Eternal Stars and Mortal Gods:
The Origin and Evolution
of the Maya Calendar System
The calendar systems of the Maya people of Mesoamerica are one of the most distinctive features of their culture. That they constructed a calendar that rivals the Gregorian system of time measurement, is not only a testament to their mathematical prowess and astronomical observations, it is a challenge to the Eurocentric view of the sources of knowledge. The Maya calendar system survives to this day despite efforts towards conversion to Christianity and the destruction of many of the scrolls which contained the knowledge of their sciences. How was the Maya perception and system of time measurement able to endure these dramatic alterations to and loss of culture? I propose that the core of Maya practice, their numeracy and precise astronomical observations were so thoroughly rooted in astronomical reality and their own cultural practice as to transcend concerns of politics or religion, both Maya and Spanish. That is to say while the ordering of society and the power and legitimacy of elites was derived from the calendar this political aspect was merely an outgrowth of it, an expression of the elite themselves, not its core function. The mythology that developed around the calendar was not as important as the knowledge of cycles and natural patterns that informed it. Despite the elaborate systems of priests, sacrifices, and leadership which drew on this knowledge of time for purposes of social control and political power, at its base was a precise way of measuring the cyclical patterns of the natural world that could not be extinguished. I first explore the sources of these cycles that allowed early inhabitants of Mesoamerica to synchronize themselves with their natural conditions. Their attunement allowed them to thrive in the Mesoamerican environment a setting the stage for agriculture, and subsequently writing and the creation of societies with distinctions of class, in particular the creation of a specialized priestly class who dedicated themselves to the tracking of time. Next I discuss how the elites of Maya society used the predictive power of the calendar to establish social order and fortify their own wealth and
legitimacy, the product of which was the elaborate mythology that Spanish missionaries came to equate with religion. I then demonstrate how these misperceptions of Maya culture by the Spanish, particularly Friar Diego de Landa, informed their attempts at conversion to Christianity. Finally by way of documents created after the arrival of the Spanish and their faith, I show how the Maya simply swapped out the deities of their mythology for Christian ones while leaving their world view, their origin story, and most importantly the ordering of their days, their calendar, intact. The Maya perception of time was thoroughly engrained in their society, that is to say able to exist independent of the politics of elites, the mythology was only a means to an end. When the ruling elite were impacted by conversion within the post-colonial documents only the characters of the mythology were changed not the underlying principles of the calendar. The elites could not exist as they did without the accompanying mythology the calendar however was not dependent on these stories for survival. For all the accomplishments that the Maya calendar system achieved, their ancestors who laid the foundation had a large body of existing information about the world that was readily available in Mesoamerica.

The Maya calendars drew on a legacy of Mesoamerican cultural concepts and numerical constructs that informed their design and applications. Ideas ranging from vigesimal (base twenty) numerology to spiritual themes are common across the region which the Maya came to inhabit. The origins of this body of knowledge lie in the first peoples to inhabit the American continents, descendants of the peoples who crossed the land bridge that once connected what is now Siberia with Alaska. They accumulated knowledge of celestial movements by observing and recording the large number of astronomical phenomenon visible to the naked eye. The movements of the planets, the phases of the Moon and the sun, both across the horizon and the shifting positions of the solstices, are just a few examples. Knowledge of seasonal transitions and
their effects on the environment, particularly the availability of food, would not only be a source of practical information but a matter of survival. The timing of the growth of plants and the births of animals would not only inform them when food would be best for gathering or hunting but would also help predict seasonal migrations and the changing weather patterns of the seasons. Prehistoric peoples all over the world relied on this knowledge of natural cycles. Passing on this knowledge would have been accomplished by way of oral traditions before the development of writing or hieroglyphics enabled a more permanent and codified form of recording it.¹ Certain members of these bands of humans who were tasked or demonstrated an affinity with tracking and remembering these phenomena would earn status and respect based on the variety of their knowledge and the accuracy of their predictions.

The descendants of these wandering groups, who eventually became the many peoples of Mesoamerica, shared a common base of ideological, numerological, and spiritual constructs that grew out of these early astrometric observations. Oral transmission of this knowledge may have been encoded in stories or myths which would make them easier to remember and transmit. The origin myths, the notion of cyclical time, vigesimal numeration, the division of the world into four quadrants, as represented by the four cardinal directions, and complex calendars and writing systems are represented among the many groups of the regions surrounding the Yucatan peninsula and southern Mexico.² The features and cycles of the human body provide a basis for the numbers present in the two most well-known Maya calendars the 260 day divinatory calendar and the 365 day solar calendar.

The twenty fingers and toes, the female menses, and pregnancy are features and cycles respectively, that would have enabled bands to mark and track the passage of time, a process that

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² Rice, Maya, 6
may have begun as far back as the Paleolithic era.\(^3\) Counting on fingers and toes may have been the most likely source of the Maya base twenty numbering system. Even today the twenty digits of the human body are utilized by children as they learn to count. In the absence of artificial light the female menses is a more regular cycle, which would provide another method of tracking the passage of time. Pregnancy is perhaps one of the sources of one of the Maya calendars numerology, specifically the 260 day sacred or divinatory calendar used primarily in religious practice. 260 days is the approximate duration of human gestation from the last menstruation. The Maya practice of naming children based on their day of birth within the 260 day calendar is perhaps a vestige of this correlation. 260 days is also the length of the agricultural year in Mesoamerica. Given the importance of agriculture, particularly the growing of maize, it would not be unreasonable to base the passage of a year around the cycles of planting, growth and harvest. The 365 day calendar which approximates the solar and seasonal year was perhaps an outgrowth of the 260 day system. The 360 day duration of the Maya Tun period, certainly suggests it began as multiples of twenty.\(^4\) It also has an agricultural connection as well, as the 365 day year aligns with the seasonal year. Regulating agricultural and secular events may have been the purpose of the 365 day calendar whereas the 260 day calendar served more spiritual purposes.\(^5\) Such a distinction may be largely arbitrary as the fusion of ritual and time that is often associated with the Maya blurs the line between the two. Although the two calendars do not mark the year in the same length, every 52 years they align, this period is called a calendar round

For the Maya the observations of natural cycles and events and their corresponding numeracy was a consistent and relatively stable framework which they were able to use as a

\(^3\) Rice, *Maya*, 7

\(^4\) Rice, *Maya*, 39

\(^5\) Rice, *Maya*, 42
basis to develop their calendric systems. Their counting system and the concept of zero allowed them to systematize their astronomical observations into a calendar system whose precision rivaled its counterparts in Eurasia. The accuracy of the calendars they developed enabled them to track the cycles of the seasons and predict astronomical events such as eclipses. The Maya were able to create such an accurate and efficient system of measuring time by attuning themselves to the natural world and the variety of readily observable cycles. By synchronizing to the patterns and cycles of nature the peoples of Mesoamerica were able to adapt to their environment and thrive. The early inhabitants of the region applied their accumulated knowledge of the natural world to the most practical of concerns, finding food.

By observing and acting based on the cyclical patterns of the seasons the early human residents of Mesoamerica were able to acquire foodstuffs more efficiently then by foraging. The improved gathering of nutrients enabled populations to grow and become more settled. The gathering of food then became a specialized technique that did not require the participation of everyone in a given group. The development of these techniques eventually led to the emergence of agriculture as a consequence of more permanent settlements, which in turn led to a more sedentary lifestyle and thus civilization as we know it. Such a drastic shift in the lifestyle of the peoples of Mesoamerica was possible as the result of the environmental alterations that took place in the region. The environmental changes brought about by the end of the last ice age transformed the environment of the Mesoamerica into the place we are familiar with today. For example, the highland areas of what is now Mexico became warmer and drier whereas the region of the Yucatan Peninsula became more tropical and wet. The warming trend that brought on these changes to the environment benefitted agricultural pursuits in the tropical regions and was

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6 Rice, Maya, 8
the source of many of the cultural aspects by which we define the cultures of the region, notably the cultivation of grains. The important role of maize based agriculture is one of the most widely known examples of the influence of environment on culture. The culture of a people, that is all the created aspects of the society of a group in a given time and place are inseparable from the environment and conditions from which they emerge. The correspondence of the 260 day calendar with the length of the Mesoamerican agricultural year is one example of this paradigm. Seasonal variations in the availability of plants and animals are cyclical events that are readily observable and also important as it is a matter of the very survival of a band or group of humans.

At the beginning of the Holocene or modern geological age in Mesoamerica, eleven thousand to nine thousand years ago, the climate of the region experienced a shift in weather patterns, specifically precipitation. In the central part of Mexico the climate became drier, whereas in the Yucatan the shift was towards a wetter climate. Changes to these weather patterns resulted in altered environmental conditions which in turn necessitated a shift in the strategies utilized by the bands that inhabited the region as well. Eventually the inhabitants reached a sophisticated understanding of their environment that allowed them to exploit resources more effectively. The technique of gathering food is described as evolving from simple foraging to the more complex strategy of collecting. Foraging is consistent with a more primitive and mobile lifestyle, collecting implies a knowledge of regional plants and animals and the timing and locations of availability. It also indicates knowledge of the cycles that would affect them, not only that but a method of transferring this knowledge across generations who inhabit an area with at least similar, if not the same, ecological and environmental attributes. Collecting enables a division of labor to take place with some members of the group attending to the task of

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7 Rice, Maya, 15
8 Rice, Maya, 17
gathering plants or hunting animals from specific locations while another part remains at some sort of base camp, the beginnings of a permanent settlement.

Eventually the sheer efficiency of the new technique of collecting would allow populations to grow and, as a result, for settlements to expand. Perhaps a particularly resource rich area would attract a large number of groups who would form a large conglomeration of peoples. A place with both favorable ecological abundance and groups with the knowledge of complex strategies of collecting, archaeologists theorize, would over generations lead to a permanent settlement and a sedentary existence. The loss of the mega fauna that once served as one of the primary source of nutrition for humans also served to affect this change in strategies. Knowledge of regional flora and fauna would eliminate the need to follow these large game animals, which were rapidly heading towards extinction by way of environmental changes and overhunting by humans, reducing the necessity of mobility. The rise of more permanent settlements also had the effect of concentrating waste products in a given area. The resulting midden heaps and the disturbed earth of these settlements provided an ideal environment for the early cultigens that became crops through human induced selective breeding. In the case of Mesoamerica these efforts resulted in Maize, a product of the consequences of a sedentary lifestyle. In the natural resource rich coastal regions of Mesoamerica efficient procurement strategies would lead to populations becoming sedentary even earlier then their brethren located in regions where foodstuffs were not as readily available or abundant.

The transition from the hunter gatherer society, which the human species has lived in for 99% of our tenure on this planet, to the agricultural based one we have today was a momentous

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9 Rice, *Maya*, 17
10 Rice, *Maya*, 17
event, consequences of this move were also significant.\textsuperscript{11} Population growth may have been primarily responsible for the shift away from hunting and gathering. The effects of this transition resulted in the creation of a positive feedback loop. A population that was supported by agriculture could grow rapidly in numbers and was thus able to devote more labor to agriculture thereby increasing its population and stores of food to support it. In such an agricultural society with accumulations of resources non-producing elites would have the opportunity to set themselves above the producing masses. Methods of creating such a distinction between peoples are as varied as the number of societies that inhabit the planet. In the case of Mesoamerica the keepers of the calendars had an ideal tool to accomplish this.\textsuperscript{12} Given the power of the accuracy of their calendars and the prestige that grew out of their indirect contributions to society the early time keepers gradually transformed into a priestly class that distinguished itself from the toiling farmers, yet reaped the benefits of their labor. To be sure their contributions to the timing of planting and knowledge of the seasons had value, however when that position becomes concerned with its own survival and not its contribution to society it is the birth of an elite and the end of egalitarian society. Whatever the type effect on the social dynamic that the knowledge of natural cycles played in the early societies of Mesoamerica it can be said to have exponentially grown once the peoples of the regions settled in permanent residences and developed the tools of civilization including agriculture and writing.

Agriculture is both cause and consequence of large populations and settlements. It allows populations to grow and large populations can only survive in a given area with it, lest they completely deplete the natural resources of the region.\textsuperscript{13} Writing enabled the people who kept

\textsuperscript{12} Rice, Maya, 8
\textsuperscript{13} Diamond, Mistake, 64-66
track of the natural cycles and days to record their observations and preserve them for future
generations developing a body of knowledge from which they could draw to benefit the
community and also influence society around them. Settlement amplified the resulting class
distinction between those who kept track of the days and the rest of the population who became
increasingly reliant on them for the timing of planting crops and other cyclical events. The 260
day sacred calendar of the Maya happens to correspond to the agriculturally active part of the
year in Mesoamerica and the people of the region could rely on their local mystic to determine
the proper timing for planting in relation to this cycle. Writing and thus record keeping allowed
for the elaboration of the calendar system with increasing numerical sophistication brought on by
the development of both writing and mathematics, which would give these individuals yet
another source of power over there fellows who were without knowledge of either. Ultimately
the power and influence of the emerging priestly class was directly proportional to their own
skill and the accuracy of the calendars. The accuracy and precision of their calendric
measurements and predictions created yet another positive feedback loop on their power.  

By the time of the arrival to the Yucatan of the Spanish Friar, Diego de Landa the
position of the calendar keeper had evolved to new heights of power and influence. De Landa’s,
Yucatan Before and After the Conquest, a manuscript that was published in Spanish in 1566,
provides a host of information on the region and the practices of its people, though not without
bias. In particular de Landa’s focus on many matters he perceived to be religious, no doubt a
consequence of his profession and position, provide a glimpse into the role that the priestly class
inhabited at the time of the arrival of the Spanish. Of course it almost goes without saying that
working with de Landa, as a source, presents challenges that should be addressed or at least
acknowledged. As an individual he is inseparable from the time and place of his existence,

14 Rice, Maya, 9
assessing his actions or words based on modern standards of cultural sensitivity or religious
tolerance is as distorting an action as de Landa’s interpretation of Maya practices. That is not to
suggest that reducing the actions of either side to the oblivion of cultural relativity is an
acceptable alternative either, only that we must recognize the milieu from which each civilization
emerges and the influence that that has had on individuals, culture and society. Modern
scholarship on the Maya provides another perspective that is outside the colonial Maya Spanish
dichotomy. While the question of objectivity within the study of history remains a constant
source of debate, a more nuanced view of events and individuals is more in keeping with the
shades of gray of human experience rather than the binary approach often employed in studies of
the interaction between the two cultures. In de Landa’s case however, his focus is on what he
knows, religion, and the ways in which he understands and interprets that knowledge.

The topics of de Landa’s account demonstrate his own concerns and biases with regards
to religion especially. De Landa wrote of a particular High Priest, “In him lay the key to their
sciences, to which they most devoted themselves, giving counsel to the chiefs and answering
their inquires”15 A position of great influence and power among not only the common people but
the leadership was created by the knowledge of the calendar systems and the preservation of that
knowledge through writing. Of course that knowledge was kept as the province of the elite who
kept it controlled by keeping it within their selected ranks. Several early Spanish accounts of the
Maya hieroglyphic system of writing state that the texts written in this manner were only
understood by the priests and members of the noble social class.16 The calendar and the tracking
of the days had changed from a method of time keeping and a tool of survival to the preserve of

of the American Philosophical Society, Vol. 93. Quoted In, Merideth Paxton. The Cosmos of The Yucatec Maya:
Cycles and Steps from the Madrid Codex. Albuquerque: University of New Mexico Press, 2001. 8
status and influence that gave those in power control over aspects of daily life, and security in their status. Maya society utilized its calendar for the timing of planting, festivals, fasts and sacrifices throughout the year the knowledge and power of which was bound up in a system of writing whose understanding was limited to the elite of society. In this way the elite preserved their legitimacy by linking it to an indisputable fact, the timing and rhythm of Maya life.

The privilege, power, and prestige of the priest were also kept within a select group by the method of priestly succession and by the decision as to who was to be taught knowledge of the system. Writing of the same High Priest, de Landa observed, how priestly succession followed the son of the priest or his nearest kin. This particular High Priest had especially great influence over the affairs of his caste and the surrounding region, “He and his disciples appointed the priests for the towns, examining them in their sciences and ceremonies; put in their charge the affairs of office, and the setting of a good example to the people; he provided their books and set them forth.” The priests of the Maya display all the organization and structure one would expect from Old World religions complete with their own hierarchy and also methods of disseminating knowledge of their skills. The knowledge and thus power of the calendar was well respected and important enough for the class that possessed it to keep it among only a select group of individuals drawn from the ruling class of Maya society. Their reasons for doing so are as simple as self-preservation. The power and influence of the priests was tied directly to the knowledge contained in their books specifically the sciences of the calendars. If the knowledge was available to everyone, then there would be no need for priests. It would seem that this conclusion was not lost on the leadership of the Maya people.

If de Landa’s account of the Maya is to be believed, his own biases and limited perception suggest an incomplete view, he indicates some level of tension between the ruling

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17 De Landa, Yucatan, 12
class, the priestly class, and the masses, with regards to sacred knowledge and the role of leadership. The example of the city of Mayapan, which by de Landa’s arrival had been abandoned for about 120 years, is particularly illustrative of the tension between rulers and the ruled and also the value of the knowledge of the sciences preserved in the books of the priests. According to the account related to de Landa, the chief authority from the house of Cocom began to covet riches and negotiated with two garrisons kept by the kings of Mexico for protection. He then proceeded to enslave many of the population of Mayapan and overall oppressed them. In de Landa’s account, “This Cocom was the first to make slaves; but out of this evil came the use of arms to defend themselves, that they might not all become slaves.”\(^\text{18}\) The other chiefs out of fear of the Mexicans martial prowess did not attempt to rebel against the Cocom. However, the people learned from these Mexicans the use of various weapons and quilted cotton armor over the course of several years. After the first leader died next Cocom who succeed him imitated his predecessor’s habits and negotiated with the people from the region of Tabasco; bringing more Mexicans into the city for security. Backed by a veritable army, he then began to enslave the common people. The chiefs of the region allied themselves with one of the rival house of the Cocom, house Xiu. With allies of their own they then killed the ruling Cocom and all of his sons save one, who was away trading at the time. The chiefs then proceeded to sack the Cocom’s home and took all of his property; in their perspective repaying themselves for what they said had been stolen by his policies. The ongoing conflict between the Xiu and the Cocom eventually led to the abandonment of the city of Mayapan and each side returning to their own country.\(^\text{19}\)

The story is typical of political intrigue that is by no means native to Mesoamerica. That being said de Landa makes an important remark after the account of the abandonment of

\(^{18}\) De Landa, *Yucatan*, 15

\(^{19}\) De Landa, *Yucatan*, 15-17
Mayapan, “The most important thing that the chiefs who stripped Mayapan took away to their own countries were the books of their sciences, for they were always very subject to the counsels of their priests, for which reason there are so many temples in those provinces.” A city such as Mayapan, which according to the account recorded by de Landa, had been inhabited for more than 500 years, could be abandoned over a political feud that eventually became a civil war, but the knowledge contained within the books, knowledge of the calendars and the science was simply too valuable to be left behind.  

While de Landa’s account of the story of Mayapan focuses on the city itself and how it came to ruin alternative perspectives on this chapter of Maya history can bring into focus what was created out of that destruction and also the durability of Maya culture. When the various factions that were living in Mayapan dispersed after the protracted civil war they went off in different directions eventually settling in separate regions of Mesoamerica. What was lost at Mayapan was a consolidated political order that held many rival factions within its borders. Tensions between these factions over dominace of that political order eventually spilled over into violence. The result of this separation of peoples was the establishment of a more decentralized political order and the foundation of the current era the Maya inhabited at the time of the arrival of the Spanish. Looking from the perspective of what was generated by Mayapans destruction, the story takes on a more positive character, from out of its destruction emerged the current world. The example suggests that the Maya may have acclimated to the arrival of the Spanish both politically and, in the eyes of the missionaries, religiously in a similar manner. Instead of being seen as an obliteration of their civilization by an alien force the events and ideas of

20 De Landa, Yucatan, 15-17
22 Restall, Conquistador, 23
Spanish colonization were integrated into the existing culture as part of the ongoing processes of invasion, conquest and the entrance of foreigners which were already very much a part of life on the Yucatan. While the missionaries, de Landa included, may have perceived their cultural and political expressions, especially religion, as mutually exclusive, post-colonial documents created by the Maya suggest that the indigenous population did not necessarily think in the same way.\textsuperscript{23}

By no means does this excuse those actions taken by either side that we now find abhorrent by the standards of today. It does suggest how events may have been interpreted by the Maya and precedents that may have informed their reactions, a more nuanced view than de Landa was able to adapt when it came to his view of the Maya and conversion to Christianity.

The fate of Mayapan also demonstrates the supreme value of the knowledge contained in the books kept by the priests. The science and the calendar had accumulated a worth that had transcended political and social concerns. It was both source and justification for the existing social order something of incalculable value to those in positions of power. The books of the priests in the hands of leadership would provide leverage that could be used to lessen their influence and increase the power of the ruling class. Although both the priests and the leadership benefitted from the power of the calendar systems the case of Mayapan would suggest that when their power drew from the same source the result was a conflict for control.

The distinction between the priestly class and the ruling class may be somewhat arbitrary. Both drew power, legitimacy, and wealth from the use of the calendar and the social order it created by way of predictions of astronomical events and the seasonal cycles which gave the user immense spiritual power in the minds of the common people who had no knowledge of how their

methods operated from empirical observation and mathematics. From the accounts of de Landa however it is clear that the rulers were to a certain extent beholden to the priest and their advanced knowledge of the calendar and religious workings. That did not prevent some rulers from dabbling in the sciences of the priests. As de Landa accounts, “Some of the principal lords were learned in these sciences, from interest, and for the greater esteem they enjoyed there by; yet they did not make use of them in public.” Knowledge of the calendar and writing was a prestigious hobby, though it is clear from the statement that the chiefs were careful not to step into the domain of the priests who would appear to hold power in the public sphere of the world of the Maya by way of their knowledge of the calendar and how to use it for prediction and determining the proper course of action in religious matters and the like. The account also suggests that the missionary focus on the public aspect of Maya religiosity and their efforts at conversion with emphasis on the communal aspects of Christian worship may have left a void that was filled by indigenous practice. To the Maya this may have been a natural state of affairs to distinguish the public sphere from the private.

The power of the calendar and the sciences was not limited to political and social order, though that was undoubtedly one of its principal functions. The calendar and the priests whose job it was to read and interpret it performed functions that were outside of the realm of politics. The colonial perspective was narrower in scope. De Landa notes that, “It was the office of the priests to discourse and teach their sciences, to indicate calamities and he means of remediya them, preaching during festivals, celebrating the sacrifices and administering there

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24 De Landa, Yucatan, 13
25 Farriss, Colonial, 287-288
sacraments.”

In this way the friar perhaps saw the priests of the Maya as rivals to his own position. That de Landa describes these functions using terminology that could be easily used to describe the functions of his own position is quiet revealing of his perception of the Maya priests in relation to himself. Such a view neglects to account for the expansive role of the Maya cosmology beyond religious concerns and may account for the ferocity with which de Landa later proceeded to destroy not only, approximately 5,000 idols, but twenty seven Maya scrolls which contained knowledge of their sciences, during his inquisition at Mani in July of 1562. It would appear that de Landa saw the Maya priests and their practices as simply another heresy to be eliminated with the same zeal as the Inquisition was being pursued in Spain.

De Landa’s approach to conversion to Christianity echoes the style by which the Maya transferred their own knowledge to the next generation. The Maya priests as previously stated shared their knowledge only with the elite of their society. De Landa’s observations confirm this practice, he writes, “They taught the sons of the other priests and the second sons of the chiefs, who were brought to them very young for this purpose, if they found them inclined toward this office.”

De Landa may have either sought to counter this practice, emulate it, or perhaps both. As he describes, “The method taken for indoctrinating the Indians was by collecting the small children of the lords and leading men, and establishing them around the monasteries in house which each town built for that purpose.” The top-down approach employed in his attempts at the conversion of the Maya underscore his misperception of the place of the knowledge of the calendar and the mythology within their society. He saw it in terms of another religion not as the complex fusion of systems of astronomy, mathematics and mythology that modern scholars understand it to be. For de Landa, “The people of Yucatan were as attentive to matters of religion

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26 De Landa, Yucatan, 47
27 De Landa, Yucatan, 13
28 De Landa, Yucatan, 29
as of government…” The religion de Landa observed was in fact thoroughly entwined with government, by way of the dynamic relationship between the priests and rulers, and that government drew its organization and legitimacy from the prestige that the religion provided through the predictive and organizing power of the calendar. To attempt to distinguish between the two demonstrates the lack of nuance to de Landa’s perspective. That being said his accounts of the Maya cannot be separated from his own existence in the Yucatan of the sixteenth century. Although modern scholarship relies on his accounts in many cases, because he destroyed so many documents which could have provided a less Spanish biased perspective on the region, his views must be seen for what they are, the perceptions of an Old World Catholic priest on a New World cultural system.

While the mythology and deities of the Maya were an important aspect of the calendar system it was by no means essential to its survival. The underlying numerology of the calendar systems, the actual core of Maya practice was the more important aspect, something demonstrated by the way in which Christianity appears in post-colonial Maya documents as a topical gloss on the stories which form the mythological basis of their measuring and perception of time. The mythology was only a superficial expression of the astronomical observations that set the timing of secular events such as agriculture as well as Maya religious practices. In the years after the arrival of the Spanish and Christianity to the new world many Maya practiced what could be called a syncretic blend of their own practices and Christianity. By superimposing Christian mythology and characters upon their own traditional perceptions of time and the world the Maya were able to mediate the forced transition between the two on their own terms.  

29 De Landa, Yucatan, 12  
30 Farriss, Colonial, 303
Replacing or substituting new deities for older ones was a religious feat that had been done before by the Maya even in the context of their own creation story. In the *Popol Vuh*, the Maya creation epic the four progenitors of the K’iche-Maya actually go on a search for their gods, eventually finding one Tojil, in the land of Tulan, the place of reeds. From the text it can be argued that the god Tojil is to fulfill a role previously occupied by the original creators of the four progenitors and the world, “Truly Tojil is your god. He is your provider. He is also the substitute and remembrance of your Framer and your Shaper.”\(^{31}\) The adaptability of characters within the mythology of the Maya establishes a precedent for the replacement of old gods with new ones as circumstances required. It is entirely possible that the Christian God was integrated into their mythology in a similar, almost reflexive manner. An action certainly suggested by documents created by the Maya after the arrival of the Spanish and the conversion to Christianity.

*The Book of Chilam Balam of Chumayel* demonstrates the process by which Christianity was integrated into Maya mythology while preserving the underlying principles of the calendar and the Maya perception of the world. The book is a post-colonial document created by a Maya author that utilizes a European style alphabet for the writing of Maya words. It is an imperfect fusion of the two cultures in many senses. The book demonstrates how Christianity was appropriated by the Maya on their own terms, within the context of their existing world view. The succession of gods established in Maya mythology provides a precedent for a shift in their pantheon without altering their perception of the world, or their perception of time. The author of the text in preface to the story of creation presented in the book offers these words on the old mythology, “These are the precious stones which our Lord, the Father has abandoned. This was

his first repast, this balche, with which we, the ruling men revere him here.” The author would seem to view the old stories in a context that may have been difficult for missionaries to understand. Perhaps they say Christianity as merely a successive progression of their own faith, a new God to replace the old ones. The concept of “mortal gods” is elaborated on further on in the text by the author. He writes, “Nevertheless, the first gods were perishable gods. Their worship came to its inevitable end. They lost their efficacy by the benediction of the Lord of Heaven…” The “Lord of Heaven” is most likely an allusion to the Christian God, and indicates that the Maya may have perceived this particular Lord as simply one more powerful than their own to which they were now turned by force or faith to worship as a replacement. Spanish military prowess may have been interpreted as indicating divine favor and from the pantheistic view of the Maya not something to be taken lightly. That being said the Maya seem to have made the distinction between accepting a new god and accepting the Christian God as the only one. In this sense the Christianity of the Maya is not so much a conversion as it is a continuation of their old faith, the Christian God has simply been added to the existing pantheon or swapped out without altering their existing perceptions of the world. Further evidence of this particular style of syncretism is evident in the gloss the Maya quadripartite division of the world received after the arrival of Christianity. In book the four directions and their purpose remain however who has placed them in their positions is different. The author writes “These were they say, four brothers placed by God when he created the world, at its four corners to sustain the heavens lest they fall.” The texts which were written after the arrival of the Spanish were written in the language of the Maya. Despite the Christian gloss applied to them they were still considered heretical by

33 Roys, Chumayel, 98
34 Farriss, Colonial, 287
35 De Landa, Yucatan, 60
the resident missionaries. If the books would be destroyed regardless of their contents it begs the question why did the Maya choose to add Christian elements to their mythology at all? Their particular brand of syncretism provides an explanation as to why certain aspects of Christianity were included in a distinctly Maya world view.

The calendar system and perception of time that the Maya assimilated and elaborated is still alive and followed today among the Quiche, a group that descends from the Maya linguistically and culturally. Tedlock’s study of the Quiche in the Momostenango region of Guatemala illustrates how the calendar system and its perception of time have survived and also points towards explanations as to how it accomplished this. The Momostecan calendar uses both the 365 day solar year and the 260 day cycle. In this region the 260 day cycle corresponds to human gestation and the vegetation of maize, firmly rooting it in the cycles of the natural world.\(^\text{36}\) The distinction between the calendar and the mythology that accompanies it is addressed in the answers given by the subjects of Tedlock’s study. She describes, “When a consultant is asked to describe the calendar, he or she simply begins with the current day or current Year-bearer, thus following divinatory practice rather than an abstract theory as to what “the” day is.” When asked about the first day they simply choose a day important to ritual. Theory about the calendar is based on the practice of using the calendar rather than preceding it.\(^\text{37}\) It can be argued that the Maya calendar system was able to survive in this way, as a practice rather than be overtaken as a pure mythological construct may have been. That being said the Quiche perception of time and mythology suggest another way in which indigenous practices were able to survive. For them, in Tedlock’s assessment, no time can be isolated from what come before or after it. Rather than replacing the old with the new, new practices accumulate on top of

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\(^{37}\) Tedlock, *Highland*, 200
established traditions. An idea which would account for the syncretism found in post-colonial Maya documents and argues for a Maya incorporation of Christianity into their existing practices rather than conversion to it. As descendants of the Maya the Quiche approach to time perception and mythology suggests ways in which the calendar system was able to remain relatively unchanged despite outside threats to its existence. Adapting to the environment was one of the factors that enabled the first peoples of Mesoamerica to survive and thrive in the region. The calendar system they created, which grew to new levels of complexity and accuracy among the Maya continued that tradition of mythological flexibility which enabled it to survive into the modern age.

The Maya perception of time, their numeracy, and adeptness in astronomy are a legacy of knowledge that stretches back to the earliest inhabitants of Mesoamerica. It is an outgrowth of the astronomical observations and synchronization with the natural world that enabled travelling groups of humans to survive in their environment and thrive to the point of establishing a civilization with all the consequences of that decision forced by circumstance. While they may have developed an elaborate cosmic view to explain and justify that knowledge and the positions of those who understood the calendar, no individual or group has a monopoly on the movements and cycles of the celestial bodies that travel across the sky. The fundamental grounding of the calendar in astronomical reality and the syncretic adaptations of the Maya gave it the durability to withstand the vicissitudes of history and continue to number the days.

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38 Tedlock, *Highland*, 202
Bibliography


