

Draft Version, May 24, 2006

A Road by Any Other Name: Trails, Paths, and Roads in Maya Language and Thought

Angela H. Keller

Prepared for
Landscapes of Movement: Trails and Paths in Anthropological Perspective
A Penn Museum International Research Conference
Organized by James E. Snead, Clark L. Erickson, and J. Andrew Darling
May 30–June 1, 2006



Q: What is a man on a road?

A: Time.

(A Maya riddle, translated by Munro Edmonson [1986:50])

Within a tropical lowland landscape, the Maya built masonry roads of a quality unsurpassed in the prehispanic New World. These massive raised constructions—measuring 3 m to over 20 m in width, and some stretching several kilometers in length—required an enormous outlay of labor for their initial construction, and an ongoing program of cleaning and refurbishing. Until recently, though, the roads of the ancient Maya were under-recorded and rarely excavated. Today, new roads and road systems are being documented across the Maya lowlands at an ever-increasing pace. Large, complicated systems of roads have been found at the centers of Calakmul (Folan et al. 2001), Caracol (Chase and Chase 1987, 1996, 2001), El Mirador (Hansen 1991; Sharer 1992), Chichen Itza (Cobos and Winemiller 2001) and Coba (Benavides 1981; Folan et al. 1983). At hundreds of other sites, from the diminutive site of Mopan 3-Este (Gómez 1996) to massive center of Tikal (Coe 1988), scores of shorter roads have come to light. In fact, the elevated stone causeway now seems to be one of the most conspicuous and enduring features of Maya architecture from the Preclassic period to the Conquest.

Despite the obvious investigative potential of Maya roads, though, archaeologists have been hampered by the general lack of associated artifacts and the effort involved in excavating these large constructions. Consequently, many interpretations of ancient causeways center upon the formal spatial analysis of causeway systems and site plans (e.g., Benavides 1981; Carrasco 1993; Cheetham 2004; Gómez 1996; Kurjack and Andrews 1976; Kurjack and Garza 1981; Madonado 1995). These interpretations have largely prefaced economic, social, and political factors in the development and use of Maya roads (see also

Chase and Chase 2001). While the roads surely functioned as economically and politically important thoroughfares, the ethnographic and ethnohistorical accounts of Maya roads uniformly, and emphatically, stress the spiritual and ceremonial significance of the roads (Freidel and Sabloff 1984; Keller 2006; Villa Rojas 1934). Although most current researchers agree that the stone-built roads of the Maya likely supported both prosaic and ceremonial functions, the interrelationship between these, the relative weighting of one to another, remains an open debate.

One little-explored avenue of research is the detailed investigation of the words used by the Maya themselves to talk about their roads. Ethnographers have long recognized the benefit of conducting research in the language of the society under study, as mere translation rarely captures the full constellation of meanings understood and implied by the native speaker. As archaeologists, we cannot directly “speak” with the people of the past, but we may arrive at a closer approximation of their thoughts and beliefs if we do not rely solely on English words and categories. As Anna Wierzbicka (1997:34) cautions, “what people regard as ‘common sense’ is bound up with a particular language,” and often serves to “reify” the concepts of that language. A critical use of Mayan vocabulary may help us construct a more Maya “common sense” approach to the past.

In this paper, I examine the historical development of the meaning senses of the Mayan term for what we would call trails, paths, or roads. The methods I employ are those of lexical semantic analysis, that is, the study of word meanings (Campbell 1999:256; Wierzbicka 1997). In lexical semantic analyses, a single word or a set of words is investigated in detail to construct a comprehensive definition. Most often, these studies augment the information gleaned from dictionary entries with a variety of use examples from common speech, formal prose, poetry, proverbs, and so on. The analyst then attempts to define subtle senses of meaning, including tone or emotional quality. Further, changes in those semantic valences are tracked over time as use examples from multiple time periods are examined. By carefully tracking the many uses and modifications of the Mayan terms, I attempt to approach a Maya understanding of the what we call trails, paths, and roads.

Talking about Trails, Paths, and Roads in Mayan

Often researchers studying paths and roads make a qualitative distinction between the category of *path* and that of *road*, pointing to the greater formality, directness, and labor investment evident in the latter (Earle 1991:11; Hyslop 1984). This distinction is sometimes understood as a reflection of the significance of the routes. Paths and trails may be described as “vernacular,” utilitarian constructions with basic economic functions, whereas roads are understood to be “more permanent political features” often with some symbolic and ceremonial significance (Snead 2002:757; see also Jackson 1984). While at first glance this dichotomy seems sensible enough, the categories of path and road are far more flexible, conflated, and locally specific.

Working on the Pajarito Plateau of northern New Mexico, James Snead (2002) imputes a symbolic, religious, and social significance for the network of “Ancestral Pueblo trails,” essentially footpaths, that crisscross the region (see also Ferguson et al., this volume). Similarly in the Neolithic Old World, various researchers have reconstructed a network of paths associated with dramatic vistas, monuments, and archaeological sites, and interpreted them as symbolically charged *viae* of social and religious import (Thomas 1993, 1996; Tilley 1994). Thus, the formal construction (or lack of construction) of a path or road does not, *a priori*, define its function or potential symbolic significance. Further, the surprising formality of many prehistoric trails and paths suggests that they were quite intentional features even if they were not “constructed” in the traditional sense. Worn into the earth by the passage of countless feet, many of these paths follow direct, straight routes and are marked by lasting features such as shrines, way markers, stair segments, and rock art (Ferguson et al., Sheets, and Snead, all this volume).

Importantly, in the Mayan languages the distinction between the expedient footpath and the constructed road is muted. Whereas in English we have a whole host of discrete terms for paths and roads—street, boulevard, promenade, avenue, lane, trail, drive, highway, turnpike, thoroughfare, and so on—in Mayan there is only one root term, pronounced *beh* in Yucatec. This root term may be modified with adjectives to specify the nature of the route in question, but the distinctions between these types are more a matter of degree than kind due to the use of a common root term. This is but one of many subtle differences between the English and Mayan manners of speaking about the landscape features we call trails, paths, and roads.

To understand the nature of the Mayan concept of *beh*, as distinct from the English concepts of trail, path, or road, I have collected a large number of use examples from the modern, Colonial, and prehispanic eras. These use examples are synthesized and grouped by meaning senses to approximate the emic Mayan dimensions of *beh*. The discrepancies and concordances between Mayan and English revealed in this study highlight potential areas of both cultural misinterpretation and cultural congruence, if not universality.

Modern Meanings

In the documented modern Mayan languages, the word for what we know as trails, paths, and roads is essentially the same as in Yucatec, *beh*, and spelled variously *beh*, *bej*, *bey*, *be*, and *bih*, as well as the possessed form, *beel* (Dienhart 1989:528–530). The existence of recognizable cognates for *beh* in every Mayan language suggests that this is a relatively old morpheme in Mayan (Campbell 1999:368). Justeson and his colleagues (Justeson et al. 1985:18) surmise that the original proto-Mayan root morpheme was *beh*, which was subsequently transformed into the various modern morphemes through separate sound-shift events. Although the antiquity of the term *beh* does not ensure that meaning has remained constant, the many analogous forms of the term are accompanied by a shared core meaning

and corresponding semantic elaborations in both lowland and highland language groups, suggesting a strong continuity of meaning over time and across space.

In modern usage, *beh* means path or road, but it can also mean life course, destiny, matter, and affair.¹ Through its incorporation in everyday words and expressions, *beh*'s metaphoric meanings appear equally as important as, if not more important than, its literal meaning of 'road.' Modern ethnographers working with the Highland and Lowland Maya have noted that *beh* "means more than 'the road you can see with your eyes,' for it is the road of life" (Tedlock 1992:118). As William Hanks (1990:312) describes the situation, "one's road is where one has been and is heading."

Commonly today, a Yucatec speaker asks, *bix a bèel?* (lit. 'how is your road?'), meaning, 'how are you?' or 'how's it going?'. Important tasks, obligations, or endeavors are also roads, and to accomplish some goal is to 'finish a road' (*ts'oksah beh*). Similarly, to get married is *ts'okan u bèel* (lit. 'finish one's road'), in the sense that one important goal has been accomplished and now a new 'road' is begun. This new, married road, or married life, is called the *icham beel* (lit. 'husband road') for women, and the *atan beel* (lit. 'wife road') for men. Extending the metaphor, community elders that act as matchmakers and general advisors, are called 'road guides' in both Quiche (*k'amol be*) and Yucatec (*ah bebesah beh*) communities.

Analogous to the use of *beh* to symbolize one's life course is the incorporation of *beh* in everyday terms referencing time and segments of time. To talk about today, the day after tomorrow, and the day after that, as well as right now, Yucatec speakers use *beh* as the root for day. Thus, 'today' is *beh-hé'ela'e'* (commonly contracted *behlá'e'*), meaning literally 'the road right here.' Similarly, 'the day after tomorrow' is *ká'abeh* (lit. 'two road'), and 'the day after the day after tomorrow', three days away, is *oxbeh* (lit. 'three road').² In an interesting twist, the terms for 'now', *beora*, and 'right now', *beorita*, are a Spanish-Mayan hybrids, mimicking the Spanish constructions, *ahora* and *ahorita* (Bevington 1995:89–90; Hanks 1990:312). These examples, although not exhaustive, develop the important personal and temporal dimensions of the term *beh* for modern Mayan speakers.

¹ For simplicity's sake in the passages that follow, I gloss the primary meaning sense of *beh* simply as 'road,' although technically it should be understood to mean something like 'path/road.'

² My analysis of the terms *ka'abeh*, *oxbeh*, and *behlá'e'* is supported directly by the work of William Hanks (1990) and Tony Bevington (1995), and is confirmed indirectly by Barbara Tedlock's (1992) analysis of the metaphoric meaning of *be*, 'road', among Quiche speakers in Momostenango, Guatemala. Nevertheless, linguist John A. Lucy (personal communication, 1996) has questioned whether the morpheme *beh* is really the root of these terms.

Colonial Dictionary Meanings

Yucatec Mayan dictionaries compiled in the Colonial period contain all of the modern uses of *beh*, as well as a number of terms and expressions which have either dropped out of use, or occur less frequently in modern parlance (Table 1). This wealth of *beh*-terms forms the basis for my reconstruction of the term as it was used by Mayan speakers at Conquest. I have organized the more than one hundred collected terms into four core meaning senses:

- (1) *Road*: including the concepts of path, transit, canal, astral course, or spirit path
- (2) *Day*: meaning either a calendar day or the length of a journey in days
- (3) *Work*: such as one's occupation, good works, or government office
- (4) *Life*: incorporating the concepts of well-being, prosperity, life course, and destiny

Despite their analytic separation here, all four senses blend together in practice. When a Mayan speaker uses an expression which entails the 'day,' 'work,' or 'life' meanings of *beh*, the 'road' sense necessarily also comes to mind and, of course, the reverse is also true. Still, the metaphoric senses of *beh* are more numerous, and are foregrounded even when an actual road is referenced.

Used prosaically to mean a physical road, *beh* can take many modifiers. There were 'straight roads' (*t'ubul beh*), 'crossing roads' (*xay beh*), 'narrow roads' (*ch'ux beh*), 'great roads' (*noh beh*), 'side roads' (*xax beh*), 'overgrown roads' (*lob beh*), and the 'constructed, white roads' (*sakbeh*) well known from the archaeological literature. *Sakbeh* literally means 'white road,' and was one of the primary terms recorded in Colonial period dictionaries as a translation of the Spanish term *calzada* ('main road, highway'), suggesting a well-constructed, major road. Amplifying this interpretation of a *sakbeh* as a well-built road is the synonymous term *betun* ('stone road'), which was also listed as a translation of *calzada*. Both *sakbeh* and *betun* refer to raised roads that are constructed of stone (*tun*) and usually covered with a white (*sak*) surface. Another analogous term is *but'bil beh* (lit. 'filled road'), which refers to raised, rubble-filled roads like those constructed by the ancient Maya.

Further, the Milky Way is, among other names, also referred to as a *sakbeh*, both presently and in Colonial period sources. This 'white road' of the heavens is conceived as a celestial highway that spans the length of the night sky and runs down from the heavens to the earth as a sort of spiritual conduit through which the initiated may converse with supernatural and ancestral beings (Tozzer 1941:174). Together these facts may explain why *sakbeh* has become such a significant term for modern Maya speakers and archaeologists alike when discussing the ancient Maya causeways. The term *sakbeh* references the color and construction of the ancient roads, as well as their reputed cosmic meaning and ceremonial function.

In addition to actual roadways, *beh* can also be applied to other path-like things, revealing an interesting connotation of 'road' not generally envisioned by English speakers: a road as a tubular or canal-like passageway. In all instances where *beh* is applied

metaphorically to road-like physical things, this meaning sense holds true. Thus, a blood vessel is *u beel k'iik'* (lit. 'its road blood'), a chimney is *u beel buts'* (lit. 'its road smoke'), a mole's tunnel is *u beel bah* (lit. 'its road mole'), and a canal is *u beel ha'* (lit. 'its road water'). The Milky Way *sakbeh* is also understood as a *kuxan sum* (lit. 'living rope'), meaning umbilical cord; a tubular passageway through which vital essences are transmitted between this world and the next. The tubular, canal-like connotation of *beh* is reminiscent of the construction of some Classic period causeways with low parapet walls that contained the flow of human concourse much like a canal or a chimney contains flowing water or smoke.

When the term *beh* is used in the possessed form, *u beel*, it is not typically a physical but a metaphorical road that is imagined. In the Colonial period, one's road was one's well-being, occupation, and destiny. In this sense, a road might be either good or bad, but the use examples suggest that there exists a good, true road from which people occasionally lose their way and therefore do not prosper (*ma' tu ch'a'ik be*, lit. 'not taking one's road'), or become preoccupied with falsehoods (*tus beh*, lit. 'false road'). This road is a person's life and life-works, and the ideal is a long, orderly, straight journey marked by birth, marriage, work, and death.

Other life and destiny meanings of *beh* include expressions for birth, *hok'ol beh* (lit. 'step onto road'), death, *ok beh* (lit. 'to enter road'), and life history, *u ts'ola'n beel maak* (lit. 'the ordered road (of a) man') (Coggins 1988:71; Freidel et al. 1993:77). Further, the course of the sun was thought of as its road, just as the orbits of the stars are their roads (*u beel ek'ob*, lit. 'their road the black ones'). In these cases, *beh* refers to the linear daily or nightly transit of these astral bodies across the sky.

In summary, from the Colonial period to the present, the meaning of *beh* appears relatively stable, integrating life cycle, temporal, and occupational aspects in addition to the prosaic 'physical road you walk on' meaning. The most significant change appears to be a slow constriction of use contexts over time, as well as a marked de-emphasis of the 'work' meaning in modern speech. Whereas in Colonial times one's life course, destiny, well-being, and occupation all coalesced in the term *beh*, now work is more commonly discussed as *meyah*, or as *tràabaho* from the Spanish word for work, *trabajo*. This may have something to do with a shift to wage work from the traditional work of farming, food processing, craft production, ritual specialization, and political office, all of which were understood as one's fate or destiny, rather than simply one's paycheck.

Colonial Contextual Meanings

As rich as the dictionary entries are, they provide few of the whole "sentences, in which words are meaningfully put together," necessary for a contextual semantic analysis (Wierzbicka 1997:27). Thus, to place the word *beh* in a broader semantic context, I have reviewed a number of Mayan language texts written in the Colonial period. The principal for the Mayan texts used here are: in Yucatec, *The Book of Chilam Balam of Tizimin*

(Edmonson 1982), *The Book of Chilam Balam of Chumayel* (Edmonson 1986), *The Codex Pérez and The Book of Chilam Balam of Maní* (Craine and Reidorp 1979), *Ritual of the Bacabs* (Roys 1965); and in Quiche, the *Popol Vuh* (Tedlock 1996), the *Rabinal Achi* (Tedlock 2003), and a collection of Quiche dramas and divinatory calendars (Edmonson 1997).

These texts—written by Maya scribes in Mayan and for a Mayan-speaking audience—are concerned with religion, myth, divination, curing rituals, calendrics, and a Maya-centered history in which the Spanish are rarely mentioned (Restall 1998:35). Many of the surviving texts were “deliberately kept secret from the Spanish,” and they stand as the only extant books “produced exclusively by and for the Indians themselves” (Farriss 1987:580). The texts I have chosen contain stylized historical content which is often metaphorical and intentionally obscure (Edmonson 1982:xiv). Most are poetic works written in a traditional semantic couplet format. The meaning of *beh* gathered from these works therefore also tends toward the poetic and metaphorical.

As with the dictionary examples, I have grouped the textual use examples of *beh* into four core meaning senses:

- (1) *Road*: including paths, spirit paths, and crossroads
- (2) *Day*: limited to the expression *kabeh*, ‘the day after tomorrow’
- (3) *Work*: such as office, burden, mantle of power (especially of lords and *k’atunob*)
- (4) *Destiny*: encompassing life and well-being

These meaning sense are similar to, but do not exactly duplicate, the dictionary meaning senses. Again, these are not mutually exclusive categories, and all of the collected use examples converge on a ritual sense of *beh* as a spiritual thread of destiny and communication between realms. This meaning sense is heightened in these texts as compared to modern speech and the Colonial period dictionary entries.

In the texts we find few actual, physical roads. More often *beh* is used metaphorically to represent spiritual paths and destiny. Time is born on a road, ancestors and gods communicate with the living via roads, calendrical cycles like the *k’atun* (a period of 20 years, analogous to our decades) are celebrated on roads, and the cosmos is organized by the intersection of four roads which form a crossroads. This last image, the crossroads, is a fundamental concept in the Colonial era, probably extending back into the Classic period as well.

The concept ‘crossroads’ is typically expressed as *kan beh* (lit. ‘four road’) in Yucatec, and *kajib xalkat be* (lit. ‘four crossed roads’) in Quiche. In the Colonial period documents, the crossroads is both a physical place and a metaphoric device signaling order, centrality, and the concordance of spiritual and mundane topographies. In the epic *Popol Vuh* narrative, the crossroads is the location of transition and transformation where the mythical Hero Twins (Hunahpu and Xbalanque) take the ‘black road’ (*q’eqa be*) to the underworld (Tedlock 1996:95, 116). In the *Chilam Balam* texts, the crossroads is associated with

representatives of the underworld and the ancestors, insignia of power, and sacrificial offerings. When the mantle of rulership is conferred upon a city, the ‘burden’ (*kuch*) of power is ‘lowered’ (*emom*) over the crossroads. When, as is often the case, power struggles emerge and the seat of the rulership is unclear, the traditional images and icons are removed from the center, thus vitiating the authority of the capital. The crossroads is a place where this world and the spirit worlds collide: where communion and transformation are possible, and where the representatives of the gods and ancestors are present.

Interestingly, the Yucatec couplets containing references to crossroads are quite consistent, usually invoking first the crossroads and then enigmatic places known as the four rest stops (*kan lub*) or four changers (*kan hel*). Munro Edmonson (1982:76–77) believes that both the *kan lub* and the *kan hel* were actual “rest stops, platforms on which one may temporarily deposit one’s burden,” and “ceremonial platforms of this sort at the entry to a central plaza.”

The *Chilam Balam* texts also contain a variety of complex word games and numerous puns. In one riddle containing the word *beh*, the officiating priest asks the initiate if he saw grown men with children on their backs walking on the road (*Mehe mak x t a u ilah ti beh/T a u ilah wa noh xibob an*). The appropriate response is that, yes he has seen them, and further that the grown men symbolize the big toes, while the children are the rest of the toes of the feet. In this case, the image of men on a road is a clue, suggesting the concept of walking and feet. Thus, even in these instances where *beh* is used literally to mean a real road, the broader context is ritual and metaphoric.

Not unexpectedly, the use contexts of *beh* in the Colonial Mayan texts are dominated by ritual senses of the word, most significantly the crossroads. The crossroads functions to order the universe, providing structure as well as communication between the mundane and supernatural realms. Mayan speakers in the Colonial era elegantly developed numerous metaphoric linkages between roads and time, incorporating the allied concepts of life, obligation, and destiny.

Prehispanic Meanings

The Classic period glyph for the word *beh*, or *bih* in Cholan, was the image of a quincunx: four corner dots and one in the center, like the five on gaming dice (Figure 1).³ This image is hardly road-like unless we imagine it as a crossroads, with each corner dot marking one of the four roads and the center dot marking their crossing point. The crossroads may have been

³ A later, apparently Yucatec glyph for *beh*, recorded by Landa in his Mayan “alphabet” (Tozzer 1941:170) takes the form of a human footprint (T301). This footprint glyph does not appear in Classic texts, but it existed alongside the quincunx glyph at the Conquest when the extant hieroglyphic codices were written.

the fundamental image of “*beh*-ness” for the Classic Maya.⁴ The quincunx glyph, also known as Thompson’s glyph T585, is relatively common in the texts of the Classic period. T585 is found in the monumental inscriptions of over 20 sites and on many codex-style vases (Thompson 1962:209–213). Like most regularly used glyphs in the ancient Mayan writing system, T585 occurs both as a lexeme (as the word *bih/beh* itself), and as a phonetic complement (supplying a /b/ or /bi/ sound to a phonetically rendered expression).

The most famous use of T585 as a lexeme occurs in the text adorning the sarcophagus of Pakal I, Palenque’s most illustrious ruler. In a passage discussing Pakal’s death, T585 is paired with a glyph translated as *och* in Cholán, or *ok* in Yucatec, meaning ‘to step’ or ‘to enter.’ In this instance, epigraphers translate the expression as ‘to enter the road,’ and interpret it as a metaphor for death (Coggins 1988; Freidel et al. 1993:76–78; Stuart 1998:388, Figure 9a). A similar usage is preserved on the Palace Tablet, where the death of Pakal’s son Kan Balam II is recorded as an *och bih/ok beh* event (Harris and Stearns 1992:88). Beyond the site of Palenque, Simon Martin (2001:181) has identified the *och bih/ok beh* death expression on an unprovenienced panel relating the death of a lord at the powerful northern Petén site of Calakmul. Other, as yet unidentified, examples of this expression likely exist as well. Clemency Coggins (1988:71) has deciphered a related expression, *hok’ol beh* (lit. ‘to go out onto the road’), which she interprets to mean ‘birth’ or ‘to be born.’ The same expression existed in the Colonial period where it most prominently meant ‘to appear’ or ‘become infamous,’ though the ‘birth’ meaning persisted as well (Andrews Heath 1980:241).

In addition to its use as a lexeme, the T585 quincunx glyph is also frequently found as a phonetic complement in compound collocations. The glyph occurs repeatedly on elaborate polychrome painted vases as part of the so-called “wing-quincunx” and “fire-quincunx” collocations. Though scholars have offered a variety of translations for these two common collocations (e.g., Coggins 1988:76), they are now convincingly translated as *y-uch’ib* (‘his drinking vessel’) and *u-ts’ib* (‘to write/paint,’ or ‘his paint’), respectively (Houston et al. 1989; Reents-Budet 1994:114–115). In each instance, T585 supplies the final /b/ sound in the expression. Further, T585 was regularly used phonetically as part of the term, *waybil*, meaning ‘lineage shrine’ (Freidel et al. 1993:190–192) or simply ‘domicile’ (Stuart 1998:Figure 1).

⁴ The interpretation of quincunx as crossroads may be supported by the very common expression *u ho(l) kan beh*, from the *Chilam Balam* texts, in which the /l/ at the end of the word *ho* is usually absent. This phrase is typically glossed as ‘at the mouth/entry (*hol*) of the crossroads,’ but it could also be translated as ‘at the five(*ho*)-four road,’ possibly referencing the collapsed quincunx and quadripartite arrangements inherent in a crossroads. Along these same lines, Linda Schele (1998:491) has identified the expression, *na ho kan wits* as ‘House-Five-Sky Mountain,’ a named place of creation, which she associates with the Colonial period *ho(l) kan beh* crossroads. Similarly, *na ho kan witz* might be translated as the House-Five-Four Mountain.

Another notable use of T585 is as the main sign in the royal emblem glyph⁵ associated with the Usamacinta River site of Piedras Negras. Though visually prominent, T585 again plays a supporting role in this collocation, supplying a /b/ sound for the term *yokib*, ‘valley.’ The entire emblem glyph is translated as *K’ul Yokib Ahaw*, or ‘Divine Valley Lord’ (Harris and Stearns 1992:71–73).

These are but a few examples of the use of the *bih/beh* quincunx glyph in the Classic period, and certainly more work remains to be done concerning the occurrence of the glyph as a lexeme and as a phonetic complement. Nevertheless, this cursory review serves to illustrate the possible continuity of the metaphoric meanings of *beh* from the Classic period to the present, particularly the interrelation of roads, life, and destiny.

Archaeological Implications

Turning now to the archaeological application of this material, I would like to address a few of the more significant implications of this study of Maya road terms for the investigation of ancient roads. These include temporal, physical, and ceremonial aspects of the concept *beh* as it relates to archaeologically documented Maya roads. The most general, and perhaps most important observation is the pervasive temporal dimension of roads in Maya language and thought. Roads are associated with journeys, the passage of time, and the celebration of calendrical ceremonies, particularly the *k’atun* and other period ending rituals. The many stone monuments erected at the ends of archaeologically documented causeways may be related to the commemoration of temporal cycles, as carved monuments often record calendrical period ending dates.

Crossroads

Related to the temporal quality of Maya roads is the concept of the crossroads. In the Colonial period, if not earlier, Maya scribes represented time, space, and the cosmos using a common cruciform image inscribed within either a circular or roughly squared perimeter (Coggins 1980; Mathews and Garber 2004). Many of these images include road-like partitions alluding to the crossroads and the centered, four-fold division of the cosmos. This symbolic crossroads might have been a direct referent for many Classic Maya causeways.

The mythical crossroads of the Colonial texts may be reflected in the cruciform patterns of sites such as Coba (Benavides 1981) Ek Balam (Bey et al. 1997), Yaxuna (Stanton and Freidel 2005), Seibal, Xunantunich (Keller 2006), and La Honradez, among others. In these cases, the cruciform pattern need not be geometrically perfect. Just as modern Mayan speakers conceive of their villages as having four cardinaly oriented roads which are, in

⁵ A Maya emblem glyph is a sort of royal title often tightly associated with a particular center, and similar in usage to a European coat-of-arms.

fact, rarely exactly to the east, west, north, and south, of the village center (Redfield and Villa Rojas 1934:114), so too might the ancient Maya have been flexible in this regard. In the physical world of caves and mountains, of lakes and streams, the crossroads may have been stretched and warped to fit.

Change Places

Another interesting set of features identified in this study are the ‘rest’ or ‘change’ places, routinely associated with the crossroads in the Colonial period texts. These places are directly tied to the ‘changing’ or rotation of temporal cycles in the *Chilam Balam* texts, and they may have had direct archaeological corollaries at numerous Classic period sites: small, seemingly out-of-place structures at the ends of causeways. If we accept Edmonson’s (1982:76–77) interpretation of the ‘rest’ or ‘change’ places as actual structures, then those structures may have performed important duties as the repositories of images and items associated with the rotation of calendrical cycles.

These rest stop platforms are reminiscent of what Diego de Landa, Bishop of Yucatan in the sixteenth century, described as “heaps of stone” erected at the four cardinal entrances to traditional Maya towns. Upon these piles of rock, Landa observed that the Maya placed “a statue of a god” representing the new year (called year-bearers) during their Year Ending (*Wayeb*) ceremonies (Tozzer 1941:139–141; see also Coe 1965; Sharer 1994:547–551). Anthropologists working with Lowland and Highland Maya groups have documented analogous shrines at the cardinal entrances to modern towns. These roadside shrines are frequently involved in the celebration and rotation of calendrical cycles (Farriss 1987:577; Fox 1994:160; Konrad 1991; Redfield and Villa Rojas 1934; Tedlock 1992; Vogt 1970, 1976).

At archaeological sites, examples of similar causeway-associated structures exist at most sites that have causeways, including Copan, Ixkun, Naranjo, Tzum, Yaxuna, and Xunantunich. These structures are often small, low platforms adjacent to or astride causeways at their entrance to major plazas. Additionally, at a number of sites causeways terminate at isolated platform structures, often fronted by numerous stone monuments. These termini structures might also be understood as ‘rest’ or ‘change’ places in the context of their overall site plans.

Types of Roads

Beyond the various qualities and features associated with roads, Mayan speakers also discriminate among a large number of road types from narrow and rocky to wide and great. The existence of multiple types and categories of roads in the Colonial period dictionaries and texts, is perhaps the most immediately applicable to archaeological investigations of Maya roads and paths. In Maya archaeology, the term *sakbeh* has become virtually synonymous with the raised stone roads of the ancient Maya, but this may not always have been the case. The number and variety of road types identified by Colonial period Yucatec speakers suggests that we are incorrect in presuming that all archaeological remains of road

features were understood as, or intended to be, *sakbeob*. Further, the archaeologically documented roads themselves are not a unitary class (Cobos and Winemiller 2001; Chase and Chase 1987; Shaw 2001).

Using the many terms gathered from Colonial sources, I have elsewhere created a preliminary, Mayan-based typology of roads which cross-cuts most archaeologically based classification schema (see Keller 2006 for a complete discussion of the typology). This classification consists of five classes: major, secondary, urban, rural, and ceremonial roads. The classes follow the Mayan terms fairly closely, although they surely only approximate Maya sensibilities. One quality that, oddly enough, is not addressed in the Mayan road terms is the *length* of a road. While we might logically assume that major roads are also long roads, the Mayan terms give us no indication that this was so. Considering the fact that archaeological road classification schemes often use length as a discriminating factor (e.g., Shaw 2001), the absence of any terms mentioning road length, or any suggesting that the length of a road was of any particular consequence in a Mayan classification, is surprising. There are wide and narrow roads, but no long or short ones.

Thus, the distinction between major and secondary roads has little to do with the length of a road, but rather with the fineness of its construction, the straightness or directness of the route, and possibly the width of the road. In this context, ‘straight’ does not refer entirely to the rectilinearity of the road, but also to the preeminence of the route in contrast to ‘crossing’ or ‘divided’ roads that meet multiple paths and are difficult to follow (cf. Hanks 1990:311). In this classification, even unconstructed footpaths, if sufficiently wide, direct, and cleared of debris might be considered major roads. In fact, the Maya conception of constructing a road seems to have as much to do with clearing the path of vegetation and maintaining it thereafter, as with earthmoving or masonry construction.

Several terms in the dictionaries refer to the act of creating a road through the forest (*hats’ beh*, *hol beh*, *tah beh*, *top’ beh*), as well as to the maintenance of a road after its construction indicating the importance of these activities. The maintenance or ‘sweeping’ of a road (*mis beh*, lit. ‘sweep road’), was apparently conducted as a sort of community service. This clearing and maintaining of rural roads (akin to trails or paths) between villages and outlying cultivated lands was surely important to the basic survival of dispersed farmers living amid a tropical forest. As cultural entities, roads created networks of cultured space through the untamed forest. They imposed a system of order on the decidedly messy expanse of lowland jungle and scrub.

The Significance of Movement

Finally, the words and writings of the Maya collected here suggest that movement, particularly along formal paths and roads, held a strong ceremonial and symbolic significance from the Classic period forward. This inference, admittedly, may be difficult to investigate archaeologically, but it is an important concept to keep in mind when excavating and discussing ancient Maya causeways.

By moving through their landscape along prescribed routes, people come to understand not only the contours of the world, but also the contours of their own bodily and perceptual presence in the world. This process of self-recognition is often described through the metaphor of a person traveling along a road, as in the common Yucatec Mayan expression, *bix a beel*, ‘how are you’ (lit. ‘how (is) your road’), wherein the concept of ‘road’ is equated with a person’s well-being, life-course, and destiny. Among the Western Apache, Keith Basso (1996:70) has documented a similarly close relationship between life, self-recognition, and movement in the expression “life is like a trail.”

Within the Maya world, motion appears to have attained a spiritual character and a generative power. Many modern Maya ritual practitioners diagnose and cure illness by tracing the movement of various forces in the world and within individual bodies (Hanks 1990:343; Tedlock 1992:138). In both the highlands and the lowlands, the movements of spiritual forces create illness, and only through the counter-movements of the ritual specialist is a cure effected. William Ringle (1999:200) observes that we find this “widespread concept, the belief in the efficacy of motion,” expressed in ritual activities ranging from curing rites and house dedications, to community-wide processions and long-distance pilgrimages. The act of moving—around a house or to a shrine—imparts substance and power upon a ritual undertaking.

What should be apparent in this discussion is that Maya movement is not merely a receptive activity of experience, it is also a generative act capable of effecting change in the world. The Maya are not alone in this regard. In a wide variety of cultures, past and present, movement—especially ritual or processional movement—is understood as a uniquely potent activity (e.g., Coleman and Elsner 1994; Morinis 1992; Orr 2001; Poole 1991; Stanley 1992; Turner 1974).

Considering the efficacy of movement in Maya thought, it is hardly surprising that Maya rulers would have made the control of movement a fundamental aspect of urban design. Maya architects had other means at their disposal to direct movement—such as walls, stairs, the opening or blocking of passageways—but constructed roads were a particularly overt tool. With their roads, Maya rulers had the opportunity to direct not only movement, but also the very basis of perception and self awareness. Further, causeways may have functioned as unmarked stages for royal display (Ringle 1999). By stepping onto a causeway, a ruler stepped into time, destiny, and his rightful place in the world. He stepped onto a *beh*, with all its many and layered meanings.

Conclusion

The importance of the Mayan term *beh*, from the Classic period to the present, suggests the deep and abiding importance of roads and paths Maya life and thought. In his interpretative notes accompanying the text of the *Chilam Balam of Tizimin*, Munro Edmonson (1982:76) explains:

The image of the road is central to Yucatecan cosmology. Life is a road. Fulfilling one's road is achieving one's destiny. One form of doing so is marriage: *k in tz'ookl in bel* 'I finish my road' is 'I marry.' The sun and the gods also follow their roads, which intersect in the center of the community, which is the center of the universe.

The fundamental meaning senses of the term *beh* appear to have changed little from prehispanic to modern times, but there have been subtle shifts in significance. From the Colonial to the modern era, *beh* has lost some of its inclusive power to convey a person's life, occupation, social and spiritual obligations, and destiny in one coherent package. Over time, the 'work' meaning of the term has lost its relevance, such that today, Maya speakers rarely use *beh* in discussions of their daily work. From the Classic to the Colonial periods, I suspect that there was a comparable shift in meaning related to the profound social and political transformations wrought by the Conquest. Road terms and concepts pertaining to the ruling elite may have lost some of their currency with the reduction of the traditional ruling class. My feeling is that many of the archaeologically documented stone roads, particularly those attached to major centers, were intimately associated with the power and the person of the ruler. These were the "king's roads" his *noh ch'ibal behob*, reflecting the flow and extent of his divine power.

Finally, revisiting the riddle posed at the beginning of this paper, "What is a man on a road?", we can now sense the logic behind the answer: "Time." The association of roads and paths with time is a metaphoric device common to many cultures and languages (Potter 2004:324). By walking on a road, one senses the passage of time physically: what is behind is in the past, what lies ahead is in the future. Few concepts could be more fundamental. In the Maya case, though, the conflation of roads and time entails not only a linear path from there to here, but also multiple, interwoven cycles of time that form the fabric of life. The road of life is likened to the roads of the sun, moon, and stars that run in great circles around our everyday world forming transits in the sky and tunnels through the underworld. By walking along their roads, the Maya performed time. They displayed the passage of time, and the transition of temporal cycles as spatially rooted entities.

Without a detailed semantic analysis of the word *beh*, we would be ill-equipped to understand the significance of "a man on a road," in the Maya sense. Within the word *beh* is the unfolding of life, destiny, obligation, transformation, order, and a conduit to the supernatural, all bound to unending cycles of time. The English words 'path,' 'road,' and 'causeway,' although formally descriptive, fail to capture the meaning of the Mayan word *beh*. As Eva Hoffman (1989:204) elegantly describes, between languages "there are shapes of sensibility incommensurate with each other, topographies of experience one cannot guess." As archaeologists, our task is to use the "shapes of sensibility" revealed by the study of language, history, and culture to approach the past with a greater sensitivity to long-forgotten "topographies of experience."

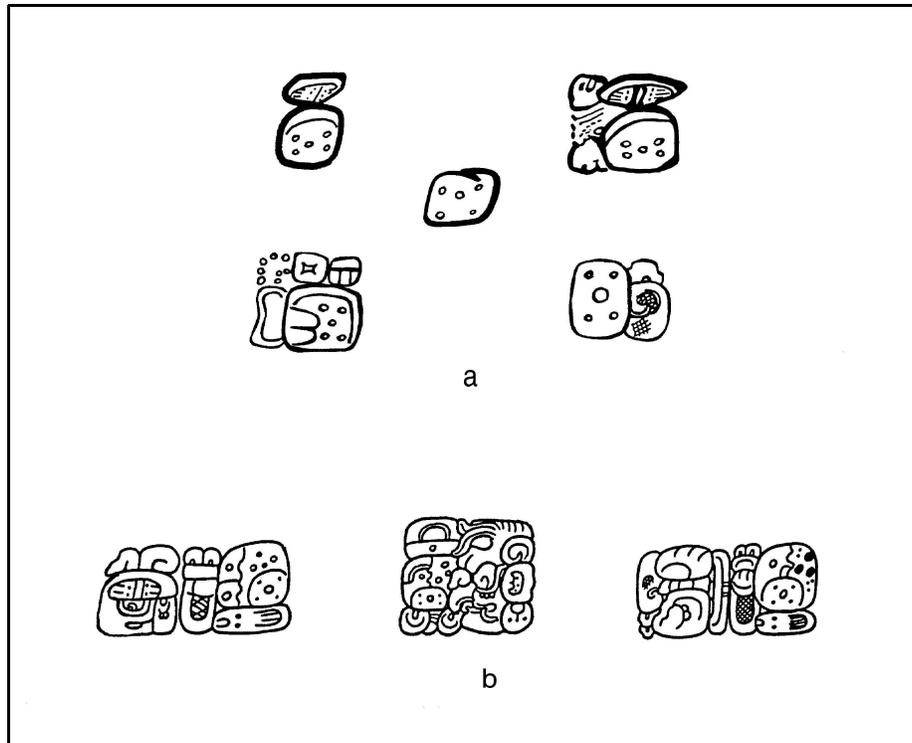


Figure 1. Examples of the quincunx glyph (Thompson's T585) from various Classic period texts: (a) as a main sign, (b) infixed.

Table 1. Terms and Expressions Containing *Beh* from Colonial Period Yucatec Dictionaries

Meaning Sense Yucatec Term	Literal Translation	English Gloss	Comments
I. Road			
Ia. Path, Course, Bridge			
<i>be-che'</i>	road-wood	wooden or log bridge; pontoon bridge	
<i>be-tun</i>	road-stone	road or bridge of stone	
<i>be-kab</i>	road-earth/world	path cleared as a fire break, for milpa fires specifically	
<i>bok'olbok' beh</i>	beaten/mixed road	rocky, rough road with many hills and dips, not level	
<i>but'bil beh</i>	filled road	road constructed with fill, probably refers to raised, stone-filled roads	
<i>ch'akat beh</i>	crossing road	road that has many forks and crossings	described as a difficult road to follow, the <i>ch'akat beh</i> is contrasted with a direct route or straight road
<i>(u) ch'ibal beh</i>	(its/his/her) lineage road	large or principal road from which smaller roads emerge	metaphorically likened to the direct male line of descent, this road is considered a large, primary road from which smaller roads branch off
<i>ch'ux beh</i>	narrow road	narrow road	
<i>ek' beh</i>	black road	rough, narrow road or path	
<i>hats' beh</i>	whip road	to open a path through thick undergrowth, or the path itself	
<i>haw beh</i>	to remove/end road	to open a road or path through people (a crowd) so that one may pass	several related expressions include reference to priests or padres, such as, <i>hawes u beel padre</i> , 'to vacate/empty the road so that the padre may pass'
<i>hol beh</i>	mouth/to open road	to open or make a new road through the mountains or forest	a related term is <i>hol che' beh</i> (lit. 'open tree road'), 'to make a road through trees and hills'

Meaning Sense Yucatec Term	Literal Translation	English Gloss	Comments
<i>(u) hol beh</i> ^a	(its) mouth/hole road	the entrance onto or beginning of the road	
<i>hola'an beh</i>	open road	open road	synonymous or derivative terms are <i>holoknak beh</i> and <i>homoknak beh</i>
<i>kan beh</i>	four road	crossroads	found repeatedly in the <i>Chilam Balam</i> texts
<i>koch-babe'en beh</i>	wide road	a wide, open road	a synonymous term is <i>koch babaknak beh</i>
<i>lik'il ti' beh</i>	to stand up on road	to leave on the road, on the road ready to go	a synonymous expression is <i>lik'a'an ti' beh</i> , and a similar idiomatic expression is <i>lep'a'an kuch</i> , translated as 'on the road ready to depart'
<i>lob beh</i>	overgrown road	rough or impassable road thick with weeds	
<i>lut' beh</i>	narrow road	path, lane, small road	synonymous with <i>nut' beh</i> (below); also given as <i>lulut' beh</i> ; the related term <i>lut' ximbal</i> (lit. 'narrow walk') means 'to walk in a jumping fashion,' or 'to trot'
<i>mis beh</i>	sweep road	to clean or renovate the roads, to remove vegetation and other debris by sweeping	other public spaces were similarly treated: <i>mis lub</i> , 'to sweep the rest stop,' <i>mis luum</i> , 'to sweep the land,' <i>mis k'i'iwik</i> , 'to sweep the plaza,' and <i>mis peten</i> , 'to sweep the region'
<i>matan mis beh</i>	charity/alms sweep road	a section of road to be swept by a particular town, barrio, or person	
<i>nak beh</i>	near road	close to or adjoining the road	also the name of a major Preclassic Maya center in the Peten
<i>nap'al nap' beh</i>	broken/pinched between hard objects road	stony, rocky road	the image created by this term is of a rocky road on which one hears the crack of animals' hooves on the stones as they pass
<i>noh beh</i>	great road	royal, principal, great, wide road	used in reference to the largest and longest roads of Yucatan, and the main roads into cities; a related term in Quiché is <i>nima be</i> , 'high, main road'

Meaning Sense Yucatec Term	Literal Translation	English Gloss	Comments
<i>nut' beh</i>	narrow road	path, lane, small road	synonymous with <i>lut' beh</i> (above); the related term <i>nut' ximbal</i> (lit. 'narrow walk') means 'to walk with small steps like a woman'
<i>pikit beh</i>	fan/blow road	watchtower, lookout in the countryside (presumably along a road)	a related term is <i>ah pikit beh</i> , 'spy, lookout, guard, sentinel, or explorer'; see also the expressions <i>u sabin beh</i> and <i>ah ch'a' beh</i> (below)
<i>p'at beh</i>	forget road	to lose the road, to get lost	often a metaphorical device
<i>sak-beh</i>	white road	white road, constructed stone road, main road	see secondary meaning as 'Milky Way' (below)
<i>tah beh</i>	knock/cut road	to make a path through brush with the feet	
<i>top' beh</i>	to flower road	to open or make a road anew	
<i>tul beh</i>	full road	path	
<i>t'ubul beh</i>	sinking road	straight road	<i>t'ubul</i> is also used with <i>k'in</i> (lit. 'day/sun') to mean the setting of the sun
<i>t'ul beh</i>	narrow road	narrow road	a synonymous term is <i>x-t'un t'ul beh</i> (lit. 'drop' or 'dot road') which has the added connotation of being a narrow pedestrian road through the mountains
<i>wa' beh</i> ^a	one's road	to leave or start on a journey	related expressions are <i>wan ti' beh</i> , 'on the road and ready to depart', and <i>(ah) wa' beh</i> , 'a walker on the road ready to depart'; see also <i>lik'il ti' beh</i> (above)
<i>xax beh</i>	side road	road that goes around or to the side of something	use examples indicate that <i>xax beob</i> go around things like towns and crosses
<i>xay beh</i> ^a	divided/crossed road	divided or crossed roads	a synonymous term is <i>xayah beh</i> ; two related terms are <i>xayankil beh</i> , 'the crossing and dividing of the roads', and <i>xaybesah</i> , 'making the crossings and divisions of the road'

Meaning Sense Yucatec Term	Literal Translation	English Gloss	Comments
<i>xoy beh</i>	roundabout/circling/ turning road	detour, shortcut	a synonymous term is <i>nach xoy-beh</i> (lit. ‘far turning road’)
Ib. Tubular or Canal-like Road			
<i>(u) beel bah</i>	(its) road mole	the tunnels of moles underground	
<i>(u) beel buts’</i>	(its) road smoke	chimney	
<i>(u) beel ha’</i>	(its) road water	canal	synonymous terms are <i>bekan, bebek</i>
<i>(u) beel it</i>	(its) road ass/anus	line between the gluteal muscles, or anus	
<i>(u) beel k’ab</i>	(its) road hand	line(s) on the hands	
<i>(u) beel k’iik’</i>	(its) road blood	vein, artery	synonymous terms are <i>(u) beel nohol</i> (lit. ‘its road south’), and <i>(u) beel nah</i> (lit. ‘its road house’, or possibly ‘its road mother’)
<i>(u) beel luk’</i>	(its) road mud/clay	sewer of the house	
<i>(u) beel pach^a</i>	(its) road back	depression between the shoulder blades running down the back	
<i>(u) beel pol</i>	(its) road head	part in the hair	generally used in reference to a child’s hair or a woman’s elaborate hairstyle
<i>(u) beel wiix</i>	(its) road urine	urethera	
<i>(u) beel yuk</i>	(its) road bastard/goat	the line of baldness, receding hairline (for men)	a synonymous term is <i>(u) beel t’ab</i> (lit. ‘its road bald’)
Ic. Astral Course			
<i>(u) bèel ek’ob</i>	(their) road the black ones	orbit of stars	
<i>(u) beel kaan^a</i>	(its) road sky/heaven	the road of the sky	this term may refer to the course of the sun across the sky or to the Milky Way

Meaning Sense Yucatec Term	Literal Translation	English Gloss	Comments
<i>sak-beh</i>	white-road	Milky Way	a synonymous term is <i>kuxan sum</i> (lit. ‘living rope’), meaning ‘umbilical cord’ and ‘Milky Way’; this ‘road’ is thought to extend across the sky and also down from the sky to earth
II. Day/Journey			
<i>ka’a beh</i> ^a	two road	the day after tomorrow, the day before yesterday	
<i>tan beh</i>	middle road	middle of the road, middle of the day, middle of the journey	a synonymous term is <i>tan k’in</i> (lit. ‘middle day/sun’); the connotation of both terms is midpoint of the sun’s journey through the sky along its course or road
<i>ox k’in beel</i>	three sun/day road	third day	possibly meaning ‘the day after the day after tomorrow,’ similar to the modern <i>oxbeh</i>
<i>way beh</i>	companion spirit road	journey undertaken at night	probably associated with other way terms like <i>waybil</i> , translated as ‘lineage shrine’
III. Work (Occupation, Office, Responsibility)			
<i>(u) atan beel</i>	(his) wife road	married life, for husband	
<i>(ah) bel-besah beh</i>	(he of the) guide road	a person who opens the road where another will travel, road guide, trailblazer; a matchmaker	this is sometimes contracted to <i>belbesah</i> ; a similar term is <i>(ah) payal beh</i> (lit. ‘[he of the] guide road’), meaning ‘road guide’; an analogous term in Quiche is <i>k’amol be</i> (lit. ‘road guide’), a daykeeper specializing in matchmaking
<i>(u) beel</i>	(its/his/her) road	work, office, position, business or occupation for good or bad	a closely related synonym is <i>kuch</i> (lit. ‘seat,’ ‘burden’) meaning ‘occupation,’ ‘burden,’ or ‘office’

Meaning Sense Yucatec Term	Literal Translation	English Gloss	Comments
<i>(ah) beel nal</i> ^a	(he of the) road ear of corn	administrator, local government official	this term seems to refer to local, Maya-speaking officials
<i>(u) beel swanil</i>	(its) road entertaining	one's occupation of caring for the house	<i>swanil</i> is used here to mean 'inviting people to a reception', or 'hosting a party'
<i>beel tah</i>	road owner	to make or do something for good or bad	
<i>(u) beel tah beel</i> ^b	(its) road ownership road	to administer, to be an official	a synonymous term is <i>beelancil</i>
<i>ch'a beh</i> ^a	to carry road	to accept a job or an office	
<i>(u) icham beel</i>	(her) husband road	married life, for wife	
<i>(ah) kanbal beh</i>	(he of the) teaching road	novice, generally in an art-related field	
<i>pat beh</i>	make/declare road	to induce or provoke	
<i>(u) sabin beh</i> ^b	(its) weasel road	sentinel or spy	Tozzer (1941:205) notes that the "weasels [<i>sabin</i>] of the army were the scouts or spies;" two related terms are <i>(u) sabin k'atun</i> (lit. '[its] weasel k'atun/war'), meaning 'war spy', and <i>(ah) ch'a' beh</i> , 'sentinel, spy, or scout' (below)
<i>swanil beh</i>	entertain/work road	adventures, varied occupations	the term <i>swanil</i> appears to have two related meanings: (1) 'inviting or entertaining'; and (2) 'occupation or work'
<i>tah beelankil</i> ^b	owner's roadship	to elect to an office	
<i>tak (ti') beh</i>	to put (in) road	to fire a servant	the expression given to explain the use of this term is, <i>ma' a takik ti' beh a ch'uplil</i> , translated as 'you don't fire your wife'
<i>(ah) tohol beh</i>	(he of the) true road	good and virtuous person (who does good works)	a synonymous term is <i>(ah) tibil beh</i>
<i>(ah) ts'ats'abail ti' beh</i>	(he of the) arrogant meddler road	ambitious person who gets involved in other people's business	a very similar expression is <i>(ah) ts'ats'abail ti' kuch</i> , meaning 'one who takes the best place or seat without having a right to it'
<i>ts'okсах beh</i>	finished road	to finish a job or a piece of work	

Meaning Sense Yucatec Term	Literal Translation	English Gloss	Comments
<i>tus beh</i> ^a	false road	to commit a sin, idle entertainment, preoccupation, diversion	today in the area around Coba, <i>tus bel</i> means ‘errand’, without the negative connotations of the Colonial term (Bevington 1995:173)
<i>uts a beeltik u beel</i>	good in doing one's road	to perform well in one's job or office	
IV. Life			
IVa. Health, Present Condition			
<i>(u) beel</i>	(its/his/her) road	the state of health, life, prosperity, present situation	
<i>bix a beel</i>	how (is) your road	how are you	
<i>hok'ol beh</i> ^a	go out onto road	to go from one road to another, to become infamous; to be born ^b	also noted in Classic period hieroglyphic texts where it means ‘to be born’ or ‘to appear’ (Coggins 1988:71)
<i>ma' tu ch'a'ik beh</i>	not taking one's road	not prospering, not thriving	
<i>pat-hal beh</i>	remedy road	to examine a potential spouse before marriage	the implication is to see if the parties are free to marry without impediments like previous liaisons
<i>ts'o'okan u beel</i>	end one's road	to get married	
<i>tumsah bel</i>	new/experimental road	out of the ordinary, unusual	
IVb. Life History			
<i>ts'ola'n beh</i>	ordered road	order or mode of life, history, chronicle	
<i>(u) ts'ola'n beel maak</i>	(his) ordered road man	biography	
<i>(u) ts'ola'n beel santosob</i>	(their) ordered road saints	chronicle of the saints	the contracted form is <i>(u) beel santosob</i>

Meaning Sense Yucatec Term	Literal Translation	English Gloss	Comments
IVc. Naturalness, Destiny			
(u) <i>beel</i>	(its/his/her) road	natural, proper	
(u) <i>beelil k'aak' chakawil</i>	(its) road fire/burning	it's natural for the fire to burn	
<i>xik'bul u beel ch'iich'</i>	fly its road bird	it's natural for the bird to fly	

Notes: Unmarked entries collected from Barrera Vásquez (1995). Parentheses are used around optional but generally present particles; alphabetization disregards these particles.

^a Terms also found in *Chilam Balam* and other Yucatec texts reviewed for this project.

^b Collected from Andrews Heath (1980).

References Cited

Andrews Heath de Z., Dorothy

1980 *Vocabulario de Mayathan, Mayan Dictionary: Maya-English, English-Maya*. Self-published, Merida, Mexico.

Basso, Keith H.

1996 Wisdom Sits in Places: Notes on a Western Apache Landscape. In *Senses of Place*, edited by Steven Feld and Keith H. Basso, pp. 53–90. School of American Research Press, Santa Fe, New Mexico.

Benavides Castillo, Antonio

1981 *Los Caminos de Cobá y sus Implicaciones Sociales (Proyecto Coba)*. Colección Científica Arqueología, Centro Regional Sureste, Instituto Nacional de Antropología e Historia, México D.F.

Bevington, Gary

1995 *Maya for Travelers and Students: A Guide to Language and Culture in Yucatán*. University of Texas Press, Austin.

Bey, George J, III, Craig A. Hanson, and William M. Ringle

1997 Classic to Post Classic Ek Balam, Yucatan: Architectural and Ceramic Evidence for Defining the Transition. *Latin American Antiquity* 8(3):237–254.

Campbell, Lyle

1999 *Historical Linguistics: An Introduction*. The MIT Press, Cambridge, Massachusetts.

Carrasco V., Ramón

1993 Formación Sociopolítica en el Puuc: El Sacbe Uxmal-Nohpat-Kabah. In *Perspectivas Antropológicas en el Mundo Maya*, edited by Josefa Iglesias Ponce de León and Francesc Ligorred Perramon, pp. 199–212. Publication No. 2, Sociedad Española de Estudios Mayas.

Chase, Arlen F., and Diane Z. Chase

1987 *Glimmers of a Forgotten Realm: Maya Archaeology at Caracol, Belize*. University of Central Florida, Orlando.

1996 The Causeways of Caracol. *Belize Today* 10(3/4):31–32.

2001 Ancient Maya Causeways and Site Organization at Caracol, Belize. *Ancient Mesoamerica* 12:273–281.

Cheetham, David

2004 The Role of “Terminus Groups” in Lowland Maya Site Planning: An Example from Cahal Pech. In *The Ancient Maya of the Belize Valley: Half a Century of Archaeological Research*, edited by James F. Garber, pp. 125–148. University Press of Florida, Gainesville.

Cobos, Rafael, and Terance L. Winemiller

2001 The Late and Terminal Classic-period Causeway Systems of Chichen Itza, Yucatan, Mexico. *Ancient Mesoamerica* 12:283–291.

Coe, Michael D.

- 1965 A Model of Ancient Community Structure in the Maya Lowlands. *Southwest Journal of Anthropology* 21(2):97–114.

Coe, William R.

- 1988 *Tikal: A Handbook of the Ancient Maya Ruins*, 2nd ed., with revisions by Carlos Rudy Larios V. Centro Impresor Piedra Santa, Guatemala. Originally published 1967, University Museum, University of Pennsylvania, Philadelphia.

Coggins, Clemency C.

- 1980 The Shape of Time: Some Political Implications of a Four-part Figure. *American Antiquity* 45:729–739.
1988 Classic Maya Metaphors of Death and Life. *RES* 16:64–84.

Coleman, Simon, and John Elsner

- 1994 The Pilgrim's Progress: Art, Architecture, and Ritual Movement at Sinai. *World Archaeology* 26(1):73–89.

Craine, Eugene R. and Reginald C. Reidorp (editors and translators)

- 1979 *The Codex Pérez and the Book of Chilam Balam of Maní*. University of Oklahoma Press, Norman.

Dienhart, John M.

- 1989 *The Mayan Languages: A Comparative Vocabulary*, Vols. I-III. Odense University Press, Odense, Denmark.

Earle, Timothy

- 1991 Paths and Roads in Evolutionary Perspective. In *Ancient Road Networks and Settlement Hierarchies in the New World*, edited by Charles D. Trombold, pp. 10–16. Cambridge University Press, Cambridge, England.

Edmonson, Munro S.

- 1982 *The Ancient Future of the Itza: The Book of Chilam Balam of Tizimin*. University of Texas Press, Austin.
1986 *Heaven Born Merida and Its Destiny: The Book of Chilam Balam of Chumayel*. University of Texas Press, Austin.
1997 *Quiché Dramas and Divinatory Calendars*. Middle American Research Institute, Publication No. 66. Tulane University, New Orleans.

Farriss, Nancy M.

- 1987 Remembering the Future, Anticipating the Past: History, Time, and Cosmology among the Maya of Yucatan. *Comparative Studies in Society and History* 29(3):566–593.

Folan, William J., Ellen R. Kintz, and Laraine A. Fletcher

- 1983 *Coba: A Classic Maya Metropolis*. Academic Press, New York.

Folan, William J., Jacinto May Hau, Joyce Marcus, W. Frank Miller, and Raymundo González Heredia

- 2001 Los Caminos de Calakmul, Campeche. *Ancient Mesoamerica* 12:293–298.

Fox, John W.

- 1994 Political Cosmology Among the Quiché Maya. In *Factional Competition and Political Development in the New World*, edited by Elizabeth M. Brumfiel and John W. Fox, pp. 158–170. Cambridge University Press, Cambridge, England.

Freidel, David A., Linda Schele, and Joy Parker

- 1993 *Maya Cosmos: Three Thousand Years on the Shaman's Path*. William Morrow, New York.

Freidel, David A., and Jeremy A. Sabloff

- 1984 *Cozumel: Late Maya Settlement Patterns*. Academic Press, New York.

Gómez, Oswaldo

- 1996 Calzadas Mayas: Un Estudio desde el Sureste de Petén. In *IX Simposio de Investigaciones Arqueológicas en Guatemala, 1995*, edited by Juan Pedro Laporte and Héctor L. Escobedo, pp. 135–151. Museo Nacional de Arqueología y Etnología, Guatemala.

Hanks, William F.

- 1990 *Referential Practice: Language and Lived Space Among the Maya*. The University of Chicago Press, Chicago.

Hansen, Richard D.

- 1991 The Road to Nakbe. *Natural History* 5/91:8–14.

Harris, John F., and Stephen K. Stearns

- 1992 *Understanding Maya Inscriptions: A Hieroglyphic Handbook*. University Museum, University of Pennsylvania, Philadelphia.

Hoffman, Eva

- 1989 *Lost in Translation: A New Life in a New Language*. Dutton, New York.

Houston, Stephen D., David Stuart, and Karl A. Taube

- 1989 Folk Classification of Classic Maya Pottery. *American Anthropologist* 91(3):720–726.

Hyslop, John

- 1984 *The Inka Road System*. Academic Press, Orlando, Florida.

Jackson, John B.

- 1984 *Discovering the Vernacular Landscape*. Yale University Press, New Haven, Connecticut.

Justeson, John S., William M. Norman, Lyle Campbell, and Terrence Kaufman

- 1985 *The Foreign Impact on Lowland Mayan Language and Script*. Middle American Research Institute Publication 53. Tulane University, New Orleans.

Keller, Angela H.

- 2006 *Roads to the Center: The Design, Use, and Meaning of the Roads of Xunantunich, Belize*. Ph.D. dissertation, Department of Anthropology, University of Pennsylvania. University Microfilms, Ann Arbor.

Konrad, Herman W.

- 1991 Pilgrimage as Cyclical Process: The Unending Pilgrimage of the Holy Cross of the Quintana Roo Maya. In *Pilgrimage in Latin America*, edited by Alan Morinis, pp.123–137. Greenwood Press, Westport, Connecticut.

Kurjack, Edward B. and E. Wyllys Andrews V

- 1976 Early Boundary Maintenance in Northwest Yucatan, Mexico. *American Antiquity* 41:318–325.

Kurjack, Edward B., and Silvia Garza T.

- 1981 Pre-Columbian Community Form and Distribution in the Northern Maya Area. In *Lowland Maya Settlement Patterns*, edited by Wendy Ashmore, pp. 287–309. University of New Mexico Press, Albuquerque.

Maldonado Cárdenas, Rubén

- 1995 Los Sistemas de Caminos del Norte de Yucatán. In *Seis Ensayos Sobre Antiguos Patrones de Asentamiento en el Área Maya*, edited by Ernesto Vargas Pacheco, pp. 68–92. Universidad Nacional Autónoma de México, Instituto de Investigaciones Antropológicas, México, D.F.

Martin, Simon

- 2001 Court and Realm: Architectural Signatures in the Classic Maya Southern Lowlands. In *Royal Courts of the Ancient Maya*, Vol. 1: Theory, Comparison, and Synthesis, edited by Takeshi Inomata and Stephen D. Houston, pp. 168–194. Westview Press, Boulder, Colorado.

Mathews, Jennifer P., and James F. Garber

- 2004 Models of Cosmic Order: Physical Expression of Sacred Space among the Ancient Maya. *Ancient Mesoamerica* 15:49–59.

Morinis, Alan

- 1992 Introduction: The Territory of the Anthropology of Pilgrimage. In *Sacred Journeys: The Anthropology of Pilgrimage*, edited by Alan Morinis, pp. 1–28. Greenwood Press, Westport, Connecticut.

Orr, Heather S.

- 2001 Procession Rituals and Shrine Sites: The Politics of Sacred Space in the Late Formative Valley of Oaxaca. In *Landscape and Power in Ancient Mesoamerica*, edited by Rex Koontz, Kathryn Reese-Taylor, and Annabeth Headrick, pp. 55–80. Westview Press, Boulder, Colorado.

Poole, Deborah A.

- 1991 Rituals of Movement, Rites of Transformation: Pilgrimage and Dance in the Highlands of Cuzco, Peru. In *Pilgrimage in Latin America*, edited by N. Ross Crumrine and Alan Morinis, pp. 307–338. Greenwood Press, Westport, Connecticut.

Potter, James M.

- 2004 The Creation of Person, The Creation of Place: Hunting Landscapes in the American Southwest. *American Antiquity* 69(2):322–338.

Redfield, Robert and Alfonso Villa Rojas

- 1934 *Chan Kom: A Maya Village*. Carnegie Institution of Washington, Publication No. 448. Washington, D.C. Reprinted facsimile, 1990. University of Chicago Press, Chicago.

Reents-Budet, Dorie (editor)

1994 *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Duke University Press, Durham, North Carolina.

Restall, Matthew

1998 *Maya Conquistador*. Beacon Press, Boston.

Ringle, William M.

1999 Pre-Classic Cityscapes: Ritual Politics Among the Early Lowland Maya. In *Social Patterns in Pre-Classic Mesoamerica*, edited by David C. Grove and Rosemary A. Joyce, pp. 183–224. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Roys, Ralph L.

1965 *Ritual of the Bacabs*. University of Oklahoma Press, Norman.

Schele, Linda

1998 The Iconography of Maya Architectural Façades During the Late Classic Period. In *Function and Meaning in Classic Maya Architecture*, edited by Stephen D. Houston, pp. 479–518. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Sharer, Robert J.

1992 The Preclassic Origin of Lowland Maya States. In *New Theories on the Ancient Maya*, edited by Elin C. Danien and Robert J. Sharer, pp 131–136. University Museum, University of Pennsylvania, Philadelphia.

1994 *The Ancient Maya*, Fifth Edition. Stanford University Press, Stanford, California.

Shaw, Justine M.

2001 *Maya Sacbeob: Form and Function*. *Ancient Mesoamerica* 12:261–272.

Snead, James E.

2002 Ancestral Pueblo Trails and the Cultural Landscape of the Pajarito Plateau, New Mexico. *Antiquity* 76:756–765.

Stanley, John M.

1992 The Great Maharashtrian Pilgrimage: Pandharpur and Alandi. In *Sacred Journeys: The Anthropology of Pilgrimage*, edited by Alan Morinis, pp. 65–87. Greenwood Press, Westport, Connecticut.

Stanton Travis W., and David A. Freidel

2005 Placing the Centre, Centring the Place: The Influence of Formative Sacbeob in Classic Site Design at Yaxuná, Yucatán. *Cambridge Archaeological Journal* 15(2):225–249.

Stuart, David

1998 “The Fire Enters His House”: Architecture and Ritual in Classic Maya Texts. In *Function and Meaning in Classic Maya Architecture*, edited by Stephen D. Houston, pp. 373–426. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Tedlock, Barbara

1992 *Time and the Highland Maya*, Second Edition. University of New Mexico Press, Albuquerque.

Tedlock, Dennis

- 1996 *Popol Vuh: The Definitive Edition of the Mayan Book of the Dawn of Life and the Glories of Gods and Kings*, revised and expanded edition. Simon and Schuster, New York.
2003 *Rabinal Achi: A Mayan Drama of War and Sacrifice*. Oxford University Press, New York.

Thomas, Julian

- 1993 The Politics of Vision and the Archaeologies of Landscape. In *Landscape Politics and Perspectives*, edited by Barbara Bender, pp.19–48. Berg Publishers, Oxford, England.
1996 *Time, Culture, and Identity: An Interpretative Archaeology*. Routledge, London.

Thompson, J. Eric S.

- 1962 *A Catalog of Maya Hieroglyphs*. University of Oklahoma Press, Norman.

Tilley, Christopher

- 1994 *A Phenomenology of Landscape*. Berg, Oxford, England.

Tozzer, Alfred M. (editor, translator)

- 1941 *Landa's Relacion de las Cosas de Yucatán: A Translation* (annotated with appendices). Papers of the Peabody Museum of American Archaeology and Ethnology Vol. XVIII. Harvard University, Cambridge, Massachusetts.

Turner, Victor

- 1974 *Dramas, Fields, and Metaphors: Symbolic Action in Human Society*. Cornell University Press, Ithaca, New York.

Villa Rojas, Alfonso

- 1934 *The Yaxuna-Coba Causeway*. Contributions to American Anthropology and History, No. 9, pp. 187–208, Publication No. 436, Carnegie Institution of Washington, Washington, D.C.

Vogt, Evon Z.

- 1970 *The Zinacantecos of Mexico: A Modern Maya Way of Life*. Harcourt Brace Jovanovich, New York.
1976 *Tortillas for the Gods: A Symbolic Analysis of Zinacanteco Rituals*. Harvard University Press, Cambridge, Massachusetts.

Wierzbicka, Anna

- 1997 *Understanding Cultures Through Their Key Words*. Oxford University Press, Oxford, England.