

HISTORICAL RECONSTRUCTION OF MAYAN APPLICATIVE AND ANTIDATIVE CONSTRUCTIONS¹

DAVID F. MORA-MARÍN

UNIVERSITY OF KANSAS

In this paper I examine comparative data on the applicative *-b'e* suffix and its related syntax (including antidative constructions) in Mayan languages in order to contribute to their reconstruction. I present evidence in favor of a Proto-Mayan reconstruction of an applicative construction that optionally focused instruments, locatives, and addressees, and a Proto-Central-Mayan (Eastern and Western Mayan) reconstruction of the *-b'e* suffix. I discuss the possible sequence of events in the history of the applicative and related constructions from Proto-Mayan to the descendant subgroups, including the Greater Tzeltalan subgroup, thought by most linguists and epigraphers to constitute the basis of the language represented in Classic Lowland Mayan hieroglyphic texts. I then hypothesize on possible scenarios that can be tested against the evidence from Classic Lowland Mayan texts.

[KEYWORDS: applicative, Mayan, antidative, reconstruction]

1. Introduction. In this paper I offer comparative evidence on two related phenomena in Mayan morphosyntax: the applicative construction generally triggered by the suffix *-b'e* and the antidative construction used in those languages where the applicative construction is not obligatory. The applicative construction, depending on the language, may “promote,” “advance,” or “focus” certain peripheral semantic roles (e.g., instruments, locatives, addressees, benefactives, malefactives, and possessors). There is much variation among Mayan languages in the types of roles affected by the applicative construction, in the discourse pragmatic factors that trigger it, and in its syntactic expression (e.g., Craig 1978, Dayley 1981, Kaufman 1990, and Norman and Campbell 1978). Syntactically, in some languages the peripheral role becomes a primary object and the former direct object becomes a secondary object, while in other languages the peripheral role becomes a direct object and the former direct object becomes oblique, and in still others the peripheral role is pragmatically highlighted but remains syntactically oblique.

¹ I am very thankful to the anonymous referees who provided me with additional data, bibliographic sources, and practical suggestions for revision. I also wish to thank Aaron Broadwell for help on the first draft of this paper, and John Robertson, Terrence Kaufman, Nora England, Keren Rice, and Nick Hopkins for their extensive assistance on subsequent drafts or parts of the paper. Any remaining omissions or errors are entirely my responsibility.

Attempting to reconstruct the form and meaning of these constructions can be complicated because of the complex and often incomplete nature of the extant data, and also because there are two competing models for the diversification of Proto-Mayan or Common Mayan (e.g., Kaufman 1976; 1990 and Robertson 1992; 1999), as well as for the diversification of some of the descendant subgroups, as in the case of the closeness of the relationship among Ch'olan, Tzeltalan, and Wastekan (e.g., Kaufman and Norman 1984 and Robertson 1999).

In **2** I provide the background necessary to discuss the applicative and antidative constructions and in **3** I discuss the methodology used for the historical linguistic reconstructions. In **4** I present the comparative Mayan data relevant to the morphosyntactic reconstruction of the applicative and antidative constructions and in **5** I reconcile the reconstructions and postulate a possible sequence of events from Proto-Mayan to the descendant subgroups. I present my conclusions and point to gaps that may be filled in future fieldwork in **6**.

I propose that the results point to a Proto-Mayan (or Common Mayan) applicative construction that optionally promoted or focused instruments, locatives, and addressees, although not necessarily with a suffix of the form *-b'e*. I also pay close attention to the Ch'olan and Tzeltalan languages due to their relevance to the study of ancient Mayan hieroglyphic texts. The historical reconstructions I offer here pose a set of scenarios for the development of the applicative and antidative constructions in the Ch'olan and Tzeltalan languages that can be tested against data from hieroglyphic texts.

2. Preliminaries.

2.1. Genetic classification. The following is a synopsis of Kaufman's (1976) model for the diversification of Proto-Mayan (fig. 1), Ch'olan (fig. 2a), and Yukatekan (fig. 3), with revisions based on later changes in Justeson et al. (1985), Kaufman and Norman (1984), and Kaufman (1989; 1991). Somewhat different results would derive from Robertson's (1992; 1999) model for the diversification of Common Mayan, Robertson's equivalent to Kaufman's Proto-Mayan (fig. 4), and Ch'olan (figs. 2b and 2c), as I discuss below.

Kaufman outlines the following events:²

(1) Wastekan separates from Proto-Mayan ca. 2200 B.C., migrates north, reaches the Huasteca region along the Gulf Coast of Mexico (ca. 1500–1000 B.C.), and leaves Late Proto-Mayan behind in the homeland. (2) Yukatekan separates from Late Proto-Mayan (ca. 1800 B.C.), and its speakers eventually

²No argument in this paper relies on Kaufman's glottochronological estimates. I use them here as a rough guide to historical time depth, not as absolute dates.

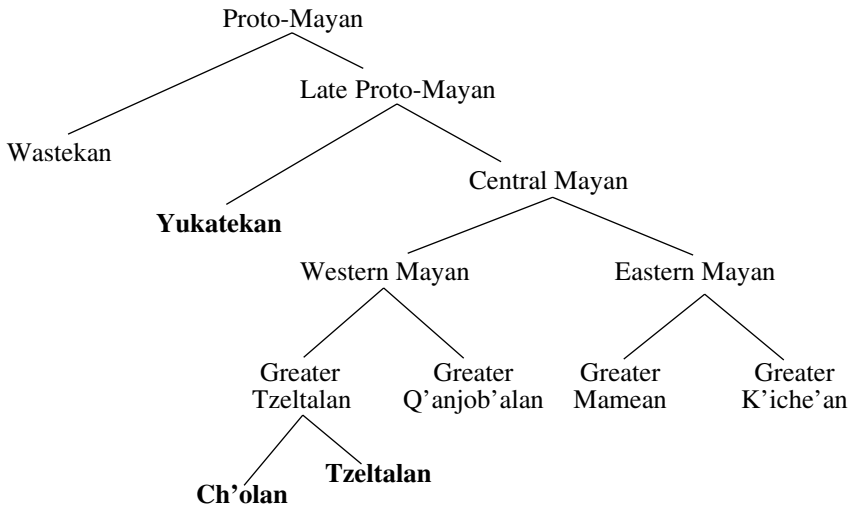


FIG. 1.—Genetic classification of Mayan languages by Kaufman (1976; 1989). Groups of interest are in boldface.

migrate north and settle in the Mayan lowlands, specifically in the Yucatan peninsula (ca. 1000 B.C.), leaving Central Mayan behind in the homeland. (3) Eastern Mayan separates from Central Mayan (ca. 1600 B.C.), spreading throughout the Cuchumatan highlands, leaving Western Mayan behind in the homeland.

(4) Greater Tzeltalan separates from Western Mayan (ca. 1000–600 B.C.), migrates north, settles in the Peten and Copan lowlands (by ca. 100 B.C.), and leaves Greater Q'anjob'alán behind in the homeland. (5) Greater Tzeltalan breaks into Ch'olan and Tzeltalan (ca. A.D. 100), with Ch'olan remaining in the lowlands and Tzeltalan migrating to the Chiapas highlands. (6) Ch'olan breaks into Western Ch'olan (Ch'ol-Chontal/Yokot'an) and Eastern Ch'olan (Ch'olti'-Ch'orti') around the end of the Early Classic period (ca. A.D. 600). (7) Yukatekan breaks into Mopan and Yukatek-Lakantun-Itzaj (Kaufman 1991) or into Yukatek-Lakantun and Itzaj-Mopan (Justeson et al. 1985) around the end of the Terminal Classic period (ca. A.D. 1000).

Robertson (1992:213, 217; 1999) holds a different view of some of the subgroupings and breakups. He subgroups Wastekan together with Greater Tzeltalan into a subgroup he calls Common Tzeltalan based on the evidence for the $k(\cdot) > ch(\cdot)$ shift; he also argues that Ch'orti' is a direct descendant of Ch'olti' rather than its sibling. I agree with Kaufman (1989:part D, 143–44) in that a subgroup including Wastekan with Greater Tzeltalan is not feasible based on the evidence of the $k(\cdot) > ch(\cdot)$ shift, since this shift took

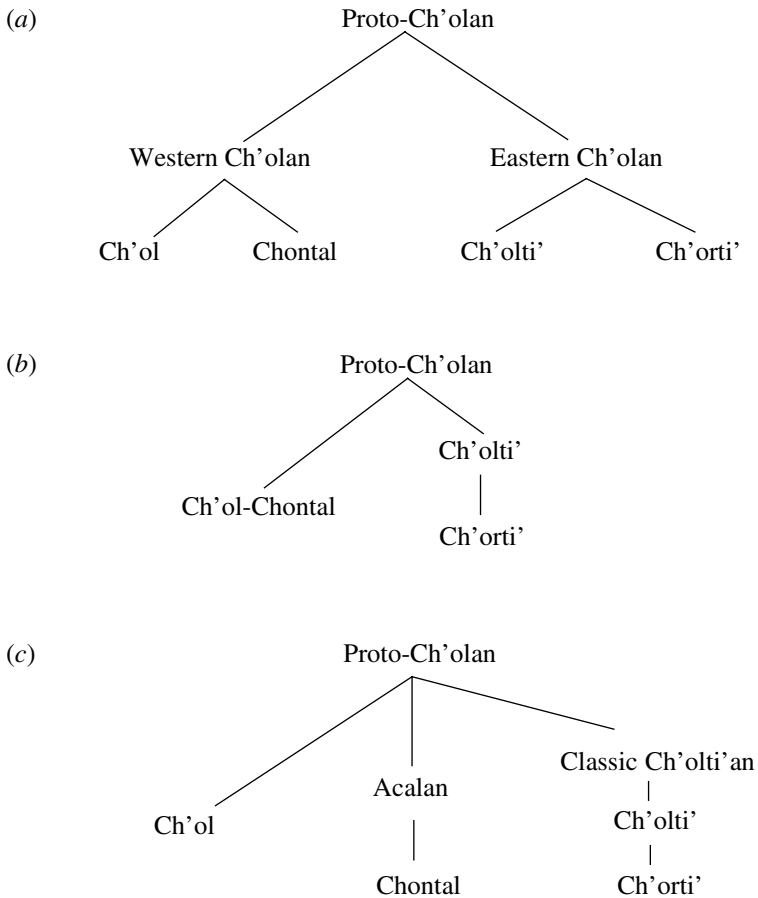


FIG. 2.—Three models for the diversification of Proto-Ch'olan. (a) Kaufman and Norman (1984); (b) Robertson (1992); (c) Robertson (1999).

place in Wastekan and Greater Tzeltalan under very different conditions (see also Kaufman and Norman 1984:83–85) and is therefore not related.³

The possibility of a Ch'olti'-to-Ch'orti' change is another matter. Robertson argues that Ch'orti' is a direct descendant of Ch'olti' rather than its

³ Kaufman (1989:part D, 143–44) points out that in Wastekan the $k(\prime) > ch(\prime)$ change was exceptionless, while in Yukatekan the change occurs in few but specific environments (cf. Justeson et al. 1985:15, Justeson 1985:470–71, and Kaufman and Norman 1984:88–89), and in Greater Tzeltalan the change applied to about 50% of the items with the said sounds following very complex rules (Kaufman and Norman 1984:84–86).

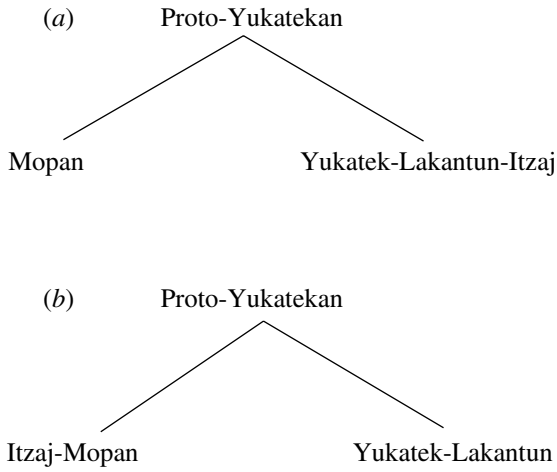


FIG. 3.—Genetic classifications of Yukatekan languages. (a) Kaufman (1991); (b) Justeson et al. (1985).

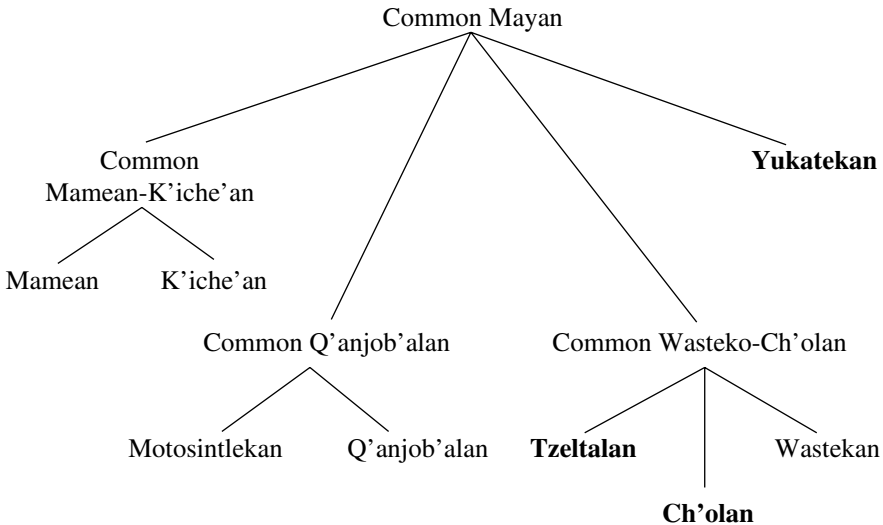


Fig. 4.—Robertson's (1992; 1999) genetic classification of Mayan languages. Subgroups of interest are in boldface.

TABLE 1

| Feature | Ch'ol | Chontal | Ch'olti' | Ch'orti' |
|------------------------|-----------------------|--------------------|-----------------------|----------------------|
| 1s | | | | |
| ERG | <i>k-</i> | <i>ka/k-</i> | <i>in-/inw-</i> | <i>ni-/niw-/inw-</i> |
| ABS | <i>-on</i> | <i>-on</i> | <i>-en</i> | <i>-en</i> |
| 2p | | | | |
| ERG | <i>la'-</i> | <i>a- . . . la</i> | <i>i-</i> | <i>i-</i> |
| ABS | <i>-etla</i> | <i>-etla</i> | <i>-ox</i> | <i>-ox</i> |
| Passive of DTV | <i>-nt</i> | <i>-nt</i> | <i>-na</i> | <i>-na</i> |
| Thematic suffix | no | no | yes | yes |
| - <i>es</i> causatives | [yes]* | no | yes | yes |
| Inchoative suffix | <i>-'an</i> | ? | <i>-l</i> | <i>-r</i> |
| Plain/CMP of RTV | <i>-V₁</i> | <i>-i</i> | <i>-V₁</i> | <i>-i/-e</i> |
| Preposition | <i>ti</i> | <i>ta/ti</i> | <i>ti</i> | <i>ta/[ti]</i> |

*The information in brackets aims to fill in the information available to Kaufman and Norman (1984). Aulie and Aulie (1978) contains various examples of *-t-es* ~ *-es* ~ *-s* causatives in Ch'ol. Also, Ch'orti' has *ti* 'generic preposition', at least in idiomatic expressions such as *ti chan(-il)* 'high'.

sibling (Robertson 1999). He proposes the third set of pronominal markers in Ch'orti', which is used exclusively for incomplete intransitive verbal inflection, as a continuing development out of the so-called second incomplete of Ch'olti'; he also proposes that the negative future of Ch'orti' was likewise a continuing development out of the so-called second future of Ch'olti'. Recent research by Wichmann (2002) suggests, however, that the evidence behind this analysis is insufficient to support it.⁴

Last, Robertson (1999) does not explain his proposed model for the diversification of Ch'olan into three groups—Classic Ch'olti'an, Acalan, and Ch'ol (fig. 2c)—instead of into two groups, one of them comprising Ch'ol-Chontal, as Robertson (1992) had argued (fig. 2b). Kaufman and Norman (1984:82, table 2), on the other hand, present grammatical evidence (table 1)

⁴ As Wichmann (2002) points out, such developments in Ch'orti' could be explained simply as a retention in Ch'olti' of a Proto-Eastern-Ch'olan pattern, and as an innovation in Ch'orti' with respect to such a hypothetical Proto-Eastern-Ch'olan pattern. Wichmann (2002:32, n. 15) also notes that the evidence from the distribution of *-b'u* ~ *-b'a* 'transitivizer of positionals' in Classic Lowland Mayan texts argues against the Ch'olti'-to-Ch'orti' hypothesis. For one, Ch'olti' has *(-ba)* ~ *(-bi)*, not *(-ba)* ~ *(-bu)*, while Ch'orti' has *-b'a* ~ *-'bu*. This evidence does not support the Classic Ch'olti'an (i.e., Pre-Eastern-Ch'olan) hypothesis as proposed by Houston, Robertson, and Stuart (2000), which assumes that Ch'orti' descends from Ch'olti', and that Ch'olti' itself is a direct descendant of Classic Ch'olti'an (i.e., Pre-Eastern-Ch'olan). Since CLM texts (i.e., "Classic Ch'olti'an" according to these authors) exhibit a pattern for *-b'u* and *-b'a* based on dissimilation, just like Ch'orti' (i.e., *CaC-b'u*, *CuC-b'a*), the fact that Ch'olti' does not exhibit such pattern suggests that Ch'olti' is not the direct ancestor of Ch'orti' but instead its sibling (i.e., CLM texts exhibit the pattern of Pre-Eastern-Ch'olan, which was retained in Ch'orti' but changed in Ch'olti' after the split of Proto-Eastern-Ch'olan).

for the diversification of Ch'olan into Western Ch'olan (Ch'ol-Chontal) and Eastern Ch'olan (Ch'olti'-Ch'orti'), and suggest that the time of separation between Ch'ol and Chontal is probably much greater than that between Ch'olti' and Ch'orti'.

2.2. Grammatical structure. Mayan languages are generally predicate-initial languages. Predicates can be verbal, nominal, or adjectival (England 1991 and Kaufman 1990). Word order exhibits much variation, but in general deviations from verb-initial word order are pragmatically marked (Bricker 1986, Brody 1984, Durbin and Ojeda 1982, England 1991, Hofling 1982; 1984, and Norman and Campbell 1978). They are generally ergative-absolutive languages at the morphological level: ergative agreement markers on the verb coreference the transitive subjects (A), while absolutive agreement markers on the verb coreference both the intransitive subjects (S) and the transitive objects (O), resulting in an A (ergative) vs. S/O (absolutive) dichotomy.⁵ At the syntactic level (Comrie 1978 and Dixon 1979) the picture is less clear: some languages exhibit some characteristics of syntactically ergative languages (Foley and Van Valin 1984, Larsen and Norman 1979, Manning 1996, and Norman and Campbell 1978), but alternative explanations in terms of different phenomena, such as obviation, may prove more adequate for others (Aissen 1999).

Modifiers precede heads (e.g., adjective before noun) and possessors precede their possessors. Verbs take pronominal markers coreferencing the S (intransitive subject) if intransitive, and the A (transitive subject) and O (transitive object) if transitive. Possessed nouns coreference their possessors by means of the same set of pronominal markers used by transitive verbs to coreference the A.

The languages mark aspectual and mood distinctions rather than tense distinctions. Transitive, intransitive, and positional verbs are distinguished morphologically; the latter make up a type of root that may be transitivized or intransitivized with explicit derivational markers. Oblique arguments (e.g., recipients, benefactives, instruments, demoted As or Os) may be expressed as the complements of prepositional phrases or as the possessors of relational nouns (or a combination of the two), or in some cases they can become primary objects (see below). Transitive clauses can undergo the following valency and voice-changing operations: passive (O > S, A optional and oblique), mediopassive (O > S, A not implied), antipassive (A > S, O optional

⁵ Splits in the morphological ergative alignment of grammatical relations may be determined by nominal ontological salience (Mocho'), tense/aspect of the clause (Ch'olan, Yukatekan, Poqom), or subordinate status of the clause (Poqom, Greater Mamean, Greater Q'anjob'alan minus Tojolob'al and Motosintleko) (Dayley 1981, Kaufman 1990, Larsen and Norman 1979, and Norman and Campbell 1978).

and oblique). Also, causative and applicative constructions are present throughout the family; in some languages, both transitive and intransitive verbs may take causative and applicative suffixes (e.g., Yukatek *-t*), with intransitive verbs undergoing transitivization when this is the case. Derivations from nouns to verbs, verbs to nouns, intransitives to transitives, and transitives to intransitives generally require specific suffixes.

2.3. Primary and secondary object languages. Dryer (1986) has argued that some languages distinguish between Primary Object (PO), consisting of the Indirect Object (IO) of a ditransitive clause or the Direct Object (DO) of a monotransitive clause, and Secondary Object (SO), consisting of the DO of a ditransitive clause. He defines PO and SO as grammatical relations that exhibit a distribution parallel to that of ergative and absolutive in ergative-absolutive languages, as (1) and (2) show (Dryer 1986:814):

| | | | | | |
|-----|----------------|---------|--------|----------|------------|
| (1) | | Subject | Object | Ergative | Absolutive |
| | Transitive | Su | Obj | Su | Obj |
| | Intransitive | Su | | | Su |
| (2) | | DO | IO | SO | PO |
| | Ditransitive | DO | IO | DO | IO |
| | Monotransitive | DO | | | DO |

In some languages the notional IO is always expressed as an indirect object (as in 3), in others it is expressed as a PO (as in 4), and in yet others both types of constructions may be possible (as in 5 and 6):⁶

- (3) French (Dryer 1986:811–12)
Jean a donné le livre à Marie
 John PERF give the book to Mary
 ‘John gave the book to Mary’.

⁶I use the following abbreviations: 1 = first-person marker, 2 = second-person marker, 3 = third-person marker; ABS = absolutive marker/case, AFF = affirmative emphasis particle, APL = applicative marker, CAUS = causative, CLS = noun classifier, CMP = completive, DEIC = deictic, DET = determiner, DIM = diminutive, DO = direct object, DUR = durative, ENCL = enclitic, ERG = ergative marker/case, EXT = existential particle, INC = incomplete, INS = instrumental suffix, IO = indirect object, IVZR = intransitivizer, THM = theme vowel, ASP = aspect, NOM = nominal suffix, p = plural, PART = participle, PASS = passive, PAST = past tense, PO = primary object, PPM = proximal patient marker, PREP = preposition, PRES = present tense, PROCL = proclitic, PROG = progressive, s = singular, SO = secondary object, SUB = subordinator, TERM = terminative, TRVZR = transitivizer. I use square brackets to set off infixes in interlineal glosses, angled brackets to set off a linguistic form cited from a manuscript using conventional orthography, and parentheses to set off omissible or phonologically conditioned segments. I use *ch* for IPA *tʃ*, *j* for IPA *x*, *x* for IPA *f*, *b'* for the voiced bilabial implosive, and ' for the glottal stop. IPA *ts* is conventionally spelled by most Mayanists as *tz*, and so I use *tz*. I leave unchanged *b* for *b'* in examples from colonial manuscripts using conventional orthography.

- (4) Ojibwa (Dryer 1986:811–12)
n-gi:-mi:n-A: mzinhigan za:bdi:s
 1-PAST-give-3.ANIM book John
 ‘I gave John a book’.
- (5) Indonesian (Dryer 1986:811–12)
Saja mem-bawa surat itu kepada Ali
 I TRANS-bring letter the to Ali
 ‘I brought the letter to Ali’.
- (6) Indonesian (Dryer 1986:811–12)
Saja mem-bawa-kan Ali surat itu
 I TRANS-bring-BEN Ali letter the
 ‘I brought Ali the letter’.

Dryer calls languages that distinguish between POs and SOs, instead of between DOs and IOs, Primary Object Languages and has defined the relevant phenomenon as PRIMARY OBJECTIVITY (1986:815). He rejects the proposal of obligatory indirect object advancement proposed by various linguists for languages like Ojibwa (Rhodes 1976) and Tzotzil (Aissen 1983). Instead, Dryer argues that in languages that lack dative constructions, the PO (DO of monotransitive clause, IO of ditransitive clause) ranks higher than the SO (DO of ditransitive clause). In Tzotzil, where the absolutive suffixes coreference the notional IO when the *-b'e* suffix is used, it can be said that absolutive agreement is reserved for intransitive subjects, monotransitive DOs, and ditransitive POs.

Dryer proposes a set of hierarchically ranked ordered pairs of grammatical relations and their corresponding advancement rules that permit the member with the lower rank in the pair to advance to the higher rank:

- (7) Pairs of GRs Advancement Rules
- (7a) Su > Obj Passive
 (7b) Abs > Erg Antipassive
 (7c) DO > IO Dative
 (7d) PO > SO Antidative

Just as the antipassive is the opposite of the passive, the antidative is the opposite of the dative. The passive allows O to advance to S and the antipassive allows A to advance to S. Similarly, the dative allows a notional IO to advance to DO and the antidative allows a SO to advance to PO. For English, the classic analysis of sentences like (8a) sees them as basic, while sentences like (8b) are seen as the result of the dative advancement rule:

(8) English (Dryer 1986:821)

(8a) *John gave the book to Mary*

(8b) *John gave Mary the book*

The antidative analysis, in contrast, sees (8b) as the basic sentence and (8a) as the result of the antidative advancement rule. The prepositional phrase *to Mary* is analogous in this sense to the prepositional phrases with *by* of passive sentences; just as the agent of a transitive clause becomes oblique in a passive sentence (if expressed at all), the PO of a ditransitive clause becomes oblique in an antidative. Thus, nonterms (oblique arguments) require a preposition, while terms (transitive subject, primary object, secondary object, intransitive subject) require no preposition. As Dryer points out, the antidative analysis directly reflects the syntactic valence of the sentences in question: the monotransitive clause shows one nonsubject term and one nonterm, while the ditransitive clause shows two nonsubject terms and no nonterms.

Dryer (1986:839–40) argues that instruments in some languages are advanced to SO not PO. This is the case when the advanced instrument does not cause the notional DO to lose its object properties. Dryer also notes that a nominal advanced to PO in AVO languages will occur in an immediately postverbal position as well. However, in Mayan languages, which are VOA languages, it is not immediately clear whether this would be a reliable diagnostic. Dryer uses an example from Kinyarwanda, an SVO language, in which an instrumental suffix *-iish* promotes a former nonterm *n'úkárámu* 'with the pen' to term status as *íkárámu* 'pen':

(9) Kinyarwanda (Dryer 1986:839–40)

(9a) *Úmwáalímu a-ra-andik-a íbárúwa n'úkárámu*
 teacher 3S-PRES-write-ASP letter with-pen

'The teacher is writing a letter with the pen'.

(9b) *Úmwáalímu a-ra-andik-iish-a íbárúwa íkárámu*
 teacher 3S-PRES-write-INS-ASP letter pen

'The teacher is writing a letter with the pen'.

After the advancement rule is applied, the advanced instrument 'pen' follows *íbárúwa* 'letter', the DO of (9a) and the PO of (9b). Dryer thus sees 'pen' in (9b) as an SO, since it does not take the place of the PO after the verb. In Mayan languages, as I show below, the instrument may be treated as a PO, an SO, or as neither, depending on the language.

2.4. The *-b'e* applicative construction: prior research. Various authors have discussed the history of the Mayan *-b'e* constructions. Norman (1978),

following Kaufman's (1976) genetic model, reconstructs the suffix **-b'e* to Proto-Central-Mayan (Eastern Mayan and Western Mayan). Kaufman (1989; 1990) too has reconstructed the **-b'e* marker to Proto-Central-Mayan and adds that the construction itself may be reconstructible to Proto-Mayan, given that Wastekan has two applicative constructions that promote indirect roles and instruments. Dayley (1981) does not use a specific genetic model but reconstructs **-b'e* to Proto-Mayan, arguing that the associated construction allowed the promotion of indirect roles, such as recipients and addressees, in addition to instruments and locatives. Kaufman and Norman, (1984:139), without commenting on the matter, reconstruct **-b'e* to Proto-Mayan. In this paper I provide further evidence in favor of the assessment by Norman (1978) and Kaufman (1989).⁷

3. Historical reconstruction: morphology and syntax. In dealing with morphological data, the comparative and internal reconstruction methods of historical linguists can readily be applied. The biggest problem lies in the risk of shifting, narrowing, or broadening functions for the morphemes in question, not to mention the risk of not recognizing or accounting for borrowing.

Dealing with syntactic reconstruction is a different matter. Following Harris and Campbell (1995:50), I assume three mechanisms of syntactic change: reanalysis, extension, and borrowing. Reanalysis due to surface ambiguity changes the underlying structure of a construction (grammatical categories, grammatical relations, hierarchical structure, constituency, cohesion) but not its surface form (morphological inflection, word order). Extension changes the surface form but not necessarily the underlying structure of a construction. Borrowing is a potential obstacle to reconstruction and can be difficult to identify in syntactic constructions.

To carry out the reconstruction, I impose the following assumptions. First, lexical reconstruction, guided by the comparative method, can lead to syntactic reconstruction. Second, it is necessary to take into account typi-

⁷ A referee of this paper offers a different view. Assuming Robertson's (1992; 1999) model for the diversification of "Common Mayan" (fig. 4), in which Wastekan did not break off early on from Common Mayan but was instead part of a "Common Tzeltalan" subgroup including Wastekan, Ch'olan, and Tzeltalan, the referee argues that Common Mayan had a **-b'e* suffix which promoted instruments and locatives but not indirect roles. The referee does not recognize the promotion of indirect roles in Wastekan, Ch'ol, Chontal, Tzotzil, and Tzeltal as significant for the reconstruction of the early stages of Mayan linguistic history: by the referee's preferred sub-grouping, these languages all belong to a closely related subgroup, Common Wasteko-Ch'olan (i.e., Wastekan-Ch'olan-Tzeltalan), and therefore do not bear implications for earlier stages. Also, by the referee's account, these languages are part of a linguistic contact area and therefore may have innovated the promotion of indirect roles through contact. The referee then concludes that no promotion of indirect roles is in evidence in Ch'olti', Ch'orti', Greater Q'anjob'alan, or Eastern Mayan. The comparative data I present below demonstrate that the opposite is the case.

cal diachronic grammaticization directionalities (e.g., main verbs > auxiliary verbs, adpositions > case affixes, positional verbs > copula, etc.). In the case at hand, it is important to note the fact that verbs of speaking may develop cross-linguistically so as to subcategorize the addressee without the need for special morphological marking (e.g., applicative marker) or syntactic constructions. Another example is that of body-part nouns developing into locatives, adpositions, or reflexive pronouns. Third, I follow the guidelines of Campbell and Mithun (1980) for a holistic approach to reconstruction. Such approach assumes that despite the directionalities just mentioned, the potential for formal similarities due to chance, borrowing, and universals is greater for syntactic constructions than for phonological and lexical items. Thus, great caution is needed to assign formal and functional similarities to common ancestry. (Note the cases of Wastekan *-b'* and Yukatekan *-'* discussed below.) And fourth, two important constraints must be kept in mind (Campbell and Mithun 1980:24–25): the uniformitarian principle, which precludes the postulation of things that are impossible in present languages to earlier languages; and the intelligibility principle, which assumes continuity of intelligibility of a process/construction from one generation to the next.

With the above in mind, I apply the following steps in the reconstructions below (Kaufman 1989:part D, 11): (1) I use a uniform terminology for all the languages discussed. (2) I discuss data from more closely related languages, assuming Kaufman's Mayan diversification model (see 4), and attempt to reconstruct the features for branches and smaller and younger subgroups first, larger and older subgroups second. (3) I then reconstruct the Proto-Mayan pattern by comparing the larger subgroups. (4) The results of (2) and (3) are reconciled. (5) The results of step (2) are reconciled with the results of step (4). Finally, I also discuss the complications imposed by diffusion.

4. The *-b'e* applicative construction: comparative Mayan evidence.

4.1. Wastekan. As part (a) of table 2 shows, Wastekan has a set of applicative suffixes that are not cognate with *-b'e*. Ochoa Peralta (1984:76) lists two suffixes for the dialect from Xiloxuchil, Veracruz, namely, *-tz* and *-tzintz*. Kaufman (1989:part D, 41–42) notes that these suffixes, which are found in variation with *-ch* ~ *-chinch*, as well as the suffix *-na'*, exhibit “the exact same function” as *-b'e* in other Mayan languages and specifically in Greater Tzeltalan: to promote a third-person indirect object to direct object.⁸

⁸ Dayley cites a personal communication from Kaufman stating that *-na'* serves specifically to derive instrumental verbs, such as *t'aj-na'* ‘do with’ < *t'aj-a-al* ‘do’ and *koto-x-na'* ‘cut with’ < *kot-oy-al* ‘cut’.

TABLE 2

| Subgroup | Language | Suffix |
|-------------------|------------------|---|
| (a) Wastekan | Wastek | - <i>chi</i> ~ - <i>tsiy</i> - <i>na'</i> |
| (b) Eastern Mayan | Ixil | - <i>b'e</i> (tv), - <i>V-b'e</i> (iv) |
| | Q'eqchi' | - <i>b'e</i> |
| | K'iche' | - <i>b'e</i> (tv), - <i>V-b'e</i> (iv) |
| | Kaqchikel | - <i>b'e</i> |
| | Tz'utujil | - <i>b'e</i> |
| | Poqom | - <i>b'e</i> ~ -'(e) |
| | Poqomchi' | -(<i>V-</i>) <i>b'e</i> |
| (c) Western Mayan | Mocho' | - <i>b'e</i> ~ - <i>b'</i> |
| | Ch'ol | - <i>b'e</i> ~ - <i>b'ey</i> ~ - <i>e</i> |
| | Chontal/Yokot'an | - <i>b'e</i> ~ - <i>b'</i> |
| | Ch'olti' | ⟨- <i>be</i> ⟩ ~ ⟨- <i>e</i> ⟩ |
| | Ch'orti' | - <i>b'e</i> ~ - <i>e</i> ~ -' . . . - <i>e</i> |
| | Tzotzil | - <i>b'e</i> ~ - <i>b'</i> |
| | Tzeltal | - <i>b'e</i> ~ - <i>b'ey</i> |

(10) Wastek (Dayley 1981:55)

(10a) \emptyset -*u-nuj-ch-al*

3SABS-1SERG-sell-APL-INCL

'I sell it to him'.

(10b) *in-nuj-chinch-aab'*

1SABS-sell-APL-PV

'I am (being) sold it'.

The use of *-ch(i)(nch)* thus seems to relate to the function of promoting indirect arguments to PO. However, since in (10a) and (10b) both the BUYER ('him') and MERCHANDISE ('it') arguments are third-person singular, it is not possible to distinguish them based on coreferencing with the verb.

Interestingly, Wastek has a suffix *-b'* 'transitive marker' that is worth further study:

(11) Wastek (Ochoa Peralta 1984:70–71)

(11a) *k-i* *pa'-ay*

SUBJ-2SPROCL come.down-IVZR

'¡bájate! (get down!)'

- (11b) *k-a* *pa'a-b-a'*
 SUBJ-2SPROCL come.down-TRVZR-ASP
 '¡bájalo! (bring it down!).'

It is possible that this suffix could be cognate with *-b'e*, given its transitivizing function in other Mayan languages where it is used with intransitive or positional roots, and the possibility that its range of functions may have undergone narrowing or shift once Wastekan innovated the additional applicative suffixes *-tz(i)(ntz)* and *-na'*. Nevertheless, this is not sufficient evidence to support Proto-Mayan **-b'(e)* 'applicative'.

4.2. Yukatekan. Yukatekan lacks an obvious cognate of *-b'e*, and it does not have an overtly marked applicative construction comparable to the *-b'e/PO* rule. In the modern Yukatekan languages, a clause with a noun phrase in addressee role ('John' in 12, 'Hachäkyum' in 13, 'the man' in 14) is not specially marked morphologically and does not undergo PO promotion but is instead expressed as the object of the preposition *ti'* 'to/at/for' in Yukatek and Lakantun and *t(i'ih)* in Itzaj and Mopan:

- (12) Yukatek (Bricker, Po7ot Yah, and Dzul de Po7ot 1998:274)

t-(k-)á'al-ah-Ø *ti'* *h+wà:n*
 ASP.TERM-(1PERG-)say-CMP-3SABS PREP PROCL+John

'We said it to John'.

- (13) Lakantun (Bruce 1968:112–13)

'u-t'an-Ø-Ø *k'akoch* *ti'* *hach-äk-yum*
 3SERG-speak-CMP-3SABS K'akoch PREP Hachäkyum

'K'akoch spoke to Hachäkyum'.

- (14) Itzaj (Hofling 1991:110)

t-uy-a'al-a(h)-Ø *t-a'-winik-eh*
 ASP.TERM-3SERG-say-CMP-3SABS PREP-DET-man-ENCL

'It said to the man'.

- (15) Mopan (Cohuoj Caal et al. 2001:256, 272 and Schumann Gálvez 1997:140)

- (15a) *In-na'+a* *u-täkaat-aj-Ø* *jun=tuul*
 1SERG-mother+ENCL 3SERG-send-CMP-Ø one=CLS

ix+na' *kax* *ti'i* *aj+Wan*
 PROCL+mother/female chicken PREP PROCL+John

'My mother sent a chicken to Mr. John'.

- (15b) *inw-ad-ik-Ø* *tech*
 1SERG-say/tell-INC 2SPRO

'I say/tell it to you'.

To my knowledge there are no published examples of Mopan clauses with the addressee argument expressed as a full nominal phrase. The phrase ‘to Mr. John’ in (15a) is used to express a recipient not an addressee, but given the evidence in (12)–(15) it is likely that Mopan would express the addressee in the same manner as Itzaj. Otherwise, the examples available to me of phrases in addressee roles involve pronominal phrases (as in 15b), where *tech* ‘2SPRO’ (< *t-ech* < *ti*’(ih) + *ech* ‘PREP + 2SABS’) is used to express the addressee.

Yukatekan languages also exhibit possessive constructions in which the possessor may be understood to be in a benefactive or recipient role. The following examples illustrate this (the Yukatek and Itzaj examples were brought to my attention by Victoria Bricker and Andrew Hofling, respectively):

(16) Yukatek (Bricker, Po7ot Yah, and Dzul de Po7ot 1998:278, 295)

(16a) *táan-in-t'úun-t-ik-∅* *u-tohol* *in-nòok'*
 ASP-1SERG-collect-TVZR-INC-3SABS 3SERG-money 1SERG-clothes
 ‘I am saving money for my clothes’.

(16b) . . . *t-in-ch'á'ah-∅* *le* *tàak'in+o'* *t-u-mèen*
 ASP-1SERG-take-3SABS DET money+ENCL PREP-3SERG-RN
k'ab'éet *in-man-ik-∅* *u-tz'àak*
 necessary 1SERG-buy-INC-3SABS 3SERG-medicine
in-yùum
 1SERG-father

‘. . . I took that money because I had to buy my father’s medicine’ (i.e., medicine for my father)

(17) Itzaj (Hofling 1990:550–51)

(17a) *ti'ih* *u-ts'(ah)-ik-∅* *uy-uk'ul*
 SUB 3SERG-give-PPM-3SABS 3SERG-drink all
tulakalu-tsimin-oo'
 3SERG-horse-PL

‘. . . in order to give all of the horses their drink . . .’

(17b) *k-in-ts'(ah)-ik-∅* *u-ts'on* *in-suku'un*
 INC-1SERG-give-PPM-3SABS 3SERG-gun 1SERG-brother
 ‘I give my brother’s gun (to him)’.

(17c) *k-in-ts'(ah)-ik-∅* *in-ts'on* *ti'ih* *in-suku'un*
 INC-1SERG-give-PPM-3SABS 3SERG-gun PREP 1SERG-brother
 ‘I give my gun to my older brother’.

< *-b') and Wastekan (with possible *-b') had this suffix, then Proto-Mayan might have had *-b'. But more evidence is necessary to test this hypothesis.¹¹

4.3. Eastern Mayan. Part (b) of table 2 shows the distribution of the -b'e suffix in the Eastern Mayan languages. These data suggest a straightforward reconstruction of *-b'e as the suffix in Proto-Eastern-Mayan, as proposed by Kaufman (1989) and Norman and Campbell (1978). But reconstructing the precise meaning of this suffix and its associated syntax is a much more complex matter.

4.3.1. Greater K'iche'an. There is considerable variation in Eastern Mayan regarding the syntactic details of the -b'e construction, as shown in (b) of table 2. Nevertheless, the construction is used for pragmatic focus throughout Eastern Mayan. In K'iche', the instrument is fronted and coreferenced on the verb by means of the absolutive marker whenever the -b'e construction is used, constituting a clear case of PO advancement, while the O may or may not be demoted syntactically but is not coreferenced on the verb:

(19) K'iche' (Kaufman 1990:78)

(19a) *k-∅-in-rami-j* *lee* *chee'* *chi* *ch'iich'*
 INC-3SABS-1SERG-cut-TV DET wood PREP machete
 'I cut (habitually) the wood with a machete'.

(19b) *ch'iich'* *k-∅-in-rami-b'e-j* *lee* *chee'*
 machete INC-3SABS-1SERG-cut-APL-TV DET wood
 'A machete is what I cut the wood with'.

Here, 'a machete' and 'the wood' are both third-person singular, and either one could correspond to the third-person singular absolutive marker -∅ on the verb. However, the O is sometimes demoted syntactically as the possessor of a relational noun -ee(ch):

(20) K'iche' (Kaufman 1990:79 and Dayley 1981:27)

(20a) *lee* *achi'h* *jukub'* *k-∅-u-wo'q-isa-b'e-ej*
 DET man canoe INC-3SABS-3SERG-eat-CAUS-APL-TV
 r-ee *lee* *aaq*
 3SERG-RN DET pig

'As for the man, it is a canoe that he uses to feed the pigs'.

(20b) *ch'iich'* *x-∅-in-sok-b'e-j* *aw-eech*
 machete CMP-3SABS-1SERG-hit-APL-TV 2SERG-RN

'It was a machete that I wounded you with/I used a machete to wound you'.

¹¹ In the case of Yukatekan, one would want to find other root transitive verbs, in particular ones likely to subcategorize for addressees, benefactives, and recipients, which are reconstructible to Proto-Mayan as simple CVC roots but with CV'VC shapes in Yukatekan.

This construction can be applied concurrently with the passive voice, showing that the verb agrees with the third-person singular ‘machete’ rather than with the underlying O, which is second-person singular:

(21) K’iche’ (Dayley 1981:28)

ch’iich’ x-∅-sok-b’e-r aw-eech
 machete CMP-3SABS-hit-APL-PASS 2SERG-RN

‘(It was) a machete (that) was used to wound you’.

The *-b’e/PO* construction can be a valency-increasing operation since it can ditransitivize root transitives and causativized verbs, as in (19)–(21) above. This is suggested by the fact that neither the PO nor the SO in (19*b*) is syntactically oblique. However, the syntactic demotion of ‘the pigs’ in (20*a*) and ‘you’ in (20*b*) and (21) shows that valency may remain unchanged. The *-b’e/PO* construction can also be a valency-changing operation since it can transitivize root intransitives and positionals, as in (22) below. Kaufman (1990:79) gives examples of intransitive (e.g., *ok* ‘to enter’, *b’iin* ‘walk’, *war* ‘to sleep’) and positional (e.g., *t’uy* ‘seated’) roots that take *-a-b’e* (after *CaC* roots?) ~ *-i-b’e* (elsewhere?) to add a second argument corresponding to a location or circumstance, which may (cf. 22*a*) or may not (cf. 22*b* and 22*c*) be fronted:

(22) K’iche’ (Kaufman 1990:79)

(22*a*) *lee achi’h u-q’ab’ k-∅-u-war-a-b’e-ej*
 DET man 3SERG-arm INC-3SABS-3SERG-sleep-?-APL-TV

‘The man sleeps on his arm’.

(22*b*) *k-∅-in-b’iin-i-b’e-j a-ch’aa-b’e-x-iik*
 INC-3SABS-1SERG-walk-[APL-]TV 2SERG-talk-APL-PASS-NOM

‘I walk (while) talking to you’ (lit. ‘I walk with your being talked to’).

(22*c*) *k-∅-u-b’iin-[i-b’e-]j lee u-yaab’*
 INC-3SABS-3SERG-walk-[APL-]TV DET 3SERG-illness

‘He walks with/despite his illness’.

(22*b*) is interesting because the circumstance is a nominalized passive verb ‘your being talked to’. The verb is a verb of talking, *ch’aa*, which shows that at least one K’iche’ verb of talking (i.e., verbs with speaker and addressee roles) may take *-b’e*. Kaufman (1989:part D, 41) has in fact commented that in K’iche’, *-b’e* survives with verbs with indirective roles in lexicalized or frozen usage.

In Tz’utujil, the instrument argument is fronted for pragmatic focus (e.g., for questioning or emphasis) but is not coreferenced on the verb with an absolute marker. Instead, the underlying O is coreferenced, as in (23*a*). This

is supported by the fact that the instrument is expressed obliquely as the object of the preposition *tza'n* (or *chee*) 'with', as in (23*b*), when the *-b'e* rule is not used:

(23) Tz'utujil (Craig 1978:59, 61)

(23*a*) *atet jun ab'aj x-in-a-ch'ey-b'ie-j*
 2SPRO one rock CMP-1SABS-2SERG-hit-APL-TV
 'You hit me with a rock'.

(23*b*) *x-∅-in-tz'ap chi' jaay tza'n chie'*
 CMP-3SABS-1SERG-close mouth house with stick
 'I closed the door with a propped stick'.

(23*c*) *chie' x-∅-in-tz'ap-b'ie-j chi' jaay*
 stick CMP-3SABS-1SERG-close-APL-TV mouth house
 'I closed the door with a propped stick'.

The construction is therefore not a PO advancement construction, and the instrument remains at best an SO:

(24) Tz'utujil (Dayley 1981:27)

(24*a*) *machat x-in-re-ch'oy-b'e-ej*
 machete CMP-1SABS-3SERG-cut-APL-TV
 'It was a machete that he cut me with'.

(24*b*) *machat x-in-choy-b'e-x-i*
 machete CMP-1SABS-cut-APL-PASS-IV
 'It was a machete that I was cut with'.

In (24*b*), a passive form of (24*a*), the O is coreferenced as the subject of the verb with an absolutive marker, unlike (21) in K'iche', where the O is not coreferenced in the passive form but expressed as the possessor of a relational noun.

Dayley (1981:59) and García Matzar (1998:114) note that Tz'utujil has some verbs with *-b'e* that promote indirect roles (I have broken up García Matzar's *-b'eej* into *-b'e-ej* [APL-TV]):

(25) Tz'utujil (García Matzar 1998:114)

(25*a*) *x-in-ru-k'ayi-b'e-ej*
 CMP-1SABS-3SERG-sell-APL-TV
 'S/he sold it to me'.

(25*b*) *x-in-ru-tzijo-b'e-ej*
 CMP-1SABS-3SERG-speak-APL-TV
 'S/he talked to me'.

In Kaqchikel, the instrument is always expressed obliquely as the possessor of the relational noun *-ik'in* and may or may not be fronted for pragmatic focus. The verb agrees with the underlying O not with the instrument. Thus, there is no PO advancement rule in Kaqchikel, and for that matter no SO advancement rule either, since the instrument is always oblique. Furthermore, the suffix *-b'e* is optional if the instrument is not fronted:

(26) Kaqchikel (Dayley 1981:27–28)

(26a) *r-ik'in jun machät x-i-ru-sok-b'e-j*
 3SERG-RN a machete CMP-1SABS-3SERG-wound-APL-TV
 'With a machete he wounded me'.

(26b) *x-Ø-u-choy(-b'e-j) r-ik'in jun machät*
 CMP-1SABS-3SERG-cut-(APL-TV) 3SERG-RN a machete
 'He cut it with a machete'.

(26c) *r-ik'in jun machät x-i-ru-sok-b'e-x*
 3SERG-RN a machete CMP-1SABS-wound-APL-PASS
 'With a machete I was wounded'.

The verb of (26c), a passivized form of the verb in (26a), shows that the verb coreferences the O rather than the instrument.

In Poqomam, the instrument may or may not be fronted for pragmatic focus, and the underlying O may or may not be oblique. If oblique, the O is expressed as the possessor of the relational noun *-ihchin* or *-e(h)* 'to/for/of' (dative). The instrument, if not fronted, may also be expressed as the possessor of the relational noun *-iij*. In fact, both the instrument and the O may appear postverbally and as the possessors of relational nouns at the same time, as in (27). As in Kaqchikel, the *-b'e ~ -'e (-'e + Vh > -'i-eh)* marker is optional if the instrument is not fronted:

(27) Poqomam (Dayley 1981:23)

(27a) *hila' x-Ø-a-q'at-'i-eh w-ihchin*
 what CMP-3SABS-2SERG-cut-APL-TV 1SERG-with
 'What did you cut me with?'

(27b) *hila' x-in-a-q'at-'i-eh*
 what CMP-1SABS-2SERG-cut-APL-TV
 'What did you cut me with?'

(27c) *ma' ha' ih-Ø-nu-muh-'i-eh r-e*
 DET water CMP-3SABS-1SERG-wet-APL-IV 3SERG-RN
 'With the water I wet it'.

- (27d) *hin ih-∅-nu-sir(-'i-eh) ma' xuut pech*
 1SPRO CMP-3SABS-1SERG-paint(-APL-TV) DET jub PREP
r-ijj ak'ach
 3SERG-back feather

'I painted the water jug with a feather'.

- (27e) *ih-∅-nu-mek-'i-eh r-eh ma' chie' pech*
 CMP-3SABS-1SERG-pull-APL-TV 3SERG-RN DET tree PREP
ma' maachit
 DET machete

'I pulled the tree with the machete'.

(27a) shows that the instrument may be coreferenced on the verb, in which case the O is expressed obliquely as the possessor of the relational noun *-ihchin*. (27b) shows that the instrument may not be coreferenced on the verb at all, in which case the O is. (27c) shows that if the O is not coreferenced on the verb, it may be expressed as the possessor of the relational noun *-e(h)*. With (27d) Dayley illustrates the fact that the instrument may be expressed obliquely, as the object of the preposition *pech* 'with', in which case the O is not demoted syntactically. (27e) shows that both the O and the instrument may be demoted syntactically, with the O as the possessor of the dative relational noun *-e(h)* and the instrument as the object of the preposition *pech*. Thus, in Poqomam, there may be PO advancement of instrument roles only in cases like (27a).

In Poqomchi', according to Dayley (1981:22), the instrument is always fronted for pragmatic focus, and the O is not demoted; the suffix is *-b'e*, according to Dayley, while more recently it has been described as *-b'eej* by Malchic Nicolás, Isem, and Tul Rax (2000:265), which may be more discretely analyzed as *-b'e-ej* (APL-TV) (cf. Tz'utujil *-b'e-ej*, Kaqchikel *-b'e-j*, K'iche' *-b'e-j*, Poqomam *-i-eh*). According to Malchic Nicolás, Isem, and Tul Rax (2000:265), fronting of the instrument after suffixation of *-b'e(-ej)* requires the placement of the particle *wii'* as a trace after the verb and before the patient and agent arguments, as in (28a) and (28b). Also, they note that if the possessed relational noun *r-uuk'* (3SERG-with) is fronted with the instrument, as in (28c), then the construction is not in instrumental focus but in frequentative focus, though their translation seems to correspond to an instrumental focus interpretation. And last, they note that the use of the suffix *-i-b'e(-ej)* is optional in some dialects, as in (28c).

- (28) Poqomchi' (Malchic Nicolás, Isem, and Tul Rax 2000:265)

- (28a) *x-∅-u-yok' i chee' i haaw*
 CMP-3SABS-3SERG-cut DET tree DET sir/man

r-uuk' *ikej*
 3SERG-with axe

'The man cut the tree with (an) axe'.

(28b) *Ikej* *x-Øu-yok'(-i-b'e-ej)* *wii' i* *chee' i*
 axe CMP-3SABS-3SERG-cut(-?-APL-TV TR DET tree DET
haaw
 sir/man

'With (an) axe the man cut the tree'.

(28c) **R-uuk'** *ikej* *x-Øu-yok'-i-b'e-ej* *wii' i*
 3SERG-with axe CMP-3SABS-3SERG-cut-?-APL-TV TR DET
chee' i *haaw*
 tree DET sir/man

'With (an) axe the man cut the tree'.

Note that while Malchic Nicolás, Isem, and Tul Rax (2000) describe the suffix as *-b'eej*, the examples given show it as *-i-b'e-ej*, in which a close resemblance to the applicative *-V-b'e* of intransitives and positionals in K'iche' and Ixil (see below) is apparent. Perhaps Poqom had a cognate of *-V-b'e* present in other Eastern Mayan languages, but Poqomam lost it while Poqomchi' broadened its range of application from root intransitives and intransitized positionals to transitives. The optionality of *-(i-)b'e* in some Poqomchi' dialects is paralleled in other Greater K'iche'an languages.

4.3.2. Greater Mamean. Only Ixil has preserved the *-b'e/PO* construction among the Greater Mamean languages. The instrument may be expressed obliquely, following one of two possessed relational nouns, *t-a'n* or *t-ucy* 'with it' (as in 29a), or it may be fronted and devoid of any evidence of syntactic demotion (as in 29b):

(29) Ixil (Ayres 1983:42)

(29a) *A-k'oni+in* *t-a'n* *uula*
 2SERG-shoot+1sABS 3SERG-RN sling

'You shot me with a sling'.

(29b) *uula* *a-k'oni-b'e+in*
 sling 2SERG-shoot-APL+1sABS

'With a sling you shot me'.

The *-b'e* suffix can be used on transitive and intransitive verbs; with intransitives the suffix is *-V-b'e*, most often *-e-b'e*, and the verb is still intransitive, taking an ergative marker for the argument in S role and no absolutive marker for the instrument:

(30) Ixil (Ayres 1991:160)

(30a) *Iqvil kat-in-ja'*[-*e-b'e*]
 rope ASP-1SERG-climb-APL

'By rope I climbed'.

(30b) *Axh in-ja'*[-*a-b'e*]
 2SPRO 1SERG-climb-APL

'By you I climbed (I used you to climb)'.

When the *-b'e* construction is used on a transitive verb, the underlying O can exhibit one of two forms: (1) it is oblique and expressed as the possessor of the relational noun *-i'*, as in (31a) below; or (2) it is not oblique and is coreferenced on the verb with an absolutive marker, as in (31b) and (29b):

(31) Ixil (Dayley 1981:34)

(31a) *ma'l u tze' Ø-i-q'os-b'e-Ø u naj*
 one DET stick ASP-3SERG-cut-APL-3SABS DET man
t-i' u ixoj
 3SERG-RN DET woman

'With a stick the man hit (to) the woman'.

(31b) *machit n-in-tzok'-b'e-Ø tze'*
 machete ASP-1SERG-cut-APL-3SABS tree

'With a machete I cut the tree'.

Ixil, interestingly, has a voice marked with *-kat* by which an indirect role such as goal or recipient can be pragmatically focused and syntactically fronted. However, the focused argument remains oblique and is not coreferenced on the verb:

(32) Ixil (Ayres 1983:25, 26)

(32a) *Kat-o-oya+Ø u b'oob'al s+ we*
 CMP-2SERG-give+3SABS DET hat PREP me

'You gave the hat to me'.

(32b) *S+ we kat-o-oya-kat+Ø u b'oob'al*
 PREP me CMP-2SERG-give-APL+3SABS DET hat

'To me you gave the hat'.

In both (32a) and (32b) the recipient is oblique, being the object of a preposition. In (32b) it is fronted and focused, and the verb takes the *-kat* focus marker. This is clearly not a case of PO advancement.¹²

¹² On this I agree with Klaiman (1991:244–45), who explains that the nonpassive voices of Ixil (i.e., the focus antipassive in *-on*, the instrumental in *-b'e*, and the indirective in *-kat*) are

4.3.3. Backward reconstruction: Proto-Eastern-Mayan. Given the data in part (b) of table 2, the Proto-Eastern-Mayan suffix can be reconstructed as **-b'e*. Since K'iche' and Poqomchi' (Greater K'iche'an) and Ixil (Greater Mamean) have a suffix of the general form *-V-b'e* to be used on intransitives, Proto-Eastern-Mayan likely had a suffix of the form **-V-b'e* as well (both K'iche' and Ixil have *-a-b'e*, so it may be possible to reconstruct **-a-b'e* as one of the allomorphs).

As far as the associated syntactic constructions, in K'iche'an Proper (K'iche', Kaqchikel, Tz'utujil) the suffix is used primarily to focus arguments in instrumental role. In K'iche', it is used with locatives and other circumstances as *-V-b'e* on intransitives. In K'iche' and Tz'utujil, it is used in a lexicalized or frozen manner to focus indirect roles such as addressees (cf. 22b and 25). In Poqom (Poqomam, Poqomchi'), the suffix is used to signal focusing of instruments too, although Smith-Stark (1994:45) points out that in Poqomam causes may also be focused with *-b'e*. In Ixil, the suffix also marks pragmatic focus of the instrument and a different marker, *-kat*, allows for indirect roles to receive focus as well, though they remain oblique.

Based on this evidence, it is possible to reconstruct the pragmatic focus of instrument roles as one of the functions of the *-b'e* suffix in Proto-Eastern-Mayan. The frozen examples from K'iche' and Tz'utujil where *-b'e* allows advancement of an indirect role, and the focusing of indirect roles in Ixil with *-kat*, suggest that Proto-Eastern-Mayan may have had a rule of PO advancement of indirect roles (more like in K'iche' and Tz'utujil), of focusing of indirect roles (perhaps without PO advancement, more like in Ixil), or of focusing with optional PO advancement of indirect roles (a combination of the situation in K'iche', Tz'utujil, and Ixil).

In K'iche'an Proper (K'iche', Kaqchikel, Tz'utujil), the construction may have involved obligatory (K'iche', Tz'utujil) or optional (Kaqchikel) fronting of the instrument role. In K'iche', the fronted and focused instrument triggers coreferencing on the verb with absolutive markers (PO advancement), while the O becomes oblique and the possessor of the relational noun *-ee(ch)*. In Poqom (Poqomam, Poqomchi'), fronting may have been obligatory (Poqomchi') or optional (Poqomam), but in neither does the focused or fronted instrument trigger coreferencing on the verb with an absolutive marker. Also, the O in Poqom was coreferenced on the verb with an absolutive marker and was not relegated to an oblique status, except in Poqomam. In Ixil, fronting is obligatory and the O always maintains agreement with the transitive verb, whether it was expressed obliquely or not. Consequently, in Proto-Eastern-Mayan, fronting may have been possible but probably not obligatory, and absolutive agreement on the verb was with the O and not

pragmatic voices, or voices that "primarily encode . . . alternating assignments of informational salience (focus) among certain noncore nominal positions."

with the instrument: the *-b'e* construction was therefore not likely a PO advancement construction in Proto-Eastern-Mayan, and became one at the earliest only in Proto-K'iche'an Proper (K'iche'-Tz'utujil-Kaqchikel), certainly in K'iche'.

As far as the antidative construction is concerned, this term only applies to the K'iche' constructions, where the instrument becomes a true PO when the *-b'e* suffix is used. None of the other Eastern Mayan languages advances the instrument to a PO status, with absolutive agreement on the verb, although in some cases (e.g., Poqomchi') more data may prove differently, while in others the instrument at best becomes an SO (e.g., Tz'utujil).

4.4. Western Mayan. (Part (c) of table 2 shows the distribution of the *-b'e* suffix in the Western Mayan languages. As explained below, the data support the reconstruction of **-b'e* for Proto-Western-Mayan.

4.4.1. Greater Q'anjob'alan. Kaufman (1989:part B, 41) shows that Mocho' retains the *-b'e* marker in a nonproductive manner. An example is 'iitz'-*b'e* '(vt) conocer (to meet)' from 'iitz'-*a*' '(vt) saber, conocer (to know, meet)' (Kaufman 1967:58). Martin (1994:125) illustrates \emptyset -*x-haqbe-qin-qe*' (ASP-3SERG-ask-1SABS-PL) 'they asked me', which shows a verb *haqbe* that may very well consist of *haq-b'e* (ask-APL). Thus, taking into account the Mocho' (Greater Q'anjob'alan), Eastern Mayan, and Greater Tzeltalan evidence (see 4.4.2), the suffix can be reconstructed as **-b'e* for Proto-Greater-Q'anjob'alan and Proto-Western-Mayan (Kaufman 1989:part C).

Interestingly, Jakaltek exhibits optional or conditioned PO advancement of instruments:

(33) Jakaltek (Craig 1978:56)

(33a) (x) \emptyset -*s-peb'a* *naj te' pulta y-u te'*
 (CMP-)3SABS-3SERG-close he the door 3SERG-RN the
xila
 chair

'He closed the door with the chair'.

(33b) *te' xila x- \emptyset -peb'a-n te' pulta y-u naj*
 the chair CMP-3SABS-close-AP the door 3SERG-RN he

'He closed the door with the chair' (lit. 'The chair closes the door by him').

In (33a) the instrument is expressed obliquely as the possessor of the relational noun *-u* and the verb is active transitive. In (33b) the so-called anti-passive suffix *-n* is used, the instrument is focused and lacks oblique marking as in (33a), and the O follows the verb immediately and lacks oblique marking. Interestingly, the A now exhibits oblique marking as the possessor of a relational noun *-u*. Craig (1978:57) argues that the "fact that the transitive

verb [in (33*b*)] is in the antipassive construction when the instrumental is promoted is taken as an indication that the instrumental functions as the surface structure subject of the sentence.” This is supported by the fact that the A is now oblique. In both cases the O argument immediately follows the verb and lacks oblique marking. While it is not possible to say that it is not the O argument that is coreferenced on the verb in (33*b*), the fact that oblique marking is reserved for the instrument in the active clause in (33*a*) and for the A in the instrument-promotion clause in (33*b*) suggests that these two arguments have exchanged function as the surface subject.

A reviewer of this paper has pointed out to me that Akatek exhibits optional advancement of indirect roles, including addressee roles, without special marking on the verb. At the same time the reviewer suggests that such promotion does not necessarily indicate that a hypothetical *-b'e* suffix once existed in Akatek and served to advance indirect roles. More commonly, the reviewer notes, a preposition *e* is used in Akatek to express indirect arguments obliquely.

I agree with the reviewer that such optional promotion does not imply the past presence of a *-b'e/PO* advancement rule, given that cross-linguistically verbs of speaking often subcategorize addressee arguments as core arguments without special marking on the verb. At the very least, Akatek may be a PO language with an antidative rule marked by the phrase in *(t)e(t)-ABS*, based on the ‘dative/benefactive’ adposition *(t)e(t)* (Zavala 1997:444). In Q’anjob’al, the preposition *b’ay* (cf. *B’ay te na* [PREP DET house] ‘in the house’) is used for the same purpose (Montejo and Nicholas P. 1996:138), and to my knowledge Q’anjob’al does not allow advancement of the indirect argument the way Akatek does. (A likely cognate of Q’anjob’al *b’ay* is found in Akatek as *b’ey*, which Zavala 1997:444 glosses as ‘locative’.)

4.4.2. Greater Tzeltalan.

4.4.2.1. Tzeltalan. In Tzotzil, the suffix *-b'e ~ -b'* is used only with transitive verbs to advance arguments in recipient, addressee, benefactive, malefactive, possessor of patient, and instrument roles, among other roles, to PO function. The *-b'e/PO* rule is obligatory for all roles except for instruments. The former DO becomes an SO. In (34), ‘(to) the woman’ is the PO and ‘pig’ is the SO:

(34) Tzotzil (Aissen 1987:104)

| | | | | | |
|-----------|-----------|-----------------|------------|----------------------|---------------|
| <i>'a</i> | <i>li</i> | <i>Xun+e,</i> | <i>b'a</i> | <i>y-ak'-b'e-∅</i> | <i>chitom</i> |
| PROCL | DET | <i>Xun+ENCL</i> | go | 3SERG-give-APL-3SABS | pig |
| | <i>li</i> | <i>'ants+e</i> | | | |
| | DET | woman+ENCL | | | |

‘Xun went to give the pig to the woman’ or ‘Xun went to give the woman the pig’.

The NP is in recipient role ('to the woman') and can only be expressed if the verb takes *-b'e*. The *-b'e/PO* advancement rule must obligatorily occur in this clause or else the argument in recipient role cannot be expressed. The PO, not the SO, is coreferenced on the verb:

(35) Tzotzil (Aissen 1987:107, 124)

(35a) *Ch-a-k-ak'-b'e*

INC-2SABS-1SERG-give-APL

'I'll give it to you'.

(35b) *L-i-'al-b'-at*

CMP-1SABS-say-APL-PASS

'I was told then . . .'

In (35a), *a-* (2SABS) corresponds to the argument in recipient role, while *k-* (1SERG) corresponds to the agentlike argument of the verb. In (35b), the verb is passive and the intransitive subject coreferenced on the verb corresponds to the argument in addressee role. In (36), the *-b'e/PO* rule triggers agreement of the verb with the PO in possessor role that is coreferenced by *i-* (1SABS) on the verb:

(36) Tzotzil (Aissen 1987:130)

Ch-i-s-na'-b'e

tal j-nichim-al

INC-1SABS-3SERG-remember-APL come 1SERG-flower-POSS

'They remember to bring me my flowers'.

The benefactive meaning of the possessor can be accounted for by the fact that it is an example of inanimate possession. Aissen (1987:128–30) explains, following Haviland (1980), that inanimate possessors may be related to the head nouns by location, function or use, cause, victim, and benefactive relationships. Thus, the benefactive function of the possessor in (36) can be explained by the inanimate possession construction alone (Aissen 1987:130) rather than by the *-b'e/PO* rule. This may be the case as well for the Yukatekan examples in (16)–(18) above.

Instruments may be expressed either with the preposition *ta* or without a preposition if the *-b'e/PO* rule applies. If the *-b'e/PO* rule applies, there is no obligatory fronting of the instrument:

(37) Tzotzil (Dayley 1981:43)

(37a) *la-∅-s-mil*

ta machita

CMP-3SABS-3SERG-kill PREP machete

'She killed him with a machete'.

- (37b) *ta-∅-s-paj-b'e* *akuxa ti ka'e*
 CMP-3SABS-3SERG-prick-APL needle DET horse
 'He pricked the horse with a needle'.

In Tzeltal, the suffix *-b'e* also marks the PO advancement rule (Dayley 1981:44). The rule applies obligatorily and advances recipients, benefactives, and possessors of patients, but not instruments, to PO function. For instance, *la-y-ak'-b'e-∅* (CMP-3SERG-give-APPL-3SABS) 'he gave it to him' advances a recipient, while *ja-s-pas-b'-on* (INC-3SERG-APPL-3SABS) 'he does it for him' advances a benefactive. The following example is of interest due to its similarity to the Yukatekan possessor–possessee constructions discussed above:

- (38) Tzeltal (Dayley 1981:44)
la-s-mil-b'e-∅ *s-tz'i' Jwan te*
 CMP-3SERG-kill-APPL-3SABS 3SERG-dog Juan DET
J+petul+e
 PROCL+Peter+ENCL
 'Peter killed John's dog'.

In (38), the verb takes the *-b'e* applicative suffix. However, it is not clear which noun, 'dog' or 'Juan', it coreferences by means of the third-person singular absolutive suffix *-∅*, since both are third-person singular.

4.4.2.2. Ch'olan. Ch'ol uses the suffix *-b'e ~ -b'ey ~ -e* (Josserand and Hopkins 1985:6), and nominals in recipient, addressee, benefactive, malefactive, and possessor of patient roles are obligatorily advanced to PO. The PO is coreferenced on the verb with an absolutive suffix, and the former DO becomes an SO:

- (39) Ch'ol (Aulie and Aulie 1978:199 and Dayley 1981:48)
 (39a) *woli-k-taj-b'e-n-∅*
 ASP-1SERG-find-APL-INC-3SABS
 'I am finding it for him'.
 (39b) *tza-k-taj-b'e-∅-∅*
 ASP-1SERG-find-APL-CMP-3SABS
 'I found it for him'.
 (39c) *mi-j-k'ajti-b'e-n-et*
 ASP.PROG-1SERG-ask-APL-INC-2SABS
 'I am asking you it'.

In *-b'e*/PO passives, neither the PO 'John' nor the SO 'a paper' is demoted syntactically, while the A is (hence it follows the preposition *ti*):

winik t-u-b'a num-ik-on . .
 man PREP-3SERG-RN pass-SUBJ-1SABS

'I went to ask that man for permission to go across [his land . . .]'

The PREP-ERG-*b'a* form can be used with any person marker, but *t-u-b'a* (PREP-3SERG-RN) 'for/to him/her/it' is the most common, given its grammaticized uses to express causes and infinitives, as in the case of the following infinitive passive:

- (44) Chontal (Knowles 1984:191)
t-u-b'a ah+k'ux-k-an
 PREP-3SERG-RN PROCL+eat-PASS-INC
 'for being eaten'

In modern Ch'orti', according to Dayley (1981:46), there is no overt morphological marker for a PO advancement rule. PO advancement does occur with some semantically appropriate verbs but is not obligatory:

- (45) Ch'orti' (Dayley 1981:46)
- (45a) *uy-ajk'u-Ø-'on e chicha*
 3SERG-give-CMP-1pABS DET rum
 'He gave us the rum'.
- (45b) *ajk'u-n-Ø-o'on e chicha*
 give-PASS-CMP-1pABS DET rum
 'We were given the rum'.
- (45c) *e Jwan uy-eb't-a-Ø in-te' karta*
 DET John 3SERG-send-THM-CMP-3sABS one-CLS letter
ta-ni-b'a
 PREP-1SERG-self
 'John sent a letter to me'.

In (45a), the verb 'give' coreferences both the agent ('he') and the recipient ('us'), while in (45b), the passivized form coreferences the recipient ('we') which is now the subject. In both cases, the patient ('the rum') is present but is not expressed as the complement of an oblique construction. In neither case is a reflex of the suffix *-b'e* present. In (45c), the phrase *ta-ni-b'a* (PREP-1SERG-RN) is used to express the recipient role in an oblique form. It can also be used to express benefactives and possessors:

- (46) Ch'orti' (Pérez Martínez 1994:48, 142)

- (46a) *e pik ta-(a)'-b'a*
 DET dress PREP-2SERG-RN

'The dress is for you'.

- (46b) *in-man-i-∅ e jun-ob' t-wa'*
 1SERG-buy-CMP-3SABS DET book-PL PREP-3SERG:RN

ni-maxtak-ob'

1SERG-children-PL

'I buy books for my sons/children'.

- (46c) *e tz'i' ta-ni-b'a*
 DET dog PREP-1SERG-RN

'The dog is mine'.

Thus, in Ch'orti', the PREP-ERG-*b'a* phrase covers the same range of roles that can be promoted in Chontal and Ch'ol through the *-b'e/PO* rule. This phrase is also used in Ch'orti' to express more grammaticized roles, such as cause and purpose, as in (47), where *twa'* (< *t-u-b'a*) is used to express the thematic role of purpose:

- (47) Ch'orti' (Pérez Martínez 1994:11)

u-ch'am-i-∅ ayi in=te' e
 3SERG-grab-CMP-3SABS there? one=CLS DET

bal'giakay-u-pas-i-∅ t-wa'
 suitcase ASP-3SERG-open-CMP-3SABS PREP-3SERG:RN

uw-ir-a-∅ tuk'a ayan-∅ tamar
 3SERG-see-APL-3SABS what exist-3SABS inside

'... he grabbed one of the suitcases and began to open it to see what was inside ...'.

Instruments in Ch'orti' are expressed as the objects of the preposition *taka* or *tama*, which is probably composed of the preposition *ta* and an undetermined particle:

- (48) Ch'orti' (Pérez Martínez 1994:48, 110)

- (48a) *in-xur-i-∅ e te' taka e machit*
 1SERG-cut-CMP-3SABS DET stick/tree PREP DET machete

'I cut the stick/tree with the machete'.

- (48b) *niw-ixka'r u-t'ojt'-i ni-jor tama e*
 1SERG-woman 3SERG-hit-CMP-3SABS 1SERG-head PREP DET

te'

stick/tree

'My woman hit me in the head with the stick'.

Kaufman (1989:42) mentions that Ch'orti' retains the *-b'e* suffix, albeit in nonproductive usage. Kaufman and Norman (1984:116, 131, 137) do provide examples from Ch'olti' and Ch'orti', based on which they reconstruct Proto-Ch'olan **-b'e* 'indirective', but they do not elaborate on them. They thus reconstruct **täk'-b'e* 'responder, contestar (answer)' based on its attestations in Acalan-Chontal, Ch'olti', and Ch'orti'; Proto-Ch'olan **äl-b'e ~ *ä'le* 'decir a (tell)' based on its attestations in Ch'ol, Acalan-Chontal, and Ch'orti'; and Proto-Ch'olan **yah* 'desire, love' based on its attestations in Acalan-Chontal ⟨*yahin*⟩ and Ch'olti' ⟨*yahbe*⟩ 'desear, amar', the latter probably *yah-b'e*. A reflex of the proposed **täk'-b'e* is found still in modern Ch'orti' as *tak(')b'e*, albeit without any obvious lexicalization of the PO advancement rule:

- (49) Ch'orti' (Pérez Martínez 1996:196)
Karme, ma'chi ub'n-e'n in-takb'e-Ø-Ø
 Carmen NEG ability-1SABS 1SERG-answer-CMP-3SABS
aw-ub'saj
 2SERG-question
 'Carmen, no pude responder tu pregunta' ('Carmen, I couldn't answer your question').

Here, 'Carmen' is not a core argument; it has more of a vocative role. The only core arguments of the verb are 'I' and 'question', and so 'question' is coreferenced on the verb with the absolutive marker *-Ø*. Only through elicitation would it be possible to test whether 'Carmen' can be expressed as core argument of the verb that is coreferenced on the verb, or obliquely (e.g., as *t-u-b'a Karme*) through antidative or indirect object construction.

Ch'orti' also seems to have a reflex of Proto-Ch'olan **äl-b'e ~ *ä'l-e* 'to tell' (Kaufman and Norman 1984:116), where the variant form suggests that the suffix *-b'e* has changed to *-e > -' - . . . -e*, as the following example suggests:

- (50) Ch'orti' (Fought 1972:308)
'entonses che' e diablo 'uy-a[']ar-e-Ø-Ø
 then said DET devil 3SERG-say[APL]-APL-CMP-3SABS
e winik
 DET man

'Then, he said, the devil told the man . . .'

The addressee argument is raised to PO and is not oblique. The verb shows an affix of the form *-' - . . . -e*, the variant of Proto-Ch'olan **-b'e* reconstructed by Kaufman and Norman (1984:116). The semantics of the verb and the syntax of the sentence are both consistent with such analysis, and the presence of such an affix explains the otherwise unexplained glottal stop

in the verb root (cf. discussion of Yukatekan *'á'al ~ 'aal-b'* in 4.2). Both Ch'ol and Chontal have *äl* as the root; and in both Proto-Greater-Tzeltalan and Proto-Mayan, the root can be reconstructed as **(h)al* (Kaufman and Norman 1984:116). Thus, the suffix *-b'e* seems to be frozen in the Ch'orti' verb *a're*, but *a're* subcategorizes the indirect role (addressee) as a core argument, whereas *tak(')b'e* does not.

Moran (1695:22–23) describes the suffix *(-bel) ~ (-el)* for Ch'olti' as a suffix used for instrumental and locative roles. The suffix may actually conflate two markers, *-b'e-el*.¹³ The following examples illustrate the use of *-b'e-el* in promoting instruments (*(in maij)* 'my offering') to absolutive case and in fronting them to the beginning of the clause:

(51) Ch'olti' (Moran 1695:23)

(51a) *(in-maij yual-in-nol-ez-be-(e)l-∅ Dios)*
 1SERG-gift ASP-1SERG-big-CAUS-APL-INC-3SABS God

'Con mi oferta o dadiva engrandesco a Dios' ('With my offering or gift I make God great').

¹³ A referee isolates the *(l)* as part of a separate morpheme, probably a "locative *-el*" that may be equivalent to the K'iche'an particle *wi'*, which is used in place of a fronted locative or instrument phrase. The referee further suggests that this locative *-el* probably spread from use with positional verbs to use with transitive verbs. Here I assume the referee's analysis for this suffix or particle, supported by the following examples:

Ch'olti' (Moran 1695:23)

(a) *(chum-ul-et)*

seated-STA-2SABS

'tu estas (sentado)' ('you are (seated)').

(b) *(tuca chul-el-et)*

what seated:STA-LOC-2SABS

'en que estas (sentado)?' ('what are you (seated) on?').

(c) *(silla chul-el-en)*

chair seated-LOC-1SABS

'estoi (sentado) en la silla' ('I am (seated) in the chair').

In (a), *-el* is not used; the verb is a positional stative verb. In (b), *-el* is used and (*tuca*) for *tuk'a* 'what' has been fronted. In (c), (*silla*) 'chair' has been fronted and *-el* is also present on the verb. The referee's proposal that the use of *-el* with locatives may have been extended from positional stative verbs to transitive verbs with *-b'e*, which can promote both locatives and instruments, is also supported. This suggests, in turn, that the suffix described by Moran as *(-bel) ~ (-el)* was actually either *-b'e ~ -e* or *-b'e ~ -∅*. The *-b'e ~ -e* form could in fact have been *-b'e ~ -' . . . -e*, as reconstructed for Proto-Ch'olan by Kaufman and Norman (1984:116) in the verb **äl-b'e ~ *ä'le*, possibly attested as *a're* in modern Ch'orti'. Also, if Ch'orti' is in fact a descendant of Ch'olti', then the *-el* 'locative' suffix was lost from Ch'orti', which shows no evidence of it. However, if the two are sibling languages, and given that the *-el* suffix was most likely an innovation in Ch'olti', maybe Ch'orti' simply inherited the ancestral Proto-Ch'olan pattern (i.e., no *-el* suffix).

- (51b) <*tuka x-in-hul-be-(e)l-∅ ne khikhil?*>
 what ASP-1SERG-shoot-APL-INC-3SABS DET bird
 ‘Con que tengo de matar al paxaro?’ (‘With what do I have to
 kill the bird?’)

- (51c) <*halal taka uante x-a-hul-be-(e)l-∅*>
 arrow CONJ bow ASP-2SERG-shoot-APL-INC-3SABS
 ‘Con la flecha y el arco le as de flechar’ (‘With the bow and
 arrow you shall shoot it’).

Based on the evidence from Ch’olti’, one of the referees of this paper has pointed out that Ch’olti’, like K’iche’, promotes locatives and instruments with *-b’e* when these are fronted. As in K’iche’, fronting was probably realized for pragmatic focus and questioning, as in (19)–(21) above. This is unlike Ch’ol/Chontal and Tzotzil/Tzeltal, where the *-b’e/PO* rule is obligatory with the presence of an indirect role in the clause, but is more like the Eastern Mayan languages where the rule applies for pragmatic purposes and generally with fronting of the instrument or locative. As the same referee also points out, the Ch’olti’ construction is also more like the Eastern Mayan languages in that it applies with instruments and locatives.

Ch’olti’ also uses the *PREP-ERG-b’a* phrase in the same manner as in Ch’orti’, but unlike Ch’orti’ the preposition used is *ti*, not *ta*, as noted in table 1:

- (52) Ch’olti’ (Moran 1695:5, 9)

- (52a) <*uy aku Dios tikaba ne pa ukhel*>
uy-a(j)k’u-∅-∅ Dios ti-ka-b’a ne
 3SERG-give-CMP-3SABS god PREP-1PERG-RN DET
pa’ uk’el
 tortilla drink

‘dio nos Dios a nosotros la comida y la bebida’ (‘God gave us
 our food and drink’).

- (52b) <*tuba vinikob u kale Dios ti khan lum*>
t-u-b’a *winik-ob’ u-cha(’)-le-∅-∅*
 PREP-3SERG-RN person-PL 3SERG-make/do-TVZR-CMP-3SABS
Dios ti chan lum
 God PREP sky earth

(‘For men God made the earth and sky’).

- (52c) <*inchohbeya taba*>
in-chohbe-ya t-a-ba
 1SERG-love-NMLZR PREP-2SERG-RN
 ‘my love for you’

The PREP-ERG-*b'a* construction is also used for possession. Moran in fact writes, “y esto tambien sirve de genitivo (and this also serves as the genitive),” for which he provides examples: ⟨*timba*⟩ for *t(i)-in-b'a* ‘mine/of mine’, ⟨*taba*⟩ for *t(i)-a-b'a* ‘your/of yours’, ⟨*tuba*⟩ for *t(i)-u-b'a* ‘of his’, ⟨*tikaba*⟩ for *ti-ka-b'a* ‘of ours’, ⟨*tiba*⟩ for *t(i)-i-b'a* ‘of yours’, and ⟨*tubaob*⟩ for *t-u-b'a(h)ob* ‘of them’. Interestingly, Ch’olti’ uses the preposition *ti*, while Chontal and Ch’orti’ both use *ta*. Kaufman and Norman (1984:82, table 2) have noted that Ch’ol has *ti*, Chontal has *ta* and *ti*, Ch’olti’ has *ti*, and Ch’orti’ has *ta*. While they reconstruct the preposition as **tä* for Proto-Ch’olan, it is possible that Proto-Ch’olan in fact had **tä* and **ti*, both of which are equally likely reflexes of Proto-Mayan **tya*, as John Justeson (personal communication, 1999) has suggested. The Ch’olti’ use of *ti*, as I show below, agrees with the antidiative of Classic Mayan texts more closely than the Chontal use of *ta* (Mora-Marín 2003). Ch’orti’, however, has frozen examples of *ti* in *ti-chan* (PREP-sky) ‘arriba’, *ti-chan-b’ir* (PREP-sky-DIM) ‘arribita’, and *ti-chan ya’x* (PREP-sky DEIC) ‘por ahí arriba’, but only uses *ta* productively (Pérez Martínez 1994:82, 91). Although Ch’ol has not preserved a *t(i/a)*-ERG-*b'a* construction, having instead innovated the use of (ERG-)*cha’an* for the same purposes, Ch’ol has *ti* and not *ta* as the generic preposition, so that any *t(i/a)*-ERG-*b'a* construction it might have had would have very likely used *ti* like Ch’olti’.

Moran (1695:3, 17, 25, 58) also includes in his vocabulary section the following Ch’olti’ entries that may correspond to indirective verbs: ⟨*ozbe*⟩ ‘amar, codiciar’, ⟨*yahbe*⟩ ‘amar, codiciar’, ⟨*tahbe*⟩ ‘responder’, and possibly others. Of these, ⟨*tahbe*⟩ ‘responder’ is related to the Proto-Ch’olan verb **täk’-b’e* and to Ch’orti’ *tak’b’e*. These entries suggest that Ch’olti’ may have had indirective verbs like those in Ch’ol and Chontal. It is possible, though, that as in Ch’orti’, these indirective verbs may have been frozen by this point.

4.4.3. Backward reconstruction of Proto-Western-Mayan. The *-b’e* suffix is attested in all the Greater Tzeltalan languages. In modern Ch’orti’ it is attested as *-b’e* (frozen) and possibly as *-’ . . . -e* or *-e* in a nonproductive manner (Kaufman 1990 and Kaufman and Norman 1984); the *-’ . . . -e* or *-e* form could correspond to the Ch’olti’ form ⟨*-e*⟩, given that glottal stop was not represented by Moran (1695). It is thus possible to reconstruct **-b’e* ~ **-b’ey* (Tzeltal, Ch’ol) ~ **-b’* (Tzotzil, Chontal, Ch’orti’) for Proto-Greater-Tzeltalan, **-b’e* ~ **-b’ey* (Tzeltal, Ch’ol) ~ **-b’* ~ **-’ . . . -e* for Proto-Ch’olan, and **-b’e* ~ **-b’ey* ~ **-b’* for Proto-Tzeltalan. The limited distribution of **-b’ey* and the fact that Tzeltal and Ch’ol have had much close contact could suggest instead diffusion of the allomorph of **-b’ey* between these languages. Kaufman and Norman (1984:139) reconstruct **-b’ey* for Proto-Tzeltalan; any diffusion would have involved at least Ch’ol and

Tzeltalan (Tzeltal-Tzotzil). The examples from Mocho' (Greater Q'anjob'alan) also suggest Proto-Western-Mayan had **-b'e ~ *-b'*.

Not enough data are presented in this paper regarding the syntax of the construction in Greater Q'anjob'alan. Mocho' has nonproductive uses of *-b'e* with the nonproductive function of PO advancement. As noted by a referee, Akatek allows promotion of addressees, and possibly other indirect roles, but no morphological marker is necessary. However, in Jakaltek, instrument promotion has been pointed out by Craig (1978), who notes that the regular antipassivizer *-n* is used to promote the instrument argument. Perhaps the antipassivizer suffix took on the function of triggering the pragmatic focus of instruments, a function similar to the focus of agents, once Jakaltek lost the *-b'e* suffix. Given the Mocho' and Jakaltek evidence, it is possible that Greater Q'anjob'alan once had a *-b'e/PO* advancement rule for indirect roles.

The evidence from Greater Tzeltalan permits a much fuller discussion. First, Tzotzil and Ch'olti' allow promotion of instruments to PO. Ch'olti' allows promotion of locatives but with a suffix other than *-b'e*. Therefore, Tzotzil and Ch'olti' support a *-b'e* applicative rule of instrumental advancement to PO in Proto-Greater-Tzeltalan. In Tzotzil, there is no obligatory fronting of the instrument. In Ch'olti', the examples show the instrument fronted for focus or questioning. Second, Tzotzil, Tzeltal, Ch'ol, Chontal, and Ch'orti' provide evidence supporting the reconstruction of a *-b'e/PO* advancement rule with the following indirect roles: addressees, benefactives, recipients, malefactive, and possessors of patients. In Tzotzil, Tzeltal, Ch'ol, and less so in Chontal, the rule is obligatory in its applicability, whereas in Ch'orti' it is lexicalized in certain verbs (e.g., 'a're 'to tell') and simply frozen without syntactic consequences in others (e.g., *tak()**b'e*). Based on such evidence, Kaufman (1990:80) has proposed that Greater Tzeltalan had an obligatory indirective advancement rule. In contrast, a referee has posited that the obligatory applicability of the *-b'e/PO* advancement rule in Tzotzil, Tzeltal, Ch'ol, and Chontal suggests a shared innovation through close contact. I think this is likely, mainly because, as the referee notes, the instrumental promotion with fronting in Ch'olti', absent in Tzotzil, Tzeltal, Ch'ol, and Chontal, is probably a conservative feature, given its similarities to instrument promotion with fronting in K'iche' (Eastern Mayan).

There is additional evidence for close interaction between Western Ch'olan and Tzeltalan. Kaufman (1989:part C, 41) has argued that several changes spread from Western Ch'olan to Tzeltalan. These include the extension of **k-* '1_{PERG}' to function also as '1_{SERG}', and of **-on* '1_{PABS}' to function also as '1_{SABS}', with loss in both Western Ch'olan and Tzeltalan of the ancestral **n(w)-* '1_{SERG}'. Eastern Ch'olan, perhaps due to geographic

distance from Tzeltalan, was kept isolated from these changes and retained an ancestral pattern of instrumental promotion. Eastern Ch'olan (Ch'olti'-Ch'orti') also preserves evidence of the use of a *-b'e/PO* rule for the advancement of indirect roles (cf. Ch'orti' *tak'b'e* 'to answer'). The evidence then supports a Proto-Greater-Tzeltalan reconstruction for the optional *-b'e/PO* advancement of instrumental and indirect roles with fronting.

This suggests a time during which Tzeltalan (Tzotzil-Tzeltal) and Western Ch'olan (Ch'ol-Chontal) were in very close interaction and innovated the obligatory use of *-b'e/PO* advancement on indirective predicates, while at the same time they de-emphasized the use of the rule on instruments, with remnants of it present today only in Tzotzil. Given Tzotzil's use of the preposition *ta* to express instruments obliquely, Ch'ol's use of the cognate *ti* for the same purpose, and the case of Ch'orti', with *taka* and *tama* (both based on the preposition *ta*) used for the same purpose, it is possible that Proto-Greater-Tzeltalan used at least **ta* for this purpose, and that Pre-Ch'olan may have used **ta ~ *ti*. Interestingly, Classic Mayan texts use the preposition *ti*, although the syllabogram used to represent the preposition *ti*, T59 *t̄i*, may have been used, as a logogram, for *ta* as well as *ti*, depending on the city (Mora-Marín 2003).

If the obligatory use of the *-b'e/PO* advancement rule on indirect roles was innovated by Tzeltalan and Western Ch'olan through linguistic contact, then there must have existed in Proto-Greater-Tzeltalan and in Proto-Ch'olan an antidative construction of some type, such as the one present in Chontal, Ch'olti', and Ch'orti', which uses the *t(i/a)-ERG-b'a + NP* phrase (*ti-ERG-b'a* in Ch'olti', *ta-ERG-b'a* in Chontal and Ch'orti'). Since Chontal has *ta-ERG-b'a* with the exact same meaning and function as in Ch'olti' and Ch'orti', it is very likely that Proto-Ch'olan had an antidative construction of the form **t(i/a)-ERG-b'a + NP* to express indirect roles whenever they were not advanced to PO. Given the frozen use of *ti* in Ch'orti', it is possible that *ti* was used in the *t(i/a)-ERG-b'a + NP* phrase during a time when it was more productive, and once it fell into disuse speakers began to use *ta* in this context. Ch'ol apparently lost this phrase and innovated the use of *cha'an* for some of the same functions that *t(i/a)-ERG-b'a* has in Chontal, Ch'olti', and Ch'orti'. In other words, Proto-Ch'olan, Proto-Western-Ch'olan, and Proto-Eastern-Ch'olan probably had an antidative construction of the form **t(i/a)-ERG-b'a + NP*.

Regarding the morpheme *b'a* in the **t(i/a)-ERG-b'a* phrase, Kaufman (1989:part A, 20) traces the form to Proto-Mayan **b'aa* 'self/body' and 'top/reflexive'. A referee of this article offers a similar view, only more diachronically differentiated. He argues that the morpheme **b'ah* was first used lexically (with the meanings 'head, top, first') and then was grammati-

TABLE 3

| Stage | Suffix | PO | Fronting | Antidative |
|-------|----------------------------|------------------------|------------|------------|
| PM | ? | Yes Ind, Instr | ? | ? |
| LPM | ? | Yes Ind, Instr | ? | ? |
| PCM | *- <i>b'e</i> | Yes Ind, Instr | Yes (Opt?) | Yes |
| PEM | *-(<i>V-</i>) <i>b'e</i> | Yes Ind, Instr, Adj | Yes (Opt?) | Yes |
| PGM | *-(<i>V-</i>) <i>b'e</i> | Yes Instr, Adj | Yes (Opt?) | Yes |
| PGK' | *-(<i>V-</i>) <i>b'e</i> | Yes Ind, Instr, Adj | Yes (Opt) | Yes |
| PWM | *- <i>b'(e)</i> | Yes Ind, Instr, Adj | Yes (Opt) | Yes |
| PGQ' | *- <i>b'(e)</i> | Yes Ind | ? | Yes |
| PGTz | *- <i>b'(e)(y)</i> | Yes Ind, Instr, Adj | Yes (Opt) | Yes |

cized to direct object (i.e., *-b'ah* 'self') in what Kaufman would regard as Western Mayan (the referee notes its use as such in Akatek, Tzotzil, Tzeltal, Ch'ol, Acalan, Chontal, Ch'olti, and Ch'orti'), and later still to indirect object (i.e., *-b'ah* 'for/to X') in what Kaufman would regard as Proto-Ch'olan (the referee notes Acalan and Ch'olti'). It makes good sense that the indirect object function is reconstructible then to Proto-Ch'olan as **t(i/a)-ERG-b'a + NP*. Kaufman (1989:part A, 21) also notes that both Tzotzil and Tzeltal have a construction *ta-ERG-b'a(h)* meaning 'on': *ta-ERG-b'a* in Tzotzil and *ta-ERG-b'ah* in Tzeltal. There is epigraphic evidence that Classic Mayan texts had the phrase *ti-ERG-b'ah* with the meaning 'on (his/her head)', suggesting that Proto-Greater-Tzeltalan had **ta-ERG-b'ah* 'on (his/her head)' (Mora-Marín 2003).

5. Discussion and reconciliation of reconstructions. The evidence presented so far allows for a somewhat detailed reconstruction of the *-b'e/PO* rule in Mayan (table 3).

(1) The suffix can be reconstructed as **-b'e* to Proto-Central-Mayan (Eastern Mayan and Western Mayan) at the earliest (Norman 1978 and Kaufman 1989:part D, 41–42), but not to Proto-Mayan as Dayley (1981:59) has argued, or to Common Mayan in Robertson's (1992; 1999) model. Further research on Yukatekan and Wastekan, however, may provide evidence for cognates of this marker.

(2) Given the evidence from Eastern Mayan (K'iche') and Western Mayan (Ch'olti'), and following on this matter the suggestion by Kaufman (1990:80) and one of the referees of this paper, it is likely that Proto-Central-Mayan had instrumental advancement to PO with fronting (focus, questioning) as one of the functions of the *-b'e* advancement rule. Such promotion was probably optional.

(3) Given the evidence from Eastern Mayan (K'iche', Tz'utujil), Greater Q'anjob'alán (Mocho'), and all the Greater Tzeltalan languages, it is likely that *-b'e* was used to advance indirect roles (e.g., addressees, recipients, benefactives, malefactives, and possessors of patients) to PO function. This includes cases of productive and nonproductive uses of *-b'e* across these subgroups (cf. Kaufman 1990:80 and Dayley 1981:59). Thus a Proto-Central-Mayan *-b'e* rule that promoted instruments, addressees, and probably other indirect roles can be reconstructed (cf. Norman 1978 and Kaufman 1989; 1990).

(4) The evidence from Wastekan, which has applicative markers that trigger the advancement of indirect roles and instruments to PO, supports the reconstruction of such syntactic rules as far back as Proto-Mayan. This means that Yukatekan must have had a rule of this sort at some point before the breakup of Proto-Yukatekan, since none of the descendant languages have preserved such a rule.¹⁴

(5) An antidative construction is attested in Eastern Mayan (K'iche') and Western Mayan (Greater Tzeltalan), and thus can be proposed for Proto-Central-Mayan. More research is needed to determine its form in Proto-Central-Mayan, and whether it was present in Proto-Yukatekan, and hence Late Proto-Mayan, and in Wastekan, and hence Proto-Mayan.

6. Conclusions. The comparative evidence presented in this paper suggests that Tzeltalan and Western Ch'olan innovated the obligatory *-b'e*/PO advancement rule through contact. Given this, Proto-Ch'olan and Proto-Greater-Tzeltalan most likely had an optional *-b'e*/PO advancement rule, and one that likely promoted instruments, locatives, and indirect roles such as ad-

¹⁴If one follows Robertson's model, then the Wastekan evidence would simply point to a shared innovation with Tzeltalan and Ch'olan of the indirective PO advancement rule, with subsequent innovation by Wastekan of markers different from pan-Mayan *-b'e*. This is what one of the referees of this paper suggests. However, even if Wastekan formed a subgroup with Greater Tzeltalan, as in Robertson's model, the evidence from the nonproductive uses of *-b'e* with verbs of speaking in K'iche' and Tz'utujil would still support the reconstruction of the indirective advancement rule, in addition to the instrument advancement rule, to Proto-Central-Mayan (Eastern Mayan and Western Mayan) in Kaufman's model, or to Common Mayan in Robertson's model.

dressees. This is supported internally by the evidence for productive indirective verbs in Western Ch'olan, for frozen indirective verbs in Eastern Ch'olan, and for productive instrumental advancement in Eastern Ch'olan. It is also supported externally by the evidence for productive instrumental advancement in Tzeltalan (Tzotzil), for productive indirective verbs in Tzeltalan (Tzotzil, Tzeltal), for productive instrumental and locative advancement in Eastern Mayan (e.g., K'iche'), and for frozen indirective verbs in Eastern Mayan (K'iche', Tz'utujil) and in Greater Q'anjob'alan (Mochó'). Both the instrumental and indirective advancement rules were likely present in Proto-Mayan, albeit possibly with different markers. Future research might confirm the presence of cognates of *-b'e* in Wastekan and Yukatekan.

The evidence presented here poses some interesting constraints on what one might find in Classic Mayan hieroglyphic texts. First, when the *-b'e/PO* rule was not used, Proto-Ch'olan most likely used an antidative construction of the form **t(i/a)+ERG-b'a(h) + NP* for the expression of indirect roles. It is not possible to hypothesize what a Proto-Greater-Tzeltalan antidative construction might have looked like, since Tzeltalan lacks one. But it is possible to hypothesize at least that Proto-Greater-Tzeltalan (e.g., Ch'ol *ti + NP* and Tzotzil *ta + NP*) and Proto-Ch'olan (e.g., Ch'ol *ti + NP* and Ch'orti' *ta(ka/ma) + NP*) could have expressed instruments with the use of a prepositional phrase **ta + NP* and **t(i/a) + NP*, respectively, when the *-b'e/PO* rule did not apply. Since Proto-Ch'olan's likely antidative construction and its instrument prepositional phrase both have in common the use of the preposition **ti ~ *ta*, one can only assume that the Pre-Ch'olan counterparts did so as well. It is not possible, however, to know whether Pre-Ch'olan had an antidative construction of the form **t(i/a) + NP* or **t(i/a)+ERG-b'a(h)* based on the evidence presented here. The question of the linguistic affiliation of Classic Mayan texts, or at least of the linguistic affiliation of the standard language represented in them, could be solved in part by determining whether antidative constructions appear as **t(i/a) + NP* or **t(i/a)+ERG-b'a(h)*.

REFERENCES

- AISSÉN, J. 1983. Indirect object advancement in Tzotzil. *Studies in Relational Grammar 1*, ed. D. Perlmutter, pp. 272–302. Chicago: University of Chicago Press.
- _____. 1987. Tzotzil Clause Structure. Dordrecht: Reidel.
- _____. 1992. Topic and focus in Mayan. *Language* 68:43–80.
- _____. 1999. Agent focus and inverse in Tzotzil. *Language* 75:451–85.
- AULIE, W. H., AND E. W. DE AULIE. 1978. *Diccionario Ch'ol-Español, Español-Ch'ol*. Mexico City: Instituto Lingüístico de Verano.
- AYRES, G. 1983. The Antipassive “voice” in Ixil. *IJAL* 49:20–45.

- _____. 1991. *La gramática ixil*. Antigua: Centro de Investigaciones Regionales de Mesoamérica.
- BRICKER, V. 1986. *A Grammar of Mayan Hieroglyphs*. Middle American Research Institute, Publication 56. New Orleans: Tulane University Press.
- BRICKER, V.; E. PO7OT YAH; AND O. DZUL DE PO7OT. 1998. *A Dictionary of the Maya Language as Spoken in Hocobá, Yucatán*. Salt Lake City: University of Utah Press.
- BRODY, J. 1984. Some problems with the concept of basic word order. *Linguistics* 22:711–36.
- BRUCE, R. 1968. *Gramática del Lacandón*. México, D.F.: Instituto Nacional de Antropología e Historia.
- CAMPBELL, L., AND M. MITHUN. 1980. Syntactic reconstruction: priorities and pitfalls. *Folia Linguistica Historica* 1:19–40.
- COHUOJ CAAL, C. B.; E. C. CAJBÓN BOL; H. YAXCAL; C. COY XOL; M. D. TZALAN COJ; E. CAAL BOL; AND C. CHOC CHIAK. 2001. *Tojkinb'eeb' T'an Mopan, Gramática Descriptiva Mopán*. Guatemala City: Academia de Lenguas Mayas de Guatemala.
- COMRIE, B. 1978. Ergativity. *Syntactic Typology: Studies in the Phenomenology of Language*, ed. W. P. Lehmann, pp. 329–74. Austin: University of Texas Press.
- CRAIG, C. G. 1978. On the promotion of instrumentals in Mayan Languages. *Papers in Mayan Linguistics*, ed. N. C. England, pp. 55–67. Columbia: University of Missouri.
- DAYLEY, J. P. 1981. Voice and ergativity in Mayan languages. *Journal of Mayan Linguistics* 2:3–82.
- DIXON, R. M. W. 1979. Ergativity. *Language* 55:129–38.
- DRYER, M. S. 1986. Primary objects, secondary objects, and antidative. *Language* 62:808–45.
- DURBIN, M., AND F. OJEDA. 1982. Patient deixis in Yucatec Maya. *Journal of Mayan Linguistics* 3:3–23.
- ENGLAND, N. C. 1991. Changes in basic word order in Mayan languages. *IJAL* 57:446–86.
- FOLEY, W. A., AND R. D. VAN VALIN, JR. 1984. *Functional Syntax and Universal Grammar*. Cambridge: Cambridge University Press.
- FOUGHT, J. G. 1972. *Chorti (Mayan) Texts*. Philadelphia: University of Pennsylvania Press.
- GARCÍA MATZAR, P. 1998. *Jotaytzij Tz'utujil: Derivación de Palabras Tz'utujil*. Guatemala City: Editorial CHOLSAMAJ.
- GATES, WILLIAM R. 1935. *Arte y Diccionario en Lengua Choltí: A Manuscript Copied from the Libro Grande of Fr. Pedro Morán of about 1625*. Maya Society Publication 9. Baltimore: The Maya Society.
- HARRIS, A. C., AND L. CAMPBELL. 1995. *Historical Syntax in Cross-Linguistic Perspective*. Cambridge: Cambridge University Press.
- HAVILAND, J. 1980. *Sk'op Sotz'leb: The Tzotzil of Zinacatán*. Available online at <http://zapata.org/Tzotzil/>.
- HOFLING, C. A. 1982. *Itza Maya morphosyntax from a discourse perspective*. Ph.D. dissertation, Washington University, St. Louis.
- _____. 1984. On Proto-Yucatecan word order. *Journal of Mayan Linguistics* 4:35–64.
- _____. 1990. Possession and ergativity in Itzá Maya. *IJAL* 56:542–60.
- _____. 1991. *Itzá Maya Texts*. Salt Lake City: University of Utah Press.
- _____. 2000. *Itzaj Maya Grammar*. Salt Lake City: University of Utah Press.
- HOFLING, C. A., AND F. F. TESUCÚN. 1997. *Itzaj Maya–Spanish–English Dictionary*. Salt Lake City: University of Utah Press.
- HOUSTON, S. D., AND D. S. STUART. 1998. The ancient Maya self: personhood and portraiture in the Classic period. *Res: Anthropology and Aesthetics* 33:73–102.
- HOUSTON, S. D.; J. S. ROBERTSON; AND D. S. STUART. 2000. The language of the Classic Maya inscriptions. *Current Anthropology* 41:321–56.
- JOSSERAND, K. J., AND N. HOPKINS. 1985. *Chol grammar notes: charts and formulas*. Ms.

- JUSTESON, J. S. 1985. Hieroglyphic evidence for Lowland Mayan linguistic history. *IJAL* 51:469–71.
- JUSTESON, J. S.; W. M. NORMAN; L. CAMPBELL; AND T. KAUFMAN. 1985. *The Foreign Impact on Lowland Mayan Language and Script*. Middle American Research Institute, Publication 53. New Orleans: Tulane University.
- KAUFMAN, T. S. 1967. *Preliminary Mocho Vocabulary*. Laboratory for Language-Behavior Research, Working Paper 5. Berkeley: University of California.
- _____. 1971. *Tzeltal Phonology and Morphology*. Berkeley: University of California Press.
- _____. 1972. *El proto-tzeltal-tzotzil: fonología comparada y diccionario reconstruido*. Centro de Estudios Mayas, Cuaderno 5. México, D.F.: Universidad Nacional Autónoma de México.
- _____. 1976. Archaeological and linguistic correlations in Mayaland and associated areas of Mesoamerica. *World Archaeology* 8:101–18.
- _____. 1989. *Mayan comparative studies*, pts. A–D. Ms.
- _____. 1990. Algunos rasgos estructurales de los idiomas Mayances. *Lecturas sobre la lingüística maya*, ed. N. England and S. Elliott, pp. 59–114. Antigua: CIRMA.
- _____. 1991. Notes on the structure of Yukateko and other Yucatekan languages. Ms.
- KAUFMAN, T., AND W. NORMAN. 1984. An outline of Proto-Cholan phonology, morphology, and vocabulary. *Phoneticism in Maya Hieroglyphic Writing*, ed. J. S. Justeson and L. Campbell, pp. 77–166. Institute for Mesoamerican Studies, Publication 9. Albany: State University of New York.
- KELLER, K. C., AND P. LUCIANO G. 1997. *Diccionario Chontal de Tabasco*. Tucson, Ariz.: Instituto Lingüístico de Verano.
- KLAIMAN, M. 1991. *Grammatical Voice*. Cambridge: Cambridge University Press.
- KNOWLES, S. 1984. *A descriptive grammar of Chontal Maya (San Carlos dialect)*. Ph.D. dissertation, Tulane University.
- LACADENA, A. 1996. *Passive voice in Classic Maya texts*. Ms.
- LARSEN, T. W., AND W. M. NORMAN. 1979. Correlates of ergativity in Mayan grammar. *Ergativity: Towards a Theory of Grammatical Relations*, ed. F. Plank, pp. 347–70. London: Academic Press.
- MALCHIC NICOLÁS, M. B.; R. M. ISEM; AND A. TUL RAX. 2000. *Rub'iral Ruk'ihaal Wach Poqom Q'orb'al: Varación Dialectal en Poqom*. Guatemala City: Editorial CHOLSAMAJ.
- MANNING, C. D. 1996. *Ergativity: Argument Structure and Grammatical Relations*. Stanford, Calif.: CSLI Publications.
- MARTIN, L. 1994. Coming here and going there: a partial account of motion and direction in Mocho. *Función* 15/16:119–67. Guadalajara: Departamento de Estudios en Lenguas Indígenas.
- MONTEJO, R., AND N. N. PEDRO. 1996. *Gramática del Idioma Q'anjob'al*. Antigua: Proyecto Lingüístico Francisco Marroquín.
- MORA-MARÍN, D. F. 2003. *Pre-Ch'olan as the standard language of Classic Lowland Mayan texts*. Paper presented at the 2002–2003 SSILA Meeting, Atlanta, January 2003.
- MORAN, F. 1695. *Arte en lengua Choltí, que quiere decir lengua de milperos*. Photographic copy, Latin American Library, Tulane University. [Facsimile edition by Gates (1935).]
- NORMAN, W. 1978. Advancement rules and syntactic change: the loss of instrumental voice in Mayan. *Berkeley Linguistics Society* 4:458–76.
- NORMAN, W., AND L. CAMPBELL. 1978. Toward a Proto-Mayan syntax: a comparative perspective on grammar. *Papers in Mayan Linguistics*, ed. N. C. England, pp. 136–56. Columbia: University of Missouri.
- OCHOA PERALTA, M. A. 1984. *El Idioma Huasteco de Xiloxuchil*, Veracruz. México, D.F.: Instituto Nacional de Antropología e Historia.
- PÉREZ MARTÍNEZ, V. 1994. *Gramática del Idioma Ch'orti'*. Antigua: Proyecto Lingüístico Francisco Marroquín.

- _____. 1996. *Leyenda Maya Ch'orti'*. Antigua: Proyecto Lingüístico Francisco Marroquín.
- PÉREZ MARTÍNEZ, V.; F. GARCÍA; F. MARTÍNEZ; AND J. LÓPEZ. 1996. *Diccionario del Idioma Ch'orti'*. Antigua: Proyecto Lingüístico Francisco Marroquín.
- RHODES, R. 1976. *The morphosyntax of the Central Ojibwa verb*. Ph.D. dissertation, University of Michigan.
- ROBERTSON, J. S. 1992. *The History of Tense/Aspect/Mood/Voice in the Mayan Verbal Complex*. Austin: University of Texas.
- _____. 1999. A Ch'olti'an explanation for Ch'orti'an grammar: a postlude to the language of the Classic Maya. *Mayab* 11:5–11.
- SCHUMANN GÁLVEZ, O. 1973. *La Lengua Chol, De Tila (Chiapas)*. México, D.F.: Universidad Nacional Autónoma de México.
- _____. 1997. *Introducción al Maya Mopán*. México, D.F.: Universidad Nacional Autónoma de México.
- SLOCUM, M. 1948. Tzeltal (Mayan) noun and verb morphology. *IJAL* 14:77–86.
- SMAILUS, O. 1975. *El maya-chontal de Acalan*. México, D.F.: Universidad Nacional Autónoma de México.
- SMITH-STARK, T. C. 1994. Instrumental voice in Jilotepequeño Pocomam. *Función* 15/16:231–60. Guadalajara: Departamento de Estudios en Lenguas Indígenas.
- STEWART, S. 1980. *Gramática Kekchí*. Guatemala City: Editorial Académica Centroamericana.
- SWADESH, M.; M. C. ÁLVAREZ; AND J. R. BASTARRACHEA. 1991. *Diccionario de elementos del maya yucateco colonial*. México, D.F.: Universidad Nacional Autónoma de México.
- THOMPSON, J. E. 1962. *A Catalogue of Maya Hieroglyphics*. Norman: University of Oklahoma Press.
- ULRICH, M., AND R. W. ULRICH. 1976. *Diccionario Bilingüe, Maya Mopán y Español, Español y Maya Mopán*. Guatemala City: Instituto Lingüístico de Verano.
- WICHMANN, S. 2002. Hieroglyphic evidence for the historical configuration of Eastern Ch'olan. *Research Reports on Ancient Maya Writing* 51:1–35.
- ZAVALA, R. 1997. Functional analysis of Akatek voice constructions. *IJAL* 63:439–74.