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Grammaticalization in Yucatec Maya

Christian Lehmann

1 Introduction¹

1.1 Organization

The following is an overview of those areas of the grammar of Yucatec Maya for which grammaticalization processes can be documented historically or at least be reconstructed. Thus, several areas of grammar remain out of discussion because nothing is known on their grammaticalization. These include nominal and verbal number as well as mood. Agreement of the verb with subject and object is reflected in section 2.5.2. Among subordinate clauses, only adverbial clauses will be treated, while complement and relative clauses are left out of consideration. In section 2.5.2, Mayan languages outside the Yucatecan branch are included in the comparison in order to reconstruct an origin for a grammaticalization process.

1.2 Prehistory and history of Yucatec Maya

Mayan languages are spoken in Guatemala and countries bordering on it. Their current geographical distribution, shown in Figure 1 (from Law 2011:78), does not differ too much from their distribution in Pre-Columbian times.

¹ Thanks are due to Andrej Malchukov and Björn Wiemer for helpful comments.

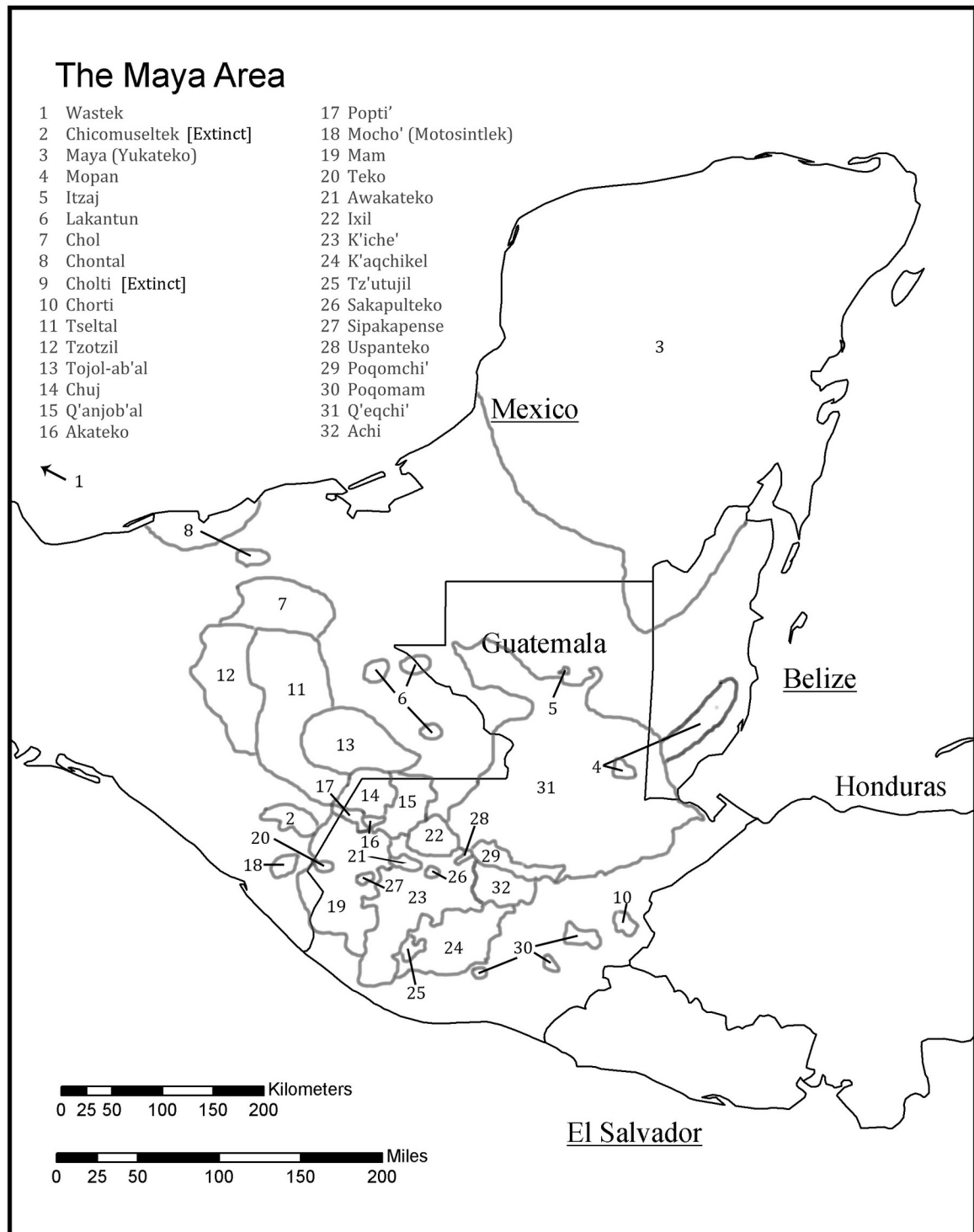


Figure 1 Current distribution of Mayan languages

Figure 2 shows the genealogical tree, based on Kaufman 1990:62f with some emendations.

| family | | | | language | |
|----------|-----------|--|------------------|---------------------------|---|
| Wastecan | | | | Wastec † Chicomuceltec | |
| | Yucatecan | | | Central Yucatecan | Yucatec Lacandón |
| | | | | | Itzá |
| | | | | Mopán | |
| | | Greater Tzeltalan (= Cholan-Tzeltalan) | Cholan | Ch'orti' † Ch'olti' | |
| | | | | Chontal Ch'ol | |
| | | Tzeltalan | | Tzeltal Tzotzil | |
| | | | | | |
| | | Greater Kanjobalan (= Kanjobalan-Chujean) | Chujean | | Tojolabal Chuj |
| | | | Kanjobalan | Kanjobal Group | Q'anjobal Jacalteco [= Popti'] Acatec |
| | | | | Cotoque | Mochó [=Mototzintlec] Tuzantec |
| | | Eastern Mayan (= Mamean-Quichean) | Greater Mamean | Ixilán | Ixil Awacatec |
| | | | | Mamean | Mam Teco |
| | | | Greater Quichean | Uspantec | |
| | | | | Quichean | Sipacapense Sacapultec |
| | | | | | Tz'utujil K'aqchiquel |
| | | | | | K'iché |
| | | | | Pokomam-Pocomchí | Poqomam Poqomchi' |
| | | | | Q'eqchi' | |

Figure 2 Genealogy of the Mayan languages

With the exception of the Wastecan outlier, Mayan languages share most of their grammatical structure, much of their lexicon, but considerably less of their inventory of grammatical morphemes, which underwent much renewal in the specific languages. In the space delineated by

Figure 1, section 2.5.2.3 will distinguish two main groups by shared grammatical properties. The Lowland group comprises the Yucatecan and Greater Tzeltalan branches with the only exclusion of Tzotzil, as well as Mocho' and Ixil. The Highland group includes the complementary subset.

The Yucatecan languages comprise Yucatec Maya, Lacandón, Itzá and Mopán. They are spoken on the peninsula of Yucatan and in more southern regions of the lowland in Belize, the Petén region of Guatemala and the Mexican state of Chiapas. The internal subdivision of this branch may have started a thousand years ago. While Mopán is clearly a distinct language, Yucatec, Lacandón and Itzá are better regarded as dialects of a single language, with the grading shown in Figure 2.

The history of Yucatec Maya may be roughly subdivided into Classical (i.e. Pre-Columbian) Maya, Colonial Yucatec Maya (CYM) from 1516 on and Modern Yucatec Maya (MYM) from 1750 on. Colonial Yucatec is relatively well attested, chiefly in the *Diccionario de Motul* (Ciudad Real 1577) and the three grammars of Coronel 1620, San Buenaventura 1684 and Beltrán de Santa Rosa 1746. Especially the latter is a linguistic work of high quality.²

Consequently, the changes described below for Yucatec Maya are evidenced by a corpus of 450 years of documented history. In some cases, grammarians have described different stages of this history, sometimes even noting explicitly grammaticalization phenomena observable at their time.

Colonial Yucatec Maya was more synthetic than contemporary Maya, which is more analytic. Many conjugation categories and formatives coded synthetically in Colonial Yucatec are lost in Modern Yucatec. Since the endpoint of a grammaticalization path is loss, several such cases could be mentioned below as illustrating grammaticalization down to zero. Among them are a vocative in *-eh* and a subjunctive in *-Vb* (illustrated by (82)). With one exception, such losses will not be described here, simply because they teach us little about grammaticalization.

1.3 Typological sketch of Yucatec Maya

Yucatecan languages have grammaticalized semantic relationality, opposing in the grammar relational to absolute nouns, transitive to intransitive verbs and prepositions to adverbs. Dependency constructions are head-marking: indexes cross-reference the subject, direct object, the possessor in a nominal construction and the complement of a preposition. The index is obligatory, the nominal dependent is optional. The two sets of indexes are dubbed A and B; this will be explained in section 2.5.2.1. Ergativity is essentially restricted to a split in the index paradigm of the intransitive predicate conditioned by a conjugation category called status which properly includes aspect and will be explained more fully in section 3.2.

Morphology is mildly synthetic and predominantly agglutinative. Conjugation is much more complex than declension. Word order is essentially right-branching, with some left-branching constructions in the noun phrase and the verbal complex. Sentence syntax involves left-dislocation of a topicalized constituent and clause-initial position of the focused constituent, often with a mark on the verb of the extrafocal clause (s. section 5).

² Colonial orthography is very poor. Examples have nevertheless been quoted literally from the sources, even though in some cases their word division is clearly wrong. The only additions are the morphological boundary symbols ‘-’ and ‘=’.

2 Grammaticalization of nominal categories

2.1 Numeral classification

Like other Mayan languages,³ Yucatec Maya has numeral classification: the numeral is combined with a classifier into one word. Currently, about 21 numeral classifiers are in use.⁴ Those which have an etymology are listed in Table 1. They are clearly based on nouns, several among these of deverbal origin (Briceño Chel 1997).

Table 1 Origin of some Modern Yucatec numeral classifiers

| classifier | class | origin |
|------------|-------------------------------|--|
| héek' | branch, twig | <i>héek'</i> 'branch, twig' |
| láak' | person located beside another | <i>láak'</i> 'companion' |
| páach' | extended object | <i>pach'</i> line [in writing] |
| píich' | bird | <i>pich'</i> 'grackle, melodious blackbird' |
| p'éel | inanimate object | <i>nomen patientis</i> of <i>p'el</i> 'shell, shuck' > grain (of corn) |
| tíich | limb | <i>nomen patientis</i> of <i>tich</i> 'extrude' |
| tsíil | sheet | <i>nomen patientis</i> of <i>tsil</i> 'tear off' |
| xa'y | fork [of tree or branch] | <i>xa'y</i> 'fork of tree or branch' |

With the exception of *p'éel*, the most basic numeral classifiers are absent from Table 1 because they are no longer transparent. The formation of the majority of those listed reduces to the conversion of a noun into a numeral classifier by combining it directly with a numeral. So far, no grammaticalization is involved.

Numeral classifiers are in use from the earliest sources. However, Colonial Yucatec yet allows occurrence of numerals without a classifier. In (1)a, the numeral combines directly with an abstract noun.⁵ In #b, the numeral occupies the focus position generally occupied by adverbs, so a more literal reading might be 'by three' (German *zu dritt*). In #c finally, the numeral takes a suffix denoting time distance to form a temporal adverb.

- (1) a. Yan=h-ebal hun olal tex. (San Buenaventura 1684:41v)
 CYM EXIST=COP-SUBJ one mind you.PL
 'May you be of one mind.' or: 'May there be concord among you.'
- b. ox cul-ic chích ca in hul-ah=e (Coronel 1620:46)
 three sit-DEP bird CONJ A.1.SG shoot-CMPL=R3
 'three birds were sitting together and I shot them'

³ But not all of them: (26) below from Tz'utujil features a numeral without classifier.

⁴ For more than one reason, the exact size of the paradigm cannot be determined: 1) There is much dialectal and diachronic variation. 2) The criteria keeping mensuratives – which number more than a hundred – out of the set of numeral classifiers are insufficiently sharp to force a decision in every case. In particular, several of those words (including *láak'* and *tíich* of Table 1) almost never co-occur with a noun being counted or measured.

⁵ Coronel (1620:38) even has *hun Cruz* 'a crucifix', although there a religious notion of unclassifiability may have bent Mayan grammar.

- c. ox-eh – ox-he (Coronel 1620:65)
 three-days.future three-days.past
 ‘in three days – three days ago’
- (2) a. hun-p’éel óolal
 MYM one-CL.INAN mind
 ‘concord’
- b. óox-túul kul-ik ch’í’ch’
 three-CL.AN sit-DEP bird
 ‘three birds were sitting’
- c. ox-p’éel k’in-ak
 three-CL.INAN day-past
 ‘three days ago’

All of the formations of (1) are ungrammatical in Modern Yucatec. Instead of (1)a, Modern Yucatec has (2)a. (1)b would require the classifier of (2)b. The second expression in (1)c would have to be (2)c (with a variant of the temporal suffix). In short, in Modern Yucatec, numerals do not occur without a following classifier. They are, in fact, prefixes to classifiers and mensuratives (Lehmann 2010). Transparadigmatic obligatorification here is the main criterion for grammaticalization. Moreover, some of the classifiers underwent semantic bleaching and phonological erosion, as is clearly recognizable in *p’éel* CL.INAN, mostly pronounced *p’é*.

The set of numeral classifiers has been gradually shrinking throughout the centuries. Of the maximum set of 21 items, most can be neutralized in favor of *p’éel*. The active vocabulary of most speakers born in the 20th century comprises little more than *p’éel* and *túul* (as already observed in Tozzer 1921:103), and occasionally *p’éel* is the only classifier used. In sum, grammaticalization of the numeral complex involves morphological reduction of the numeral to a prefix and obligatoriness of a classifier chosen from an ever smaller paradigm.

2.2 Possession

Yucatecan languages share a relational noun *aal* ‘child, offspring’. This forms an irregular compound with *ti’* Loc to yield *ti’aal* id., yet preserved with this meaning in Lacandón (Perez 2003 s.v. *tiaar*). The other languages have grammaticalized the word into a dummy possessum, as e.g. in Modern Yucatec *in ti’a’l* (A.1.SG property) ‘mine’; cf. (3)a. Structurally, such a dummy head noun is needed as a prop for the clitic indexes of set A. To the extent that it appears from the sources, this construction has made a very fast career in this function: There is no trace of it in Coronel and San Buenaventura; in Beltrán, however, the third person singular complex is even further grammaticalized to function as a preposition ‘for’ (#b) and a conjunction ‘in order to’ (#c).

- (3) a. a ti’a’l le taak’in=o’
 MYM A.2 property(B.3) DEM money=R2
 ‘the money is yours’ (HALA’CH_008.3)⁶
- b. bix ken u ch’a’ áalimeentoh u ti’a’l u winkl-il=e’
 how SR.FUT A.3 take(SUBJ)(B.3) food for A.3 body-REL=R3
 ‘... how he would get food for his body’ (HIJO_044.3)

⁶ Abridged references of this structure refer to a corpus of modern Yucatec which is accessible online: http://linguistik.uni-regensburg.de/yuclex/diccionario/dic_index.html.

- c. túun pompom-chek'
 PROG\A.3 stamp-foot(INCMPL)
 u_ti'a'l u háa's-k u yóol le peek'o'
 for A.3 frighten-INCMPL A.3 mind DEM dog=R2
 'he is stamping in order to frighten the dog' (EMB_0265)
- d. u tih-il ma'loob u_tia(')l u mees-il áabril=e'...
 A.3 dry-INCMPL good for A.3 month-REL April=TOP
 '(that) it dries well until the month of April ...' (TRAB_009f)

The grammaticalization of *ti'a'l* has obviously been guided and accelerated by the model of Spanish *para*. This is suggested by (3)d, where *ti'a'l* serves as a translation equivalent of Spanish *para* even in what is, in cross-linguistic perspective, a highly idiosyncratic sense of a benefactive preposition.

2.3 Determiners

Colonial Yucatec has no article and does not signal (in-)definiteness as such. The semantic definiteness of the NPs in (4)f is not coded; and the NPs in (6) may be semantically definite or indefinite.

- (4) lic y-il-ic-ob ek ox-tul ahau-ob (Coronel 1620:57)
 CYM IPFV A.3-see-CMPL-PL star three-CL.AN chief-PL
 'the Three Kings saw the star'
- (5) Tabx yan cah licil ca ben-el (Coronel 1620:43)
 CYM where EXIST village IPFV A.1.PL go-INCMPL
 'where is the village that we are going to?'
- (6) chee cul-ic chhichh (Coronel 1620:46)
 CYM tree sit-DEP bird
 'on a/the tree a/the bird is sitting'

In the period of Spanish contact, Yucatec has been acquiring a definite and indefinite article paradigm. For definiteness, the discontinuous determiner described in section 2.5.1 is grammaticalized. The combination of the demonstrative *lay* with the referential particles (RP) *=la'*, *=lo'* and *=le'* is not found in the 17th cent. grammars. Beltrán has hints of it, e.g. in (7).

- (7) ma Batab lay lo (Beltrán 1746, section 194)
 CYM NEG chief DEM R2
 'he is not the/a chief' (lit.: 'not chief is that one')

In the short span since Beltrán's time, the construction [*le* X_{Nom} Y_{RP}]_{NP} becomes the standard way of marking definiteness of an NP, with the *l* of the enclitic RP getting lost in most positions, as illustrated by (8).

- (8) a. le nah=a' 'this house'
 MYM b. le nah=o' 'that house'
 c. le nah=e' 'the aforementioned house'

On the one hand, *=o'* is unmarked as against *=a'* and often used if no deixis is involved. This kind of definite determination is even used with proper names, e.g. *le Hwaan=o'* 'John', going in this beyond the degree of grammaticalization of the Spanish definite article. On the other hand, the referential particle may be omitted, as in (9).

- (9) tsik le u suuhuy nook'-il u lu'm-il Meehikoh!
 MYM respect(IMP.2.SG)(B.3) DEM A.3 virgin cloth-REL A.3 earth-REL Mexico
 'respect the flag of Mexico!' (ACC_0138)

Except for the variation mentioned, this amounts to a complete grammaticalization of a demonstrative to a definite article.

At the same time, the numeral 'one' gets grammaticalized, too. All the examples of *hun* 'one' found in the Colonial Yucatec texts are nothing else than a numeral. Since then, however, *hun* provided with a numeral classifier has been increasingly used for indefinite determination. For instance, the title of the fable of the tortoise and the hare reads as in (10).

- (10) hun-túul áak yéetel hun-túul kéeh
 MYM one-CL.AN tortoise and one-CL.AN deer
 'a tortoise and a deer' (AAK_000)

In this way, Yucatec Maya has acquired a paradigm of definite and indefinite article within two and a half centuries. Influence from Spanish must have accelerated the process, the more so as the formatives *le* and *hun* resemble Spanish *el* and *un* not only in their syntagmatic position, but even phonologically. In fact, *hun* has acquired an allomorph *un* during the 20th century, which cannot be obtained by any rule of phonology.

2.4 Case relators

The Mayan languages lack the category of case throughout. What may be described in this place is the grammaticalization of prepositions. From Pre-Columbian times, there is one fully grammaticalized preposition *ti'* (Loc), with a prevocalic allomorph *t-*, which marks both complements and adjuncts in local function and indirect objects.

Most local prepositions are based on relational nouns designating regions of space. One of the two most common constructions of such denominal prepositions is [[*ti'* X_{A.i} Y_{N.rel}]_p Z_{NP.i}]_{pp}, where Y is the slot for the relational noun to be grammaticalized to a preposition and Z is its lexical complement as cross-referenced by X, as illustrated in (11)f.

- (11) mán-i t=u yam vinic-ob (Coronel 1620:59)
 CYM pass-CMPL.B.3 LOC=A.3 interspace man-PL
 'he passed among the people'
- (12) t=u yáam le nah-o'b=e' hach loob (Yaxley_0191)
 MYM LOC=A.3 interspaceDEM house-PL=R3 very weedy
 'between the houses it is very weedy'

As shown by the examples, there is no change in this respect from Colonial to Modern Maya. Table 2 enumerates some local prepositions forming this and an alternative construction.

Table 2 Modern Yucatec denominal local prepositions

| noun | meaning | complex preposition | meaning |
|---------------|-----------|--------------------------------------|---------------|
| <i>iknal</i> | proximity | <i>ti' X iknal Z</i> | by, near Z |
| <i>táan</i> | front | <i>ti' X táan Z ~ táanil ti' Z</i> | in front of Z |
| <i>paach</i> | back | <i>ti' X paach Z ~ paachil ti' Z</i> | in back of Z |
| <i>óok'ol</i> | top | <i>ti' X óok'ol Z</i> | on, above Z |
| <i>áanal</i> | bottom | <i>ti' X áanal Z</i> | under Z |
| <i>tséel</i> | side | <i>ti' X tséel Z</i> | beside Z |

From Beltrán 1746 on, the simple preposition *ti'*, which converts the relational noun construction into a prepositional phrase, becomes optional and is usually omitted in casual speech with the third person, as in *y-okol-ob* (A.3-on-PL) 'on them' (Beltrán 1746:145). Moreover, several among these prepositions undergo semantic and phonological erosion. Thus, *paach* also designates company. *Óok'ol* gets reduced to *o'l* before a vowel and also takes on more abstract meanings like 'on account of'. On the grammaticalization of the benefactive preposition s. section 2.2, and of prepositions to conjunctions s. section 4.1.

2.5 Pronouns and indexes

2.5.1 Demonstratives

Colonial Yucatec has some free demonstrative formatives which partially combine to yield discontinuous deictic marking, as follows: First, there is a set of demonstrative words which only code demonstration, but no particular deictic value. This set includes importantly *lay* 'that', which is also used in anaphoric function, as in (13). In Coronel 1620:5, it is adduced as the third person member of the paradigm of free personal pronouns.

- (13) *lay v chun bin-ci padre* (Coronel 1620:41)
 CYM that A.3 ground go-DEP.CMPL father
 'that is the reason why the reverend went'

This pronouns still sounds *lay* in Beltrán 1746, but since then has been reduced to *le* (DEM). Apart from fossilized uses, it no longer occurs as a substantival pronoun, but has become a determiner; s. section 2.3.

On the other hand, Colonial Yucatec has two deictic pronouns, *la* 'this' and *lo* 'that'. These may occur independently of a preceding demonstrative word, as in (14) and (15).

- (14) *t=u dza-ah ten=x lo* (Coronel 1620:105)
 CYM PRFV=A.3 give-CMPL me=also R2
 'he also gave me that'

- (15) *ma úuchac in beelt-ic lo=e* (Coronel 1620:68)
 CYM NEG possible A.1.SG do-INCMPL R2=R3
 'I cannot do that'

In the colonial grammars, the two deictic pronouns form a plural, e.g. *lo-ob* (R2-PL). Furthermore, they may determine a noun and then follow it, as in E16.

| | | | | |
|-----|-----------------------|--------|----|-------------------|
| E16 | tup | cib | lo | (Coronel 1620:27) |
| CYM | extinguish(IMP) | candle | R2 | |
| | 'put that candle out' | | | |

Now a demonstrative word is optionally followed, in the same clause, by one of the deictic pronouns to fix the former's deictic value, as in (17) and (18).

| | | | | | | |
|------|--|-----|-----------|--------|------------------|-------|
| (17) | Te | v | bin-el | huun | t=in=menel | la=e |
| CYM | there | A.3 | go-INCMPL | letter | LOC=A.1.SG=doing | R1=R3 |
| | 'there goes this letter at my instigation' (San Buenaventura 1684:9Cr) | | | | | |

| | | | | | | | | | |
|------|--|------|-----|------------|---------|------|-----|---------------|----|
| (18) | he | lic | v | tanl-e | Dios=e, | lay | bin | bót-ab-ac | lo |
| CYM | INDIF | IPFV | A.3 | serve-SUBJ | God=TOP | that | FUT | pay-PASS-SUBJ | R2 |
| | 'whoever serves god, that one will be paid' (Coronel 1620:104) | | | | | | | | |

This discontinuous combination becomes obligatory in Modern Yucatec: Any of the demonstrative words triggers an occurrence of one of the deictic pronouns; and these, in turn, almost only occur when preceded by one of the demonstrative words. Examples are in (8) above.

Second, the binary deictic paradigm is joined by the enclitic element *=e*', which follows a left-dislocated topical constituent, as in (18). Initially, *=e*' may even follow a deictic pronoun, as in (15) and (17); but once it joins the paradigm of the latter, it no longer combines syntagmatically with them. Consequently, this paradigm becomes semantically wider, since its primary subdivision is [\pm deictic], and it is only for [$+$ deictic] that we get the binary contrast of [\pm proximal].

Third, the deictic formatives are no longer used as free forms, as in (14)f, but exclusively as enclitics, preferably at the end of a clause or of a left-dislocated constituent, as in (74). They become invariable, no longer taking the plural suffix. At the same time, they preserve their initial /l/ only in continuous combination with certain demonstrative words and otherwise forfeit it. As a consequence, the paradigm of referential clitics becomes formally quite homogeneous: *=a*', *=o*', *=e*'. The entire process is an exemplary instance of paradigmaticization.

In conclusion, grammaticalization turns one of the demonstrative words, viz. *lay*, into a definite determiner and forms a paradigm of two deictic clitics and a referential particle.

2.5.2 Personal pronominal elements

2.5.2.1 Paradigms and syntagmatic positions

All Mayan languages have at least three sets of personal pronominal formatives. All but one of these paradigms are clitic or bound and function as cross-reference indexes; the last is a set of independent personal pronouns. The main paradigms of bound indexes are called set A and set B in Mayan linguistics. The functions of the pronominal sets are as follows:

- Indexes of set A cross-reference the possessor of a nominal group and the actor of the transitive verb. Moreover, in the split-subject marking languages like Yucatec, they cross-reference the subject of an intransitive verb in some verbal statuses (section 3.2).
- Indexes of set B cross-reference the subject of a non-verbal clause and the undergoer of the transitive verb. In the split-subject marking languages, set B also cross-references the intransitive subject in the complementary subset of statuses.
- The free pronouns are reinforced forms of set B forms. They appear as left-dislocated topic and in focus position. Some languages including Yucatec Maya have enclitic variants which function as indirect object (as, e.g., in (86)).

These sets of functions are heterogeneous, which is why we have to stick to the mnemonically unhelpful labels ‘set A’ and ‘set B’. Table 3 shows the reconstructed forms of sets A and B (according to Kaufman 1990:71f). For the first person plural, the exclusive form is given. All of these pronominal elements are free forms at the stage of Proto-Maya.

Table 3 Proto-Mayan pronominal paradigms

| | A | B |
|-------|-------|------|
| Sg. 1 | (n)w | iin |
| 2 | aa(w) | at |
| 3 | u ~ r | ∅ |
| Pl. 1 | q(a) | o’nh |
| 2 | ee(r) | ex |
| 3 | k(i) | eb’ |

In all Mayan languages, the set A index precedes the possessed nominal, cross-referencing the possessor. In some of them, it has become a prefix to the possessed nominal.⁷ In the following, we will be concerned with the syntagmatic position and the autonomy of set A and B indexes vis-à-vis the verb. (19)f provide a set of illustrative examples.

- (19) a. x-at=b'e
 Q'EQCHI' [PFV-B.2.SG]=go
 ‘you went’
 b. x-at=x-b'oq
 [PFV-B.2.SG]=[A.3-call]
 ‘he⁸ called you’ (Dayley 1990:344)

- (20) a. h bin-ech
 MYM PFV go-B.2.SG
 ‘you went’
 b. t=u t'an-ech
 PFV=A.3 call(CMPL)-B.2.SG
 ‘he called you’

The examples are in the completive status, which conditions ergative alignment in all Mayan languages. Both in (19) and in (20), the set A index immediately precedes the transitive verb, although it appears to attach to it only in (19)b. A greater difference, however, lies in the position of the set B index: In (19), it precedes the verb, while in (20), it follows it. The position of the indexes is often described uncomprehendingly in the literature. A diachronic perspective will clarify matters. We will review the fate of each of the two sets in turn.

⁷ To be precise: Set A has a subset of allomorphs which appear if two conditions are fulfilled: First, the index directly precedes its head (i.e. no other dependent of the head intervenes), and second, this head starts with a vowel. In this case, the prevocalic allomorph appears; and in contradistinction to the other allomorph, this is prefixal in all Mayan languages under all circumstances. This prefixation is an automatic consequence of the two conditions: nothing separates the index from its grammatical host, and the prevocalic allomorph forms a canonical syllable with the latter's onset. Examples are in (4) (3rd sg.) and (26) (1st sg.), among others.

⁸ Mayan languages lack the category of gender and have little or no sex marking, either.

2.5.2.2 Indexes in possessive, ergative and subject function

There is a recurrent notion in the literature that “the Set A person markers are invariably prefixes in all Mayan languages”.⁹ That is not so.¹⁰ Set A pronouns were free in Proto-Maya and became clitic in the specific languages. Since they always precede their head, it seems indeed natural for them to become proclitic. Now the first thing to note here is that all Mayan languages have at least some enclisis; and some of them, including the languages of the Ch’olan and Yucatecan branches, are decidedly averse to proclisis. In these languages, the phonological bond of set A indexes clashes with their syntactic dependency. This leads to complicated grammaticalization processes, but to prefixation only under special circumstances.

Although the set A index bears the same syntactic relation to its nominal and to its verbal head (prepositions may be left out of consideration here), there is an important difference between the two constructions: In the nominal construction, the structural slot immediately preceding the pronominal index may be occupied by a determiner. Although in such cases the index cliticizes to the determiner, no systematic processes of coalescence have been described. In most occurrences, the pronominal index is the initial subconstituent of the noun phrase, anyway. In the verbal construction, the structural slot immediately preceding the pronominal index is occupied by some tense/aspect/mood formative, whose status and grammaticalization will be analyzed in section 3.4 and which will here simply be called an auxiliary. This yields the sequence ‘Auxiliary Set_A_index Verb’. Now the auxiliary is present in verbal clauses with much more regularity than the determiner in a noun phrase. As a result, the pronominal index cliticizes to the auxiliary and may form irregular portmanteau morphs with it. However, here too, there are some verbal clauses not preceded by an auxiliary and therefore introduced by the pronominal index.

The initial state of set A indexes is as words which stand independently if they are the first element in their sentence, but which form a phonological word with whatever precedes them in the same clause (for the possessive index, this is mostly a preposition or a verb form). The former position is illustrated in (21) and (86) below from Modern Yucatec, in (35) from Colonial Yucatec and in (23)a from Ch’ol. The #a examples of (21) – (23) show the set A index in possessive function, while the #b examples show it in ergative function. Attachment of the clitic to whatever precedes it is shown by (22) for Modern Yucatec and by (23)b for Ch’ol.

- (21) a. **In** ho’l=e’ túun k’i’nam.
 MYM A.1.SG head=R3 PROG\A.3 ache
 ‘My head aches.’

⁹ Grinevald & Peake 2012:13. Same claim in Dayley 1990:344; likewise Hofling 1991:18 for Itzá and Coon 2010, section 3.1 for Ch’ol.

¹⁰ Information on the clitic or affixal status of grammatical formatives in the Mayan languages is notoriously unreliable. For instance, some Mayanists declare Yucatec auxiliaries and set A indexes to be prefixes of the full verb. Dayley (1990:376) spells: “t-in-tz’on-aj-Ø” (‘I shot it’; same structure as (22)b; likewise Vapnarsky et al. 2012), which is clearly wrong in the face of data like (24)b. Several authors declare the enclitic set A indexes to be proclitic; thus, e.g., Bruce S. 1968:40, 45 for Lacandón, despite his own examples (e.g. p. 37, 45) to prove the contrary. Shklovsky (2005, ch. 3) corrects earlier analyses of Tzeltal set A indexes as prefixes, showing that they are enclitic. In Tzotzil, set A indexes precede the verb, but in second position of the template of the verb form, whose first position is obligatorily occupied by an aspectual formative. For the other Mayan languages adduced below, esp. (31)f, no explicit analysis is available, so one has to rely on the orthography of the sources.

- b. **In** wil-eh?
A.1.SG see-SUBJ(B.3)
'(Do you want) me to meet him?'
- (22) a. t=**in** ho'l
MYM LOC=A.1.SG head
'on my head'
- b. t=**in** wil-ah
PFV=A.1.SG see-CMPL
'I met him'
- (23) a. **c** jol
CH'OL A.1.SG head
'my head' (Aulie & Aulie 1979:232)
- b. tsa=**c** taj-a
PFV=A.1.SG meet-CMPL
'I met him' (Aulie & Aulie 1998:243)

Although these indexes precede their grammatical head, they are not bound to it. Instead, they are enclitic, just as all the clitics in these languages are. In syntactic terms, they cliticize to the wrong side.¹¹ Moreover, modifiers of the head may follow the clitic, as shown in (24),¹² again with the clitic in adnominal (#a) and adverbial (#b) position.

- (24) a. ichil =**u**¹³ seen p'uha'nil=e'
MYM within A.3 very upset:RSLTV:ABSTR=TOP
'in all her fury ...' (HNAZARIO_012.4)
- b. ts'=**u** hach ka'n-al-o'b
TERM=A.3 very tired-INCMPL-PL
'they are already very tired' (HK'AN_487.2)

There are, thus, in these languages both phonological and syntactic obstacles to a morphological union of the clitic with its grammatical head. On a cline from independent word via clitic to affix, these elements are closer to the word than to the affix. They differ, however, from free pronouns in their inability to constitute a sentence.

The union of the auxiliary with the enclitic set A index illustrated by (24)b is further analyzed in section 3.4. While this complex remains independent in Yucatecan, Ch'olan and Tzeltal, it univerbates with the following full verb in other Mayan languages. Tzotzil is one of these, as illustrated by (25).

- (25) l-i-bat
TZOTZIL PFV-A.1.SG-go
'I went'

In yet other Mayan languages, it appears that the set A clitics did change their prosodic orientation and directly became prefixes to their host. Their prevocalic allomorphs (fn. 7), which had always been prefixes, may have acted as analogical models here. (26) is from Tz'utujil,

¹¹ S. Klavans 1985 on mismatches between syntactic constituency and prosodic orientation of clitics.

¹² By means of similar examples, Shklovsky (2005, ch. 3) shows that set A indexes are no prefixes in Tzeltal.

¹³ In constructions like (24)a, the index is enclitic, too. The same goes for (51) below, where the standard pronunciation is [ts'ɔ̃klu ...] (with syncope). In such constructions, all existent orthographies respect the clitic's word status.

thus, from the Quichean branch (Dayley 1985, ch. 3.1.2). (26)a shows the (prevocalic) set A index in possessive function, while #b shows it in ergative function, both as prefixes of their head. Here the set A indexes possess the maximum degree of grammaticalization reached in the Mayan family.

- (26) a. K'o jun w-oochooch.
 Tz'UTUJIL EXIST one A.1.SG-house
 'I have a house.' (o.c. 142)
- b. x-at=w-aajo'
 PFV-B.2.SG=A.1.SG-love
 'I loved you' (o.c. 107)

To conclude, while the set A indexes can and have become prefixes of their head in several Mayan languages, they are stopped from doing so at least in the Ch'olan and Yucatecan branches and in Tzeltal. The lesson from this is that structural properties of a construction may stop the progress of grammaticalization of its grammatical formative.

2.5.2.3 Indexes in absolutive and subject function

Now for the set B indexes, these are described in the literature as being alternately prefixes or suffixes to the verb (Dayley 1990:74, 344, Grinevald & Peake 2012:13). Actually, at the stage of Proto-Maya, they were words with a tendency to enclisis. There was, therefore, no direct passage to prefixes from the beginning.

Similarly as the enclitic set A indexes of the Ch'olan and Yucatecan branches, the enclitic set B indexes of Tz'utujil and Huastec (Dayley 1990, section 4.7) may occur independently if no preceding host is available. The nominal clause of (27)a and the perfect clauses of #b and #c as well as the transitive clause of (28) lack an initial auxiliary.

- (27) a. In aachi.
 Tz'UTUJIL B.1.SG man
 'I am a man.' (Dayley 1985:298)
- b. in wa'-naq
 B.1.SG eat-PRF
 'I have eaten' (Dayley 1985:75)
- c. in ki-ch'ey-oon
 B.1.SG A.3.PL-hit-PRF
 'they have hit me' (Dayley 1985:75)
- (28) tin kw'iy-a-al
 HUASTECA B.1.SG&A.3 scold-THM-INCMPL
 'he scolds me' (Dayley 1990:380)

Always judging from the orthography of the sources (cf. fn. 10), this does not entail that the pronominal index is prefixed to the verb. The proper diachronic analysis would seem to be that this is a continuation of the original free status of set B.

In most other Mayan languages, set B elements are always left-bound. If the predicate is nominal, as in (27)a, they follow it. In Jacaltec, set B indexes are still clitic (rather than affixal) when following a non-verbal predicate, as in (29).

- (29) winaj hach
 JACALTEC man B.2.SG
 'you are a man' (Grinevald & Peake 2012:19)

¹⁴ Some languages, including Chuj and Mam, have an additional morphological slot between the set B prefix and the set A prefix; cf. (31)b.

Most Mayan languages opt for one of the alternatives shown in Figure 3.¹⁶ The Lowland variant, where the set B morpheme follows the full verb, is chosen by the Lowland group introduced in section 1.2. The Highland variant, where the morpheme attaches to the auxiliary, is chosen by the Highland group. A few languages including Tzotzil have both variants depending on verbal categories. Given the specific syntactic preconditions for the Highland variant mentioned before, this one may constitute the innovation.¹⁷

The lesson from these changes is the following: It is possible for etymologically identical paradigms to emerge as prefixes in one language and as suffixes in another. However, given their advanced degree of grammaticalization, affixes do no “hop”. Neither is it necessary, if a verb has a sequence of affix slots, that the innermost affix agglutinated first and the outermost last. Instead, what is synchronically a complex morphological structure may have more than one center. In more concrete terms: If there is a sequence of affixes on a verb some of which are indexes while others are tense/aspect/mood markers, then it is probable that the latter once were auxiliaries which first attracted some indexes and then coalesced with the full verb, adding to it a whole bunch of morphemes in one go.

2.5.2.4 Free personal pronouns

Colonial Yucatec lacked a neutral anaphoric pronoun; the demonstrative *lay* ‘that’ (section 2.5.1) took its place. By erosion, this becomes *le* in Modern Yucatec. In certain uses in focus position, it survives in substantival function, but now mainly functions as the deictically neutral prenominal determiner discussed in section 2.3. The paradigm of the contemporary free personal pronouns is in Table 4:

Table 4 Modern Yucatec free personal pronouns

| number person | singular | plural |
|------------------|----------|----------|
| 1 | teen | to’n |
| 2 | teech | te’x |
| 3 | leti’ | leti’o’b |

The forms are composed of *ti’* (Loc) plus a set B morpheme (which is zero in third person singular). The third person forms are, furthermore, combined with the demonstrative *le*. As a consequence, the latter gets reinforced in its function as third person pronoun.

These pronouns have clitic variants, which take the postverbal position in indirect object function and whose third person forms lack the *le*. Thus, the paradigm of Table 4 is the result of a grammaticalization process involving the loss of the semantic role of the locative preposition and of the demonstrative feature.

¹⁵ Vinogradov 2017 shows the diachronic sequence postulated here to match historical evidence in the case of Qeqchi’. It is also consonant with the observation of Grinevald & Peak (2012:13): “If they [the set B indexes] are prefixes, there are no separate pre-consonantal and pre-vocalic forms as there are for the set A prefixes.”

¹⁶ On the areal distribution of the variant positions of set B indexes, cf. Law 2011, ch. 4.2.4.

¹⁷ The innovation may be one change occurred in a genetic subgroup, in which case it may be necessary to adjust the genealogical tree of Figure 2. Alternatively, it may be due to areal contact among the languages concerned. The latter option is, in principle, argued in Law l.c., although there an alternate positioning of these indexes is assumed to be the innovation.

2.5.3 Reflexive pronouns

Yucatecan languages share a relational noun *bah* ‘counterpart, replica’, whose original meaning is preserved in Lacandón.

- (32) a. in böh-o (Perez 2003 s.v. *böh*)
 LACANDÓN A.1.SG counterpart-PL
 ‘my companions’
 b. u böh u txé in tèt (ibd.)
 A.3 counterpart A.3 tree A.1.SG father
 ‘the same tree as my father’s’

Already in Colonial Maya, this root had been grammaticalized to a reflexive marker ‘self’. This combines with set A clitics in a regular way to yield a complex reflexive pronoun. From the earliest sources to this day, there is a tendency to treat this construction as one morphological complex, writing it jointly, as in (33).

- (33) in cimç-ah inbáh (Coronel 1620:4)
 CYM A.1.SG kill-CMPL(B.3) A.1.SG:self
 ‘I killed myself’

To this day, the reflexive pronoun behaves syntactically as an NP. It can also depend on a preposition, as in (34).

- (34) t=u ya'l-ah t=u báah
 MYM PRFV=A.3 say-CMPL LOC=A.3 self
 ‘he said to himself’ (HK_{AN} 046)

In contemporary non-standard writing, the complex reflexive pronoun in direct object function (as in (33)) is generally attached to its verb, being considered a suffix.

2.5.4 Interrogative proforms

Colonial Yucatec interrogative proforms have roots as shown in the first column of Table 5 (the forms of the first two columns are from Coronel 1620). The root for ‘who’ is grammaticalized from *máak* ‘person, human being’, and the root for ‘what’, from *ba’l* ‘thing’. To judge from the examples in Coronel 1620:78, the original meaning of *bahun* may have been ‘quantity’. All of these roots can be used as such or can optionally be reinforced with a suffix -x, which may be cognate to the enclitic *ix* ‘also’ seen in (14). The combination yields the forms of the second column. The basic and reinforced forms are apparently in free variation in Colonial Yucatec.

Table 5 Yucatec interrogative proforms

| Colonial Yucatec | | Modern Yucatec | meaning |
|-------------------|---------------|----------------|---------|
| root | suffixed form | | |
| mac | macx | máax | who |
| bal | ba(l)x | ba’x | what |
| tab ¹⁸ | tabx | tu’x | where |

¹⁸ preserved in Lacandón to ‘where’ (Perez 2003 s.v. *toan*)

| | | | |
|-------|---------|-------|-----------|
| bic | bic(i)x | bix | how |
| bahun | bahunx | bahux | how much |
| kun | kunx | kux | how about |

Given the basic meanings of *mac*, *bal* and *bahun*, it appears that the first-column words acquired interrogative force in the focus position of the interrogative sentence; there is no other mark distinguishing it from a declarative sentence. The combinations with the focusing suffix *-x* got then grammaticalized in interrogative function. In Modern Yucatec, interrogative pronouns do not occur in their root form; they bear the *-x* suffix, and a subset of them alternatively bears an *-n* suffix, like *ba'n* ‘what’, *tu'n* ‘where’. Further grammaticalization leads to their use as relative pronouns in headless relative clauses.

3 Grammaticalization of verbal categories

3.1 Verbal clause structure

With some simplification, the Yucatecan verbal complex consists of a verb form inflected by set B indexes and preceded by set A indexes; s. Figure 4 below. The elementary independent verbal clause consists of a verbal complex in completive status and its dependents, as in (35).

- (35) u kam-ah nicte in mehen
 CYM A.3 get-CMPL-B.3 flower A.1.SG son
 ‘my son got the flower (i.e. got married)’ (Motul s.v. *kamnictē*)

Already in Colonial Maya, many verbal clauses are introduced by an element which codes tense, aspect or mood and which will be called an auxiliary (s. section 3.4.1 for discussion of the appropriateness of this term). In Modern Yucatec, this is the default for independent verbal clauses. At this stage, the verbal complex with its dependents as illustrated by (35) only forms a clause core, while an independent declarative verbal clause generally – except in the perfect – requires an auxiliary in front of it. (36) illustrates this with the terminative auxiliary.

- (36) ts'o'k u mux-ik le ta'b=o'
 MYM TERM A.3 grind-INCMPL(B.3) DEM salt=R2
 ‘he has ground the salt’ (HA'N_043.1)

3.2 Status

In all Mayan languages, the verb has a suffixal slot for a category called status, which comprises the subcategories of dependent status proper, aspect and mood. These suffixes belong to the earliest layer of the diachrony and are completely grammaticalized. The Colonial Yucatec paradigm is as shown in Table 6; material in parentheses is optional or confined to *pausa* position.

Table 6 Colonial Yucatec status conjugation

| status | stem class aspect/mood \ | intransitive | | transitive | |
|-----------|-----------------------------|--------------|-------------|---------------------------|---------|
| | | basic | derived | basic | derived |
| plain | subjunctive | -Vc | -n-ac | -Vb | (-e) |
| | completive | (-i) | -n(-ah)(-i) | -ah | |
| dependent | subjunctive | -ebal | | -ic | |
| | completive | -ci | -n-ici | -(i)ci / -i ¹⁹ | |
| | incompletive | -Vl | | -ic | |

The incompletive (aspect) derives from a nominalization conditioned by embedding of the full verb clause core under matrix auxiliaries, a construction to be analyzed in section 3.4.2. In intransitive verbs, status conditions the choice between set A and set B indexes to cross-reference the subject; s. section 2.5.2.1.

The status paradigm is alive to this day, but given its high degree of grammaticalization, it is fragile. Several endings appear only *in pausa* and are syncopated otherwise (Beltrán 1746, sections 135-147). Some of the allomorphy is utterly complicated, syncretistic and constantly exposed to variation. All in all, this paradigm is unproductive and unstable.

Partly preceding, but mainly within the period from Colonial Yucatec to Modern Yucatec, the inherited aspect system is largely renewed by a paradigm of auxiliaries analyzed in section 3.4. These mark relatively fine distinctions not only of aspectual, but also of temporal and modal categories. They stem from different categorical sources and form different syntactic constructions with the clause core. The latter, in turn, condition different status categories on the full verb. Conditioning them, they render them largely redundant.

3.3 Voice/valency

Yucatecan languages share a passive suffix *-b*, shown in (37) for Itzá.

- (37) k=u tz'on-b-ol
 Itzá IPFV=A.3 shoot-PASS-INCMPL
 'it is shot' (Hofling 1991:33)

The suffix appears, *inter alia*, as a submorphemic component of a passive participle in *-bil*, shared at least among the Yucatecan, Tzeltalan and Ch'olan branches (cf. Vapnarsky et al. 2012). A passive morpheme *-b* (of unknown provenience) can therefore safely be reconstructed for some prehistorical stage of Yucatecan. In Mopán and Itzá, this remains a suffix. In Yucatec and Lacandón, it develops an infixal allomorph, as illustrated in (38).

- (38) k=u ts'o<'>n-ol
 MYM IPFV=A.3 shoot<PASS>-INCMPL
 'it is shot'

Forms such as these are already attested in the earliest colonial grammars, so the infixing must have occurred in Pre-Columbian times, but after Itzá split off from Yucatec-Lacandón.

Passive is marked by the /ʔ/ infix in primitive transitive roots, i.e. those of the canonical phonotactic shape CVC. Other transitive stems form the passive by a set of allomorphs conditioned by the status category, but sharing a /b/. We appear to be faced with a change of a suffix to an infix by metathesis: [ʔ] is a systematic allophone of /b/ in coda position in all historical phases of Yucatec. Once the /b/ crosses the right morpheme and syllable boundary of the root, it turns into [ʔ].

¹⁹ The allomorph *-i* appears if the subject is the focus constituent of a cleft-construction.

Now for forms like the one seen in (37), metathesis cannot be motivated by phonology. Possibly primitive transitive roots ending in /b/, of which there are quite a few, played a triggering role here. Modern Yucatec verbs such as *ts'a'* ‘put, give’, *cha'* ‘let’, *ch'a'* ‘fetch’, *he'* ‘open’, *chi'* ‘bite’ and several more form their incomplete passive as *ts'a'b-al*, *cha'b-al*, *ch'a'b-al*, *he'b-el*, *chi'b-il*. In Classical Maya, these roots had themselves ended in /b/.²⁰ By phonological rule, the sequence of two /b/s yielded [ʔb]. Given that the lexical form of the root ended in /b/, the passive form was reinterpreted as infixation of the passive morph /b/ > [ʔ]. Given the central position and high token frequency of the verbs in question, they may have served as an analogical model for other primitive transitive roots, maybe fostering a metathesis or just the infixation of a glottal stop.

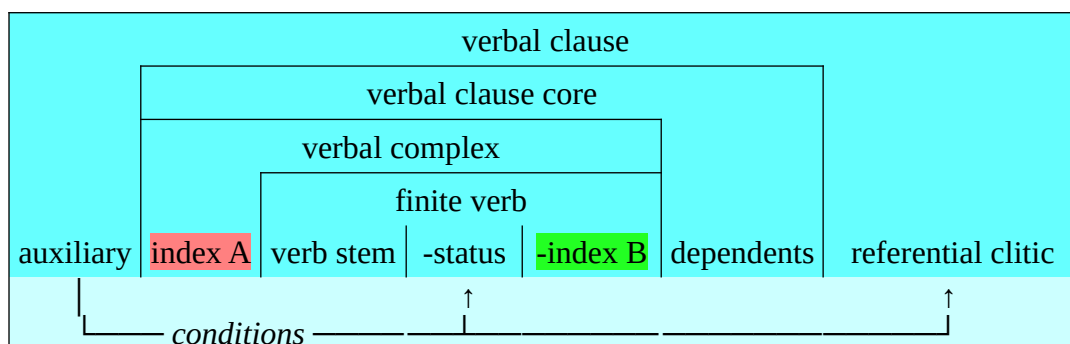
The details of passive morphology are complicated. Here it suffices to mention that transitive stems that do not correspond to the canonical phonotactic shape of primitive transitive roots – including all derived stems – infix the glottal stop into the status suffix instead of in the root, like *il-a'l* (see-INCMP\PASS) ‘be seen’. This may be the only known instance of what appears synchronically as an infix inside an affix.²¹ What matters in the present connection is that the entire process described is an instance of grammaticalization. Not only does agglutinative morphology become fusional morphology. The passive also plays an essential role in the verbal system and in information structure and is very frequent in texts of all genres.

3.4 Aspect²²

3.4.1 Periphrastic aspects

The clause has an initial syntactic position preceding the clause core which may be taken by elements and constituents of very different nature. Since the material in this structural position is so heterogeneous, its relation to the rest of the clause differs accordingly, and consequently the constructions are syntactically different. The differences are reflected morphologically on the full verb, which depending on the construction is in the dependent incomplete, the complete or the subjunctive status. As we will be concentrating on such constructions in which the element occupying the initial position gets grammaticalized to an auxiliary, the result is that the auxiliary conditions the status. Figure 4 visualizes this dependency.

Figure 4 Syntagmatic relation between auxiliary and status



²⁰ Among the evidence is the Ch'ol cognate of Yucatecan **ch'ab*, which is *ch'äm*.

²¹ Diachronically, such forms may originate in *il-ab-al* (see-PASS-INCMP\PL) etc. Such forms are reported in the colonial grammars (e.g. Coronel 1620:32). While in this context, the /b/ would not become a [ʔ], it would do so after syncope applied to the last syllable of the form, i.e. in the context *ilabl* ...

²² The following sections on tense/aspect/mood marking are an abridged version of Lehmann 2017.

The first thing to be noted about Figure 4 is that the full verb is finite. This is a peculiarity of Yucatec periphrastic constructions whose diachronic explanation will become clear in the following sections. As we saw in section 2.5.2.2f, in the Yucatecan languages, the pronominal indexes do not combine with the auxiliary, but with the full verb. Thus, the auxiliary deserves its name only insofar as it carries tense/aspect/mood information. Person and number, instead, are marked on the full verb, and consequently it is indeed finite.

There is in Yucatec a large variety of tenses, aspects and moods that are coded in the initial position of Figure 4.²³ While the construction of the initial auxiliary is inherited, most of the auxiliaries actually in use are at best in an incipient stage of grammaticalization in Colonial Yucatec. The set is large and heterogeneous, and only some of them will be described in the following subsections. We will see that all the auxiliation constructions come about by grammaticalization, but that they start off from different sources.

Some of the statuses have the intransitive subject represented by a set A index, while others have it represented by a set B index. This is the alignment split already mentioned in section 2.5. Although it is not the main object of the ensuing analyses, these will nevertheless contribute to its understanding.

3.4.2 Auxiliation based on complementation

3.4.2.1 Basics

Of importance for auxiliation is a kind of complex construction consisting of a main clause core and a complement clause core occupying an argument position of the governing predicate, most importantly, the subject position of an intransitive verb. Being nominalized, the complement clause is in dependent status. This construction is the model for a number of auxiliaries. The clause-initial slot of Figure 4 attracts not only intransitive verbs, but also verboids, nouns and denominal adverbs. The construction, however, remains essentially the same: in all the constructions of section 3.4.2, the clause core depends on the initial element.

3.4.2.2 From habitual to imperfective aspect

The inherited imperfective was renewed in Colonial Yucatec Maya. At the beginning of this process, there is a set of words, apparently denominal in origin, which compete for the auxiliary position. Three of these appear in E39, listed as synonymous in the colonial grammar. One of these is *lic*, which must be a root with the meaning ‘this time span’.

| | | | |
|-----|---|--------|--------------------------------|
| E39 | cim-ç-ab-i | in | yum |
| CYM | die-CAUS-CMPL.PASS-B.3.SG | A.1.SG | father |
| | ti= <i>lic</i> | / | tamuk / ti válac v han-ál |
| | LOC=this.span/ | while | / LOC this.time A.3 eat-INCMPL |
| | ‘my father was killed while eating’ (Coronel 1620:57) | | |

The preposition subordinating *lic* may be omitted, as in E40.

| | | | | | | |
|-----|---|-----|------------|------|------------------|---------|
| E40 | lic u dzoc-ol | a | han-al | ca | ta-c-ech | uay=e |
| CYM | span A.3 end-INCMPL | A.2 | eat-INCMPL | CONJ | come-SUBJ-B.2.SG | here=R3 |
| | ‘when you have eaten, you should come here’ (Motul s.v. <i>ca</i>) | | | | | |

While Yucatecan languages possess some types of indisputably subordinate clauses (among them those in dependent and subjunctive status), the coding of temporal and tactic relations is

²³ An extensive list of relevant markers appears in Briceño Chel 2006, ch. 1.2f.

essentially left to the tactic potential of the aspectual system (Bohnenmeyer 2003; (45) below is a typical example). Formatives like the three shown in E39 reinforce this tactic relation more than subordinating their clause. At any rate, the clause introduced by *lic* may also be independent; and then the temporal construction may have a habitual sense (cf. Coronel 1620:67), clearly visible in (41).

- (41) *lic* *in* *uen-el* *tamuk* *in* *han-al*
 CYM HAB A.1.SGsleep-INCOMPL while A.1.SGeat-INCOMPL
 ‘I usually fall asleep while eating’ (Motul s.v. *lic*₂)

By further grammaticalization, the morpheme functions as a mere imperfective auxiliary, as in (38), (43) and as also possible in (42).

- (42) *lic* *bin* *a* *haɔ-ic* *a* *paal-il* *tumen* *u* *tuz.*
 CYM IPFV QUOT A.2 beat-INCMPL A.2 child-REL because A.3 lie\INTROV
 ‘They say you (habitually) beat your boy because he lies.’ (Motul s.v. *lici lic*)

Here *lic* is yet a word. However, there already exists a shortened variant *c(i)*, apparently in free variation, as in the dialogue of (43):

- (43) a. *bal* *c=a* *uok-t-ic?*
 CYM what IPFV=A.2 weep-TRR-INCMPL
 ‘What are you crying for?’
 b. *in* *kéban* *lic* *u-ok-t-ic.*
 A.1.SGsin IPFV A.1.SG-weep-TRR-INCMPL
 ‘It is for my sins that I am crying.’ (Coronel 1620:67)

In (43)a, the particle already univerbates with the enclitic A index, as compared with the #b version. Today, the auxiliary only survives in its one-phoneme form *k*, obligatorily univerbates with the set A index and carries aspectual information only in contrast with more specific auxiliaries, as in (38) above.

3.4.2.3 Progressive aspect

The progressive itself is a Proto-Mayan category. In Colonial Yucatec Maya, it is based on the relational noun *tan*,²⁴ illustrated in (44) in its lexical meaning ‘front, middle’.

- (44) *t=u* *tan* *Dios*
 CYM LOC=A.3 front god
 ‘in front of god’ (San Buenaventura 1684:39v)

(44) shows the regular syntactic construction for a noun designating a spatial region, presented in section 2.4. The same configuration is also at the source of its aspectual use. Already in the earliest sources, the preposition *ti’* is normally dropped. (45) – obviously a variant of E39 – illustrates the incipient progressive function for an intransitive verb.

- (45) *vtán* *v* *han-ál* *in* *yum,*
 CYM A.3:middle A.3 eat-INCMPL A.1.SG father
 ca *cim-ç-ab-i*
 CONJ die-CAUS-PASS-CMPL(B.3.SG)
 ‘my father was in the middle of eating when he was killed’ or: ‘while my father was eating, he was killed’ (Coronel 1620:57)

²⁴ The progressive function of this morpheme may be inherited from Proto-Maya; some languages, including K’aqchikel, have plausible cognates.

The original construction with the subordinating *ti'* and its further evolution are, at any rate, completely analogous to the imperfective *ti' lik* seen in E39: It follows the pattern where the full verb of the complement clause is in dependent status. Initially, the new auxiliary is typically used in complex sentences, where the progressive clause provides the background for the event of the main clause, as clearly shown by (45). However, and again like the imperfective, the progressive also appears in monoclausal sentences. (46) features, already at Coronel's time, a further reduced form of the auxiliary, where the original possessive clitic preceding *táan* is no longer there.

- (46) ma tan a túb-ul ten
CYM NEG PROG A.2 escape-INCMPL me
 'I am not going to forget you' (Coronel 1620:34)

Beltrán (1746) only uses the reduced form *tan*, as in (47).

- (47) tan in tzeec, ca lub ku-na
CYM PROG A.1.SG preach(INCMPL) CONJ fall(CMPL.B.3) god-house
 'I was preaching, there the church collapsed' (Beltrán 1746, section 262)

As may be seen, this is now just a progressive aspect. By the positioning of the Wackernagel-enclitic interrogative particle, (48) shows that in Modern Yucatec, *táan* may still be a word.

- (48) Táan wáah a bin?
MYM PROG INT A.2 go(INCMPL)
 'Are you going (leaving)?' (HNAZARIO_406)

In its further development, and again in analogy with the development of the imperfective auxiliary, the progressive auxiliary coalesces with the set A index which most often follows it, with the full form surviving essentially in writing and, in the oral mode, in cases like (48). This is a process in two phases. At first, the product of the merger of *táan* with the three singular indexes *in*, *a*, *u* is *tíin*, *táan*, *túun*, as illustrated by (3)c above. This is, however, just a transitional stage rarely represented in writing. In the end, these forms are shortened to *tin*, *ta*, *tu* (cf. Briceño Chel 2006:24f), as in (49).

- (49) t=u sáas-tal
MYM PROG=A3 dawn-FIENT.INCMPL
 káa h téek líik' y-ich hun-túul le peek'=o'
 CONJ PFV for.a.moment get.up(CMPL.B.3) A.3-eye one-CL.AN DEM dog=R2
 'It was dawning when one of the dogs suddenly rose his glance' (HTS'oon_310.1)

In this configuration, the progressive clause specifies a situation holding in the background, into which the event described by the following main clause is incident. This is functionally equivalent with the – much older – combination of a nominalized clause subordinated by *ti'* serving as background information for the main clause (Lehmann 2017, section 4.3). In fact, since the products of the merger of the preposition and of the progressive auxiliary with the following set A index are homonymous, the two constructions are not easily distinguished. It may be assumed that the model of the nominalized construction played a role in the rather radical reduction of the auxiliary complex.

3.4.2.4 Terminative aspect

One important subclass of intransitive predicators to fill the clause-initial position are phase verbs. The central phase verbs are *ho'p'* 'start' and a set of verbs including *ts'o'k*, all meaning

‘end’. They are normally impersonal (Coronel 1620:34f). Personal use is possible with a few of them, but does not generate auxiliaries. In the impersonal construction, actancy is coded on the dependent verb. (50) illustrates the construction for *ts’o’k*. The dependent verb is in dependent status.

- (50) *ɔoc-i* *incan-ic*
 CYM end-COMPL(B.3.SG) A.1.SG:learn-DEP.INCMPL
 ‘I finished learning / have learnt it’ (San Buenaventura 1684:17r)

The phase verb *ts’o’k* combines with aspect auxiliaries just like any full lexical verb, e.g. in E40. It continues this life up to the present day. (51) displays a symptom of grammaticalization: the phase verb is in the incomplete, but lacks both the introductory imperfective auxiliary and the set A index. This suggests that even in the construction at hand, where the main clause comprises more than just the phase verb, the latter fulfills an auxiliary function, with the form *kuxtal* in its subject not just being a noun, but rather the verbal predicate (live:INCMPL) of the dependent clause core.

- (51) *beey túun ts’o’k-ol u kuxtal le p’us-o’b=o’*
 MYM thus then finish-INCMPL A.3 life DEM hunchback-PL=R2
 ‘This then was the end of the life of the P’uz.’ (chem_ppuzoob_011)

This grammaticalization process starts in the colonial period. The 17th century grammars adduce the phase verbs *ɔoc* ‘finish’ and *hopp* ‘begin’ only in order to mention their regular impersonal or personal construction as illustrated by E40 above. Only Beltrán (1746, sections 85f) observes the expansion of the use of *ts’o’k* as auxiliary in vogue at his time.

The form of this verb which occupies the clause-initial position, becoming, thus, a component of the grammaticalization path, is the completive form triggered by perfective aspect, as in (52).

- (52) (h) *ts’o’k* *in meyah*
 MYM PFV finish(CMPL:B.3) A.1.SG work
 ‘my work ended = I finished working’ (Briceño Chel 2000[t]:84)

In the sequel, the perfective auxiliary is omitted. In fact, by the evidence of (50), the grammaticalization of *ts’o’k* probably started at a time when the completive alone could make a perfective clause. Otherwise, however, the new auxiliary can maintain its full form even in the colloquial style. There is, however, a reduced form in addition to the full form, although not as widely used as the reduced form of the progressive auxiliary. The auxiliary then shrinks to its initial consonant and coalesces with the set A clitic, as shown by (24)b above (cf. Briceño Chel 2000[t]:87f).

3.4.2.5 From debitive to future tense

The canonical construction coding ascription of possession consists in inserting a possessed nominal in the central actant position of the existential verboid *yaan* (cf. (5)), as in (53).

- (53) *yan wa a yum?*
 CYM EXIST INT A.2 father
 ‘do you have a father?’ (Motul s.v. *yan*)

Once a nominalized verbal complex is substituted for the possessum of the ascription of possession, a debitive construction results. Just as the possessum is ascribed to its possessor, so the obligation is ascribed to the actor of the nominalized verbal complex, as in (54).

- (54) ba'l=e' yan a bo'l-t-ik-en
 MYM however=TOP DEBA.2 pay-TRR-INCMPL-B.1.SG
 'however, you must pay me' (HALA'CH_084)

This use is not found in the colonial sources and is documented only in the modern Yucatecan languages. The most recent development, only documented in the 20th century oral register, is a pure future without debitive connotations, as in (55), where the speaker articulates what he thinks will certainly happen.

- (55) yan u kaxt-ik-ech a taatah
 MYM DEBA.3 search-INCMPL-B.2.SG A.2 father
 'your father will search you' (HNAZARIO_402.1)

This construction is currently ousting the (much older) predictive future (section 3.5.2), which gets pushed back into the formal register.

3.5 Tense

A Modern Yucatec tense not to be dealt with here is the assurative future with *he'(l)* (featured in (75)), because the semantics obtaining at its origin remain to be investigated.

3.5.1 From hodiernal past to perfective

As explained in section 3.2 and illustrated by (35), in Colonial Yucatec, completive status is the only one beside the perfect that a simple independent declarative clause may exhaustively be based on (i.e. without the need for an auxiliary). This means, at the same time, that such clauses have little marking in comparison with all other tense/aspect/mood categories appearing in independent sentences. Moreover, the completive has zero allomorphs in several contexts. The result is that many completive verbal complexes occurring in texts reduce to verb stems provided with indexes.

In Colonial Yucatec, the completive clause can be marked for hodiernal completive by the particle *ti'* 'there' (or its prevocalic bound allomorph *t-*), a deictically neutral local demonstrative adverb which occupies the same position as the auxiliary in Figure 4. (56) shows the simple plain completive for an intransitive (#a) and a transitive (#b) verb. The two parts form minimal pairs with the #a and #b sentences of (57), which show the hodiernal completive.

- (56) a. Bin-i Fiscal ti yotoch ku,
 CYM go-CMPL(B.3) inspector LOC A.3:house god
 'The inspector went to the church'
- b. ca vhaɔ-ah pal-alob
 CONJ A.3:beat-CMPL child-PL
 'and beat the children' (San Buenaventura 1684:23r-v)
- (57) a. ti bin-i padre
 CYM HOD go-CMPL(B.3) father
 'the reverend went today / has gone'
- b. t=in haɔ-ah paal
 HOD=A.1.SG beat-COMPL(B.3) child
 'I beat the child today / have beaten the child' (San Buenaventura 1684:35r)

The hodiernal completive is already highly grammaticalized in Colonial Yucatec Maya. Already in Coronel 1620, some completive examples introduced by *ti'* are translated as sim-

ple past. In Beltrán's (1746) examples – e.g. sections 264f (*t luben* – the completive aspect appears variously with and without the aspect auxiliary *t-*, with the same Spanish translation *caí* ‘I fell’ and no comment on any semantic difference. In section 36, he admits that, in front of intransitive verbs, the *t* is “semipronunciada”, and establishes the variation taken up below. Apparently, the hodiernal component has disappeared, and what we now have is a perfective auxiliary, reduced to the phoneme *t*, as in (58) below, and therefore regularly univerbated with the following enclitic set A index in front of transitive verbs, as evidenced by (57)b. This is, then, the only auxiliary which has already lost word status at the stage of Colonial Yucatec and become a bound morpheme. In Modern Yucatec, the perfective auxiliary has become obligatory with transitive verbs in completive status.

Intransitive completive verbs get a set B index suffixed, as seen, *i.a.*, in (20)a. The monophonemic auxiliary therefore hits directly on the verb, which may start with a consonant, as in (58). Yucatec has a phonological rule converting /t/ into /h/ in front of /t/. An extended version of this rule may have applied to the perfective auxiliary. At any rate, this auxiliary has an allomorph *h* with intransitive verbs. A preconsonantal /h/, however, generally disappears in Yucatecan. The *h* to be seen in (20)a and (52) is optional both in speaking and in writing, but is mostly absent, as it is in (56)a. One may speculate that what manifests itself in such cases is an uninterrupted continuation of the plain completive of Colonial Yucatec. This may be hard to settle. At any rate, since the hodiernal feature present at the beginning disappears, the result of the entire grammaticalization process is a weak reinforcement of the inherited completive status.

The perfective is the only auxiliary of the Yucatecan branch that cooccurs with completive status. It remains a loner as regards both the source of the auxiliary and the status conditioned (or rather, conserved) by it on the verb. However, the more recent grammaticalization paths converge with it into a common paradigm.

3.5.2 Predictive future

The motion-cum-purpose construction is a regular syntactic construction in the Yucatecan branch. It is a complex clause core starting with an oriented motion verb followed by a verbal clause core in the subjunctive, the latter coding the purpose. As long as no focus precedes the motion verb, the core verb is in plain status subjunctive. The bracketing in (58) marks off the motion and the purpose parts.

- (58) *t bin-én in cim-ez uacax*
 CYM [PFV go(CMPL)-B.1.SG] [A.1.SG die-CAUS(SUBJ) cow]
 ‘I went to kill cows’ (Beltrán 1746, section 110)

The central verbs of oriented motion (‘go’, ‘come’, ‘pass’) become irregular in their conjugation on their way to Modern Yucatec. The reduced forms of *bin* ‘go’ appear both with the lexical meaning and as auxiliary.

The motion-cum-purpose construction with *bin* as motion verb is grammaticalized to a future in the Yucatecan branch. Coronel (1620) already calls it “futuro” and provides examples of it. Beltrán (1746, section 299, p. 128) lists *bin* as ‘partícula de futuro’, giving examples (59)f for the intransitive and transitive construction, resp.

- (59) *bin bol-nac-én dzedzetàc*
 CYM FUT pay-SUBJ-B.1.SG little.by.little
 ‘I shall pay little by little’ (Beltrán 1746, section 299, p. 149)

- (60) caix u tancoch in hanal=e,
 CYM although A.3 half A.1.SG meal=R3
 bin in zi-ib tech
 FUT A.1.SG present-SUBJ(B.3.SG) you
 ‘although it is half of my meal, I’ll give it to you’ (Beltrán 1746, section 299, p.129)

The core verb keeps the subjunctive of the source construction. The motion verb complex has been reduced to the root of the motion verb. This becomes impersonal like all the other auxiliaries and, in Yucatec and Lacandón, undergoes an idiosyncratic phonological change: the vowel of the auxiliary *bin* (not of the lexical verb!) is lengthened and gets high tone in Yucatec. This may be due to analogy with the progressive auxiliary *táan*, but may also be regarded as the expression counterpart of the grammatical change. At any rate, the impersonalization and morphological impoverishment of the auxiliary comes under paradigmaticization and may be ascribed to analogical pressure from the older auxiliiation constructions analyzed in section 3.4.2. (61) illustrates the construction for both an intransitive and a transitive verb.

- (61) Bíin suu-nak yéetel bíin in wil-eh.
 MYM FUT return-SUBJ(B.3) and FUT A.1.SG see-SUBJ(B.3)
 ‘He will come back and I will see him.’ (XIPAAL_032)

This future construction finds its place in the tense/aspect/mood paradigm at the side of three other futures, viz. the debitive future (section 3.4.2.5), the immediate future (section 3.5.3) and an assurative future not analyzed here. It does not become an immediate future, as so many futures based on the motion-cum-purpose construction do in other languages. Instead, it bears a feature of neutral, objective prediction, which may be related to the impersonality of its auxiliary.

We find the predictive future at an intermediate stage of grammaticalization. On the one hand, the reduction process mentioned above proves that it is grammaticalized to some extent already at the stage of Colonial Yucatec. On the other hand, it retains its word status to this day.

The origin of the predictive future construction is the motion-cum-purpose construction. It differs from the other tense/aspect/mood auxiliaries analyzed in sections 3.5.1f in that the emerging marker – the verb ‘go’ grammaticalized to a future marker – does not originally occupy the clause-initial position described at the beginning of section 3.4.1 and instead is the remnant of a complete superordinate clause. However, the canonical model for an auxiliary construction requires that the auxiliary be monomorphemic, impersonal and occupy the clause-initial position. In its grammaticalization, the motion-cum-purpose construction is forced into the Procrustean bed of the verbal clause expanded by an initial position, which is the template for the auxiliary construction. This is, thus, a clear example of grammaticalization guided by analogy.

3.5.3 Immediate future

The auxiliiation strategy leading to the immediate future originates in a verb-focus construction. From there, we get to the immediate future in two steps: First, on the basis of the verb ‘go’ in focus, a focused progressive is formed. Second, this strategy applies to the ‘go’ verb of the motion-cum-purpose construction to form the immediate future of its purpose component.

Putting the lexical main verb of a clause into its focus position requires filling the gap that it leaves in the extrafocal clause by a verb meaning ‘do’. For this purpose, Colonial Yucatec used a verb *cib* ‘do’, which is totally irregular and defective. The verb is rarely found with this meaning in a simple transitive clause; the lexicon contains other verbs meaning ‘do’. Instead, it is used almost exclusively in focus constructions and there takes the form *cah*. At the stage of Colonial Yucatec, the verb is indispensable as a pro-verb in the verb focus construction, illustrated in (62).

- (62) han-ál v cah (Coronel 1620:71f)
 CYM eat-INCMPL A.3 do
 ‘he is eating’

As suggested by the translation, this construction functions as a progressive in Colonial Yucatec Maya. As a matter of fact, it figures much more prominently in colonial grammars than the simpler progressive with the auxiliary *táan* (section 3.4.2.3). The 17th cent. grammars start their account of the conjugation with the periphrastic construction based on *cah*, calling it the “presente”. (63) completes the exemplification with a transitive verb.

- (63) cámbec-ah in cah ti pá-l-alob
 CYM teach-INTROV(INCMPL) A.1.SG do LOC child-PL
 ‘I am teaching the children’ (Coronel 1620:72)

While (62) and (63) are focus constructions, there are a number of peculiarities. Focusing of a finite verb requires its nominalization. Therefore, the focused verbs show the nominalizing suffixes which join the status paradigm as incomplete aspect. This process is relatively complicated with transitive focused verbs, as in (63). The purpose of the construction is to put the verb into focus. Consequently, its dependents remain in the extrafocal clause. Therefore, the verb is detransitivized before it is nominalized. The internal syntax of the extrafocal clause is adjusted, too: what was the direct object of the focused verb becomes a prepositional object (Beltrán 1746, section 172). The verb focus construction is, thus, marked with plurivalent verbs.

The progressive aspect views what the verb designates as an ongoing situation that the referent of the subject is in. Consequently, the functional locus of the progressive aspect is in intransitive verbs. The verb focus construction is therefore well suited to get grammaticalized into a progressive aspect. The resulting construction may be dubbed focused progressive. It is grammaticalized in Colonial Yucatec to the extent that it is a member of the conjugation paradigm.

On its way into the modern Yucatecan languages, the pro-verb *cib* is fossilized; only the form *cah/ka’h* occurs in a couple of contexts. It is ousted from its function as a pro-verb in regular verb-focus constructions by the lexical verb *beet/meent* ‘make’. *Ka’h* survives in this function only in formulas. Neither is the focused progressive with *ka’h* further grammaticalized to a plain progressive. As we have seen in section 3.4.2.3, the progressive construction which gets established involves a different auxiliary. Instead, verb focusing is applied to the motion-cum-purpose construction analyzed in section 3.5.2. What is put into focus position is the verb *benel/binel/bin* ‘go’, while the purpose part of the construction is left behind in the extrafocal clause core. The resultant specific construction is, thus, a merger of the focused progressive with the motion-cum-purpose construction. (64)f illustrate it with an intransitive and transitive full verb, resp.

- (64) ben-el in cah ti han-al
 CYM go-INCMPL A.1.SG do LOC eat-INCMPL
 'I am going to eat' (Coronel 1620:50)

- (65) Bin-el in cah incam-bez pal-alob.
 CYM go-INCMPL A.1.SG do A.1.SG:learn-CAUS(SUBJ.B.3) child-PL
 'I am going to teach the children.' (San Buenaventura 1684:9Br)

At the stage of Colonial Yucatec, there is already an asymmetry conditioned by the transitivity of the full verb: a transitive full verb is in the subjunctive motivated by the motion-cum-purpose construction, as in (65), while an intransitive full verb, as in (64), is subordinated by the preposition *ti* and therefore nominalized, marked by incomplete status. At the same stage, the binary contrast between *bin* 'go' and *tal* 'come' is yet maintained in their grammaticalization, as proved by (66):

- (66) a. tal(-el) v cah in bot-ic in ppax
 CYM come-INCMPL A.3 do A.1.SG pay-INCMPL A.1.SG debt
 'I am coming to pay my debt' (Coronel 1620:69)

Further reduction of the paradigm, however, leads to the consequence that the only verb possible in the focus construction with *ka'h* of Modern Yucatec is *bin*, and it only survives in the modern immediate future, illustrated by (67).

- (67) a. bin in ka'h xíimbal ti' le chaan kaah ...=e'
 MYM IMM.FUT A.1.SG do walk(INCMPL) LOC DEM little village=R3
 'I am going to walk to that little village' (HTS'ON_016)
- b. bin in ka'h in xíimba-t yuum ahaw
 IMM.FUT A.1.SG do A.1.SG walk-TRR(SUBJ.B.3) master chief
 'I am going to visit the chief' (HTS'ON_020)

The preposition *ti'* no longer shows up in this construction in Modern Yucatec. Furthermore, the full verb no longer needs to be an agentive verb, as shown by (68).

- (68) bin in ka'h kíim-il
 MYM go A.1.SG do die-INCMPL
 'I am going to die' (FCP 395)

By desemanticization, the semantic component of motion has disappeared, and what remains is only the direct tie between present topic time and future event time. *Bin ... ka'h* is now a complex auxiliary with the value of immediate future.

Bin ... ka'h is the only discontinuous auxiliary of the language. And while *bin* is impersonal like all its other auxiliaries, *ka'h* is the only one with personal inflection. As a consequence, with transitive full verbs, the subject is cross-referenced twice (Briceño Chel 1998:82), as is apparent from examples like (67)b. There is, consequently, much redundancy in this auxiliatation. In the colloquial register of Modern Yucatec, the full forms are rarely used. They are normally reduced in phonologically irregular ways, and there is currently much variation in this respect. The fusion of *bin in/a/u ka'h* into *nika'h/naka'h/nuka'h* (noted in Briceño Chel 1998:82, 2000[i]:88f, 2006, sections 1.2f) is illustrated in (69)a. If the full verb is transitive and therefore preceded by a set A index, the *ka'h* of the auxiliary coalesces with it, as in #b.

- (69) a. Ni-ka'h meyah t=in kool.
 MYM IMM.FUT A.1.SG-do work LOC=A.1.SG milpa
 'I am going to work on my cornfield.' (Briceño Chel 2000[i]:88)

- b. Ni-k=in hant bak'
 IMM.FUT\A.1.SG-do=A.1.SG eat:TRR(SUBJ) meat
 'I am going to eat meat' (Briceño Chel 2000[i]:99)

Other idiosyncratic mergers occur in a variant of the construction in which the *ka'h* component takes set B indexes. Using this variant with a transitive verb leads to cross-referencing the subject three times. The reduction processes applied in this context disguise this to a certain extent. Thus, the first syllable of the complex auxiliary in (70) contains the vowel of the first person singular set A clitic.

- (70) mi-ka'h-en in wa'l te'x ...
 MYM IMM.FUT\A.1.SG-do-B.1.SG A.1.SG say(SUBJ) you.PL
 'I'm going to tell you ...' (FCP_043)

However, contractions with clitics of other persons may also contain an *i*, so that the interim result of these changes is an auxiliary which takes set B suffixes to cross-reference the subject of the clause core. In cases like (70) it leads to doubling, quite untypical of the language. The only comment one may make on the situation is that before a construction reaches the end-point of its grammaticalization path, much variation occurs.

The following steps compose this complex grammaticalization process:

- The motion verb *bin* 'go' is semantically bleached; the movement component disappears.
- The incomplete or subjunctive verb remaining in the extrafocal clause is reinterpreted as the main verb.
- The internal structure of the complex '*bin* set_A_index *ka'h*' is blurred. By being forced into the Procrustean bed of the initial position, it is reanalyzed as a discontinuous immediate future auxiliary with internal inflection.
- The whole sentence ceases to be complex; it is reinterpreted as a single clause.
- Whatever may have remained of the focal emphasis on the initial verb vanishes; the construction becomes open to different information structures that may be superimposed.

The model of this complex reanalysis is the structure of the simple fully finite clause, in which the initial auxiliary combines with the enclitic subject pronoun and is followed by the verbal complex (as, e.g., in (57)b). The result of the change conforms to that model to the extent possible for a discontinuous auxiliary.

3.6 Copula

Mayan languages generally lack a copula proper. Instead, they have derivational processes of verbalization which are regularly used if a non-verbal predicate needs to inflect for verbal categories, i.e. needs to be marked for some aspect or mood. While most of these derivational operators contribute some aktionsart shade to the meaning, Colonial Yucatec does have a pure copula. The root *h-* is an inactive intransitive verb which serves as an all-purpose verbalizer. Its free use is limited to its function as an impersonal auxiliary (section 3.4.2.1) in the modal construction illustrated by (71).

- (71) h-ij xi-c-en ti Ho (Coronel 1620:75)
 CYM COP-CMPL(B.3)go-SUBJ-B.1.SG LOC Mérida
 'I would have gone to Mérida'

Unless this formative is in initial position, it is enclitic. Then it combines with any nonverbal predicate and conjugates through the persons and numbers, as in (72) and (73).

(72) makol=h-en in cámbec in mehén-ob
 CYM lazy=COP(CMPL)-B.1.SG A.1.SG teach(SUBJ) A.1.SG son-PL
 ‘I was lazy in teaching my sons’ (Coronel 1620:52)

(73) ca-ten=h-i in kaç-ic çukin
 CYM two-times=COP-CMPL(B.3) A.1.SG break-DEP fast
 ‘(it was) twice (that) I broke fast’ (Coronel 1620:66)

This formative survives in contemporary Maya only in the third person singular form of the completive aspect of a handful of non-verbs, like *yaanhiih* ‘there was’, *sáashiih* ‘it was at dawn’. In all other cases, the non-verbal predicate either is verbalized by one of the other verb-creating derivations (cf. (49)) or accompanied by a temporal adverb. Compare the first clause of (74) with (72).

(74) le ka'ch hach chichan-en=e'
 MYM DEM back.then really small-B.1.SG=TOP
 beey u yúuch-ul teen=o'
 thus A.3 happen-INCMPL me=R2
 ‘when I was very young, that happened to me’ (XIPAAL_043)

The modal meaning coded by *h-* in (71) is now also coded by the temporal adverb *ka'ch*, as in (75).

(75) he'l ak bin-o'n ka'ch wáah ma'loob k'iin=e'
 MYM ASS.FUT A.1.PL go(INCMPL)-1.PL back.then if good sun/day=R3
 ‘we would go if the weather were fine’ (ACC_0529)

This is, then, historical evidence of the loss of a copula.

4 Grammaticalization of complex constructions

4.1 Adverbial clauses

Adverbial clauses are very loosely integrated, and their dependency is not easily distinguished from parataxis. They are introduced by coordinative or subordinative conjunctions. These may be denominal or deverbal in origin. Denominal conjunctions start out as complex prepositions.

Occupying the position of the relational noun in the construction of the denominal preposition of section 2.4, the abstract noun *ok'lal* ‘reason, sake’²⁵ forms a complex preposition meaning ‘on account of, because of’, as in (76). The component *tu* is preserved in written style and usually dropped in casual speech.

(76) xotk'int-a'b t=u yo'lal u si'pil
 MYM sentence-CMPL.PASS(B.3) LOC=A.3 account A.3 sin
 ‘he was sentenced on account of his crime’ (Maglah Canul 2014 s.v. *xotk'iin*)

The complement may be a clause. Of the numerous occurrences in the corpus, all are purpose clauses, as in (77); none is a causal clause s.s.

(77) no'xt-eh yo'lal mu'n lúub-ul
 MYM wedge-IMP so.that NEG:A.3 fall-INCMPL
 ‘wedge it so it doesn't tip over’ (RMC_2092)

²⁵ possibly based on the spatial region noun *óok'ol* ‘top’ of the paradigm treated in ch. 2.4

In colonial times, the complex preposition *men(el)* Z ‘at Z’s instigation, by Z’s agency’ is rather freely adjoined to verbal predications, as in (78) (cf. also (17) above).

- (78) *úchuc* *t=in* *men*
 CYM possible LOC=A.1.SG doing
 ‘I can (do it)’ (Coronel 1620:68)

This prepositional construction got fixed in the function of an agent phrase in passive constructions. This resulted in internal inflection, like *tinmen* ‘by me’, *tamen* ‘by you’ (Coronel 1620:33). The third person form *tumen* then got lexicalized and now is underway to an invariable preposition taking free personal pronouns as its complement, like *tumen teen* ‘by me’. Finally, it has also become a causal conjunction, as in (79).

- (79) *le* *chanpaal=a’* *chi’chnak* *tumen* *wi’h*
 MYM DEM baby=R1 ill-tempered because hungry
 ‘this baby is ill-tempered because he is hungry’ (Maglah Canul 2014 s.v.
 chi’chnak)

Summarizing the preceding two cases, a construction based on an abstract noun is grammaticalized to a subordinative conjunction.

In Colonial Yucatec, conditional clauses are introduced by the all-purpose conjunction *ca* (*káa*) (CONJ), other uses of which are illustrated in (1)b, E40 and (82). Alternatively, they may be introduced by *wáah* ‘if’, which originates in an interrogative marker, viz. a particle marking polar interrogative sentence-type in independent sentences and subordinating dependent polar interrogatives, as in (48) and (53). In Modern Yucatec, only this latter conjunction survives in conditional function. It is optionally reinforced by *tumen*, yielding *wáah tumen*, with no change to the conditional sense.

4.2 Insubordination and promotion

In the 17th cent. grammars, the use of what were to become the imperfective (section 3.4.2.2) and the progressive (section 3.4.2.3) auxiliaries is described in connection with complex sentences. Examples are E40 for imperfective *lic* and (45) for progressive *tan*. There is also evidence for *licil* serving as a temporal conjunction, viz. Yucatec *ka’likil* ‘at the time, while’ and Itzá *kil* ‘when’ (Hofling 1991:26). Thus, it is possible that these formatives first introduced a temporal clause serving as the background for an adjacent main clause, and in a second step, the former got detached and independent. Historical evidence for such a diachronic hypothesis is, however, unknown.

The case of the Colonial Yucatec comitative preposition *etel* (i.e. *éetel*) ‘with’ may be conceived as one of promotion to a higher syntactic level. The preposition is based on the relational noun *éet* ‘companion’. The derivation in -*VI* must have yielded an abstract relational noun ‘company’, which however is not attested as such. The word only occurs in the construction of denominal prepositions shown in section 2.4, so that the basic meaning of *ti’* A_i *éetel* Z_i (with A as the possessive clitic) is ‘in Z’s company’.²⁶ By the start of the colonial history, this preposition is already more grammaticalized than the other denominal prepositions. One of the relevant clues is the fact that the subordinating *ti’* is generally – though not always – omitted. The construction is illustrated by the examples in (80).

²⁶ There is, in Colonial Yucatec, a related preposition *étun* ‘at, by’ (French *chez*, German *bei*).

- (80) v étel – au étel – y-etel Juan – x-en y-etel ob
 CYM A.1.SG with A.2 with A.3-with John go-IMP A.3-with PL
 ‘with me – with thee – with John – go with them’ (Coronel 1620:90)

Contexts of use of this preposition expand in two directions. On the one hand, the structural asymmetry inherent in an adposition was already relaxed in Classical Maya. The inherited Yucatecan neutral conjunction is *ca* (*káa*), mentioned in section 4.1. It introduces clauses with no distinction as to coordination or subordination and no information on the interpositional relation, but it does not coordinate phrases. Phrases are coordinated in Colonial Yucatec by (*y*)*etel*, as in (81).

- (81) yan=h-om uil chicil ti kin yetel ti v
 CYM EXIST=COP-FUT(B.3) DUB sign LOC sun and LOC moon
 ‘there may be signs on the sun and on the moon’ (Coronel 1620:28)

The second member of such a coordinative construction is neither first nor second person, so the preposition fossilizes in its third person form, *yéetel*. This form develops into an all-purpose symmetric conjunction largely exchangeable with the Spanish loan *y* ‘and’. This use can already be found in Colonial Yucatec, as in (82).

- (82) tibil ca a can-ab yetel ca xi-c-ech
 CYM just CONJ A.2 learn-SUBJ(B.3) and CONJ go-SUBJ-B.2.SG
 ‘it would be befitting that you learn it and go’ (San Buenaventura 1684:25v)

The change of the syntactic function of the syntagma introduced by *yéetel* from governed to independent is a (diachronic) promotion to a higher syntactic function.

On the other hand, the selection restriction on animate complements is dropped, so that the comitative preposition develops an instrumental use. Traditionally, the instrumental function had been coded by the all-purpose preposition *ti*. In the two 17th cent. grammars, *éetel* is found in comitative, but not in instrumental function. Beltrán (1746, section 20) notes that *ti* in instrumental function is increasingly ousted by *yéetel*. Thus, (83)a would be an example of traditional usage, whereas #b would illustrate then fashionable usage.

- (83) a. lox tî chô
 CYM box(IMP) LOC(B.3) wood
 ‘beat him with a club’
 b. lom y-etél hulté
 stab(IMP) A.3-with spear
 ‘stab him with a spear’

This is, in sum, a case of polygrammaticalization.

4.3 Discourse-level conjunction

The phase verb *ts’o’k* ‘end’ seen in section 3.4.2.4 provides another example of polygrammaticalization. In the imperfective aspect, it is the grammaticalization source of a conjunction in a paratactic construction of the form [P; *ku ts’o’kole*, Q], literally: ‘P; (now) this ends, (and) Q’, as in E84.

- E84 K=u ts’o’k-ol=e’ k=in p’o’-ik;
 MYM IPFV=A.3 finish-INCMPL=TOP IPFV=A.1.SG wash-INCMPL
 ‘Then I wash it;’

k=u ts'o'k-ol=e'
 IPFV=A.3 finish-INCMPL=TOP
 k=in ts'a'-ik t=eh k'áak'=o' ...
 IPFV=A.1.SG put/give-INCMPL LOC=DEM fire=R2
 'then I put it on fire ...' (CHAKWAAH_03f)

Q is anaphorically connected with P both by the index *u* (A.3) and by the referential clitic *e'* (R3 or TOP) composing the emergent conjunction. It is very widely used in the colloquial register, as witnessed by the monotonous repetition in E84. The phrase *ku ts'o'kole'* is commonly reduced to *ts'o'(h)le'*, the loss of the auxiliary complex being due to grammaticalization, while the shrinking of the verb form follows regular phonological processes.

5 Main constituent order change

Let the basic main constituent order be that order of the main constituents of an independent declarative clause which involves the least grammatical apparatus. In the verbal clause of Yucatecan languages and several other Mayan languages, this order is VOS. (85) shows it for Modern Yucatec; cf. (35) for Colonial Yucatec.

(85) káa t=u t'an-ah hun-túul éenkargaadoh le taatah-tsil=a'
 MYM CONJ PFV=A.3 call-CMPL one-CL.AN employee DEM father-ABSOL=R1
 'and this father called an employee' (HLO_074.1)

Needless to say, such structurally complete configurations are not particularly frequent in the texts. Within the confines of the simple clause, there is, in Yucatec, no alternative to the verb as first main constituent. In independent sentences, this is not necessarily the sentence-initial position, because as seen in section 3.4, a verbal sentence generally starts with an auxiliary.

Marked information structure provides for two sentence-initial positions to be occupied by main constituents, viz. the position of the left-dislocated topic and the focus position. The maximum configuration was dubbed LIPOC (language-independent preferred order of constituents) in Dik 1981:189ff and may be represented by Figure 5. (86) is an example.

Figure 5 Extended sentence structure

[left-dislocated topic [focus extrafocal clause]]

(86) le chaan lak he'l=a'
 MYM DEM little bowlPRSV=R1
 in kiik síih-mah-il ten
 A.1.SGelder.sister give.as.present-PRF-DEP(B.3) me
 'this little clay bowl, my elder sister gave it to me' (ACC_0039)

The left-dislocated topic is marked by a referential enclitic, R1 in (86). The paradigm contains an element (R3, last seen in E84) which functions as a topicalizer if no deixis is involved. The focus itself is not marked, but the extrafocal clause is marked by a dependent status suffix, *-il* in (86) (s. section 3.2). Note that the construction of (86) does not count as an instance of SVO order, since the S is not in the same clause as the V.

Both left-dislocation and preverbal focusing are frequent in the texts. Certain categories, especially adverbs ((43)b) and adverbialized verbs, have a preference for the preverbal position. To the extent that their position becomes fixed, the emphatic potential of the construction

as a focus construction is undermined. This is a correlate of grammaticalization (Lehmann 2008).

While the marking of constructions with preverbal main constituents remains relatively stable in the other Yucatecan languages, it gets lost in Lacandón. Part of the relevant change is a morphological change: the paradigm of the referential clitics including the topicalizer and the dependent status on the verb get lost. As a result, we find sentences such as E87.

E87 K'akoch t=u me(n)t-a wolol k'uh.
 LACANDÓN K'akoch PFV=A.3 make-CMPL all god
 'K'akoch made all the gods.' (Bruce S. 1974:19)

E87 is a chapter heading and therefore lacks information structure. Nevertheless, the subject is in preverbal position, and there is no mark of left-dislocation or focusing. This structure characterizes the majority of independent declaratives in the Lacandón corpus and is the default order according to Bruce S. 1968:104-106. Thus, the original information structural profile of this construction gets lost together with its outward marks. It is not even possible to ascertain whether the construction illustrated by E87 has been grammaticalized from a left-dislocation or from a focus construction. What remains is a new basic constituent order, viz. SVO. The same phenomenon may be observed in other Mayan languages, esp. Ch'orti'. In Yucatec Maya, too, this order has become more frequent recently; and sometimes, esp. in the speech of younger generations, the marks of topicalization and focusing are missing.

This syntactic change is an instance of the grammaticalization of a construction which can easily occur by itself and has occurred in many languages. However, in the sociolinguistic setting in which the Mayan languages are found, it seems plausible that the change is fostered by contact with Spanish. While this is indeed plausible for all the other Mayan languages, it is more problematic in the case of Lacandón, as the Lacandones are known to have avoided Spanish contact as far as possible up to the end of the twentieth century..

6 Comparative outlook

Some of the grammaticalization phenomena reviewed above recur in other languages or are even widespread. These include

- the reduction and fossilization of the numeral classifier paradigm (section 2.1)
- the development of a definite and indefinite article system on the basis of a demonstrative and the numeral 'one' (section 2.3)
- the transformation of spatial region and other relational nouns into adpositions (section 2.4), and the use of the latter as subordinative conjunctions (section 4.1)
- the reduction of demonstratives to personal pronouns and to determiners and their reinforcement (sections 2.5.1f)
- the agglutination of an auxiliary, fully equipped with finite morphology, to the full verb (sections 2.5.2.3f)
- the formation of interrogative proforms from indefinite proforms used in a focus construction (section 2.5.4)
- the obtainment of a future from a motion-cum-purpose construction, and of a progressive aspect from a verb-focus construction (section 3.5.3)
- the desemanticization of a comitative into an instrumental adposition, and the use of such an adposition as a coordinator (section 4.2)

- the acquisition of a new main constituent order by leveling of the specific information structure associated with a dislocation or clefting construction (section 5).

Other changes seem to be rarer and may be typical of Mayan or even just of Yucatecan languages:

- the recruitment of a noun meaning ‘counterpart, replica’ as a reflexive prop (section 2.5.3)
- the full grammaticalization of passive morphology down to an internal modification process and to an infix in a suffix (section 3.3)²⁷
- auxiliation based on impersonal complement constructions (section 3.4.2), although this is common for modals
- double cross-referencing of a verbal actant in a periphrastic construction.²⁸

As mentioned at the outset, the Mayan family is rather uniform in its syntactic and morphological categories. Counterparts of most of the above-mentioned changes may be found in most or all members of the family. However, the Yucatecan branch stands out by the low degree of grammaticalization of the possessive/ergative pronominal indexes, of the sentence-initial auxiliaries and the syntagmatic complexes formed by these two classes of formatives. Several other Mayan languages have gone much further in their grammaticalization, turning them into slot fillers of a template of verbal prefixes. Contrariwise, other Mayan languages, with Chuj, Jacaltec and Mam among them, have grammaticalized a class of directionals in preverbal position, of which there is no trace in Yucatecan. It is conceivable that some of the more idiosyncratic grammaticalization paths may be used to typologically characterize a language.

7 Discussion/conclusion

In internal comparison, it strikes the eye that some changes occurred rather quickly within the period of Modern Yucatec, while others have been underway since Pre-Columbian times. The former comprise the article system, the preposition ‘for’, clause coordination with ‘and’ and the main constituent order SVO. These are just the changes that follow a Spanish model. In comparative perspective, it appears that certain kinds of change are principally available in a language whose structure provides the necessary conditions, but that they may be triggered and accelerated by contact with another language. In such cases, one may speak of loan grammaticalization.

Abbreviations in glosses

| | | | |
|---------|--|------|----------------------------|
| 1, 2, 3 | 1 st , 2 nd , 3 rd person | Aux | auxiliary or modal verboid |
| A | possessive/subject function | B | absolutive function |
| ABSOL | absolutive morpheme | CAUS | causative |
| ABSTR | abstract nominalizer | CFP | clause final particle |
| ADVR | adverbializer | CL | numeral classifier |
| AN | animate | CMPL | completive |
| AP | antipassive | CONJ | all-purpose conjunction |
| ASS | assurative | COP | copula |

²⁷ The Latin *r*-passive is completely grammaticalized, too, but structurally only reaches the stage of affixation.

²⁸ Andrej Malchukov mentions that this may be found in Ket and in Athapaskan, too.

| | | | |
|--------|---|-------|--------------------------------|
| DEB | debitive | R3 | non-deictic referential clitic |
| DEM | neutral demonstrative | REL | relational morpheme |
| DEP | dependent status | RSLTV | resultative |
| DIR | directional | SG | singular |
| DUB | dubitative | SR | subordinator |
| EXIST | existence | SUBJ | subjunctive |
| FIENT | fientive | TERM | terminative |
| FUT | future | THM | thematic element |
| HAB | habitual | TOP | topicalizer |
| HOD | hodiernal past | TRR | transitivizer |
| ILL | illative | | |
| IMM | immediate | | |
| IMP | imperative | | |
| INAN | inanimate | | |
| INCMPL | incompletive | | |
| INDIF | indifferent | | |
| INT | interrogative | | |
| INTROV | introversive | | |
| IPFV | imperfective | | |
| LOC | locative | | |
| NEG | negator | | |
| PASS | passive | | |
| PFV | perfective | | |
| PL | plural | | |
| PRF | perfect | | |
| PRSV | presentative | | |
| PROG | progressive | | |
| QUOT | quotative | | |
| R1, R2 | referential clitic of 1 st , 2 nd ps. deixis | | |

Other abbreviations

| | |
|-------|-----------------------|
| CYM | Colonial Yucatec Maya |
| MYM | Modern Yucatec Maya |
| N.rel | relational noun |
| Nom | nominal (group) |
| NP | noun phrase |
| P | preposition |
| PP | prepositional phrase |
| RP | referential particle |

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²⁹ Pagination in this edition is in disorder, which is why references contain doubled page numbers and specification of recto (r) and verso (v).