:97).

<sup>28</sup> This datum is from Schumann (1978:97).

Kaufman (1989:Part B:57) points out that in Acalan <hain>, Ch'olti' <haine>, and Ch'ol *jini* the first part (i.e. <ha->, <ha->, *j-*) corresponds to the base *ha(')* < Proto-Ch'olan-Tzeltalan *\*ha'*. The second part corresponds to *\*il* ~ *\*in* 'neutral demonstrative', a marker that Kaufman (1989:Part B:57) reconstructs tentatively to Central Mayan, and even more tentatively to Proto-Mayan, given a possible reflex in Wastekan (i.e. *in* ~ *i* '3ERG'). So it would seem that Proto-Ch'olan used this neutral demonstrative, henceforth *\*+in*, with *\*ha'* to form *\*ha'+in*. But, What were the forms in Proto-Western Ch'olan and Proto-Eastern Ch'olan like?

Ch'olti' shows three forms: <haine> ~ <ne> ~ <e>. Ch'orti' shows the form *ja'ax* 'he/him/she/her/it'. In Ch'olti' the forms <haine> ~ <ne> ~ <e> may not be related to the rest of the paradigm, which shows <natz-> followed by <-en> '1sABS', <-et> '2sABS', <-on> '1pABS', <-ox> '2pABS', <-ob> '3pABS' depending on the intended person (e.g. <natzon> 'I/me'). The form <natz->, attested also in Classic Chontal (Acalan) as <nadzon> '1sPRO' is probably based on the Proto-Ch'olan positional root *\*natz'* 'nearby' followed by the appropriate absolutive person marker; it is therefore not related to the forms in *\*ha'* that can be reconstructed for Proto-Mayan and Proto-Ch'olan-Tzeltalan. In Ch'orti' things may be different. The forms for non-third-person independent pronouns or demonstratives have the general form *nV'*- followed by the appropriate absolutive person marker. Also, an anticipatory vowel assimilation rule seems to take place: *ne'-en*, *ne'-et*, *no'-on*, *no'-ox*. This is supported by the possibility that these forms could be

based on the Ch'olti' forms <haine> ~ <ne> ~ <e>. In other words, it is possible that Ch'orti' may have also had *ne* '3sPRO' (cf. Ch'olti' <ne>) at one point, and that just like Proto-Mayan used *ha'* as the base upon which an absolutive person marker was added to form an independent pronoun or demonstrative, Ch'orti' may have used *ne* as the basis for forming independent pronouns or demonstratives with the addition of an absolutive marker. Interestingly, Ch'orti' may preserve the equivalent of the the Ch'olti' forms <haine> ~ <ne> ~ <e> in its obligatory determiner *e* 'the'. This <e> of <haine>, in turn, may come from Proto-Mayan *\*+e* 'that/there; the' (Kaufman 1989:Part B:51). This suggests the following for Proto-Eastern Ch'olan. First, Proto-Eastern Ch'olan must have had at least *\*ha'-in+e* possibly with the meaning 'he/him/she/her/it there'. This form led to Ch'olti' <haine> ~ <ne> ~ <e>. It may have led to Ch'orti' *e* 'the' (cf. Proto-Mayan *\*+e* 'that/there; the') and to the Ch'orti' pronoun base *ne'*. The Ch'olti' forms with <natz-> are most likely unrelated. Given the Ch'orti' form *ja'ax*, it is likely that Proto-Eastern Ch'olan had a form or two based on *\*ha'* that differed from *\*ha'-in+e*.

Proto-Western Ch'olan is also complicated. Ch'ol shows a paradigm still based on the original base *\*ha'*, although vowel assimilation tends to obscure this, and Proto-Ch'olan *\*h* changed to *\*j* before vowels in Ch'olan (Kaufman and Norman 1984:86-87). The form *jini* (i.e. *j[a']-in-i*) suggests the presence of three morphemes. In Chontal it is possible to distinguish these three morphemes given the forms *jini* 'that one' and *jinda* 'this one'. It

yields *j[a']-in-i* and *j[a']-in-da*, respectively, suggesting a contrast between the final components: *+i* ‘distal’ vs. *+da* ‘proximal’. Interestingly, Chontal dialectal variants also show forms like *kä-ne ~ ka-nde* ‘1sPRO’, *a-ne ~ a-nde* ‘2sPRO’, and *u-ne ~ u-nde* ‘3sPRO’. Each is composed of an ergative person prefix (i.e. *ka-*, *a-*, *u-*) and the particle *-ne*. This last particle is probably derived from a form like Ch’olti’ <haine> ~ <ne>; this in turn would suggest that Proto-Ch’olan probably had *\*ha’+in+e* based on *\*ha’+in*. The *d* present in these forms is most likely a relatively recent innovation of Chontal, as suggested by the facts that some Chontal dialects do not show it, and that *d* in most Mayan languages is generally a recent development due to Spanish influence. Thus, it is possible to reconstruct an earlier set of forms *\*jini* ‘that one’ vs. *\*jina* ‘this one’ for Pre-Proto-Chontal, which would support the reconstruction of a set of enclitics Pre-Chontal *\*+i* ‘distal’ vs. *\*+a* ‘proximal’. The Ch’ol/Chontal form *jini* strongly suggests that Proto-Western Ch’olan had *\*jini* ‘that one’. It is likely that this form was broken up into *\*j[a']-in-i*, and therefore that an enclitic *\*+i* ‘distal’ was present. This in turn makes it likely that a contrasting form *\*jina* ‘this one’ existed as well, and therefore, that an enclitic *\*+a* ‘proximal’ was present too. The attested Acalan form <hain> suggests that Proto-Western Ch’olan may have had also *\*ha’+in* as a base upon which to add *\*+i* or *\*+a*; perhaps it was the addition of a second enclitic to the base *\*ha’* that prompted the need for simplification through vowel assimilation and glottal stop deletion seen in *\*jini* (< *\*ha’+in+i*) and *\*jina* (< *\*ha’+in+a*). And last, it is likely that the Ch’olti’ forms <haine> ~ <ne> (perhaps not <e>) had cognates in Proto-Western Ch’olan, given the

Chontal forms based on *ne* (i.e. *kă-ne*, *a-ne*, *u-ne*). Since the Ch'olti' form <haine> was likely broken up into <ha-in-e>, with the final <-e> probably a reflex of Proto-Mayan *\*+e* 'that/there; the', and since such form was in variation with <ne> (~ <ne>), which was likely present as well in Proto-Western Ch'olan (cf. Chontal *-ne*), it is possible that Proto-Ch'olan may have had a three-way contrast marked by the enclitics *\*+i*, *\*+a*, and *\*+e*: *\*ha'-in(+i/a/e)*. These enclitics may be reflexes of Proto-Mayan *\*+i* 'this/here', *\*+a* '(this) right here', and *\*+e* 'that/there; the' (Kaufman 1989:Part B:51); the first two correspond, in relative terms, with the Chontal distinction between *+i* and *+da* (< *+a*), as seen in *jini* 'that one' vs. *jinda* 'this one'. These enclitics are attested in Tzeltalan as well: *+a* in Tzeltal, and *+i* and *+e* in both Tzeltal and Tzotzil. They are thus reconstructible to Proto-Tzeltalan and Proto-Ch'olan-Tzeltalan as *\*+i*, *\*+a*, *\*+e*. The precise meanings of these enclitics in Proto-Tzeltalan and Proto-Ch'olan-Tzeltalan need to be explored further.

The hieroglyphic forms attested in CLM texts show some complexity too. The independent pronouns were independently identified by several epigraphers (e.g. Werner Nahm, Nikolai Grube, Barbara MacLeod, others) during the early 1990s. They propose that the spelling *ha-'i* spelled the Proto-Ch'olan determiner/prnoun base *\*ha'* (i.e. *\*ha'-in*), perhaps as *ha'-(i)*. However, no epigrapher to my knowledge has discussed the possibility that the final vowels of spellings like this might represent the deictic enclitics attested in modern Ch'olan languages and reconstructed to Proto-Mayan. I

think it likely that **ha-'i** actually spells *ha'-Ø+i* DET-3sABS+ENCL 's/he/it there; that one over there', and that **ha-'a** might spell *ha'-Ø+a* DET-3sABS+ENCL 's/he/it here; this one over here'. (Plural forms are also attested as **ha-'o-b'a** and **ha-'o-b'o**, but these are not of interest here.) In any case, the alternative spellings **hi-ni** and **hi-na** are also attested in a handful of Late Classic (ca. A.D. 600-900) texts on pottery vases; no examples are found, to my knowledge, in monumental texts. The Western Ch'olan data (e.g. Ch'ol *jín-i* 's/he/it; that one' and Chontal *hín-i* 's/he/it there; that one' vs. *hín+da* 's/he/it here; this one') support a closer affiliation with the forms **hi-ni** and **hi-na** than the Eastern Ch'olan data (e.g. Ch'orti' *ja'ax* and Ch'olti' <haine> ~ <ne> ~ <e>), while the more common forms attested in the monuments (**ha-'i**, **ha-'a**), as well as the forms attested in Acalan (i.e. <hain>) and Ch'olti' (i.e. <haine>) are consistent with Proto-Ch'olan and Common Ch'olan expectations based on the unmodified pronoun base *\*ha'* (i.e. *ha'+i* 's/he/it there; that one there' vs. *ha'+a* 's/he/it here; this one here') and preclude the possibility of a narrower linguistic affiliation.<sup>29</sup> Thus, the forms *ha'-Ø+i* and *ha'-Ø+a* suggested by the glyphic spellings are consistent with what one would expect from the presumed Proto-Ch'olan-Tzeltalan form *\*ha'*, and the presumed Proto-Ch'olan enclitics *\*+i* and *\*+a*. While all evidence points to the Common

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<sup>29</sup> In an unpublished manuscript still in progress I discuss the reconstruction of independent pronouns of Proto-Ch'olan (Mora-Marín n.d.). I suggest the possibility that Ch'olti' <haine> ~ <ne> ~ <e> could explain the article *e* of Ch'orti'. This article may have originated in the enclitic *+e* 'topical' which is present, perhaps in an unproductive manner, in the form <haine>. This form was simplified to <ne> and <e> in Ch'olti', and I suggest that this simplification might have started in Proto-Eastern Ch'olan, resulting in both Ch'olti' and Ch'orti' having this form as an article.

Ch'olan pronoun having the determiner *\*-in* as a first position determiner in *\*ha'-Ø+in*, this may not have been the case in earlier stages (i.e. Proto-Ch'olan). Tzeltal and Tzotzil have *ha'*, hence the Proto-Tzeltalan reconstruction *\*ha'*. Proto-Ch'olan-Tzeltalan must have had *\*ha'* as well. Thus, it is possible that Proto-Ch'olan may still have had *\*ha'*, upon which *\*+i* and *\*+a* (and *\*+e*) may have been added as needed without an intervening form *\*+in*. The use of this intervening form *\*+in* (e.g. *\*ha'-Ø+in+i*) may have been a Common Ch'olan innovation; Proto-Western Ch'olan may have innovated the rule of vowel assimilation and glottal stop deletion (e.g. *\*ha'-Ø+in+i > \*hini > \*jini*), as well as the change of *\*h > j*. Common Ch'olan may have also developed a simplified form *\*ne* based on *\*ha'-Ø+in+e*; this simplified form is attested in Chontal and in both Ch'olti' and Ch'orti'. Thus, the innovated spellings **hi-ni** and **hi-na** and examples of Western Ch'olan innovations, while the standard spellings **ha-'i** and **ha-'a** are likely Pre-Ch'olan forms, since they cannot be reconstructed as such from extant Ch'olan data, but must be arrived at instead through forward reconstruction based on Proto-Ch'olan-Tzeltalan *\*ha'*.

The fourth marker is uniquely attested in Western Ch'olan languages today, but is very widespread geographically starting in the Late Classic period (**Table 10d**): *t(i/ä)+TV-(i/e)l* 'progressive (of transitive actions)' (Josserand et al. 1985). An early, clear example attested as **ti-CHOK-ko**, possibly for *ti chok(-ol/el)* (PREP throw.down(-NMLZR)) 'throwing down' is found on an unprovenanced text that dates to A.D. 662 (Schele 1982:168,



Chart 38:2). Examples from Ch'ol and Chontal, as well as some comparative examples from Ch'orti', are shown in **Table 12**.

Table 12

a) Ch'ol (Josserand et al. 1985:98, 100)		
woliy-on	ti	alas
PROGR-1sABS	PREP	play
'I am playing (estoy jugando)'		
woli-Ø	ti	alas
PROGR-3sABS	PREP	play
'S/he is playing (está jugando)'		
kahiy-on	ti	we'-el
begin-1sABS	PREP	eat-NMLZR
'I'm beginning to eat (estoy empezando a comer)'		
kahiy-Ø	ti	we'-el
PROGR-3sABS	PREP	play
'They're beginning to eat (están empezando a comer)'		
b) Chontal (Knowles-Berry and Quizar 1988:84)		
'a-h-e	t ä	wan-e
2sERG-go-INC	PREP	jump-NMLZR
'you go to jump'		
c) Ch'orti' (Pérez Martínez 1994:56, 67)		
war	a-xux-b'a	
PROGR	3sNOM-whistle-TVZR	
'está silbando'		
war	in-jatz'-i-Ø	
PROGR	1sERG-strike-PL-3sABS	
'le estoy pegando'		

The CLM/Ch'ol/Chontal construction is attested also in Tzeltal and Tzotzil, as seen in **Table 13**.

Table 13

b) Tzotzil (Hurley and Ruíz Sánchez 1978:393, 395)			
yac(al)-un	<b>ta</b>	abt-el	
PROGR-1sABS	PREP	work-NMLZR	
'yo estoy comprando'			
yac-Ø	<b>ta</b>	abt-el	
PROGR-3sABS	PREP	work-NMLZR	
'él/ella está comprando'			
yac-un	<b>ta</b>	s-pas-el	j-na
PROGR-1sABS	PREP	3sERG-make-NMLZR	1sERG-house
'estoy construyendo mi casa'			
b) Tzeltal (Hinmán Smith et al. 1999)			
yak-on	<b>ta</b>	'och-el	
PROGR-1sABS	PREP	enter-NMLZR	
'I am entering'			
yak-Ø	<b>ta</b>	'och-el	
PROGR-3sABS	PREP	enter-NMLZR	
'He is entering'			
yak-on	<b>ta</b>	s-pas-el	waj
PROGR-1sABS	PREP	3sERG-make-NMLZR	tortilla
'I am making tortillas'			

The difference between the CLM/Ch'ol/Chontal version and the Tzeltalan version lies in the form used for transitives: in Tzeltalan the progressive construction for transitives takes an ergative agreement marker (e.g. s- '3sERG'), while in CLM/Ch'ol/Chontal it does not; the use of an ergative agreement marker in this context is a Proto-Mayan trait, and therefore, the absence of one is an exclusive (Western) Ch'olan innovation. The two versions agree in the form used for intransitives, neither of which uses person agreement markers. From the Ch'olan and Tzeltalan data alone it is

simply not clear what the transitive form might have been like in Proto-Ch'olan-Tzeltalan and Proto-Ch'olan. It is possible that:

1. Proto-Ch'olan-Tzeltalan had  $*t(i/a)+VERB-(i/e)I$  for both transitives and intransitives, with Tzeltalan later innovating the transitive form  $t(i/a)+ERG-TV-(i/e)I$ ; or
2. Proto-Ch'olan-Tzeltalan had  $*t(i/a)+ERG-VERB-(i/e)I$  for transitives and  $*t(i/a)+VERB-(i/e)I$  for intransitives, with some form of Ch'olan later regularizing the system to  $t(i/a)+TV/IV-(i/e)I$ .

The answer to this question lies in the comparative evidence. As Kaufman (1989:76-95, Part B) has shown, the original pattern for the expression of progressive nominalizations is reconstructed to Late Proto-Mayan (Proto-Mayan after the split of Wastekan from the rest of the family) as:  $*AA + ABS (+ PREP) + IV-NMLZR$  and  $*AA + ABS (+ PREP) + ERG-TV-NMLZR$  (AA = higher predicate/aspect, ABS = absolutive person agreement marker). This pattern is illustrated with the following examples from K'iche', where the progressive aspect is expressed with the incompletive aspect marker *k+*, a progressive particle *tajiin* that takes an absolutive person agreement marker (here *in-* 'first person absolutive'), a preposition *chi* before *war-aam* 'sleeping', and *a-ch'ay-h-iik* 'your being hit' (Robertson 1976:191):

(6)	k+	in:-tajiin	chi	:war-aam
	INC	1ABS-PROG	PREP	sleep-NMLZR
	'I am sleeping'			

(7) k+      in-:tajiin                  ch+                  a-:ch'ay-h-iik  
          INC    1ABS-PROG                  PREP                  2sERG-hit-PASS-NMLZR:POSS  
          'I am hitting you'

K'iche' uses different nominalizers in the intransitive and transitive structures (i.e. *-aam* vs. *-iik*), but the generic preposition *chi* ~ *ch+* is cognate with Proto-Ch'olan *\*ti* ~ *\*ta* (< Proto-Mayan *\*tya*). The loss of the ERG marker in the transitive progressive nominalization is a Ch'olan innovation. This innovation is what CLM texts clearly attest to, and it is not attested in Eastern Ch'olan today. This evidence by itself would support the hypothesis of a Western Ch'olan innovation, and therefore of a Western Ch'olan affiliation of the standard language of CLM texts. However, it is possible that this was a Proto-Ch'olan or Common Ch'olan innovation that simply left no trace in Eastern Ch'olan. One can only propose with confidence that Proto-Ch'olan-Tzeltalan must have had *\*t(i/a)+ERG-TV-(i/e)l* for transitives and *\*t(i/a)+IV-(i/e)l* for intransitives.

Also worthy of mention, Macri (1998:2) has pointed to a likely Western Ch'olan marker in CLM texts. This consists of the numeral classifier *uk* 'a short period of time' attested only in Ch'ol. Though a unique attestation, Macri suggests, the context of T855 in glyph block B1 of Aguateca Stela 7, which is dated to A.D. 790, is sufficiently constrained to support its identification with the numeral classifier *uk*. If correct, then, this could be an attestation of another Ch'ol marker, suggesting that Aguateca, in the Petexbatun region, was located within the emerging dialect or linguistic

Western Ch'olan area.

There are two markers that have been argued to be cases of Western Ch'olan innovations (Lacadena and Wichmann 1999; Houston et al. 2000; Hrby and Child 1999): *-w-an* and *-l-el*. As already discussed earlier, *-l-el* is likely not a Western Ch'olan innovation, but instead a Proto-Ch'olan, possibly even a Proto-Ch'olan-Tzeltalan innovation. This marker had completed its spread from the western lowlands (Yaxchilan) to the southeast lowlands (Copan) between ca. A.D. 526-682; if one assumes, conservatively, that the marker was already in use at a city by roughly two or three decades prior to its first attestation, we may propose a rough dating of the spread of the marker between ca. A.D. 500-650. The case for *-w-an*, first identified by MacLeod (1984) as a Ch'olan marker in CLM texts, is similar. Kaufman and Norman (1984:106-107) have reconstructed *\*-w-an(-i)* (< *\*-aw-an*) as the Proto-Ch'olan 'completive status of positionals', but they have presented strong evidence for the reconstruction of *\*-l-aj(-i)* as the Pre-Proto-Ch'olan

‘completive status of positionals’.<sup>30</sup> CLM texts do in fact attest to an earlier use of *\*-l-aj(-i)* (Justeson 1985). The first clear attestation of *\*-w-an* in CLM texts is found at Palenque and dates to A.D. 625; it is attested at Copan (Altar H') already by A.D. 682 (Schele 1982:293, Chart 112:31). Based on this example a recent hypothesis by Hrby and Child (1999), which is supported by Houston et al. (2000), suggests that the earliest attestations in the western Lowlands of *-w-an* at Palenque could suggest it was a Western Ch'olan innovation that spread through diffusion to the central lowlands and then to the southeastern Lowlands. However, there is an even earlier possible attestation of this marker on Tikal Stela 10 that dates to A.D. 527, as seen in Figure 7.

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<sup>30</sup> Kaufman and Norman (1984:107) propose Pre-Ch'olan *\*-l-aj(-i)* as one of two possibilities for the source of Ch'ol *-le*. The other possibility would be that Ch'ol extended the use of *-le* ‘completive of root transitive passives’ to the ‘completive status of positionals’ function. Kaufman and Norman argue in favor of the origin of Ch'ol *-le* as a passivizer that was extended to positionals only because they argue that it would be easier to assume that Proto-Ch'olan innovated *\*-w-an*, which was then inherited by Chontal and Eastern Ch'olan, than to assume that Proto-Ch'olan still had *\*-l-aj(-i)* which was inherited only by Ch'ol, with both Chontal and Eastern Ch'olan independently innovating *\*-w-an*. I regard as likely the possibility that Ch'ol *-le* is derived from Pre-Ch'olan *\*-l-aj(-i)*, and in fact, that Ch'ol also inherited *\*-w-an* from Proto-Ch'olan. Interestingly, several CLM cities remained immune to the *\*-l-aj(-i) > \*-w-an* shift. And some cities actually used both of them for as long as their texts were written. Some cities shifted to the *\*-w-an* form entirely. Now, even though it may seem that Ch'ol has only retained *-le* presumably from *\*-l-aj(-i)*, Josserand (1998) has recently pointed out a possible frozen example of *-w-an* in Ch'ol: *aj ch'ujwanaj ~ aj ch'uwanaj* ‘cargoholder’ (*aj+ch'uj-wan-aj* PROCL+carry-INTRVZR-AG-PL-REL). Thus it is possible that Ch'ol had both forms, and only *-le* has remained productive. Ch'ol may very well have inherited both markers from a speech community where both markers were in use. Kaufman and Norman (1984:107) in fact point out that Proto-Ch'olan may well have had *\*-le (< \*-la(j)-i)* ‘completive status of positionals’ given that the reconstructed paradigm for positional inflection shows a likely related form: *\*-le-k < \*-l-a(j)-ik* ‘dependent status of positionals’. This lines of evidence (i.e. dual attestation of *\*-l-aj(-i)* and *\*-w-an* within a city, possible dual attestation of *-le* and *-w-an* in Ch'ol, dual presence of *\*-l-a(j)* in Pre- and Proto-Ch'olan positional inflection) support the hypothesis that Ch'ol *-le* is inherited from *\*-l-aj(-i)* ‘completive status of positionals’.

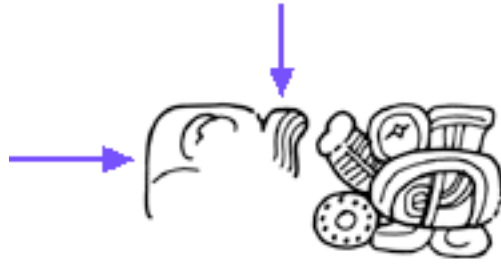


Figure 7. Tikal Stela 10: CHUM-*\*wa-ni* ta-AJAW-wa.

Drawing by Linda Schele.

This earlier Tikal example could hardly be anything other than a spelling of CHUM-wa-ni ta-AJAW-wa from which a piece of stone containing T130 wa has flaked off. It dates to almost a century earlier than the Palenque example, and suggests a central lowland innovation during the Early Classic period, perhaps in place by ca. A.D. 500, which may have more easily spread from the central lowlands in westward and eastward directions. Assuming for now that *\*-w-an* was not innovated in Western Ch'olan and then diffused to Eastern Ch'olan after the Common Ch'olan breakup, the switch from Proto-Ch'olan *\*-l-aj(-i)* to Common Ch'olan *\*-w-an*, would have begun by ca. A.D. 500-650 (Tikal by ca. A.D. 500, Copan by ca. A.D. 650), if we assume two or three decades of arrival of the innovation prior to its written attestation at a given city, and thus could be evidence of the change from Proto-Ch'olan to Common Ch'olan.<sup>31</sup> This is in rough agreement with the evidence for *\*-(V)l-el*, first attested by A.D. 526 and present already at Copan by A.D. 682, suggesting that *\*-w-an* and *\*-(V)l-el* were two markers

<sup>31</sup> A possible instance of *\*-w-an* may be found on Quirigua Monument 26, which dates to A.D. 493 or A.D. 495 (Schele and Looper 1996:67). This example is found on glyph block C5, where one reads **pa-sa-wa-?**, where the last sign of the verb is missing due to damage.

that signal the transition from Proto-Ch'olan to Common Ch'olan. The rough dates for the spread of the *\*-(V)l-el* marker, again assuming prior arrival and acceptance of the markers two or three decades earlier, are similar to those for *\*-w-an*: A.D. 500-650. As already explained, exclusive Western Ch'olan (*hin+i* 'that one' ~ *hin+a* 'this one', *cha'an* 'from, since; about, because', *=uk* 'a short period of time') and Eastern Ch'olan (*-ib* 'instrumentalizer of positionals', *-w-aj* 'passivizer') markers do not make their appearance until ca. A.D. 669-790, supporting the estimate of ca. A.D. 500-650 for the beginning of the shift from Proto-Ch'olan to Common Ch'olan traits that preceded the breakup of Common Ch'olan. The case of the progressive construction of transitives (i.e. *t(i/ä)+TV-(i/e)l*) is less clear, but it could tentatively be assigned to Western Ch'olan; if so, this would be the strongest case for a Western Ch'olan standardized feature, although one that is attested at least as early as A.D. 662, possibly earlier, as future research will likely show.

### **Markers Reconstructible to Common Ch'olan**

The CLM markers seen in **Table 14** are reconstructible to Common Ch'olan, and thus, their presence or absence from one of the branches cannot be used to claim a special relationship with that branch.



Table 14

1) <i>*-w-an</i> ‘completive status of positionals’ or ‘intransitivizer of positionals’
2) <i>*-i(y/h)</i> ‘completive status of intransitives’ < Proto-Mayan <i>*-i-h ~ *-i-k</i>
3) <i>*-V<sub>1y</sub></i> ‘intransitivizer’ or ‘completive/indicative status of intransitives’ < Proto-Ch’olan-Tzeltalan <i>*-V<sub>1y</sub></i> (Tzeltal, Tzotzil, Ch’ol, Ch’olti’, Ch’orti’)
4) <i>*-aj ~ -ij</i> ‘intransitivizer’ < Proto-Ch’olan-Tzeltalan
5) <i>*-en</i> ‘1sABS’ < Proto-Mayan <i>*-iin</i>
6) <i>*(V)l-el</i> ‘abstractive’ < Proto-Ch’olan-Tzeltalan (Ch’ol, Chontal, Tzeltal, Tzotzil, Ch’orti’)
7) <i>*+(i)j+iy</i> ‘since/after’ < Proto-Ch’olan-Tzeltalan <i>*+(ee)j+eey</i>
8) <i>*t(i/ä) + IV-il/el</i> ‘progressive construction of intransitives’ < Proto-Ch’olan-Tzeltalan (Ch’ol, Chontal, Tzeltal, Tzotzil)
9) <i>*(ASP-)ERG-IV-INC-ABS</i> ‘(split ergative) incomplete status of intransitives’
10) <i>*ni-</i> ‘1sERG’ < Proto-Mayan <i>*nu-</i>

The first marker of interest here is Common Ch’olan *\*-w-an(-i)* ‘completive status of positionals’ (Kaufman and Norman 1984) or ‘transitivizer of positionals’ (Houston et al. 2000).<sup>32</sup> As already discussed, this marker succeeded Pre-Ch’olan *\*-l-aj(-i)*, and this succession is in fact attested in CLM texts beginning by ca. A.D. 500-600 (Justeson 1985). Hrbý and Child (1999) have argued that *\*-w-an(-i)* was innovated in the western lowlands, and therefore possibly in a Western Ch’olan dialect or language, and based on their proposal Houston et al.’s (2000) have suggested that this marker could therefore be simply a case of diffusion subsequent to the breakup of Proto-Ch’olan. However, as discussed above, the marker may

<sup>32</sup> Given the Chontal data in Knowles (1984), which shows that *-w-an* may be used in the completive or incomplete statuses, I agree with Houston et al.’s (2000) definition as ‘transitivizer of positionals’. This is too what Ch’orti’ shows, suggesting that such trait is a Proto-Ch’olan trait.

have originated in the central lowlands much earlier than previously thought, and it is certainly simpler to assume that the marker was innovated once than to assume that it was innovated and then diffused, or even worse, to assume that it was innovated independently twice.

The second and third markers are Proto-Ch'olan/Common Ch'olan *\*-i(y/h)* 'completive status of root intransitives' and Proto-Eastern Ch'olan *\*-V<sub>1</sub>y* 'completive status of root intransitives' (Kaufman and Norman 1984); earlier I showed that *\*-V<sub>1</sub>y* may very well be a Proto-Ch'olan or Proto-Ch'olan-Tzeltalan marker of verbs of motion and change-of-state, consistent with Kaufman's (1989) reconstruction of Proto-Ch'olan-Tzeltalan *\*-e(y) ~ \*-V<sub>1</sub>y* 'versive'.<sup>33</sup> CLM texts generally show Proto-Ch'olan *\*-i(y/h)* 'completive status of root intransitives' as *-i* (e.g. **HUL-(I)i** for *hul-i-Ø* arrive.here-CMP-3sABS 's/he arrived (here)', **hi-li** for *hil-i-Ø* rest-CMP-3sABS 's/he rested', **ta-li** for *tal-i-Ø* come-CMP-3sABS 's/he came', **e-mi** for *ehm-i-Ø* descend-CMP-3sABS 's/he descended', **OCH-chi** for *och-i-Ø* enter-CMP-3sABS 's/he entered'). This marker is a retention of Proto-Mayan *\*-i(h/k)* 'completive status of root intransitives' (Kaufman and Norman 1984; Kaufman 1989), and is attested in Ch'ol (Western Ch'olan) and in Ch'olti' (Eastern Ch'olan).

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<sup>33</sup> While it is clear that *\*-V<sub>1</sub>y* had a meaning of 'completive status of intransitives' in Proto-Eastern Ch'olan (Kaufman and Norman 1984), it is possible that its Pre-Ch'olan and Proto-Ch'olan function may have been different, perhaps simple as 'versive'. This is suggested by the fact that this markers were always spelled partly with T17 **yi** (e.g. **pu-lu-yi**, **ja-tz'a-yi**). If one does not abide by the idea that in such cases T17 **yi** functioned pseudologographically as *-V<sub>1</sub>Y*, which is essentially what Houston et al. (2001) argue for, then it would seem likely that the vowel of T17 **yi** was there to spell *\*-i(h/y)* 'completive status of intransitives', just as in cases like **HUL-li** for *hul-i-Ø* 's/he/it arrived (here)'. If correct, then **pu-lu-yi** would represent *pul-uy-i-Ø* burn-VRS-CMP-3sABS 's/he/it burned'.

However, in Ch'olti' the marker is not widely used. It is attested with relatively few intransitives (e.g. <at-i> 'bathe', <uk-i> 'cry', <ajn-i> 'run'), while Proto-Eastern Ch'olan \*-V<sub>1</sub>y 'completive status of root transitives' (see discussion above) appears to be more widely used (e.g. <em-ei> 'go down', <loc-oi> 'go out', <och-oy> 'enter', <cham-ai> 'die', <pul-ui> 'burn', <van-ai> 'sleep'), as pointed out by Kaufman and Norman (1984:104).

Ch'orti' uses -V<sub>1</sub>y ~ -ay exclusively (e.g. *cham-ay* 'die', *pur-uy* 'burn', *lok'-oy* 'go out', *k'ot-oy* 'arrive', *t'ab'-ay* 'go up', *kar-ay* 'get drunk', *num-uy* 'pass', *och-oy* 'enter', *tob'-oy* 'jump'; *ekm-ay* 'go down', *ojm-ay* 'boil'), as also pointed out by Kaufman and Norman (1984:103). This evidence supports Kaufman and Norman's (1984:103) proposal that Proto-Eastern Ch'olan had both \*-i and \*-V<sub>1</sub>y. More specifically, it would suggest that Common Eastern Ch'olan (though not necessarily Proto-Eastern Ch'olan) would have used \*-V<sub>1</sub>y on the following verbs at least: *\*lok'-oy*, *\*och-oy*, *\*cham-ay*, and *\*em-ey*.

However, CLM texts exhibit **OCH-chi** for *och-i* (not *och-oy*), **CHAM-mi** for *chäm-i* (not *chäm-ay*), and **e/EM-mi** for *em-i* (not *em-ey*). While it is possible to assume that Proto-Eastern Ch'olan may very well have had forms like *\*och-i*, *\*cham-i*, and *\*em-i*, the fact is that such forms would have been retentions from earlier stages, not innovations, and cannot be used to support an exclusively Eastern or Western affiliation.

The fourth marker is -aj ~ -ij 'intransitivizers' attested in CLM texts (Lacadena 1996, 2001). They are used in derivations involving action nouns like **AK'-ta-j(a)** for *ahk't-aj-Ø-Ø* (dance-IVZR-CMP-3sABS) 's/he danced',

and **pi-tzi-j(a)** for *pitz-ij-Ø-Ø* (ball.playing-IVZR-CMP-3sABS) ‘s/he played ball’, respectively. This agrees with their reconstructed Proto-Ch’olan and Proto-Ch’olan-Tzeltalan function (Kaufman and Norman 1984). They became thematic suffixes in Proto-Eastern Ch’olan, as attested in Ch’olti’ and Ch’orti’ (see discussion above of the second component of the *-h-...-aj* marker proposed by Houston et al. [2000]). Hence, while Proto-Eastern Ch’olan may have had *\*-aj ~ \*-ij* as ‘intransitivizers’, with that function shifting to ‘thematic intransitive markers’ in Common Eastern Ch’olan, the fact is that such forms are retentions from Proto-Ch’olan-Tzeltalan *\*-aj ~ \*-ij* ‘intransitivizers’(and *~ \*-uj*, not discussed here).

The fifth marker is *\*-en* ‘1sABS’. CLM texts may attest to the use of the sequence **Ce-na** to spell *\*-en* ‘1sABS’ in **a-wi-na-ke-na** on Piedras Negras Lintel 3, as proposed by Stuart et al. (1999:II-22), who translate it as *a-winak-en* 2sERG-person-1sABS ‘I am your servant’. Though *-en* is attested today only in Eastern Ch’olan (within the Ch’olan subgroup), it is reconstructible to Proto-Ch’olan as *\*-en* (Kaufman and Norman 1984:90-92). Kaufman (1989:Part C:26) in fact argues that this absolute marker was borrowed by “Pre-Proto-Ch’olan” from Yukatekan, which underwent a process of leveling and assimilation of the vowels of the absolute person markers (i.e. Proto-Mayan *\*iin* ‘1sABS’ and *\*at* ‘2sABS’ > Proto-Yukatekan *\*en* and *\*ech*, Proto-Mayan *\*o7nh* ‘1pABS’ and *\*ex* ‘2pABS’ and *\*eb* ‘3pABS’ > Proto-Yukatekan *\*o7n* and *\*e7x* and *\*o7b*). Therefore, it cannot be used to argue in favor of just one branch of Ch’olan.

The sixth marker is the already mentioned *\*(V)l-el* ‘abstractive’ attested in Ch’ol, Chontal, Ch’orti’, Tzeltal, and Tzotzil. This marker can be reconstructed to Proto-Ch’olan as *\*(V)l-el*. It may have coexisted with similar meaning and function with *\*-il* ‘abstractive’, which is in fact reconstructible to Proto-Mayan as *\*-iil* (Mora-Marín 2001).

The seventh marker is *\*+(i)j-iy* ‘since/after’, spelled T136.126 **ji-ya** or T126 **ya**. Fox and Justeson (1984), Wald and MacLeod (1999), and Wald (2000, 2001) have made a strong case for the use of T88.126 **ji-ya** and T126 **ya** as alternative spellings of an apparent set of deictic enclitics that may be postposed to verbs, nouns, adverbs, and adjectives. Fox and Justeson (1984:58-59) argue this marker is cognate with Proto-Tzeltalan *\*+ej* ‘in the future’ and *\*+ey* ‘in the past’ which could be combined as *\*+jey* (< *\*+ej+ey*) ‘since/after’ (Kaufman 1972:147). Kaufman and Norman (1984:138, 145) reconstruct these as the suffixes *\*-ij* ‘in the future’ and *\*-i* ‘in the past’, respectively, and propose they form adverbs from numerals (e.g. *\*chun-ij* ‘in four days’, *\*chun-ij-i* ‘four days ago’), nouns (e.g. *\*äk’b’-i* ‘yesterday’), and other adverbs (e.g. *\*on-i* ‘formerly, long ago’). Both Kaufman and Norman (1984:87) and Fox and Justeson (1984:58) point out that in Proto-Ch’olan these markers underwent the *\*ee > \*i* shift exclusive to Ch’olan; indeed, these markers are reconstructed to Proto-Mayan as *\*+eej* and *\*+eer* (Kaufman and Norman 1984:138). Wald (2000, 2003) and Wald and MacLeod (1999:89) note that it is attested in Acalan Chontal (Western Ch’olan) as <ihi> and <i>, while in Ch’olti’ it is attested also as

<ihi>. Based on this, and on their exhaustive analysis of discourse patterns in texts from a variety of ancient cities, they also identify <ihi> with Proto-Ch'olan *\*+(i)j+i(y)*. This marker of CLM texts cannot be used, for this reason, to support an exclusive Western or Eastern Ch'olan affiliation either.

The eighth marker is actually a phrasal construction: *\*ti/tä-IV-el* 'progressive of intransitives'. As already discussed, it is not possible to accurately reconstruct how Proto- or Common Ch'olan handled transitives in this kind of construction, but Proto-Ch'olan-Tzeltalan must have used *\*ti/ta-ERG-TV-el* 'progressive of transitives'. Subsequently, Common Ch'olan or Western Ch'olan changed in the following way: *\*ti/ta-ERG-TV-el* > *ti/tä-TV-el*. This innovation might have taken place in Proto-Ch'olan, Common Ch'olan, or Proto-Western Ch'olan. In terms of simplicity, one can argue that Western Ch'olan innovated this feature; however, Proto-Ch'olan may very well have innovated this feature, in which case Western Ch'olan would have retained and Eastern Ch'olan would have lost it. In any case, the intransitive version (*\*ti/tä-IV-el*) can be reconstructed to Proto-Ch'olan-Tzeltalan, and by itself does not provide evidence for linguistic affiliation within Ch'olan.

The ninth marker is also a phrasal construction indicative of split ergativity: *\*(ASP+)ERG-IV-INC-ABS* 'incompletive aspect/status of intransitive verbs'. Split ergativity is reconstructed by Kaufman and Norman (1984) to Proto-Ch'olan, as already discussed above. In Robertson's (1999) model of Ch'olan diversification (i.e. Ch'ol vs. Chontal vs. Ch'olti'), a development of split ergativity after the breakup of Proto-Ch'olan would be

even less likely (though not impossible). Can CLM texts help resolve the matter? There is some limited evidence suggestive of split ergativity in CLM texts. For example, there is at Copan (Monument 157) an antipassive construction that appears to be in the incompletive status and takes an ergative person agreement marker:

(8) **u-CHOK-no-m(a)**

u-chok-n-om-Ø

3sERG-throw.down-AP-POT-3sABS

‘he would/will throw.down/scatter’

The antipassive marker *-n* intransitivizes a root transitive verb (Lacadena 1998; Mora-Marín 1999, 2001). Yet in this example the verb takes the prefix *u-*, which is normally an ergative agreement marker coreferencing transitive subjects, not intransitive subjects. The suffix *-om* ‘potential/future’ suggests that the action alluded to may not be in the completive aspect after all; instead, it may be in the incompletive aspect. Thus, the dual presence of *u-* and *-n* can only be reconciled here if one assumes a type of split ergativity at work. This is the best example of a split ergative construction in any text known to me, and it is somewhat late, dating to A.D. 783. It dates to around the time when the few exclusive innovations of Western Ch’olan and Eastern Ch’olan first appear (see above). These innovations are perhaps too few to call the emerging systems different languages, but perhaps at least different dialects. The facts that the earliest hint of split ergativity dates to A.D. 783 supports this idea: it is

simpler to assume that split ergativity developed once in Proto-Ch'olan, and that the Eastern and Western branches simply inherited this trait. So for now my best guess is that split ergativity, assuming the above example attests to it, arose during the late Proto-Ch'olan period, when well defined Western and Eastern Ch'olan dialect areas were just emerging. This development also postdates the transition of *\*-l-aj(-i)* to *\*-w-an(-i)*, which I suggest signaled the Proto-Ch'olan to Common Ch'olan transition.

And last, the marker *\*ni-* 'first person singular preconsonantal ergative/possessive agreement marker' is attested in CLM texts spelled with T116 **ni** (e.g. Vase K1398, **ni-b'u-ku** for *ni-b'uhk* 1sPOSS-clothes 'my clothes', and **ni-CH'AM-wa** for *ni-ch'am-aw-Ø* 1sERG-grab-CMP/PL-3sABS 'S/he/it grabs/grabbed it'). Wichmann (2002:17-19), referring in particular to the possessive prefix, has pointed out that the form attested in CLM texts, *ni-*, is not what Kaufman and Norman (1984:92) reconstruct for Proto-Ch'olan, namely, *\*in-*. At first sight this may appear to reinforce an Eastern Ch'olan model, since Ch'orti' has *ni-* (for verbal agreement) and *-in* (for nominal possession) and Ch'olti' has *in-* (for both verbal and possession agreement); in contrast, Ch'ol and Chontal both have *k-*. Wichmann, responding directly to Houston et al.'s (2000) and Robertson's (1992, 1998) proposal that Ch'olti' is the parent of Ch'orti' and that CLM texts represent a form of Pre-Eastern Ch'olan ("Classic Ch'olti'an"), notes that it is very unlikely that a hypothetical Proto-Ch'olan *\*in-* could have become *ni-* in the language of the script, *in-* again in Ch'olti', and *ni-* again in Ch'orti'. The other



alternative, a Proto-Ch'olan *\*ni-* reflected in the script but changing to *in-* in Ch'olti' (which is assumed in this scenario to be the parent of Ch'orti') and then back to *ni-* in Ch'orti' seems less unlikely to Wichmann. There is a third alternative not considered by Wichmann. Since Ch'orti' does have *in-*, restricted to nominal possession, it is possible that Proto-Eastern Ch'olan had both *\*ni-* (verbal agreement) and *\*in-* (nominal agreement), with Ch'olti' expanding the use of *\*in-* to verbal agreement and ejecting *\*ni-* from the paradigm altogether. Ch'orti' would have preserved the ancestral pattern. In fact, if one considers the alternative of Proto-Ch'olan *\*ni-*, it becomes evident that it is more consistent with Proto-Mayan *\*nu-* (Kaufman and Norman 1984:91, Table 7) than Proto-Ch'olan *\*in-*. Kaufman (personal communication 1999) has actually pointed this out to me, and suggested that CLM *ni-* may be a retention reflecting the Proto-Mayan form; earlier, Kaufman (1989:Part C) had reconstructed *\*nV-* to Proto-Western Ch'olan, but *\*n-* to Proto-Ch'olan. It is quite likely that CLM *ni-* is in fact a reflex of Proto-Mayan *\*nu-* and Proto-Western Mayan *\*nV-*. But given that Western Ch'olan (probably through contact with Tzeltalan) innovated the use of *k-* as 'first person singular preconsonantal ergative/possessive marker' (Kaufman and Norman 1984:90-92), subsequent to the split of Proto-Ch'olan into Eastern Ch'olan and Western Ch'olan, we cannot know with certainty whether Western Ch'olan had *ni-*, and therefore, whether Proto-Ch'olan had *\*ni-*. Nevertheless, it is possible that such a form did in fact exist, and at least for now it would be too premature to use the form *ni-* of CLM texts as evidence for an Eastern Ch'olan affiliation.

## Markers Reconstructible to Proto-Ch'olan, Not Common Ch'olan

There is a set of at least eleven markers attested in CLM texts that is reconstructible to Proto-Ch'olan but not to Common Ch'olan. The evidence for this claim comes in the form of two types of markers:

1. innovations exclusive of Pre-Proto-Ch'olan which are only partly preserved in the two Ch'olan branches and arrived at through internal reconstruction; and
2. retentions reconstructible to Proto-Ch'olan but not to Common Ch'olan by means of forward reconstruction.

Ordinarily retentions from Proto-Mayan should not be evidence for linguistic affiliation. However a retention from Proto-Mayan that is present in CLM texts, but completely absent from the extant Ch'olan languages poses ambiguity. Were they retained in Proto-Ch'olan and subsequently lost independently from both Western Ch'olan and Eastern Ch'olan after diversification? Were they preserved in one branch only and subsequently lost leaving no trace in either branch? While these are certainly possible scenarios, the simplest solution in such cases is to assume that such markers were lost during Proto-Ch'olan times, and thus, Common Ch'olan did not inherit them; and as a result, neither Western Ch'olan nor Eastern Ch'olan inherited them either. The case of innovations attributable to Pre-Proto-Ch'olan but only partly preserved in the extant Ch'olan languages is

similar to that of retentions as far as the ambiguity it poses; the point I make here is that in the cases below simplicity favors one period of loss (i.e. during Pre-Proto-Ch'olan times), as opposed to two periods of loss (e.g. independently from Western Ch'olan and Eastern Ch'olan) or more (e.g. independently from Ch'ol, Acalan, and Ch'olti'an, if one assumes Robertson's Ch'olan diversification model).

Before discussing these markers, a lexical example that is analogous is necessary. The standard phonetic spelling of the word for 'fire', **k'a-k'a**, suggests a lexeme *k'ahk'*, consistent in its final consonant with what one would expect given the cognates from non-Ch'olan Mayan languages. Indeed, Kaufman and Norman (1984:123) propose a reconstruction of *\*q'ahq'* for Proto-Mayan, and *\*k'ähk'* for Proto-Tzeltalan. This strongly suggests that Proto-Ch'olan-Tzeltalan had *\*k'ahk'*. Nevertheless, based on the reflex present in all of the Ch'olan languages, Kaufman and Norman reconstruct *\*k'ahk* for Common Ch'olan, showing a change in the final consonant, from an ejective velar stop *k'* to a non-ejective velar stop *k*. Thus, the term attested in CLM texts, **k'a-k'a**, reflects a stage prior to the Common Ch'olan change of *\*k'* to *\*k* at the end of the term for 'fire'. The term **k'a-k'a**, therefore, is consistent with a Proto-Ch'olan stage. It cannot be arrived at through internal reconstruction from modern Ch'olan data alone; instead, one must look outside of Ch'olan (e.g. Tzeltalan) to reconstruct *\*k'ahk'* to Proto-Ch'olan-Tzeltalan, and then, given the CLM spelling **k'a-k'a**, one can reconstruct *\*k'ahk'* to Pre-Ch'olan. Thus, the evidence from CLM texts, and

the evidence from other non-Ch'olan Mayan languages are sometimes necessary to reconstruct earlier stages of Ch'olan linguistic history through forward reconstruction. There is a set of morphological markers that fall into this category, as seen in **Table 15**.<sup>34</sup>

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<sup>34</sup> Further research will likely reveal more lexical cases like **k'a-k'a**. Such research should also address terms that are inconsistent with modern Ch'olan reflexes. For example, CLM texts attest to the term **b'u-la-yu** in reference to a spotted feline creature. However, Kaufman and Norman (1984:117) reconstruct the presumably matching term in Proto-Ch'olan as *\*b'o'lay* 'spotted; jaguar'. It is possible that Ch'olan may have had originally *\*b'o'lay*, and that some dialects applied the Ch'olan shift of Proto-Mayan *\*oo > uu* to this term, while other dialects did not. In fact, Proto-Mayan *\*CV'C* became Proto-Ch'olan-Tzeltalan *\*CVVC*, which in turn resulted in Proto-Ch'olan *\*CVC* (Kaufman and Norman 1984:88, Table 6). Thus in some dialects the term *b'o'lay* may have been pronounced as *b'oolay*, and then, when the *\*oo > uu* shift was in effect, some speakers at least produced *b'uulay* or *b'ulay*. This may have been a overtly prestigious form: a linguistic variety used by elites which has left its only trace in CLM texts.

Table 15

MARKER	ATTESTATION
1) <i>-aj ~ -ij</i> ‘uncertain possession’	CLM texts, Greater Q’anjob’alan, Eastern Mayan
2) <i>-as ~ -is</i> ‘uncertain possession’	Greater Q’anjob’alan, Yukatekan, Eastern Mayan
3) <i>-l-aj(-i)</i> ‘completive status of positionals’	CLM texts, poss. Ch’ol <i>-le</i>
4) <i>-V<sub>1</sub>w</i> ‘plain status of transitives’	CLM texts, Greater Q’anjob’alan, Eastern Mayan, Wastekan; preserved in both branches of Ch’olan as <i>-V<sub>1</sub></i> but <i>w</i> has not been preserved in Ch’olan
5) <i>-(e)j</i> ‘perfective’	CLM texts, Tzeltalan, Eastern Mayan
6) <i>w-</i> ‘1sERG’	CLM texts, Proto-Mayan; preserved in Eastern Ch’olan as <i>inw-</i> ~ <i>niw-</i>
7) <i>t(ASP+)IV-INC-ABS</i> ‘no split ergativity’	CLM texts; Proto-Ch’olan had <i>(ASP+)ERG-IV-INC-ABS</i> (i.e. split ergativity)
8) <i>ha’-Ø(+i/+a)</i> PRO-3sABS+ENCL	CLM texts, Proto-Mayan <i>*ha’-Ø</i> , Proto-Ch’olan <i>*ha’-Ø+in</i>
9) <i>-w(-i/-a)</i> ‘objectless/incorporative antipassive’	CLM texts; Greater Q’anjob’alan
10) <i>t(i/ä) + NP(patient)</i> ‘absolutive antipassive object demotion’	CLM texts; other Mayan languages have <i>PREP + ERG-RN ± NP</i>
11) <i>t(i/ä) + NP(addressee)</i> ‘antidative construction’	CLM texts; Greater Q’anjob’alan had <i>PREP + NP</i> also, while other Mayan languages have <i>PREP + ERG-RN ± NP</i> including Proto-Ch’olan with <i>*t(i/a) + ERG-b’a ± NP</i>

The first and second markers of interest here are *-aj ~ -ij* ‘uncertain possession, generic/plural marker’ and *-as ~ -is* ‘uncertain possession, generic/plural marker’. The first marker, which is used on nouns to express a type of unpossessed stem or a generic/plural meaning (e.g. **tu-pa-ja** for *tu(u)p-a(a)j* ‘earring(s)’ and **B’AH-hi-ja** for *b’ah-i(i)j* ‘image(s)’), has been identified in CLM texts by Stuart et al. (1999) and Houston et al. (2001). I

differ from those authors in their claim that only one suffix of the form *-aaj* is spelled, since the spelling patterns suggest two: *-a(a)j* and *-i(i)j*. Its presence in CLM texts, though, suggests that it was present in some now extinct form of Ch'olan. Fortuitously, as the preceding authors have pointed out, this marker is attested outside of Ch'olan: Mam (*-baj* ~ *-j*), K'iche' (*-aaj* ~ *-ijj*), Kaqchikel (*-aj* ~ *-ij*, *-ätz*), Tz'utujil (*-aaj* ~ *-ijj*), and Q'eqchi' (*-b'ej* ~ *-ej*) attest to it in Eastern Mayan, while Jakalteek (*-e*) and Q'anjob'al (*-e* ~ *-ej*) attest to it in Western Mayan. This comparative evidence suggests that the marker was probably present in Proto-Central Mayan (Eastern Mayan and Western Mayan), Proto-Eastern Mayan (Greater Mamean, Greater K'iche'an), and Proto-Western Mayan (Greater Q'anjob'alan, Ch'olan-Tzeltalan). Its attestation in CLM texts points to a Proto-Ch'olan-Tzeltalan and a Pre-Ch'olan presence as well. And since no extant Ch'olan language preserves it, we can propose that Pre-Ch'olan had this marker, but that it was lost from Proto-Ch'olan, resulting in the fact that none of the extant Ch'olan languages have a reflex of this marker. The alternative is a less likely scenario: The marker may have been passed down from Proto-Ch'olan to Pre-Western Ch'olan and Pre-Eastern Ch'olan, but both branches subsequently lost it. This scenario requires two discontinuities: two independent losses of this marker in Western Ch'olan and Eastern Ch'olan. Or we can propose that it was passed down to Proto-Ch'olan, and then to one of the two branches, which subsequently lost it. But this scenario also requires two discontinuities. The first scenario, the one proposing that the marker was still present in Pre-Ch'olan as *\*-a(a)j* ~ *\*-i(i)j*, but was lost during Proto-

Ch'olan times, requires only one discontinuity.

The same is true for the second marker, *-as* ~ *-is* 'uncertain possession; generic/plural marker'. Zender (2001) has proposed that another such suffix, *-is*, is attested, and may be related to the forms attested in Poqom (*-is* ~ *-es* ~ *-bes*). It is found, Zender proposes, in examples like **WAY-ya-si**, based on **WAY** for *wäy* 'animal spirit' (Houston and Stuart 1989) and **k'a-b'a-si**, based on **k'a-b'a/K'AB** for *k'ab* 'hand, arm'. Kaufman (1989:Part B, 8) in fact reconstructs *\*-itz* ~ *\*-atz* to Proto-Mayan based on examples like those in Poqom and Kaqchikel (*-ätz*). These are probably related to the suffix in CLM texts, which seems to be spelled phonetically as *-as* (i.e. **WAY-(y)a-s(i)** 'co-essence, shapeshifter'), although Zender (2001:10) argues for an *-is* form (i.e. **WAY(-ya)-IS**) assuming the proposal by Stuart et al. (1999) and Houston et al. (2001) that suffixes are often spelled logographically instead of purely phonetically. Zender (2001:4, 6) points out that Ch'ol has a suffix *-ä/* used on some unpossessed nouns with the same function, and that Ch'orti' has *-b-ir*. Thus, even if the markers *-aj* ~ *-ij*, and *-as* ~ *-is* have not been preserved in modern Ch'olan languages, two other markers with a similar function have. In any case, the *-aj* ~ *-ij*, and *-as* ~ *-is* markers also support a Pre-Ch'olan stage for the language of CLM texts. None of these markers is attested in modern Ch'olan languages. They can only be posited to Pre-Ch'olan (i.e. *\*-a(a)j* ~ *\*-i(i)j*, *\*-as* ~ *\*-is*) through forward reconstruction from Proto-Central Mayan, given

their attestation in Greater Q'anjob'alan and Eastern Mayan.<sup>35</sup>

Regarding the third marker, as already mentioned, CLM texts attest to Pre-Ch'olan *\*-l-aj(-i)* 'completive status of positionals' (Kaufman and Norman 1984). If Kaufman and Norman's suggestion that Ch'ol *-le* is not related to this marker is correct, then there would be no modern Ch'olan trace of this marker; Kaufman and Norman's reconstruction was in fact carried out in part through forward reconstruction, using Tzeltalan evidence, and in part through backward reconstruction, using Ch'olan evidence for other parts of the Ch'olan paradigm related to positionals, but not to the reconstructible Proto-Ch'olan/Common Ch'olan equivalent, *\*-w-an(-i)* 'completive status of positionals'.

The fourth marker corresponds to *-V<sub>1</sub>w* 'plain status of transitive roots' (e.g. *u-cho-ko-wa*, *u-tz'a-pa-wa*, *u-je-le-wa*, *u-ti-mi-wa*, *u-b'u-t'u-wa*), but this marker does not survive with *w* in any extant Ch'olan language. Several authors have discussed this marker (Bricker 1986; Josserand 1991; Justeson and Campbell 1997; Wald 1994). Bricker (1986:126) points out that, based on the syntactic contexts of verbs with *u-C<sub>1</sub>V<sub>1</sub>C<sub>2</sub>-wa ~ u-...-C<sub>2</sub>V<sub>1</sub>-wa* spelling patterns, such verbs must be

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<sup>35</sup> I think it is possible that frozen forms of *-as* may be attested in modern Ch'olan languages. Indeed, all the Ch'olan languages attest to Proto-Ch'olan *\*alas* 'game, toy', from Proto-Mayan *\*aala's* (Kaufman and Norman 1984:116). This term may be composed of two parts: *\*al* 'woman's offspring' from Proto-Mayan *\*aal*, and a presumed suffix *\*-as* from Proto-Mayan *\*-a's*. Semantically it makes sense to derive 'toy' from 'woman's offspring'. Also, colonial Yukatek may attest to this suffix or a similar one in terms like *wayas* 'lo que pasa de presto como sueño', possibly based on (*ah*) *way* 'brujo, nigromántico, encantador; familiar que tienen los nigrománticos brujos o hechiceros, que es algún animal, que por pacto que hacen con el demonio se convierten fantásticamente' (Barrera Vásquez et al. 1980:916). This term *wayas* could be identical to the CLM term **WAY-ya-si**, for example.



active transitive, and therefore, the suffix spelled with **-wa** ( $\sim -C_2V_1\text{-wa}$ ) must be some suffix that active transitives may take; Bricker specifically related this marker with Tojolob'al  $-V(w)$ , a suffix of transitives, though she did not use this evidence to argue for Tojolob'al as the language of CLM texts, rather to point out that such a suffix may have been present in Ch'olan and Yukatekan languages, the languages she considered to be most closely aligned with that of CLM texts. Wald (1994) suggests the *w* of the T130 **wa** is silent, and analyzes spellings like **u-cho-ko-wa** as *u-chok-o-Ø* 3sERG-throw.down-CMP-3sABS 's/he/it threw it down', an analysis that is consonant with Kaufman and Norman's (1984) Proto-Ch'olan reconstruction of this marker as  $*-V_1$ . More recently Justeson and Campbell (1997:65) have pointed out that Kaufman's reconstruction of Proto-Mayan  $*-o(w)$  'plain status [of root transitives]', in which the *w* was optional, is in close agreement with the glyphic facts. Indeed, they point out that Kaufman's reconstruction reflects the fact that in some languages the *w* is deleted when a following consonant-initial suffix follows. Thus, in Ch'olan only the form without *w* has survived: Ch'ol (Western Ch'olan) and Ch'olti' (Eastern Ch'olan) preserve  $-V_1$ , while Chontal (Western Ch'olan) has  $-i$  and Ch'orti' (Eastern Ch'olan) has  $-i/-e$  (Kaufman and Norman 1984:Table 12, 100). The *w* of  $-V_1w$  simply cannot be reconstructed from the data in the extant Ch'olan languages. In fact, Kaufman (1989:Part C:23, 28, 33) proposes  $*[-o(w)]$  as the plain status of root transitives in Proto-Mayan,  $*[-a(w)]$  in Proto-Western Mayan,  $*[-a]$  with the same function for Proto-Greater

Tzeltalan, and  $*-V_1 \sim *-i$  as the completive status of root transitives for Proto-Ch'olan. However, the evidence from CLM texts shows that in some form of Ch'olan the marker must have been  $*-V_1w$ . Since no extant form of Ch'olan attests to  $*-V_1w$ , only to  $*-V_1$ , one must conclude that at the moment of its split Common Ch'olan had  $*-V_1$  (Kaufman and Norman 1984), not  $*-V_1w$ , and therefore, that  $*-V_1w$  is a Proto-Ch'olan form. Furthermore, one can even revise Kaufman's (1989:Part C:28) reconstruction of Proto-Ch'olan-Tzeltalan  $*[-a]$  as  $*[-a(w)]$ . Ch'olan reanalyzed the *a* of  $*[-a(w)]$  as  $V_1$ , resulting in  $*[-V_1(w)]$ . CLM spellings such as **u-CHOK-ko** for *u-chok-o-Ø* 3sERG-throw.down-CMP-3sABS 's/he/it threw it down' in fact support the optionality of *w*, showing that Proto-Ch'olan must have had  $*[-V_1(w)]$ . One could concede the possibility that perhaps Common Ch'olan had  $*-V_1w$ , and that this marker was in fact inherited by both Ch'olan branches, each of which subsequently lost the *w*; or even that only one Ch'olan branch inherited the marker in its full form, but subsequently lost it. But either of these scenarios would require two cases of independent loss of the same segment, or two discontinuities, instead of just one in Proto-Ch'olan, and is therefore not the simpler model.

The fifth marker is  $-(V)j$  or  $-(VV)j$  'perfec status', recently proposed by MacLeod (2001). This marker would be in paradigmatic contrast with the previously discussed  $*-V_1w$  and  $*-i(h/y)$ . This marker is not attested in any of the modern Ch'olan languages, but it is attested in Tzeltalan and in other Mayan languages. Kaufman (1989:Part C:5) has reconstructed it to Proto-

Mayan as *\*(-o)-ej* for root transitives and *\*-ej* for derived transitives, but has defined it as a ‘perfect participle/gerund’ not as a status marker. Kaufman (1989:Part C:28) reconstructs it as *\*-ooj ~ \*-ej* in Proto-Ch’olan-Tzeltalan with the same definition as for Proto-Mayan. Kaufman (1989:Part C:33) does not reconstruct any perfect participle/gerund markers for Proto-Ch’olan, leaving the question open; modern Ch’olan languages preserve no reflexes of this Proto-Mayan marker. Hence, if MacLeod (2001) is correct in her identification, this would be another example of a suffix that can be reconstructed to Proto-Ch’olan from evidence in non-Ch’olan languages and the evidence from CLM texts (forward reconstruction).

Regarding the sixth marker, Schele and Grube (2002:27) have noted that CLM texts seem to attest to a prevocalic first person singular ergative prefix of the form *w-*. Ch’ol and Chontal have *k-*, while Ch’olti’ and Ch’orti’ have *inw-* and *inw-/niw-*. Kaufman and Norman (1984:91) have reconstructed the Proto-Ch’olan form as *\*inw-*. At first, this evidence could suggest a close match between *w-* of CLM texts and *inw-/niw-* of Eastern Ch’olan, while excluding Western Ch’olan. However, Kaufman and Norman (1984:91) also reconstruct the Proto-Mayan form as *\*w-*, suggesting that the *w-* attested in CLM texts was simply a retention from Proto-Mayan. More recently, Kaufman (1989) has made some revisions to the reconstructions in Kaufman and Norman (1984). He has proposed the following reconstructions (Kaufman 1989:Part C): *\*nV-* before consonants and *\*w-* before vowels for Proto-Western Mayan; *\*n-* before consonants and

*\*nw-* before vowels for Proto-Greater Tzeltalan; and *\*n-* before consonants and *\*nw-* before vowels for Proto-Ch'olan. The forms attested in CLM texts, *ni-* ~ *w-* (see above for *ni-*), are closer to what Kaufman has proposed for Proto-Western Mayan, *\*nV-* ~ *\*w-*, than for Proto-Ch'olan, *\*n-* ~ *\*nw-*. Since the evidence from modern Ch'olan language suggests a prevocalic form such as *\*inw-* or *\*nw-* for Proto-Ch'olan, the evidence from CLM texts supports a form much closer, if not identical, to Proto-Mayan *\*w-*. Thus one can suggest that this form points to a Proto-Ch'olan stage, one that cannot be arrived at by means of backward reconstruction of Common Ch'olan.

The seventh marker is actually a morphosyntactic pattern already discussed: the ergative-absolutive person agreement system for transitive and intransitive verbs. As mentioned above, Proto-Ch'olan most likely had split ergativity. Yet there is no evidence for split ergativity in the script until rather late, ca. A.D. 783; in other words, there is no evidence of use of ergative person agreement markers on incomplete intransitive or intransitivized verbs (i.e. (ASP+)ERG-IV-INC-ABS) prior to that time. If CLM texts indeed lack split ergativity (i.e. (ASP+)IV-INC-ABS), a trait inherited from Proto-Mayan, then one would have to invoke a Pre-Ch'olan stage again, since Proto-Ch'olan probably had split ergativity.

The eighth marker is *ha'-Ø(+i/+a)* 's/he/it; her/him/it'. The independent pronoun base reconstructed to Proto-Mayan by Kaufman (1989:Part C:75) is *\*ha'*. The paradigm of Proto-Mayan independent pronouns was based on this root and the appropriate absolutive marker (i.e.

*\*ha'-iin* 'I/me', *\*ha'-at* 'you', *\*ha'-Ø* 'he/him/she/her/it', et cetera). CLM texts exhibit this root spelled **ha'-(i/a)** for *ha'-Ø(+i/+a)* PRO-3sABS(+ENCL) 's/he/it/him/her' and **ha-o-b'(a/o)** for *ha'-ob'(+a/+o)* PRO-3pABS(+ENCL) 'they/them'. These forms do not completely match the form *\*ha'-Ø+in* PRO-3sABS+ENCL 's/he/it, him/her/it' reconstructed for Proto-Ch'olan by Kaufman and Norman (1984). Instead, it suggests a form much closer to Proto-Mayan *\*ha'-Ø*, with the addition of enclitics such as descendants of Proto-Mayan *\*+i* 'this/here', *\*+a* '(this) right here', or *\*+o* 'yon(der)'. Earlier I suggested that Proto-Ch'olan may have had a partial paradigm for '3sPRO' represented by *\*ha'-Ø-in+i*, *\*ha'-Ø-in+a*, and *\*ha'-Ø-in+e*. The form *\*ha'-Ø* is therefore a conservative form that cannot be reconstructed to Proto-Ch'olan based on the attested Ch'olan languages. The simplest explanation is that the glyphic spellings attest to a Proto-Ch'olan form *\*ha'-Ø(+i/+a)* PRO-3sABS(+ENCL). Common Ch'olan subsequently incorporated the Proto-Mayan demonstrative *\*+in* (see above), and the result, *\*ha'-Ø+in* served as the base for the forms attested in the descendant Ch'olan languages (e.g. Ch'ol *jini* < *\*ha'-Ø+in+i*, Ch'olti' <haine> < *\*ha'-Ø+in+e*).

The ninth marker is *-w(-i/a)* 'objectless/incorporative antipassivizer', and is spelled with T117 **wi** or T130 **wa**. It was first identified in CLM texts by Lacadena (1998), but also discussed in detail by Mora-Marín (1999, 2001, 2004). External comparative data from Tzeltalan and Greater Q'anjob'al suggests an absolutive or objectless antipassive marker of the general form

\*-(V)*w(-i/a)* for Proto-Western Mayan.<sup>36</sup> Tzeltalan exhibits *-wan* (Tzotzil) and *-awan* ~ -(V)*wej* (Tzeltal), while Greater Q'anjob'alan exhibits *-w(-a)* (Jakaltek, Q'anjob'al, Akatek), *-w(-i)* (Jakaltek, Q'anjob'al, Akatek), *-w(-an)(-i)* (Q'anjob'al), *-waj* (Chuj), *-wan* ~ *-wun* (Tojolob'al), and *-o'* (Jakaltek, Akatek). The only relevant cognate in Ch'olan is *-(w)an* (Ch'orti'). Otherwise, Ch'olan lacks a cognate objectless antipassive marker. Kaufman (1989) has suggested the *-w-an* forms were diffused between Tzeltalan and Tojolob'al at least, and possibly more widely with the rest of Greater Q'anjob'alan (e.g. Q'anjob'al). No such form is attested in CLM texts. CLM texts, instead, spell such antipassive markers with the syllabograms T130 **wa** and T117 **wi** (e.g. **CHOK-wi** for *chok-w-i-Ø* throw.down-AP-CMP-3sABS 's/he threw.down', **K'AL-wa** for *k'al-w-a-Ø* throw.down-AP-CMP-3sABS 's/he wrapped'), with not one single instance of **-CV-wa** or **-CV-wi** spellings to suggest that the suffix was of the general shape *-Vw(-i/a)*. Instead, the use of T130 **wa** and T117 **wi** point to a form like *-w(-i) ~ -w(-a)*, which is found in Greater Q'anjob'alan (Jakaltek, Q'anjob'al, Akatek). Based on this evidence, and the suggestion by Kaufman that *-wan* may have been diffused between Tzeltalan and Greater Q'anjob'alan, one may propose a Proto-Western Mayan form *\*-w(-i/a)* that was retained by Proto-Ch'olan, though not necessarily by Common Ch'olan, given the form *-(w)an* in Ch'orti', which is not attested in CLM texts. Therefore, the forms *\*-w(-i) ~ \*-w(a)* 'incorporative and

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<sup>36</sup> The data for Tzotzil comes from Aissen (1999), Dayley (1981), and Kaufman (1989); for Tzeltal from Kaufman (1971, 1989) and Dayley (1981); for Ch'olti' from Moran (1625); for Ch'orti' from Fought (1982) and Pérez Martínez (1994); for Chontal from Knowles (1984) and Quizar and Knowles-Berry (1994); for Jakaltek from Craig (1978, 1979), Datz (1980), Dayley (1981), and Zavala (1992); for Q'anjob'al and Akatek from Zavala (1997); and for Chuj and Tojolob'al from Kaufman (1989).

objectless antipassive' may be proposed for a Proto-Ch'olan dialect, and could be traced back to possible  $*-w(-i) \sim *-w(a)$  forms in Proto-Western Mayan.

There are two additional phrasal constructions that can be attributed to Proto-Ch'olan, but not to Common Ch'olan based on evidence from the extant Mayan languages. One is the antidative phrase  $t(i/\ddot{a}) + NP[addressee/recipient]$  and the other is the antipatient phrase  $t(i/\ddot{a}) + NP[patient]$ . However, I reserve a full discussion of these constructions and their history to another paper, given the extensive syntactic data necessary for argumentation. For now, see my previous discussions of these matters in Mora-Marín (2001, 2004).

In summary, none of these CLM markers is attested in full or at all in any of the modern Ch'olan languages. Two of them ( $w-$  '1sERG/POSS' and  $-V_1w$  'plain/completive status of root transitives') do have reflexes in modern Ch'olan languages, but the forms attested in CLM texts cannot be reconstructed from the extant Ch'olan data alone to Common Ch'olan, but instead require evidence from Mayan languages outside of Ch'olan for complete reconstruction to Proto-Ch'olan. Since the unique marker from Western Ch'olan (i.e.  $t(i/\ddot{a})+TV-el$ ) requires further research, we cannot rely on it to advocate for a Proto-Western Ch'olan dialect as the standard written language of CLM texts. And last, since the features of CLM texts just described must have existed in a form of Ch'olan, but not in any form of

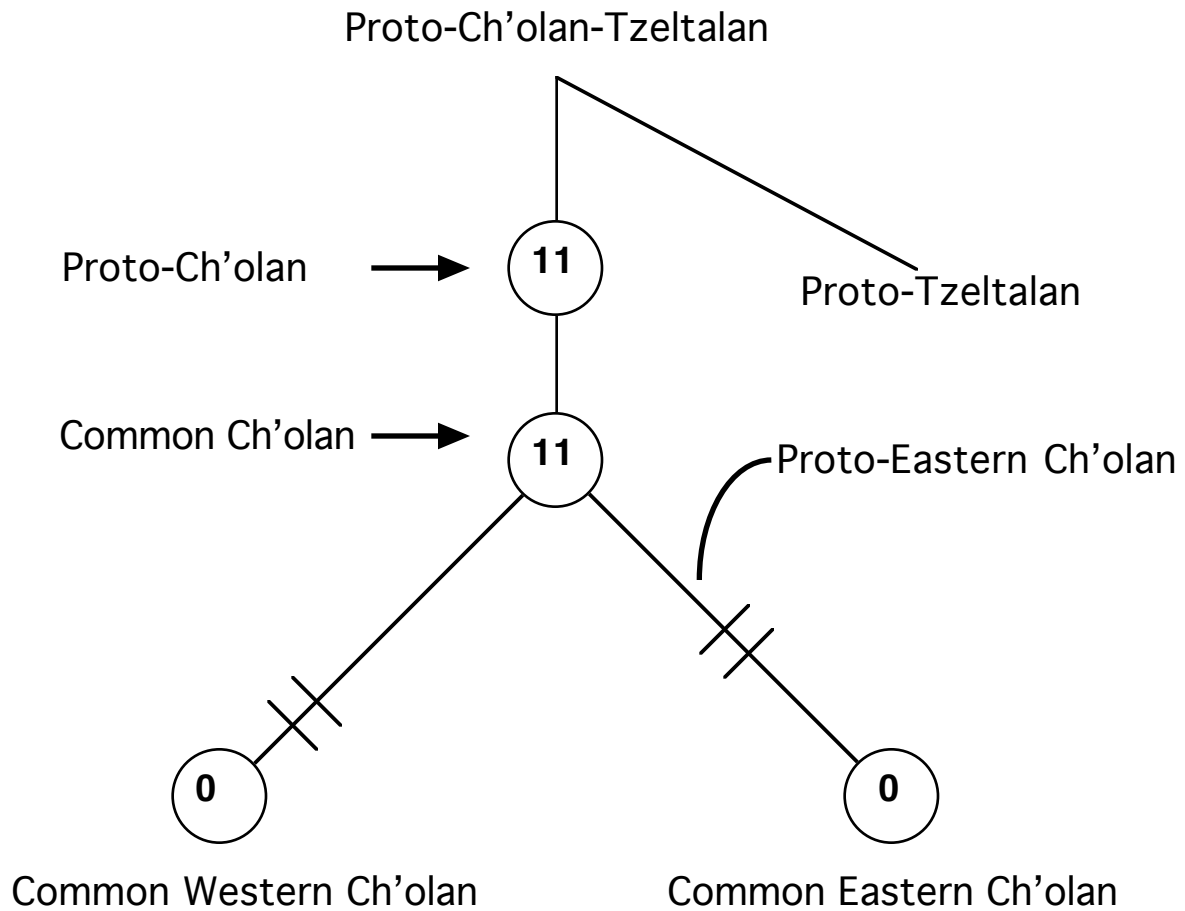
Ch'olan directly reconstructible from the extant Ch'olan languages, the standard written language is not very likely based on a dialect of Common Ch'olan either. All that is left is a Proto-Ch'olan dialect, which would allow for a single discontinuity between Proto-Ch'olan and Common Ch'olan as the explanation for the loss or change of these eleven features.

### **Discussion of Implications**

The Proto-Eastern Ch'olan or “Classic Ch'olti'an” hypothesis would require the acceptance of two major discontinuities, namely, that the eleven markers reconstructed here to Proto-Ch'olan based on evidence from outside Ch'olan and CLM texts were independently lost in each branch of Ch'olan, as seen in **Figure 8**.

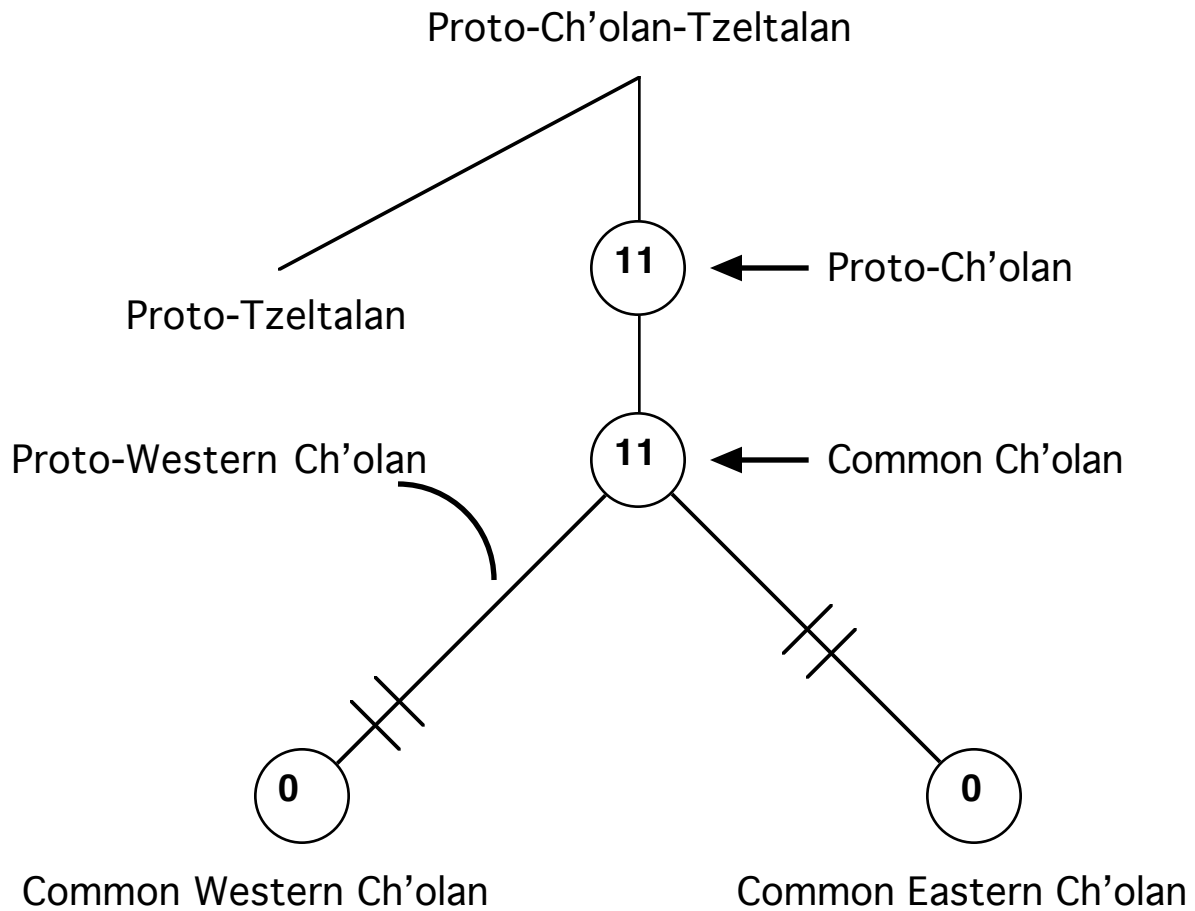


Figure 8. Proto-Eastern Ch'olan Model: Two Major Discontinuities



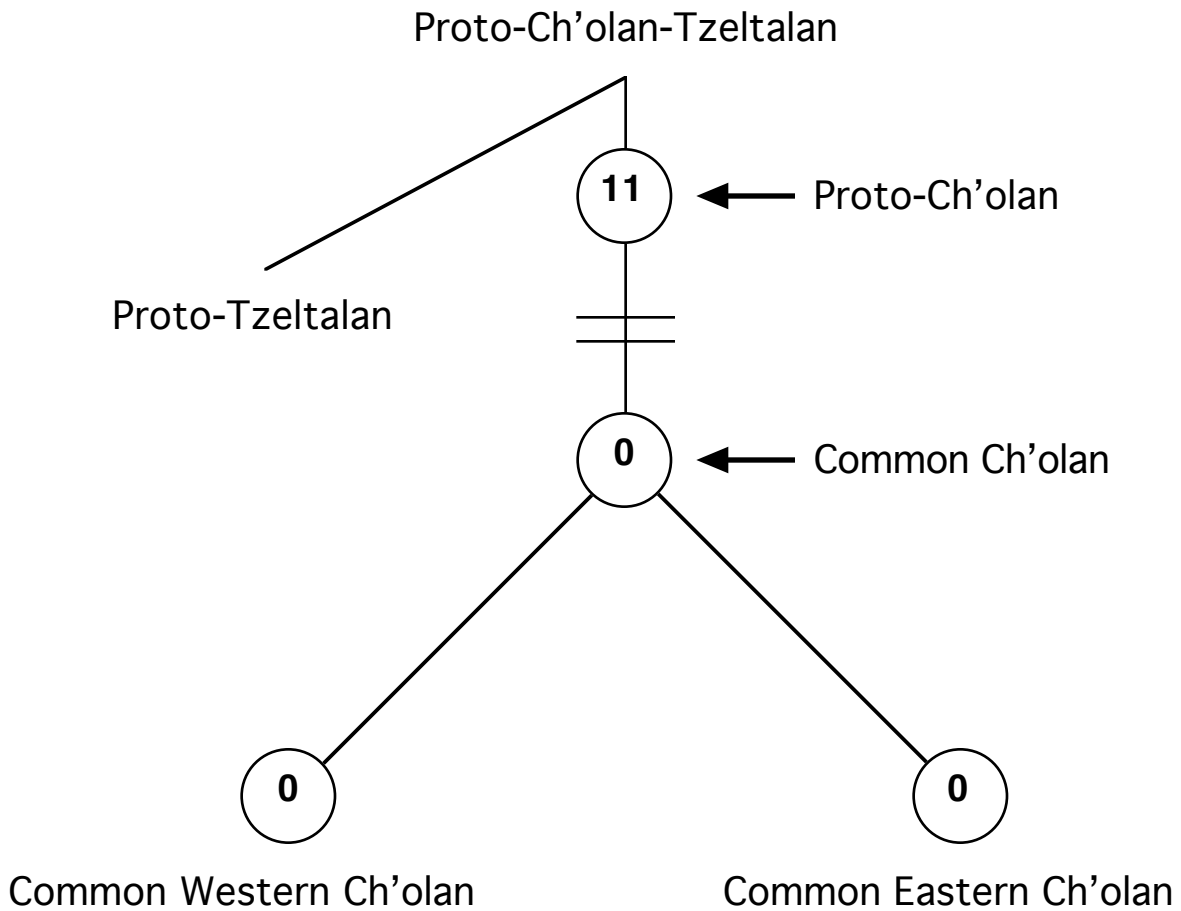
Analytically such a scenario is quite undesirable, and one in which those markers were lost in a single line would be more desirable. A Proto-Western Ch'olan model would find the same disadvantage, seen in **Figure 9**, pending resolution of the history of the  $t(i/\ddot{a})+TV-el$  construction.

Figure 9. Proto-Western Ch'olan Model: Two Major Discontinuities



But a Proto-Ch'olan model requires only that all of those markers that are present in CLM texts but are absent from both Ch'olan branches today were lost prior to the diversification of Common Ch'olan and were not inherited by either branch. Thus, a Proto-Ch'olan model is the simplest model, as seen in **Figure 10**.

Figure 10. Proto-Ch'olan Model: One Discontinuity



Simpler does not mean correct, only more likely. Methodologically, this analysis is supported by evidence that suggests that proposal of the three Eastern Ch'olan innovations by Houston et al. (2000) was somewhat premature: their analysis did not take into account comparative evidence from Tzeltalan that may be relevant to the issue, nor did they explicitly state why a Western Ch'olan hypothesis would not be more adequate.

### Implications for Historical Linguistics

Interestingly, the shift of Pre-Ch'olan *\*-l-aj(-i)* to Proto-Ch'olan *\*-w-an*, and the spread of Proto-Ch'olan *\*-(V)l-el* could suggest that the breakup of

Proto-Ch'olan had not taken place yet by ca. A.D. 500-650. Together with the appearance of unique and geographically restricted Western Ch'olan (e.g. *hin(+i/+a)*, *cha'an*, *=uk*) and Eastern Ch'olan (e.g. *-ib'*, *-w-aj*) innovations between ca. A.D. 650-800, the emerging picture would roughly matches the glottochronological estimates by Kaufman (1976, 1989) for the breakup of Proto-Ch'olan between ca. A.D. 400-600. However, whether the Western and Eastern branches had fully split by ca. A.D. 800 is simply not possible to determine yet. There are very few Western and Eastern Ch'olan innovations so far attested. How many innovations must accumulate before one can proclaim two distinct Eastern and Western Ch'olan languages? I suspect the answer will be many more than have been identified to date.

The minute degree of differentiation between A.D. 650-800 may represent no more than the increasing crystalization of two major and mutually intelligible Ch'olan dialects. This is supported by the fact that the earliest hint of split ergativity, which likely developed in Proto-Ch'olan and was inherited by both the Eastern and Western branches of Ch'olan, is not attested until A.D. 783. I also suspect that there are bound to be some serious analytical difficulties in the picture too, since the vernacular language at many sites was quite likely not Ch'olan at all, but some form of Yukatekan. That Yukatekans were likely influential innovators, rather than merely passive recipients, of Classic Lowland Mayan civilization is suggested by examples of ritual terms of Yukatekan origin, one of which was the epithet acquired by rulers upon accession, *k'iin=ich* 'sun-face' (in Proto-

Ch'olan *\*(h)ut* is 'face'), the name of the Sun God. Thus, it is not unlikely, but instead to be expected, that Yukatekan-speaking scribes may have embedded many aspects of their language into the traditional structure of the script.

What these patterns suggest is that the written language of CLM texts was not uniform over long periods of time. While it is perhaps possible to see the very process of transition from a Pre-Ch'olan stage (e.g. *\*-l-aj(-i)*) to a Proto-Ch'olan stage (e.g. *\*-w-an*), it may not be possible to determine with confidence when the Proto-Ch'olan stage concluded and two distinct Western and Eastern Ch'olan languages were present. I suspect many more examples of local innovation and regional differentiation await discovery, especially as more syntactic data is taken into account in the future. Once more of these transitional traits are discovered and their dates taken into account, it may be possible to estimate with more precision when that transition took place. The same can be said for the development of the Western and Eastern Ch'olan dialect or language areas.

Now, with regard to the origin of the standard written language, I have previously suggested that the earliest Mayan texts, dated to the Late Preclassic period (400 B.C.-A.D. 200), provide positive evidence in the form of linguistic innovations for Lowland Mayan (Ch'olan, Yukatekan) and specifically Ch'olan scribes (Mora-Marín 2001). For example, what may very well be one of the earliest Mayan texts on calligraphic and stylistic grounds, the Dumbarton Oaks quartzite pectoral (Coe 1966; Mora-Marín 2001),

contains an instance of the third person ergative and possessive prevocalic prefix *uy-*, spelled **u-ya-**, a form of this prefix present only in Ch'olan and Yukatekan, seen in **Figure 11**.



Figure 11. Ch'olan or Yukatekan Marker on Dumbarton Oaks Quartzite Pectoral (ca. 300-100 B.C.).

Given the identification of Proto-Ch'olan as the likely standard written language during the Classic period it makes sense that the earliest texts were specifically written in Proto-Ch'olan. Less direct evidence also supports the preponderance of Ch'olan scribes in the development of early Mayan writing. On Kaminaljuyu Stela 10 a possible day count of 10 Chikchan appears. As David Stuart (personal communication 1999) has suggested, the spelling of the day name in the day count may be partly phonetic: **chi-SNAKE** possibly for **chi-CHAN**, or *chi(j)=chan* 'boa constrictor (literally deer-snake)', the meaning of the day name Chikchan. This etymology is traced to Ch'olan, where Proto-Ch'olan *\*chij* 'deer' accounts for the first term, and Proto-Ch'olan *\*chan* 'snake' for the second term in the compound. The term records uniquely Ch'olan innovations: Proto-Mayan *\*ee* > *\*ii* in *\*chij* 'deer', and Proto-Mayan *\*k* > *\*ch* also in *\*chij* 'deer'. Since Stela 10 dates to ca. 400-200 B.C., this spelling could support a very important role of specifically

Ch'olan scribes (as opposed to Ch'olan-Tzeltalan scribes) in the origin of Mayan writing.

### **Implications for Archaeology**

The implications for archaeology are clear. First, we cannot make assertions about the linguistic affiliation of a city or region based on the standard features of the script (Justeson et al. 1985; Justeson and Fox 1989; Justeson and Campbell 1997). Second, we can only suggest that the innovators and standardizers of CLM writing were probably speakers of a Ch'olan language that lived after the breakup of Ch'olan-Tzeltalan into separate Ch'olan and Tzeltalan branches. And given the preponderance of demonstrably Proto-Ch'olan markers, and the limited and late distribution of innovations attributable exclusively to Eastern or Western Ch'olan dialects, we can support the proposition that the period of standardization began prior to the breakup of Proto-Ch'olan into its Eastern or Western branches. The breakup of Proto-Ch'olan into its two branches, at the earliest, must have begun to take by ca. A.D. 650-800, during the Late Classic period. Prior to this it is not yet feasible to speak of Eastern Ch'olan or Western Ch'olan as distinct languages.

Furthermore, as already pointed out, I have previously shown that probable Ch'olan markers are present in Late Preclassic texts (Mora-Marín 2001), some of which may have originated in the Mayan highlands and Pacific coastal regions. Previous authors have suggested possible indirect evidence for the involvement of Ch'olan speakers in the origin of Mayan writing. Thus

Justeson and Mathews (1983:590) and Justeson et al. (1985:42) have pointed out that T548 **HAB’/TUN** ‘year, anniversary’ must have become part of the Initial Series Introductory Glyph (ISIG) as a result of an association with the erection of stelae on year endings, and the fact that Proto-Mayan *\*tuun* ‘(slit) drum(?)’ (cf. Yucatek *túun* as in *túun=k’ul* ‘slit drum’ [Bricker, Po’ot Yah, Dzul de Po’ot 1998:285]), the likely linguistic source for the logogram T548 DRUM, was a near-homophone with Pre- or Proto-Ch’olan *\*tuun* ‘stone’ (from Proto-Mayan *\*toon*). The **TUN** reading for T548 is not supported by explicit phonetic evidence until very late, on a Late Classic Comacalco bone (i.e. **tu-T548-ne**) and on the Dresden Codex (**4-T548-tu** for *chan tun* ‘four years’), but this only suggests that until that point scribes had felt it was unnecessary to disambiguate the possible readings of T548 (i.e. **TUN/HAB’**) explicitly. The use of T548 DRUM as part of the ISIG is attested as early as 236-19 B.C. on Abaj Takalik Stela 2, suggesting, indirectly, that the Ch’olan *\*oo > uu* (back, raising) shift that made the homophonous play of words possible in the first place had already taken place by then. This possibility is supported by the possible **chi-SNAKE** spelling on Kaminaljuyu Stela 10 (400-200 B.C.) identified by David Stuart and mentioned above. Such spelling would attest to the parallel *\*ee > ii* (front, raising) shift exclusive of Ch’olan. What this evidence suggests is that Ch’olan speakers may once have been present throughout the Mayan highlands and lowlands. In other words, the Ch’olan-Tzeltalan speakers that have been proposed to have been the source of ritual, commerce, and agricultural vocabulary in the Mayan highlands during the Late Preclassic



period by a variety of authors (e.g. Josserand 1975; Kaufman 1976; Campbell 1984; Hopkins 1985; Justeson et al. 1985; Justeson and Fox 1989), as well as the innovators of the Mayan script were specifically of Proto-Ch'olan speech. Many, if not most of the standard features of the script present during the Classic period became established originally during the Late Preclassic period. Subsequently, through a process of accretion, new features originating in later stages of the Proto-Ch'olan language were standardized.

### **Conclusions**

This paper has shown that the Eastern Ch'olan or Classic Ch'olti'an hypothesis does not, in its present form, withstand a careful scrutiny of comparative and historical Mayan data. The proposed Eastern Ch'olan markers are not Eastern Ch'olan innovations; in fact, these markers may very well be reconstructible to Proto-Ch'olan or even Proto-Ch'olan-Tzeltalan stages. Just as important from a methodological point of view, Houston et al. (2000) have not attempted a thorough and systematic evaluation of the data with the goal of assessing the most likely model for the linguistic stage of the standard written language of CLM texts. They have not tested the possibility of a Western Ch'olan model or a Proto-Ch'olan model, nor did they adequately test the possibility of a broader attestation of their proposed Eastern Ch'olan linguistic markers. Once the various possibilities are taken into account and properly tested by determining the number of discontinuities each one would require, a different model seems much more

likely: a Proto-Ch'olan language. This proposal is strengthened by the chronology of the possible development and spread of *\*-w-an* 'transitivizer of positionals' and *\*-(V)/-el* 'abstractive'. Such development was quite likely a Proto-Ch'olan development, and could very well constitute the best evidence yet for the Proto-Ch'olan to Common Ch'olan transition, which can be roughly placed between ca. A.D. 500-650. Furthermore, the dates of ca. A.D. 650-800 for the attestation of exclusive Western Ch'olan and Eastern Ch'olan innovations provide a rough estimate for the increasing differentiation of Common Ch'olan into its Western and Eastern dialect areas between ca. A.D. 650-800. As already described this estimate is not too far from previous estimates for the breakup of Proto-Ch'olan into Western Ch'olan and Eastern Ch'olan between ca. A.D. 400-700 (Kaufman 1976; Kaufman and Norman 1984; Justeson et al. 1985).

The evidence presented in this paper, though, is only sufficient to reject the Eastern Ch'olan model and its Western Ch'olan counterpart, and to set up the Pre-Ch'olan hypothesis as the most favorable model. Much work is required to provide more substance to this hypothesis before it can become a full-fledged model that can be assumed in the process of addressing broader cultural and historical issues. Such work should involve more detailed study of the grammar and linguistic affiliation of CLM texts, including the earliest Mayan texts, and a comprehensive effort to reconstruct the grammar of Proto-Ch'olan and Proto-Ch'olan-Tzeltalan. Such an effort should build on the solid foundations laid down by Kaufman's

(1972) reconstruction of Proto-Tzeltalan phonology and vocabulary and Kaufman and Norman's (1984) reconstruction of Proto-Ch'olan verb morphology and vocabulary, and it should focus on the reconstruction of nominal and verbal morphosyntax, which have been to some extent neglected. Such an effort should also study the interaction between Ch'olan-Tzeltalan and Yukatekan, as well as between Ch'olan-Tzeltalan and other Mayan subgroups such as Poqom with whom Ch'olan-Tzeltalans appear to have been in close contact (Kaufman 1989). And finally, as is made clear by this paper, such an effort should also compare, in a systematic manner, the linguistic markers present in CLM texts but absent from extant Ch'olan languages, and the linguistic markers from other non-Ch'olan Mayan languages, given the possibility that such comparison could elucidate the former existence in Ch'olan of markers that are now extinct in Ch'ol, Chontal, and Ch'orti'. Such effort will require a systematic and comprehensive program of study of not only Ch'orti', but of many ethnolinguistic groups whose ancestors were responsible for the development of Lowland Mayan civilization.

*Acknowledgments.* I thank Cliff Pye for serving as my medium at the SSILA meeting in January of 2003, where I presented a 15-minute version of this paper, John Robertson for commenting on two earlier drafts of this paper, and Barbara MacLeod for her encouragement and for providing me a copy of her paper on the perfective marker. Also, I want to thank Søren Wichmann for his observation about the presence of *-p'i* and *-p'u* in Tzeltal.

Following up on Søren's insight I found attestations of these markers in Tzotzil as well, not to mention the dialectal variability between *p'* and *b'* in Tzotzil. Thanks also are due to Nicholas Hopkins for sharing some thoughts on the arguments by Houston et al. (2000) with me during the Fall of 2001 and a few more sporadic times since then.

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