



Mayan Historical Linguistics in a New Age

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Abstract

Mayan historical linguistic research has progressed at a healthy pace since the 1970s. The recent decipherment of ancient Maya hieroglyphic writing and the publication, in the last decade, of a large cohort of high quality linguistic descriptions of several Mayan languages, many of them written by native speakers of those languages, have opened a floodgate of new linguistic data that promises to revolutionize our understanding of the history of the language family. In particular, recent research has shown the Mayan region to have been a remarkably dynamic zone of language contact. Contact among Mayan languages has the potential to illuminate mechanisms and constraints on language contact between related languages. New data and attention to contact phenomena may also help clarify long-standing disagreements about the historical relationships among Mayan languages, particularly Wastek, Tojol-ab'al, and the language of the hieroglyphs, all of which have been an important impetus for historical linguistic research in the past decades.

1. Introduction

There has been a surge in recent years of popular interest in the Maya. The media attention generated by the pop-cultural '2012 Phenomenon'¹ has made "Mayan Apocalypse" and "B'aktun" worldwide buzzwords, listed as number four on the Global Language Monitor's "Top Words of 2012"². Historical linguistics scholarship on Mayan languages is also experiencing a surge of new research which builds on, and in some cases calls into question, the large body of work carried out particularly in the 1970s and 1980s. This boom in Mayan historical linguistics is not due to media attention or big-budget Hollywood films, but to recent advances in the decipherment of ancient Maya hieroglyphic texts that have provided linguistic data from more than 1000 years before the Spanish conquest, and an increase in quality linguistic description of contemporary Mayan languages done by a new generation of highly trained linguists, including many native speaker linguists (England 2003). This article will provide a summary overview of work in the historical linguistics of Mayan languages over the last few decades and how that new wealth of data is leading to new proposals about proto-Mayan lexicon, phonology, morphology and syntax. In particular, research has begun to recognize the importance of contact-induced language changes throughout the family, which have been particularly extensive. The study of language contact within the family can inform cross-linguistic theories of the limits and processes of language contact, especially in cases of intensive contact among genetically related languages.

2. Overview of the Family

The Mayan language family includes between 29 and 31 contemporary languages spoken³ collectively by more than 5 million people in Guatemala, Mexico, Belize, Honduras (Figure 1), and in diaspora communities in the US and Canada. The languages range in

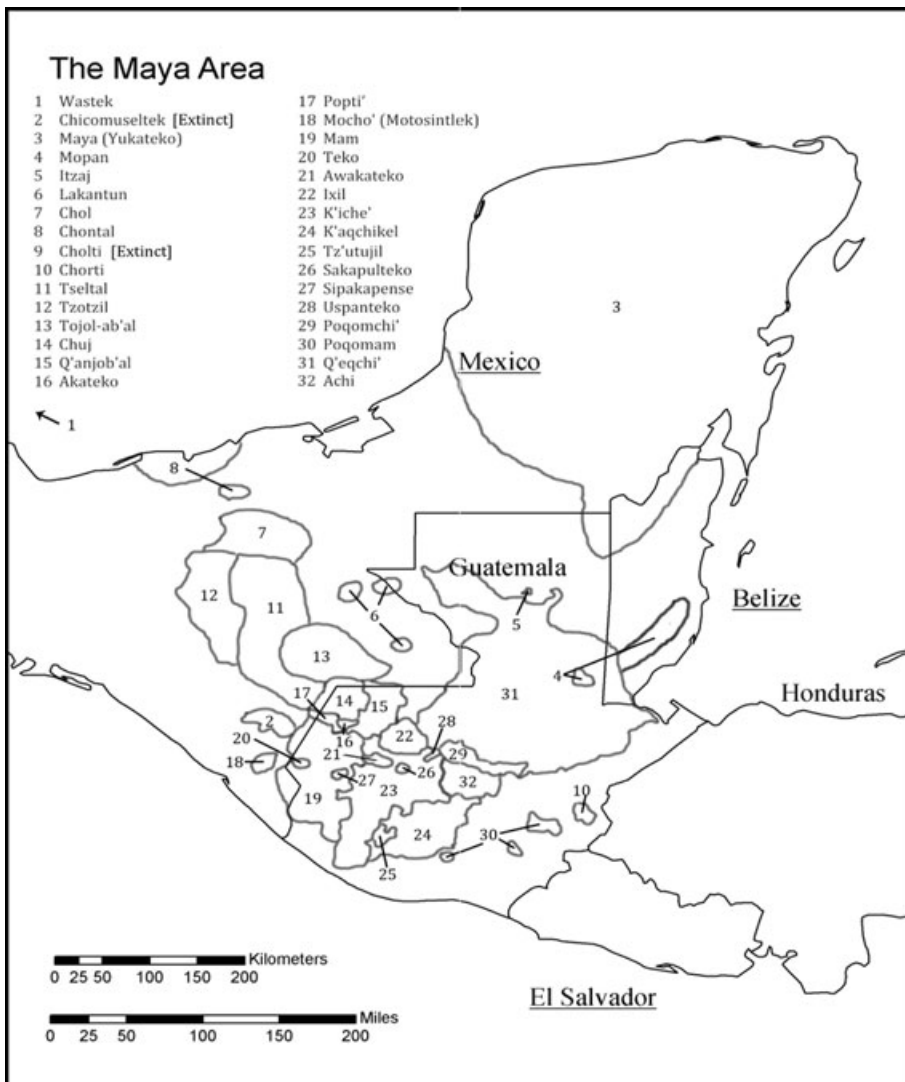


Fig. 1. Current geographical distribution of Mayan languages. From Law (2011).

vitality from highly endangered, with elderly speakers numbering in the dozens or less (Itza', Hofling 2000; Mocho, Martin 1994, 1998) to thriving languages, with half a million to a million speakers, serving as first language and the primary mode of communication in numerous communities (K'iche', Yukatek, Tsotsil). In addition, written records and salvage linguistic work have left us with some documentation of at least three now dead Mayan languages: Chicomuseltek (Campbell and Canger 1978); Ch'olti' (Morán 1695, Robertson et al. 2010) and the language of Maya hieroglyphic inscriptions, recorded in some 20,000 terse hieroglyphic inscriptions; these ancient texts are a valuable linguistic resource and document many important details of phonology, morphology and syntax. It has been argued that the latter two languages are ancestral forms of the contemporary language Ch'orti' (Houston et al. 2000). If true, this would provide nearly two

millennia of virtually continuous, if admittedly partial, documentation for a language; a situation unprecedented in the New World and rare anywhere else. Table 1 provides a list of Mayan languages in their respective subgroups, with recent estimates of number of speakers for each.

Mayan languages are head-marking, morphologically synthetic, mildly agglutinating, and have fairly flexible word order. Most Mayan languages (an exception appears to be Ch'orti') have a basic verb-initial word order, with the preferred order in most languages being either VOS or VSO, though many other word orders are possible for different pragmatic, semantic, and discourse organizing purposes (see England 1991 for the history of basic word order in Mayan). Most Mayan languages are predominantly morphologically and syntactically ergative, though several languages display a nominative-accusative pattern of person marking in certain aspects (incomplete), certain syntactic contexts (dependent clauses), or certain persons (first and second person). Several Mayan languages also have systems of numeral and noun classifiers that are quite developed (Berlin 1968,

Table 1. The Mayan Language Family⁴

K'iche'an

K'iche' (922,378) and Achi (51,593)
 Q'eqchi' (726,723)
 Sakapulteko (3940)
 Sipakapense (6344)
 Kaqchikel (475,889)
 Tz'utujil (47,669)
 Uspanteko (1231)
 Poqomam (9548)
 Poqomchi' (69,716)

Mamean

Awakateko and Chalchiteko(16,272)
 Mam (519,664)
 Tektiteko (1241)
 Ixil (69,137)

Q'anjob'alán

Q'anjob'al (99,211)
 Akateko (5572)
 Chuj (38,253)
 Popti' (38,350)
 Mocho (170)
 Tojol-ab'al (51,733)

Ch'olan-Tseltalan

Tseltal (445,856)
 Tsotsil (404,704)
 Ch'orti' (9105)
 Chol (212,117)
 Chontal (38,561)
 Ch'olti' (Extinct)

Yukatekan

Yukateko (759,000)
 Mopan (9668)
 Itza' (123)
 Lakantun (1000)

Wastekan

Wastek (161,120)
 Chikomuselték (Extinct)

Zavala 2000), and make various grammatical distinctions based on transitivity, animacy and definiteness.

Several aspects of proto-Mayan grammatical structure are fairly uncontroversial. The proto-Mayan phonemic inventory included a series of ejective stop and affricate consonants (*b', *t', *t', *ts', *ch', *k', *q'), as well as voiceless counterparts and a glottal stop, but not a corresponding series of voiced consonants. It is unclear whether proto-Mayan *b', which contrasted with *p was phonetically ejective or implosive. A voiced/voiceless contrast was also absent in the series of fricatives, which included alveolar, palatal, velar and glottal fricatives. Proto-Mayan roots are mostly mono-syllabic with CVC syllabic structure, though some other syllable shapes can be reconstructed. Proto-Mayan was a head-marking, ergative language with a verb-initial basic word order. Ergative agreement markers also functioned as possessive markers. Root classes included transitive and intransitive verb roots, ideophonic affect roots, positional roots, nouns, a small number of adjectives and one or two prepositions. Passive, mediopassive and antipassive voices were marked with verbal suffixes. Most derivational and inflectional morphology was sensitive to word class and different paradigms can be reconstructed for use with different root classes, as well as a set of affixes for use with derived forms. Indirect objects and other non-core grammatical relations were expressed with possessed relational nouns. Aspectual distinctions were made with preverbal aspectual particles. Mood was primarily expressed with verbal suffixes, as was the perfect and voices including passive, mediopassive and antipassive. Both ergative and absolutive arguments were referenced with agreement clitics. Ergative agreement was marked with a series of verbal preclitics, with distinct prevocalic and preconsonantal allomorphs. Absolutive agreement was indicated with a postclitic that followed the aspect marker, when there was one, and followed the verb or stative predicate when no aspectual particles or auxiliary verbs were present. Arguments could be fronted for focus but the fronting of agents required use of a special verbal derivation. The most detailed published treatments of the overall grammatical structure of proto-Mayan to date are Kaufman (1990) and Robertson (1992). Kaufman with Justeson (2003) provides the most detailed presentation of lexical reconstructions for proto-Mayan.

3. *Early Research on Mayan Historical Linguistics*

Documented speculation about the prehistory of Mayan languages begins with the first writings of Spanish linguists and historian-priests in the 16th and 17th century. Serious comparative linguistic work began around the end of the 19th century with the work of Daniel Garrison Brinton (1837–1899), Karl Hermann Berendt (1817–1878), Karl Sapper (1866–1945), Otto Stoll (1849–1922) and William Gates (1863–1940). Early historical work included some primary fieldwork on spoken languages, in the form of elicitation of word lists (especially Stoll), but the bulk of efforts by early scholars were archival: they searched out, collected and copied colonial manuscripts from local and national archives throughout Mesoamerica and Europe written in and about many indigenous languages, Mayan as well as others, and analyzed those manuscripts. A more documentary, fieldwork-oriented approach to Mayan historical linguistics began in earnest with the work of Norman McQuown, who studied under Edward Sapir and Leonard Bloomfield in the late 1930s, as well as a few of his contemporaries. The baseline for most modern work on Mayan historical linguistics, however, was established by Terrence Kaufman, a student of McQuown's, who carried out extensive elicitation and survey-based linguistic research on Mayan languages.⁵ The quality and quantity of the linguistic materials gathered by Kaufman were orders of magnitude beyond anything previously used to develop

hypotheses about Mayan prehistory. The family tree that Kaufman proposed in 1964, and then revised slightly in publications a few years later (Kaufman 1969, 1972) has remained the default model of genetic relations among Mayan languages for nearly half a century.

Of course, the history of diversification proposed by Kaufman has not been without critics. None of the counterproposals articulated in the subsequent decades have achieved universal acceptance among mayanists, but these critiques have highlighted particularly troublesome (and interesting) points in Mayan language history, and have been the impetus for a great deal of historical linguistic research. More recently, several attempts to apply automated cladistic, phylogenetic or algorithm-based methods to the Mayan language family have mirrored the disagreements identified through traditional methods (Brown et al. 2008, Holman et al. 2008, Holman et al. 2011, Léonard 2010, Léonard et al. 2010, Atkinson 2006: §6). The main points of disagreement since Kaufman's proposal include the place of Tojol-ab'al and Wastek, the configuration of Eastern Ch'olan (Ch'orti' and Ch'olti') and how these languages relate to the language of the hieroglyphs. For the most part, Kaufman's arguments and evidence for his model of the Mayan language family diversification are unpublished and unavailable to the author and others attempting to evaluate his proposals, though it is often possible to infer what evidence he is likely to have used to develop his hypotheses. These problem areas will be discussed in greater detail below. In some cases, the disagreements stem from incomplete data or different analyses of the relevant language – the debate over the linguistic affiliation of the hieroglyphs is a good example of this. However, these conflicting interpretations can also represent truly conflicting theoretical positions regarding what types of language change are possible or probable in human language generally. For example, at its heart, the disagreement about the place of Wastekan is about how many parallel innovations one can reasonably accept as having occurred independently (at this point, over half a dozen phonological and morphological innovations have been identified that would need to have developed independently in Wastekan and Ch'olan-Tzeltalan according to Kaufman's model). In the case of Tojol-ab'al, the question hinges on borrowability: are the grammatical and lexical features that Tojol-ab'al shares with Chuj more or less likely to be shared through contact than the linguistic features that Tojol-ab'al shares with Tzeltal and Tsotsil?

4. *The Maya Homeland and Proto-Mayan Cultural Features*

Even with a few problem spots in the history of the diversification of Mayan languages, it is clear that these languages came from a common source, and linguistic paleontology suggests several cultural characteristics of Proto-Mayan speakers. It appears that proto-Mayan speakers had well developed agricultural practices, cultivated maize, beans, squash, chiles and other plants and had domesticated dogs and turkeys. In some cases, such as with the common bean, linguistic evidence suggests that cultivation began much earlier than what is archaeologically attested (Brown 2006, 2010).

While information about some cultural practices of proto-Mayan speakers is reconstructible, there have been several conflicting hypotheses concerning where they lived. Proposed locations for the proto-Mayan homeland have ranged from northern South America (Paltineanu 1986), Central America (Tuzumal or Comayagua—cited and rejected in Schumann 1983: 355), or Chalchuapa in the South-eastern Highlands of Guatemala (Josserand 1975), to coastal Veracruz, near the modern-day Huasteca (Manrique Castañeda 1989). However, by far the dominant hypothesis places proto-Mayan speakers in the Southern highlands of Guatemala (Diebold 1960, Kaufman 1976). The main argument in

support of this rests on a ‘least moves’ assumption: the Maya highlands have the greatest amount of linguistic diversity, so a highland homeland would require the fewest migrations to explain the current linguistic geography of the family (Diebold 1960). Kaufman (1976) adds two further lines of reasoning to this and refines the geographical range of the proposed homeland to the region around the modern-day highland town of Soloma, Huehuetenango, in highland Guatemala, an area currently occupied by speakers of Q’anjob’al. In addition to the ‘least moves’ argument, Kaufman argues that 1) rivers would have facilitated movement of populations, so a location at the head of several rivers would have enabled the dispersal of peoples, as Kaufman puts it “it is easier to move downstream than upstream” (1976: 104). He notes that Soloma is near the heads of several important rivers; and 2) Proto-Mayan included terms for both Highland flora and fauna (i.e. *tyaj ‘pine tree’) and Lowland flora and fauna (i.e. *ts’ihn ‘cassava’). Kaufman argues that because highland Mayan languages today have terms for lowland flora and fauna but lowland people are not generally familiar with Highland flora and fauna, we might infer that a lexicon with both Highland and Lowland terms would be more likely to belong to a Highland language, and not the reverse, suggesting a Highland homeland for proto-Mayan. Neither of these arguments is probative, however. Riverine travel is not limited to going downstream, and even if the generalization about unequal highland and lowland botanical and zoological knowledge is accurate (something that has not been explicitly demonstrated in published work), it is not clear that this can plausibly be extended back to the speakers of proto-Mayan. The fact that the earliest archaeological evidence of ceramics (Swasey – Hammond 2000) and domesticated maize (Pohl et al. 1996) in the Maya region are in Lowland Belize, rather than the highlands, have led some to prefer a Lowland proto-Mayan homeland (Willey 1982, Atkinson 2006: 6.6).

Absolute dating for the diversification of proto-Mayan has received efforts from several directions. In spite of critiques, the glottochronological estimates of Kaufman (1976), which place the initial break-up of proto-Mayan (the departure of the Wastek from the Maya homeland) at 2200 B.C, are still widely used by archaeologists working in the region, in part because they seem superficially to correspond fairly well with archaeologically identified phases, though careful consideration of these correspondences reveals several problems. More recently Atkinson (2006:§6) has applied several newer computational models for the diversification of the Mayan language family, and proposed a mean time depth for the family of 6000 to 6500 BP, two millennia older than the widely cited glottochronological estimates. Holman et al. (2011), using another computational method, and applying an inferred average rate of change for languages of the world, proposed a date for proto-Mayan divergence at 2200 BP, 2000 years more recent than Kaufman’s estimates. Needless to say, both newer estimates of time depth would have significant implications for the development of Mayan languages. For example, Holman et al.’s estimate suggests an exceptionally compressed rate of change and locates proto-Mayan in a time period for which we have written texts, though these remain undeciphered. No published work has evaluated these hypotheses for Mayan languages specifically, though the methods used in both cases remain somewhat controversial.

5. *Relationship with Other Language Families*

Interest in historical connections between Mayan languages and other languages of Mesoamerica and the Americas more generally has generated at times fanciful proposals, but also a great deal of discussion of general relevance to historical linguistics concerning methods and evidence for evaluating ancient contact and distant genetic relationships.

Contact between Mayan and non-Mayan languages is common, unsurprising considering that Mesoamerica has been famously described as a particularly strong linguistic area (Campbell et al. 1986). Mayan languages have clear lexical and grammatical evidence of contact with Mixe–Zoquean from an early stage, as a result of the latter family’s hypothesized connection to the Olmec civilization, which dominated Mesoamerica in the last two millennia BC (Campbell and Kaufman 1976, Justeson et al. 1985). There is also evidence of more limited or more recent contact between some Mayan languages and Otomanguan (Hopkins 2012), Nawa and, to a smaller degree with Totonakan.⁶ Dakin and Wichmann (2000) argue that both comparative and hieroglyphic evidence concerning words for ‘cacao’ and ‘chocolate’ provide evidence of very early (third or fourth century AD) contact between Nawa and several Mayan languages, along with numerous other languages, ranging as far south as the Amazonian basin. They argue that these proposed early linguistic connections support Hill’s (2001) proposed central Mexican origin for Uto–Aztecan languages. In an extensive critique of Dakin and Wichmann’s proposal, Kaufman and Justeson (2007) engage in an extended discussion of methodological issues involved in determining the etymological sources of linguistic forms that are widely diffused in a region, as is the case with several terms in Mesoamerica. The debate surrounding ‘cacao’ further brings out the potential difficulty of reconstructing single syllable lexical items.

Attempts to identify genetic relationships, rather than simply historical contact, between Mayan and other language groups have generally been much less successful. On the extreme end lies Greenberg’s much criticized ‘Amerind’ (Greenberg 1987). Other proposals include connections with the South American languages Chipaya (Bolivia – Olson 1964, 1965; Stark 1972; see Campbell 1973 for critique) and Mapuche (aka Mapudungu or Araucanian, Chile – Stark 1970), and even Quechua (Martínez Paredes 1967: 163). Of the less (geographically) distant proposals, perhaps the most discussed has been a proposed genetic connection between Mayan, Mixe–Zoquean and Totonakan, (along with others, including Huave, Lenkan, or Xinka in some cases). This grouping has been referred to as Macro–Mayan (McQuown 1942), ‘Mesoamerican’ (proposed to include Oto–Manguan as well – Witkowski and Brown 1978) or Mayan–Zoquean (Brown and Witkowski 1979). While the general consensus is that borrowing is a more plausible explanation for the similarities between these languages, the published exchange that Brown and Witkowski’s (1979) Mayan–Zoquean proposal invited (Campbell and Kaufman 1980, 1983; Witkowski and Brown 1981) generated valuable public discussion about methods and standards of acceptable evidence in the investigation of distant genetic relationships.

6. *New Data and Old Language Forms*

New sources of data for Mayan languages and improved descriptive standards are opening up new venues for exploring the linguistic history of the Maya. Several high quality grammatical descriptions of Mayan languages have been produced in the last 15 years, many written by linguists that are native speakers of the language being described, or one closely related to it. This descriptive work has identified and described important, previously unrecognized grammatical features, particularly in syntax and discourse organization, that open up new possibilities for historical analysis that have yet to be fully explored. Other aspects of the grammar of Mayan languages, such as the intertwined systems of deixis, discourse organization and evidentiality, have yet to be adequately described in enough languages to allow for historical treatment. Even with far fewer adequate resources than what are presently available, however, historical research on Mayan

languages has generated significant historical analyses and reconstructions of proto-Mayan lexicon (Kaufman with Justeson 2003), phonology (Fox 1978, Campbell and Kaufman 1990, Brown and Wichmann 2004), morphology – particularly the systems of person marking (Robertson 1982, 1998), tense/aspect/mood (Robertson 1992, Robertson and Law 2009) and voice (Norman and Campbell 1978, Davies and Sam-Colop 1990, Houston et al. 2000, Law et al. 2009, Mora-Marín 2003), and syntax (Smith-Start 1976, basic word order: England 1991, ergativity: Larsen and Norman 1979), as well as studies of linguistic development in individual branches of the Mayan family: Yukatekan (Hofling 2006, Ola Orié and Bricker 2000, Bricker 1981); Wastekan (Kaufman 1985, Robertson 1993); K'iche'an (Campbell 1977); Mamean (England 1983, Robertson 1987), Tzeltalan (Kaufman 1968) and Ch'olan (Justeson 1985, Kaufman and Norman 1984, Wichmann 2002, Robertson and Wichmann 2004, Law et al. 2006, Robertson 1998, Quizar and Knowles-Berry 1988, Mora-Marín 2009).

The history of the Ch'olan subgroup has been the object of particular scrutiny as the result of a gradual discovery that the vast majority of ancient Maya hieroglyphic inscriptions are written in a Ch'olan language (Schele 1982, Campbell 1984, Macleod 1984, Macri 1991, Wald 1994, Justeson and Campbell 1997). These newly-deciphered texts provide linguistic data from more than a millennium before the Spanish conquest, but their interpretation has also generated debate and substantial historical research as epigraphers and linguists attempt to locate hieroglyphic inscriptions in their proper historical context within the Mayan language family and to understand sometimes befuddling linguistic structures within the hieroglyphic corpus. Prior to the early 1990s, when the decipherment reached a point where linguistic forms could be confidently identified and analyzed, epigraphers were content to find etymological justification for new decipherments in any of a number of different Mayan languages, particularly Colonial Yukatek, and it was assumed that several different languages would have been written with the script. As it became more and more clear that the language of the hieroglyphs was a single unified Ch'olan language (Lacadena 1998), epigraphers began to look to historical linguistic reconstructions to guide interpretations of the glyphs. Based on glottochronological estimates (Kaufman 1976), the Ch'olan subgroup began to differentiate around AD 600, and since many of the inscriptions were earlier than this, but had distinctively Ch'olan phonological innovations and verb morphology, it was assumed that the language of the glyphs must be proto-Ch'olan. Kaufman and Norman's (1984) reconstruction of proto-Ch'olan phonology, morphology and lexicon, done without reference to glyphic data, was particularly influential and became a sort of reference manual for epigraphers. As the decipherment advanced, however, linguistic data from hieroglyphic sources became adequate enough for detailed linguistic analyses to serve as evidence for historical linguistic development in its own right. Several of the features identified proved to be conservations of earlier forms assumed to have been lost by proto-Ch'olan, including a distinction between glottal and velar voiceless fricatives /x/ and /h/ and contrastive vowel length, neither of which survive in any modern Ch'olan language. Other surprising conservative features were also identified, including a lack of aspect-based split ergativity, an agent focus construction in which a fronted agent triggers the use of a valence-changing suffix *-Vw* or *-Vn* on the verb, a conservative form *ni-* for the ergative first person singular prefix, a suffix *-is* to derive inalienably possessed nouns into unpossessed nouns, otherwise only attested in Poqom (Zender 2004). However, in addition to these conservative features, the decipherment revealed linguistic features that appear to be innovations that only effected the eastern branch of Ch'olan, leading to the proposal that the language of the hieroglyphs reflected that later stage of development, rather than

reflecting proto-Ch'olan (Houston et al. 2000). Later treatments both for (Law et al. 2009) and against (Mora-Marín 2009) this hypothesis engage in detailed discussions of the history of three grammatical features in the hieroglyphs: a passive marker, an intransitive suffix, and a special transitivizing suffix particular to a root class known as 'positionals'. Similarly data-rich historical linguistics debates have been spurred by proposals about tense/aspect (Houston 1997, Robertson et al. 2004, Wald 2007), nominalized dependent verbs (functionally relational nouns, called 'secondary verbs' in epigraphy jargon – Robertson et al. 2004, MacLeod 2004), and spelling conventions (Houston et al. 1998; Robertson et al. 2007; Lacadena and Wichmann 2004).

7. *Tojol-ab'al*

Another point of uncertainty in the history of the Mayan language family is the language Tojol-ab'al, spoken today in Chiapas, Mexico. One of the earliest attempts at relating Tojol-ab'al to other Mayan languages, Berendt (1876), based apparently on scant lexical data and gut intuition, was curiously prescient when he observed that Tojol-ab'al (which he referred to as Chaneabal) "undoubtedly belongs to the Maya family, but is distinguished by copious admixtures from other languages of the neighboring countries" (10). It is unclear exactly what admixtures he was referring to, or what languages he imagined were their source, but over a century later, this is still an appropriate assessment. Tojol-ab'al shares innovative phonological, lexical, morphological and syntactic features with languages of the Q'anjob'alan subgroup (particularly Chuj), and with members of the Ch'olan-Tseltalan subgroup (particularly Tseltal). For example, Schumann (1981: 160), notes that Tojol-ab'al shares 65% of its basic vocabulary with Tseltal and 69% of its basic vocabulary with Chuj. It also shares an innovative generic preposition *b'a* with the Q'anjob'alan subgroup, but shares the innovative comitative preposition *sok* with Tseltal. It shares an innovative plural marker *-ik*, an irrealis suffix *-uk*, virtually its entire paradigm of person markers and an innovative incomplete aspectual prefix *x-* with Tseltalan, but shares an innovative potential preclitic *oj=*, a progressive aspectual particle *wan*, an interrogative particle *(a)ma*, an innovative type of directional coverb, and an innovative use of the enclitic *=e'* to mark third person plural absolutive and a plural agreement marker on (non-predicate) nouns with Chuj and other Q'anjob'alan languages (Law 2011, Forthcoming).

The main question in terms of the history of the language is whether Tojol-ab'al is a Q'anjob'alan language that underwent massive contact-induced change from Tseltal (Kaufman 1969, Campbell 1988: 154), or a Ch'olan-Tseltalan language with extensive influence from Q'anjob'alan (McQuown 1956, Robertson 1977).⁷ Atkinson (2006: §6.9) applied a phylogenetic approach to analyze the relationships among Mayan language and found that the algorithm he used grouped Tojol-ab'al with Tseltalan and Chuj with Q'anjob'alan, but with a very high degree of reticulation among the groups, leading Atkinson to exclude both Tojol-ab'al and Chuj from subsequent phylogenetic analyses. More recently, Law (2011, Forthcoming) has argued, based on additional investigation of the morphological and phonological innovations in Tojol-ab'al, that the mixture of historical sources for the various grammatical features of Tojol-ab'al is so extensive as to call into question the applicability of the notion of genetic descent in this case. The evidence suggests that the mixture of Tojol-ab'al may well have been gradual, and does not display the kind of compartmentalization of functional or semantic domains that is typical of classic 'mixed languages' (Michif, Mednyj Aleut, Media Lengua and the like; Matras 2003), but is no less mixed.

8. *Wastek*

Perhaps the most extreme difference of opinion about the linguistic affiliation of a Mayan language has to do with Wastek and its extinct sister language, Chikomuseltek. At its heart, the debate is about the limits of parallel development, rates of change, and the value of grammatical evidence in determining genetic affiliation. The Wastekan subgroup is unusual in the Mayan family. Both members of the subgroup are indisputably radically different from all other Mayan languages. Wastek is spoken in the Mexican states of San Luís Potosí and Veracruz, in an area geographically removed from the other Mayan languages, while Chikomuseltek was spoken in Chiapas near to Tseltal and Tsotsil speaking communities but is recently extinct (Campbell and Canger 1978). According to Kaufman's model for the diversification of Mayan languages, Wastekan was the first language group to leave the Maya homeland (near Soloma, in the Cuchumatanes Mountains), and migrated to coastal Veracruz some 4200 years ago, losing all contact with other Mayan languages. Under this model, around AD 1100, a group of Wastek speakers would have traveled back to the Maya area, very near to where they would have started some 3000 years earlier, and their language developed into Chikomuseltek (Kaufman 1976, Kaufman 1980). Campbell (1971: 299–300, 1977: 100) is the earliest to suggest that, in spite of the radical innovations and geographical isolation of Wastek, it might be better understood as a much more recent departure from the Maya area, and that it may be coordinate with Ch'olan and Tseltalan, rather than being the first group to separate from the Mayan family. His argument for this is the fact that Wastek shares four of the defining phonological innovations of the Ch'olan–tseltalan subgroup, including ***k(ʔ)* to **tʃ(ʔ)*, ***q(ʔ)* to **k(ʔ)*, ***tʃ* to **t*, and ***r* to **j*.⁸ Campbell concludes that “some of these shared innovations may be independent developments within both branches, but it seems unlikely that so many would have occurred independently” (Campbell 1977: 101).⁹ He later appears to have reversed this position in a coauthored overview of Mayan linguistics with Kaufman (Campbell and Kaufman 1985: 188–190), which states that “The position of Wastekan has been in dispute, but it now seems clear that it was the first to break off.” (*ibid*: 188). The only new data referenced with this assertion concerned a dialect of Wastek that preserved proto-Mayan plural pronouns, since in most dialects of Wastek, these display an innovation that is shared with Ch'olan and Tseltalan languages. Since the pronouns weren't part of Campbell's initial proposal, however, the change in position is essentially a change in what can reasonably be considered ‘independent development’ vs. what must be taken as evidence of genetic relatedness. Nearly two decades later, Robertson (1992: 213–217) also came to the conclusion that Wastek was closely related to the Ch'olan–Tseltalan languages, this time, based on similarities in reconstructed early stages of the development of the incompletive and progressive aspects, and the system of person marking (Robertson 1993) for Wastekan and Ch'olan–Tseltalan. More recently, Robertson, in collaboration with archaeologist Stephen Houston, bolstered his 1992 argument for a late separation of Wastek with additional linguistic arguments and archaeological evidence showing that a late arrival of the Wasteks in the Huasteca is at least plausible archaeologically as well (Robertson and Houston 2003, Forthcoming).

In a 1988 presentation of the Chikomuseltek corpus (some 500 lexemes), Campbell (1988: 210–211) notes that Kaufman's model for the separation of Wastekan from proto-Mayan involves two components that are not necessarily one and the same: 1) the date at which Wastekan separated from proto-Mayan, and 2) the date at which Wastekans migrated to their present-day location. Campbell suggests that even if we assume that Wastekan was the first group to separate from proto-Mayan, it is possible that the

Wastekans remained in the Maya region for considerably longer before moving north (See also Norcliffe 2003). This last hypothesis (that Wastekan separated from the other Mayan languages early on, but did not leave the Maya area until much later) is particularly interesting in light of Law's (2011) recent description of massive contact-induced changes in Lowland Mayan languages. Many of the phonological and morphological innovations that Wastekan shares with Ch'olan-Tzeltalan languages are precisely those features that Law has identified as being particularly widely diffused among lowland languages. This would suggest that prior to leaving the Maya region, Wastekan participated extensively in the lowland Mayan sphere of linguistic interaction.

9. *Language Contact among Mayan Languages*

As the preceding examples illustrate, language contact, and particularly contact with other Mayan languages, has had a significant impact on the history of the language family as a whole. The Mayan languages make for a fascinating potential laboratory for examining language contact among related languages and push the limits of what have been considered possible linguistic outcomes of language contact. Campbell's early work on the history of the K'iche'an branch of the Mayan language family, which included dialectal information, described several significant phonological innovations that were areally diffused, and in some cases are still spreading. Barrett (1996, 2002) elaborated on patterns of contact in what he called the "Huehuetenango Sprachbund", which included the areal diffusion of several phonological features among several K'iche'an, Mamean and Q'anjob'alan languages in and around the department of Huehuetenango, in Guatemala. Justeson et al. (1985) noticed similarly robust patterns of areal diffusion of several sound changes in what they called the "Lowland Mayan Language Area". In addition to phonological innovations, they also identified several other innovative features that were shared by languages of the region including the presence of an aspect-based ergative split marked with a particular suffix (*-Vʔ) in the incompletive, a large class of words that are semantically verbal but syntactically nominal (other Mayan languages have these, but they are not as frequent), several specific suffixes (*-tal, *-na, *tuhl and *iwa:l), and a large body of shared vocabulary (they give 73 items). Wichmann and Brown (2003) and Wichmann and Hull (2009) provided additional evidence of extensive lexical borrowing, including very frequent borrowing of verbs in Q'eqchi. Law (2009) also presented evidence of numerous areally diffused innovations in the systems of person marking in Lowland Mayan languages, including actual phonological forms, in some cases nearly entire paradigms. A more detailed investigation (Law 2011) revealed still more syntactic and morphological contact phenomena in Lowland Mayan languages. Additional research will doubtless uncover additional instances of contact-induced change in the Lowlands and well as the Highlands.

10. *Conclusion*

The Mayan language family is perhaps one of the better-studied language families in the Americas, yet partly because of the excellent attention it has received to date, a great deal remains to be done that will have relevance to our understanding of language change in general. As with any language group, there are problem areas in the history of Mayan languages, but a surge in the production of descriptive linguistic materials, and newly available linguistic data going back more than a 1000 years earlier than any other language in the Americas mean resolving these tricky issues is by no means a hopeless prospect. We are only

now beginning to appreciate how cross-linguistically remarkable the Mayan languages are in terms of language contact phenomena and as synchronic analyses of contemporary languages continue to improve in analytical sophistication and empirical accuracy, new avenues of investigation will allow us to bring more clarity to the history of Mayan languages.

Short Biography

Danny Law's research deals with the relationship between language and society over time, particularly contact-induced language change and how social and language-internal factors interact to shape the outcomes of language contact. He has published in *Diachronica*, the *International Journal of American Linguistics*, the *Latin American Indian Literatures Journal* and *Ancient Mesoamerica* on topics of language contact in the Maya lowlands, the evolution of aspectual systems, split ergativity, poetics and authorship. He is the author of *Language Contact, Inherited Similarity and Social Difference: The story of linguistic interaction in the Maya Lowlands* (In preparation) and coauthor (with John Robertson and Robbie Haertel) of *Colonial Ch'olti': The Seventeenth-Century 'Morán Manuscript'* (University of Oklahoma Press, 2010). He holds a PhD in Linguistic Anthropology from the University of Texas at Austin, where he was a Jacob Javits Fellow, and holds an MA in Linguistics from Brigham Young University. He is currently a Postdoctoral Scholar in the Department of Anthropology at Vanderbilt University.

Notes

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¹ For a scholarly summary of the history and origins of the '2012' cultural phenomenon, see Hoopes (2011).

² <<http://www.languagemonitor.com/2011/12/>>

³ The lack of a precise number has to do with the politics of distinguishing languages from dialects. Two varieties recognized as languages by the Guatemalan Academy of Mayan Language are linguistically nearly identical to another language: Achi (K'iche') and Chalchiteko (Awakateko).

⁴ Guatemalan Language speaker estimates from Richards (2003), Mexican language speaker estimates from INEGI 2010 census. Mopan, Mocho and Lakantun estimates from Ethnologue.

⁵ For a thorough summary of historical linguistic research on the Mayan family prior to Kaufman's work, see Campbell (1977).

⁶ For specific loanwords in Mayan, the reader is directed to Kaufman with Justeson (2003) etymological dictionary of Mayan, which notes many of the loans that are evident in more than one Mayan language.

⁷ Schumann (1981, 1983) and Dakin (1988) provide additional discussions of the affiliation of Tojol-ab'al that are essentially in line with what has been mentioned here.

⁸ Intriguingly, the only sound change that Huastec does not share with the Ch'olan-Tzeltalan subgroup is the latter's shift of **ŋ to *n. Rather than retaining **ŋ, however, Wastek shifted the sound to /h/, very similar to the shift to /x/ evident in the Mamean and K'iche'an languages.

⁹ Fox (1978: 92) comes to the same conclusion after an extensive study of proto-Mayan velar innovations.

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