

The Linguistics of Toponymy in Maya Hieroglyphic Writing

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Abstract: In onomastics, toponyms embrace a broad variety of categories to name geographical entities, objects and features, whether they are natural or artificial. This paper pursues the question of how toponyms can be classified and seeks examples to illustrate these cases, involving a structural approach of how to identify toponyms in the hieroglyphic record. This in turn leads to the question of how toponyms of different categories are formed, by compounding, affixation patterns, or morphosyntax.

Also, linguistic peculiarities may be indicators to identify a Classic Mayan language geography, likewise in comparison with general onomastics. Finally, the formation of demonyms relates how toponyms are integrated into the socio-political sphere and help to shape identities.

Keywords: onomastics; toponymy; linguistics; Classic Mayan; hieroglyphic writing.

Resumen: Estudios onomásticos demuestran que topónimos pueden designar una amplia variedad de categorías, como por ejemplo entidades geográficas u objetos y características tanto naturales como artificiales. Este artículo examina cómo topónimos pueden ser clasificados y presenta ejemplos para ilustrar estos casos, proponiendo una aproximación estructural para identificar topónimos en el registro epigráfico. Esto lleva a la cuestión de la formación de topónimos de diferentes categorías a través de la composición, los esquemas de afijación o la morfosintaxis.

Además, peculiaridades lingüísticas también pueden ser indicadores que permiten identificar la geografía del idioma maya clásico, tal como indica la onomástica general. Finalmente, la formación de gentilicios esta relacionada con la inclusión de topónimos en el contexto socio-político y juega un papel importante en la construcción de identidades.

Palabras clave: onomástica; toponimia; lingüística; idioma maya clásico; escritura jeroglífica.

Introduction

Toponymy, the study of place names, is a branch of onomastics, the study of proper names (based on the Greek word ὄνομα, 'name'). While a 'name' is, broadly speaking, a specifier for things, abstract ideas, substance, or events; it is always the sign for a denotation within a non-linguistic class (e.g. Kripke 1980), according to one concept of 'name'. More of interest for this study are two subclasses of names, appellatives as names for a generic multitude of individual things, and proper names for an individual, singular thing, following the distinction by Mill (1846: I, 17). However, proper names may frequently develop from generic names (e.g. consider the anthroponym 'Smith' or

the toponym ‘Bath’), sometimes we encounter the reverse process (e.g. the appellative ‘Kalashnikov’ or *wil+te’+nah* as an original Teotihuacan oikodonym (Fash, Tokovinine & Fash 2009: 213-214) re-used in several Maya sites to designate ancestral shrines); thus both categories are permeable (Bauer 1996). Proper names (generally of any kind) can also be classified by several domains, for example their etymology, eponymy (if ‘name-source’ is broadened to physical features), semantics, linguistics, pragmatics, or taxonomy (see next section).

While anthroponyms as one major category have received an intensive discussion (Colas 2004) with regard to their different domains in Maya epigraphy, theonyms as well as toponyms still lack a substantial study, a desideratum this article can hardly remedy for the latter. The most concise study of its time on toponyms (Stuart & Houston 1994) provided substantial insights on the syntax, context, and iconography of place names. García Campillo (2002) specifically dealt with place names from the inscriptions of Yucatan. Only most recently, Tokovinine (2013) deepened our understanding of place and identity. A toponymy of modern Maya place names, on the other hand, is widely available (e.g. Arriola 1973; Brito Sansores 1981; Ochoa 1987; Pacheco Cruz 1967; Réjon García 1910; Roche Canto 1987; Romero Castillo 1987). Other philological disciplines are more advanced on a theoretical level, especially the German onomastics and toponymy.¹ Likewise, the thematic range within general onomastics is rather broadly settled (cf. Eichler *et al.* 1995: xxiii-xxxii, 1996: v-xvi). It is probably most appropriate to consider classification schemes of toponyms first, before examining their linguistics.

Classification of toponyms

Toponyms can be classified in a variety of ways (Tent & Blair 2009: 2-16), most of these following a descriptive or etymological scheme. Zelinsky (2002: 243) objected such “primitive level of specifying” by proposing a logical coherent hierarchy of eight major *taxa* with branched subdivisions, also with regards to place names (2002: 254-255) in which he includes natural and artificial features. A feature-based classification scheme has the advantage that each of its categories can independently be reviewed in terms of its naming conventions. Only in a second step can etymologies or social reasons be applied as explanatory and comparative parameters. I will apply a modified terminology introduced by several authors (Cassidy 1996; Kamianets 2000: 47-48), enhanced with categories from Zelinsky’s (2002) scheme:

1 Interestingly, the first compilation of German place names was conducted by no less a person than Ernst Förstemann (1872), custodian and commentator of the Dresden Codex; besides his merits as a pathfinder for quantitative linguistics.

A. Proper names of natural features

1. *Oronyms*, from ὄρος, ‘mountain’: The proper names of geomorphological features of the topographic relief, such as mountains, hills, or valleys.
2. *Drymonyms*, from δρυμός, ‘forest’: The features determined by biogenic influence, both primary and secondary (anthropomorphic), such as forests and cultivations.
3. *Hydronyms*, from ὕδωρ, ‘water’: The generic term for all watery environments, which can further be broken down.
 - a. *Potamonyms*, from ποταμός, ‘river’: For the proper names of all watercourses.
 - b. *Limnonyms*, from λίμνη, ‘lake’: For the proper names of all basins filled with water (for which sinkholes may also account in the Maya area).
 - c. *Pelagonyms*, from πέλαγος, ‘sea’: For the proper names of all exterior bodies of water not enclosed by land.
4. *Astronyms*, from ἄστρον, ‘star’: The generic category for the proper names of extraterrestrial objects, especially planets and stars.

B. Proper names of cultural features

1. *Choronyms*, from χώρα, ‘land’: This is a special category linking natural and artificial features. It mainly refers to regions and landscapes (including islands and peninsulas) in their anthropological sense (Kirchhoff 2011).
2. *Politonyms*, from πόλις, ‘city/state’: The term refers to administrative, political, and historic units and territories (see ‘Toponyms in their Socio-Political Context’ below).
3. *Mythonyms*, from μῦθος, ‘narrative’: The term refers to supernatural places of any kind, acknowledging that this in particular is an epigraphic and etic distinction not congruent with the emic Maya belief system, hence it may be difficult to define this category other than context. Also, existent locations may be named after mythological places.

C. Proper names of artificial features

1. *Dromonyms*, from δρόμος, ‘road’: The proper names of route ways, which in part could be natural and also be extra-urban (if this is an applicable terminology in the Maya area at all). Among their aspect as public space, *hodonyms* (from ὁδός, ‘place’) could be separated for open spaces within settlements, such as plazas.

2. *Oikonyms*, from οἶκος, ‘dwelling’: The generic term for assemblages of architecture, specifically settlements and cities.
 - a. *Urbanonyms*, from *urbānus*, ‘urban’: For the proper names of residential subdivisions and other features within a settlement, such as groups and architectural compounds.
 - b. *Oikodonyms*, from οἰκοδομή, ‘building’: For the proper names of individual structures of profane nature.
 - c. *Naonyms*, from ναός, ‘temple’: For the proper names of individual structures of sacral nature.²
 - d. *Necronyms*, from νεκρός, ‘deceased’: For the proper names of burial places, both burial grounds and funeral monuments.

Epigraphic examples can certainly be found for most of the categories (while the taxonomy is definitely not exhaustive), while it is sometimes unclear to which a toponym pertains. For example, *yaxa'* (Stuart 1985) refers to a site and its polity, but it was likely named after the lake whose northern shore it occupies, and which is still carrying the name today (also think of ‘Salt Lake City’). We may find many more examples, after which a site or features within were named after a natural characteristics, especially when the proper names contains words like *(h)a'*, ‘water’, *witz*, ‘hill’, or *te'(el)*, ‘tree, forest’. In the ideal case, the etymology can be deduced when examining the surrounding topography, but the inscriptions often lack a clear attribution. But it is detrimental to think that the immediate name will automatically point to the underlying natural feature. Nevertheless, I will include such inferences based on the generic term among the examples, unless a clear attribution to any other toponym is possible and points out to which toponym such attestation refers to in the inscriptions (e.g. Figure 1c).

Oronymic place names are widely attested in the inscriptions (Figure 1) and comprise the most examples attested (Tokovinine 2013: tab. 1) with *witz*, ‘mountain, hill’ or *tun*, ‘stone, rock’. In most contexts, a topographic feature becomes highlighted to refer to a settlement or an individual structure as an artificial mountain (Figure 1i). However, neither the etymology nor the attribution of the place name to a known feature is possible in the majority of cases.³

2 I introduce this term in contrast to the otherwise used *ekklesionym* (from ἐκκλησία, ‘assembly’), because of its Christian connotation. The term *naos* is instead established in architecture and art history to refer to a sacral building or parts thereof.

3 For example, one well known exception is the toponym *k'a[h]k'+witz* for Tortuguero (Wanyerka 2002: 54). In addition, it also likely served to refer to the Cerro de Macuspana, a steep limestone cliff rising amidst the Tabasco floodplains and on whose east side the site was located, towards the rising sun (Gronemeyer 2006: 401-441). Another, yet less specific instance is *bax+(tun)+witz* for Xultun (Prager *et al.* 2010), named after *in-situ* quartzite formations in the adjacent ranges, thus *witz* serves as a collective plural. The case of *kol-ol te'* is one where a hill (close to Tonina) is not referred to by *witz*, but where a secure relation can be established by its still modern name (Boot 2009: fn. 132).

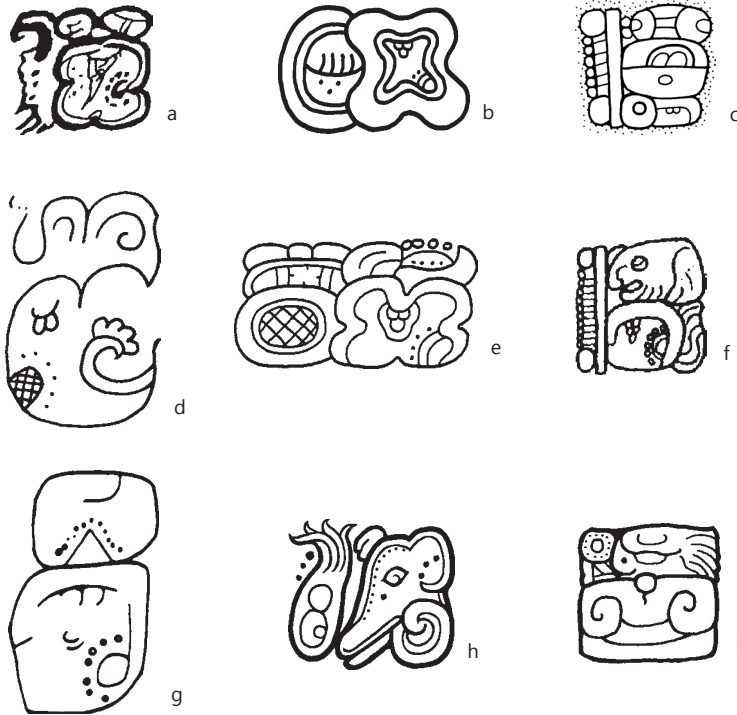


Figure 1. Examples of oronyms and place names of oronymic eponymy. **a) BAX-TUN-WITZ-AJAW** < *bax+tun+witz+ajaw*, “Quartz-Stone-Hills-Lord” = Xultun (XUL K3743, H1; drawing by Sven Gronemeyer), **b) HIX-WITZ** < *hix+witz*, “Jaguar-Hill” = Zapote Bopal (DPL HS. 2 V-W, F2b; drawing by Luis Luin in Fahsen 2002: fig. 8), **c) AJ-ko-²lo-TE** < *aj=kol-ol te*, “He of Scabby? Tree” = Tonina hillside (TNA Mon. 149, N1; drawing by Lucia Henderson in Graham *et al.* 2006: 82), **d) K’AK’-WITZ** < *k’a[h]k’+witz*, “Fire-Hill” = Tortuguero (TRT Mon. 8, B21a; drawing by Sven Gronemeyer in Gronemeyer 2006: pl. 16), **e) K’INICH-pa-a-WITZ** < *k’inich pa’-Ø+witz*, “Hot Split-Hill” = Aguateca (DPL HS. 2 V-E, F2; drawing by Luis Luin in Fahsen 2002: fig. 7), **f) AJ-PEK-TUN** < *aj=pe[h]k+tun*, “He of Speaking-Stones” = Usumacinta area site (PNG St. 40, C11; drawing by Stefanie Teufel in Teufel 2004: 465), **g) TOK’-TUN** < *tok’tun*, “Flint-Rock” = Pasion area site (ITN St. 17, K5b; drawing by Christian Prager in Mayer 1995: pl. 15), **h) USIJ-WITZ** < *usij+witz*, “Vulture-Hill” = Bonampak (BPK ScS. 5, F6; drawing by Alexandre Safronov, courtesy Wayeb Drawing Archive), **i) ?-ka-WITZ** < *CVk+witz*, “? Hill” = the *wayib* of *K’an Tatbu Max* (COL Lnt. “Po Throne”, D3; drawing by Alexandre Safronov, courtesy Wayeb Drawing Archive).

Place names of drymonymic origin are mostly known from the context of settlements (for an exception see Figure 1c), these may in turn be named after individual trees, their appellatives, or woodlands (Figure 2). The latter can especially be assumed when not only *te'*, ‘tree, wood’ is used, but the collective *te'el*, ‘forest’.⁴ Nevertheless, the frequency among oikononyms or urbanonyms is considerable high (Tokovinine 2013: tab. 1).

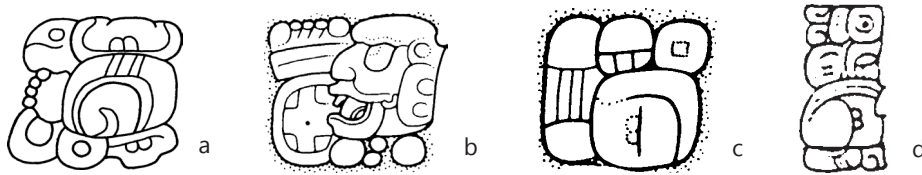


Figure 2. Examples of drymonyms and place names of drymonymic eponymy. **a)** **a-na-yi-TE'** < *an-ay-Ø?* *te'*, ‘Incarnated? Tree’ = Tonina area site (TNA Mon. 155, B1; drawing by Lucia Henderson in Graham *et al.* 2006: 89), **b)** **AJ-K'AN-TE'-la** < *aj=k'an te'-[e]l*, ‘He of the Yellow Forest’ = Usumacinta area site (YAX Lnt. 23, G2; drawing by Ian Graham in Graham 1982: 135), **c)** **ko-TE'-AJAW** < *ko[k]+te'+ajaw*, ‘Trogon?-Tree-Lord’ = Usumacinta area site (YAX Lnt. 8, C1; drawing by Ian Graham in Graham and van Eeuw 1977: 27), **d)** **SAK-TE'-AJAW**^{wa} < *sak te'+ajaw*, ‘White Tree-Lord’ = Copan area site (CPN Alt. K, K1a; drawing by Linda Schele in Grube and MacLeod 1989: fig. 1).

Among hydronyms, there is often a high degree of confidence to associate the attested name with a body of water or the site located on its banks or shores (Figure 3). With any luck, the ancient name still persists in modern designations, as for example with Coba and Yaxha, or is partially hispanicised, as likely in the case of the Riachuelo and Laguneta Chacrió (Stuart & Houston 1994: 37-38), a tributary of the Rio Petexbatun. While the generic (*h*)*a'*, ‘water’ can refer to both potamonyms and limnonyms, *nahb*, ‘lake’ has to be restricted to the latter.⁵ Pelagonyms, except the generic appellative *k'ahk' nahb* for ‘ocean’ (e.g. on PAL TI-W, P12), often in connection to primordial waters (Stuart 2005: 168-169), are unknown so far.

4 See CHR *te'eh*, ‘trees, grove, forest’ (Wisdom 1950: 670), CHN *te'e*, ‘montaña, selva, bosque’ (Keller & Luciano 1997: 235), and CHL *te'el*, ‘bosque’ (Aulie & de Aulie 1978: 88). A *-Vl* marking for a collective abstractive was proposed by Stuart (1998: fn. 3).

5 Stuart & Houston (1994: 52) proposed that the differences in writing **HA'** < *+ha'* and **a** < *+a[']* should be dialectal, with the latter predominant in the eastern lowlands. Although there seems to be more evidence for an abbreviated spelling in these regions, I do not consider it because of a Western / Eastern Ch'olan distinction, as there are rare occurrences of substitutions (e.g. the **YAX-HA'-AJAW** spelling on K4427, M1, a Uaxactun / El Zotz' area ceramic vessel). An initial /h/ is often elided upon possession in many Mayan languages, e.g. YUK *ha'*, ‘agua’ with *yaa'l ich*, ‘lágrimas de los ojos’ (Barrera Vásquez 1993: 165), also refer to Yoshida (2013: 9-15) for a discussion of /h/ representations in Colonial YUK orthography. It is not unlikely that the same phonological process appears in compounds, where a spelling with **HA'** is then more etymological and analytical, than with just **a** as the more phonemic spelling. With regards to *nahb* for lakes, seasonal *bajos* may also be attributed to this category, as suggested by *chik nahb* for Calakmul, which is not neighboured by any permanent body of water.



Figure 3. Examples of hydronyms and place names of hydronymic eponymy. **a)** **AJ²-bu-lu HA'** < *aj=bub-ul ha'*, "He of Tadpole?-Water" = Usumacinta area site (PNG P. 2, J'2; drawing by David Stuart in Schele and Miller 1986: pl. 40a), **b)** **AJ-CHAK-HA'** < *aj=chak ha'*, "He of Great Water" = Chacrió? area site (ALS P. 1, A4; drawing by Stephen Houston in Stuart and Houston 1994: fig. 43c), **c)** **chi-ku-NAB** < *chik+na[h]b*, "Coati?-Lake" = Calakmul (DPL P. 7, B6b; drawing by Stephen Houston in Houston 1993: fig. 5-11), **d)** **a-ik'-aj** < *a[j]=ik'+a[']*, "He of Wind-Water" = Motul de San Jose (YAX St. 21, pH8; drawing by Peter Mathews in Tate 1992: fig. 151), **e)** **ko-ba-a** < *kob a'*, "Turbid Water" = Coba (COB P. Gr. D; drawing by Eric von Euw in Grube and Stuart 1987: fig. 13), **f)** **k'an-tok-a-ajaw** < *k'an tok+a[']+ajaw*, "Yellow Mist-Water-Lord" = Caracol area toponym (CRC St. 3, A10b; drawing by Carl Beetz in Beetz and Satterthwaite 1981: fig. 4), **g)** **ix-aj-k'in-a** < *ix=aj=k'in+a[']*, "Lady of Sun-Water" = Piedras Negras (COL St. Lausanne, I7-J7; drawing by Simon Martin in Miller and Martin 2004: 167), **h)** **lakam-ha'** < *lakam ha'*, "Big Water" = Río Otolum? = Palenque (PAL T19B-S, P8; drawing by David Stuart in Stuart 2005: pl. 2), **i)** **pi-a** < *pip+a[']*, "Raptor?-Water" = Pomona (PMT Mon. 8, pD4; drawing by Peter Mathews), **j)** **3-witz-a** < *ux witz+a[']*, "Three Mountain-Water" = Caracol (CRC St. 3, B15a; drawing by Carl Beetz in Beetz and Satterthwaite 1981: fig. 4), **k)** **yax-a** < *yax a[']*, "Green Water" = Yaxha (YXH St. 2, B1; drawing by Linda Schele in Grube 2000b, fig. 197), **l)** **?-ha'** < *?+ha'*, "Dragon'-Water" = Dos Pilas (DPL HS. 2 II-E, C2b, drawing by Luis Luin in Fahsen 2002: fig. 7).

I will only tangle astronoms briefly, as they are less tied to toponyms as ‘places of power and memory’. There are additionally some major difficulties involved. Many celestial bodies are intimately connected with (named) supernatural actors or aspects thereof. Several names may exist for one extraterrestrial object, depending on its visibility or position within a cycle. However, when naming an astronomical object, the designation was specifically used as a proper name, as it likely did not expand to an appellative in Classic Mayan astronomy.⁶ Thus, *k'in*, ‘sun’ and *uh*, ‘moon’ are indeed astronoms, likewise *chak ek'*, ‘great / red star’ as the apparent generic name for Venus, but also specifically for the Morning Star.⁷ The situation becomes more complicated in the Venus tables in C Dr. 24, where *chak ek'* is associated with different supernaturals, as well as on C Dr. 46-50, where different Venus aspects / periods are equalled as representations of (Central Mexican) deities (cf. Milbrath 2000: 163-177 for a concise discussion). Mars also has its own calculation tables in C Dr. 43b-45b (Bricker & Bricker 1986; Willson 1924: 22-25), and is referred to by the still undeciphered **MARS.BEAST** sign already attested in Classic inscriptions (Kelley 1976: 120, 334; Lounsbury 1991: fn. 7), but it is unknown if it refers to the planet itself or a related supernatural.

Among the choronyms, the Peten region and department still inherits a Classic Mayan designation, although the applicability of *peten* in general (also translatable as ‘province’), its ancient use for the central lowlands and thus its extension are unknown. But the word is attested in Naranjo and Cancuen⁸ as geographically related sites. It also appears in a toponym that possibly refers to the Laguna Mecoacan peninsulas at the mouth of the Río Seco and the site of El Bellote alike (Ensor 2003: 107). Likewise obscure is the possible *mon+pan* toponym mentioned six times in various drawings

6 For example, ‘moon’, the original proper name for the Earth’s single satellite, became the common designation for any other body orbiting a planet, after Galileo’s discovery of the four Jupiter satellites Io, Europa, Ganymed, and Kallisto. Therefore, the Latin proper name *Luna*, ‘the Moon’, *la luna* (with article) in English and Spanish, or *Erdmond* (i.e. ‘Earth’s moon’) in German are sometimes used to provide a general or language-specific astronm. The distinction between proper name and appellative becomes even more apparent in the universal common distinction between ‘sun’ and ‘star’ inherited from the observations of early astronomy.

7 After the entry in the Motul dictionary, cf. *chak ek'*, ‘estrella de la mañana’ (Barrera Vásquez 1993: 79). At the same time, the name also refers to a wasp species in the *Ritual de los Bacabes* (cf. Roys 1965: 132) on p. 119. There may thus be a relation between insectoid representations of stars descending from skybands in Postclassic iconography (Iwaniszewski 1987: 211; Miller 1982: 86) and the diving star in the eclipse table of C Dr. 58b (Aveni 1992: 71). Another instance of a supernatural possibly embodying different phases are the spelling variations of Goddess I as either *uh ixik* or *sak ixik* in the Dresden Codex (Taube 1992: 64) with youthful and mature aspects.

8 There is a lengthy passage on CNC P. 1, G2-H8 that starts with the arrival of the Cancuen Ruler K'ib Ajaw, followed by the **SHELL.TUN** ‘foundation verb’ – possibly *kaj*, ‘to settle’ (Tokovinine 2013: 80-81, fig. 46c) – and the three place names *o[']+jal*, *o[']+mak*, and *o[']+na[h]b*, referred to as *ux a[h]k+pet-[e]n*, ‘Three Turtle-Peten’. The Peten is thus part of a nominal compound, and its specification by *ux a[h]k* may relate to a sub-region of the Peten related to the Cancuen polity.

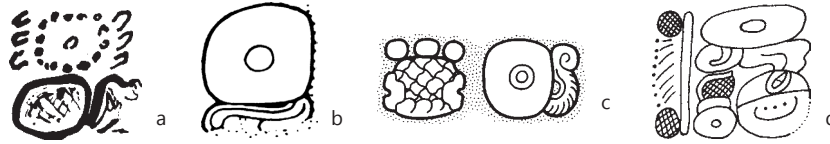


Figure 4. Examples of choronyms and place names of choronymic eponymy. **a) mo-no-pa-na** < *mon+pan*, “?” = Mopan area? (NTN Dwg. 29, A4-A5; drawing by Barbara MacLeod in MacLeod and Stone 1995: fig. 7-8), **b) PET-ni** < *pet-[e]n*, “The Rounded” = Peten (NAR St. 23, E21b; drawing by Eric von Euw in Graham and von Euw 1975: 60), **c) 3-AK PET-ne** < *ux a[h]k+pet-[e]n*, “Three Turtle-Peten” = part of Peten (CNC P. 1, G5-H5; drawing by Yuriy Polyukhovich), **d) AJ-PET-ne-ti-i** < *aj=pet-[e]n+ti*, “He of Island-Mouth” = El Bellote? (TRI Mon. 8, B64; drawing by Sven Gronemeyer in Gronemeyer 2006: pl. 16).

of the Naj Tunich cave, possibly referring to the area around the upper reaches of the Río Mopan (MacLeod & Stone 1995: 169).⁹ Other regions or landscapes frequently equal political units, e.g. *sum?-[a]l* as a regional toponym for the Petexbatun, but also the larger polity and interest sphere of Tamarindito (Buechler 2012: 529-536, fn. 4). Therefore, I postpone providing examples of politonyms to the socio-political discussion of toponyms below, also to provide them more space as ‘places of power’.

Mythonyms (Figure 5) have already been summarised by Stuart & Houston (1994: 69-80). There are several prominent place names mentioned in texts across the Maya area, linked to certain mythological events. Of special importance are those places associated with the different fragments we have from the era day story on 4 *Ajaw 8 Kumk’u* (Figure 5b, d, f-h), for which several reconstructions are possible (Callaway 2011: 197-208). Besides named localities, era day events also simply happen in unspecific spheres of the heavens or on the earth,¹⁰ but can also be quite specific in terms of the type of place.¹¹ In the Classic Maya world view, mythological places permeate with the physical world. This is best demonstrated by the *matwil* mythonym almost exclusively mentioned in Palenque. It is the birthplace of the Palenque Triad (Kelley 1965: 97; Stuart

9 Originally, the reading was ***mo-o-pa-na** < **mo’pan*, hence making a toponymic reference reasonable. As the spelling indeed involves **no** instead of **o**, the revised *mon-Ø+pan* became reinterpreted as an agricultural rite (MacLeod & Sheseña 2013: 205-206). While the contexts following the perfective verb form *y-il-j=iy* to witness an event perfectly fit other parallel statements (such as with *k’al-Ø+tun*) of a compound with a nominalised verb, it still might be possible that the texts refer to the landscape being spotted. If *mon+pan* (of a different and unclear etymology, then) was indeed a toponym, it could likewise have turned into Mopan by elision.

10 Compare to the **u-ti-ya KAB-KAJ-la** < *u[h]t-Ø=iy kab+kaj-[a]l*, ‘it happened in the land-settlement-place’ as a couplet term for territory (Tokovinine 2013: 43-44).

11 The *sak ch’en-nal* mentioned on the Yax Wayib Mask is the proper name of the *way-b-il*, the ‘sleeping place’ (Houston & Stuart 1989: 9-13; Stuart 1998: 399-401) of the *chan-al k’uh* and *kab-al k’uh* (Prager 2013: 504-517).

& Houston 1994: 77); and frequently, Palenque rulers identify themselves as *matwil* lords to claim their godly descent (Gronemeyer 2012: 32). Likewise, *mo' witz* may as well refer to the hill range north of Copan (Elisabeth Wagner, personal communication, November 7, 2014).

I am aware of only one potential dromonym (Figure 6a), where the apparent descriptive *chan+te' sak bih* must also refer to a specific causeway of that length,¹² considering the prominence of numerals in proper names. The situation for hodonyms is even more unsecure. Because of a quatrefoil deepening in the main plaza of Machaquila (Graham 1967: 59, fig. 42), Stuart & Houston (1994: 33) relate the suggested Machaquila oikonym (Figure 6b) **?^{na}-HA'** to the main plaza as well.¹³

Oikonyms have already been referred to a couple of times in relation to examples from other taxonomic categories in case they derive from natural features or contain such appellatives. Apart from these cases, there are abundant other oikonyms (Figure 7) that may likewise overlap with politonyms (see below), but even more problematic is their distinction from urbanonyms. The etymology of is often harder to assess, both in terms of morphological segmentation and eponymy.¹⁴

12 The classifier *-te'* is not only used for the count of calendrical units (Prager 2003), but is also attested for counting miles, eggs, and calabashes in YUK (Thompson 1972: 333).

13 The place name consists of the quatrefoil sign with an infix **HA'** sign, complemented by **na**. It is attested as an in-text reference on SBL St. 8, C5, and as a separate spelling on DPL St. 15, B7 without reference to Machaquila, but a local place. In Machaquila, it only appears as an iconographic representation in the basal register of MQL St. 4, 7, 8, 10?, and 18 to let the ruler stand on. Although the common formula for an event to take place on a plaza is *ta[h]n ha'* + emblem/toponym (e.g. TRT Mon. 6, J2, YAX Lnt. 25, I3), it is unlikely that the quatrefoil is a substitution to **TAN**, although plazas are also referred to as a watery surface. Loofer (2000) suggests the reading **CH'EN**, based on the complementation pattern, and in comparison with an infixation of **TUN** on CPN Alt. S, J1 (where the **ni** more likely serves as the complement to **TUN**). But no substitution patterns with other **CH'EN** graphemes are known, so I question this reading. But in the light of spelling variations, the supposed Machaquila oikonym might have been derived from the proper name of its central plaza, the nucleus of any settlement (similar to the title *Markt* that became part of German place names with a market and market rights, e.g. Markt Schwaben). In comparison with the Seibal and Dos Pilas cases, it might even be the appellative for a centrally located space which was only architecturally recreated in Machaquila.

14 For example *ahin* and *yohm pi* mentioned on TRT Mon. 6 as warfare targets and which both must be located in the Tabasco floodplains (Gronemeyer 2006: 38, 40, 59). As alligators populate watery and swampy areas, a relation can be established for the first site. Tabasco also has fertile soils and is a region to grow cacao. The fruits of the Canistel or Yellow Zapote (*Pouteria campechiana*) can be fermented into a drink, a boiling of its bark is used in traditional medicine, and it also provides latex (Morton 1987: 402-405). The site may be named after a plantation or its main production, thus indirectly supporting the assumption that Tortuguero wars were to gain control of the economic resources and trade network of northern Tabasco (Gronemeyer 2006: 58-59). Another example is *bital*, a site / polity mentioned in texts of Naranjo and Caracol. It is possibly the abstractive of the adjectival root *bit*, 'small, little', based on CHL *bi'tal*, 'niño' and *bi'ti mut*, 'pajarito' (Aulie & de Aulie 1978: 10), and CHN *bit*, 'chicos' (Keller & Luciano 1997: 45).

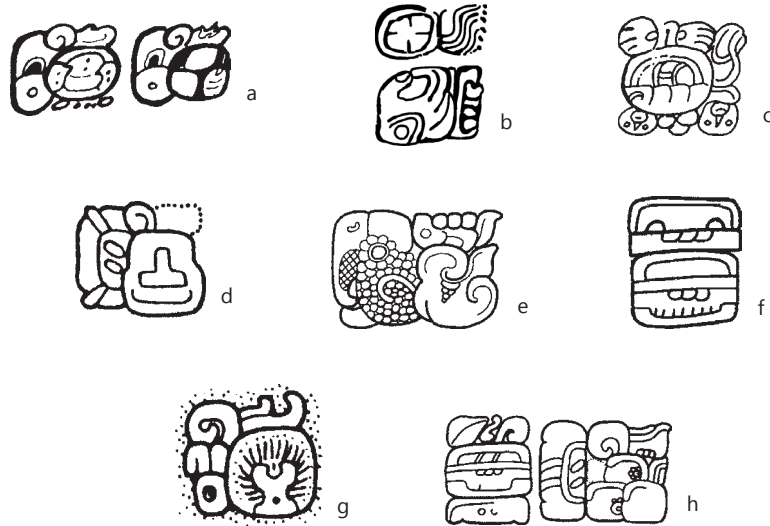


Figure 5. Examples of mythonyms and place names mythonymic economy. **a**) **IK[?]-WAY-NAL^{na} IK[?]-NAB-NAL** < *i[h]k[?] way-nal i[h]k[?] na[h]b-nal*, “Black Portal-Place, Black Lake-Place” (COL K1609, F1-G1; drawing by Linda Schele in Schele and Miller 1986: pl. 122c), **b**) **K[?]IN-ni-chi-li** < *k[?]inich-il*, “Hot Place” (NAR K7750, C[?]11; drawing by Sven Gronemeyer), **c**) **ma-ta-wi-la** < *mat-w-il*, “?” (PAL TFCB, B2; drawing by Merle Greene Robertson in Robertson 1991: fig. 13c), **d**) **MIH-IK[?]-NAL** < *mih ik[?]-nal*, “No Wind-Place” (QRG Alt. P[?], L2a; drawing by Matthew Loooper), **e**) **MO[?]-wi[?]WITZ** < *mo[?]+witz*, “Macaw-Mountain” (CPN St. B, C1; drawing by Alexandre Tokovinine in Tokovinine 2013: fig. 36f), **f**) **NAH-5-CHAN** < *nah jo[?] chan*, “First Five Skies” (QRG St. C, A9b; drawing by Matthew Loooper in Loooper 2003: fig. 5.1), **g**) **SAK-CH[?]EN-NAL** < *sak ch[?]en-nal*, “White Cave-Place” (COL Yax Wayib Mask, A5; drawing by Stephen Houston in Houston and Inomata 2009: fig. 2.3), **h**) **TI[?]-CHAN^{na} YAX-THREE.STONES-NAL** < *ti[?]+chan yax THREE.STONES-nal*, “Edge-Sky First ‘Three Stones’-Place” (QRG St. C, B13b-A14; drawing by Matthew Loooper in Loooper 2003, fig. 5.1).



Figure 6. Examples of dromonyms and place names of dromonymic economy. **a**) **4-TE[?]-SAK-BIH** < *chan+te[?] sak bih*, “4-miles causeway” (CPN HS. 1 XXIX, T1b; drawing by Barbara Fash), **b**) **?^{na}-HA[?]** < *?-ha[?]*, “?-Plaza?” (SBL St. 8, C8; drawing by Ian Graham in Graham 1996: 27).



Figure 7. Examples of oikonyms and place names that likely refer to a site. **a)** **ta-AHIN** < *ta abin*, “at Alligator” (TRT Mon. 6, F10; drawing by Ian Graham in Gronemeyer 2006: pl. 12), **b)** **bi-TAL** < *bit-al*, “The Little?” (NAR St. 13, G16; drawing by Ian Graham in Graham and von Euw 1975: 38), **c)** **HIX-NAL-AJAW** < *hix-nal+ajaw*, “Jaguar-Place-Lord” (TRT Mon. 8, B13; drawing by Sven Gronemeyer in Gronemeyer 2006: pl. 16), **d)** **AJ-ja-ma-li-bi** < *aj=jam-l-ib*, “He from Opening?” (YAX Lnt. 23, J1; drawing by Ian Graham in Graham 1982: 136), **e)** **PA’-ni-li** < *pa’-Ø+nil*, “Split-?” (COL St. Canberra, A5b; drawing by Stephen Houston in Mayer 1989, pl. 101), **f)** **AJ-SAK-o-ka** < *aj=sak ok*, “He of White Foot” (YAX Lnt. 26, R1; drawing by Ian Graham in Graham and von Euw 1977: 57), **g)** **tza-ma** < *tzam*, “?” (CRC St. 3, D19b; drawing by Carl Beetz in Beetz and Satterthwaite 1981: fig. 4), **h)** **yo-mo-pi** < *y-o[h]m-Ø pi*, “Froth of Canistel” (TRT Mon. 6, H1; drawing by Ian Graham in Gronemeyer 2006: pl. 12).

Often, toponyms attested in and attributed to a specific archaeological site may not refer to the settlement as a whole, but rather seem to be urbanonyms (Figure 8). Inherent to the nature of a Maya city state is the equalisation of the royal court with the settlement and polity. Often, emblems also appear in the ‘place name formula’ or contexts of demonymy (Gronemeyer 2012: 14, 18; Grube 2000a: 553; Stuart & Houston 1994: 57-60, 93).¹⁵ There are several instances where we can at least narrow down the location

15 That a settlement’s oikonym is often the same as or similar to the politonym is true for many cases, as best demonstrated by substitutions of titles of origin (among one person or between different persons), i.e. the proclitic *aj=*, the generic *winik* and the title (*kuh*) *ajaw*. As previously discussed examples demonstrate, it is often not possible to establish an unambiguous relation between a toponym and the named entity in hieroglyphic inscriptions. While e.g. *ux witzá’* is related to Caracol, there is no proof that it was the ancient name of the site, while the ruling house / polity was *kuh k’antu mak*. Perhaps, it is either the proper name of the *Caana* structure crowned by the three pyramids B-18, B-19, and B-20 (Chase & Chase 1987: 18), or the opposite elite compound comprising of Structures B-4, B-5, and B-6 with extensive Tlaloc and water lily serpent iconography (Ishihara, Taube & Awe 2006), or

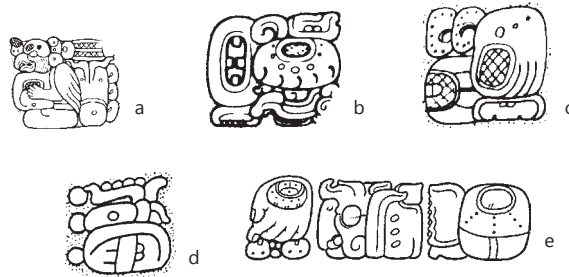


Figure 8. Examples of urbanonyms and place names that likely refer to architectural compounds. **a** *ko-xo-o-pa* < *koxo'op*, “?” = Copan Group 9N-8 (CPN Alt. W, E2; drawing by Barbara Fash in Baudez 1994), **b** *K'IN^{mi}-HA'-NAL* < *k'in+ha'-nal*, “Sun-Water-Place” = Dos Pilas El Duende group (DPL St. 8, H6; drawing by Ian Graham in Houston 1993: fig. 4-14), **c** *to-ko-TAN^{na}* < *tok+ta[h]n*, “Mist-Centre” = Palenque southwest groups location (PAL TS, P5; drawing by Merle Greene Robertson in Robertson 1991: fig. 95), **d** *3-wi-ti-ki* < *ux witiik*, “Three?” = Copan principal group location (CPN Alt. Q, D5; drawing by Linda Schele in Schele 1989: fig. 1), **e** *ye-ma-la K'UK' LAKAM wi-tzi* < *y-e[h]m-al-Ø k'uk' lakam witz*, “Descent of the Quetzal [from] the Big Mountain” = Palenque Cross Group / Mirador (PAL T18J, D17-D19; drawing by David Stuart in Stuart and Robertson 1994: fig. 34).

of urbanonyms within archaeological sites, e.g. in Palenque and Copan¹⁶ by contextual inferences or archaeological evidence.

Oikodonyms (Figure 9) are often attributable to a specific structure by the inscription referring to a house dedication and a name formula (Stuart 1998; Stuart & Houston 1994: 85-86). Also, building names often comprise the term *nah*, ‘house’, but may

the B-Group plaza as a whole. One case, where the name of the polity does not equal the oikonym, is Aguateca (while *k'inich pa' witz* in turn is certainly derived from the chasm separating the main plaza from the palace group). The ruling *mutul* lineage was exiled from Tikal and made Dos Pilas the foundation of a new royal court (cf. Gronemeyer 2012: 18-20), with Aguateca acting as a ‘twin capital’.

16 In Palenque, two major toponyms are recorded: *tok tabn* and *lakam ha'* (cf. Stuart & Houston 1994: 30-31). The former is related to the Early Classic (Martin & Grube 2000: 157) and possibly relates to the complexes south-west of the Cross Group, entrenched between the hill ridges and where mist often forms at dawn. It is also the location of the spring of the Otulum, which is also referred to in writing (**TAN^{na} CH'EN^{na} LAKAM-HA'** < *ta[h]n ch'en lakam ha'*, ‘amidst the well of *Lakam Ha'*’, PAL T19B-S, O7-O8). The usual *lakam ha'* toponym referring to Palenque is thus probably more the central plaza with the palace acropolis as the administrative heart of the site, located along the course of the Otulum. Specifically, we have a ‘shell-tun’ event at *lakam ha'* by Butz'aj Sak Chik (PAL T17P, B5-B6) that may relate to the foundation of the palace complex, also a *pat-l-aj* event for *lakam ha'* noted on PAL TFCJ, B12. Interestingly, *lakam ha'* is also never used as a demonym (Bíró 2011: 40) except on BPK Lnt. 4, B1. Within Copan, we can likely relate the *ux witiik* toponym with the principal group (Schele 1989: fn. 2), as the founding of the Copan lineage by K'inich Yax K'uk' Mo' took place here (CPN Alt. Q, C5-D5). We can also identify *koxo'op* as the urbanonym of Group 9N-8 (Wagner 2006: 13-14) and even as the emblem of the lineage occupying it.

involve more specialised functions, such as ‘ball court’ or ‘platform’.¹⁷ But there is a particular uncertainty to distinguish building functions in the epigraphic record. Buildings (or parts thereof) may serve different purposes, while at the same time religious aspects also permeate a building’s role (cf. Stuart 1995: 155 for a comparable historiographic perspective) beyond dedication rituals (Stuart 1998).¹⁸

Naonyms (Figure 10) are most easily distinguishable from other buildings when the context explains that the respective structure is a dwelling for gods (e.g. by *u-pib-Ø+nab-il u-k’uh-il*, ‘the sweat bath of his gods’), or the dedication formula specifically acknowledges that the proper name is *u-k’uh+k’aba*, ‘it’s god-name’, also used for necronyms of venerated ancestors. Architecturally, such proper names refer to the superstructure atop a stepped pyramidal platform.

A secure identification of necronyms (Figure 11) is ensured by the relation to the deceased via the phrase (*u-k’uh+k’aba*) *u-muk-Ø-nal*, ‘(it’s god-name) the burial-place of’. However, it is possibly from case to case if such a name only refers to the tomb or crypt or encompasses the entire funerary shrine, as for example with the Temple of the Inscriptions at Palenque.

The taxonomic distinction just presented is of course solely based on an etic perspective and not without conceptual pitfalls. As first noted by Stuart & Houston (1994: 12-13), certain nominal compounds (the so-called ‘sky-bone’ and ‘earth-bone’) often accompany proper names that can be identified as toponyms by their verbal embedding. Today, we have a more thorough understanding of an emic Classic Mayan landscape description (Tokovinine 2013: 19-48). For *kab+ch’en*, Lacadena (2009: 46-47) noted parallel constructions in the *Chilam Balam* books of Chumayel and Tizimin, where

17 The ball court sign ZY3 was first identified by Houston (Miller & Houston 1987), but still resists decipherment. Its frequent complementation with **na** or **ni** suggests a **CVn** reading. The platform / pyramid sign ZH4 is also frequently suffixed by **na**, and could possibly read **CHEN** (Christian Prager and Elisabeth Wagner, personal communication, November 19, 2014). In C Dr. 42a3, Goddess I is seated on a three-tired platform. In comparison with other *t’ol* texts in the same almanach, the second block always denotes the locality the respective deity is depicted in / on. Although washy, the block in the scene under discussion might read **che-na**. In Chontal, *chen* is a transitive verb meaning ‘hacer, construir, elaborar, fabricar’ (Keller & Luciano 1997: 84), so the putative reading might generally refer to a ‘construction’.

18 One example is House E of the palace in Palenque (Stuart 1998: 378), referred to as the ‘dwelling’ of K’inich Janab Pakal (e.g. *sak nuk nah ta y-otot k’inich janab pakal*, PAL 96G, A8-C1). It served as a throne room and probably never had a residential purpose. Although administrative in function, courtly activities were never separated from ritual ones, especially when considering that House E was likewise the place of coronation. Therefore, Figure 9 may include examples of other taxonomic groups, unless these buildings can be assigned to another primary function or the exact taxonomic categorisation is unknown. For example, ball courts are not necessarily considered by the scheme. Another category difficult to capture by the proposed taxonomy are portable places such as palanquins that also bear proper names (e.g. *nun+cha[h]k+ba[h]lam-nal* on TIK T. 1 Lnt. 3, D2).

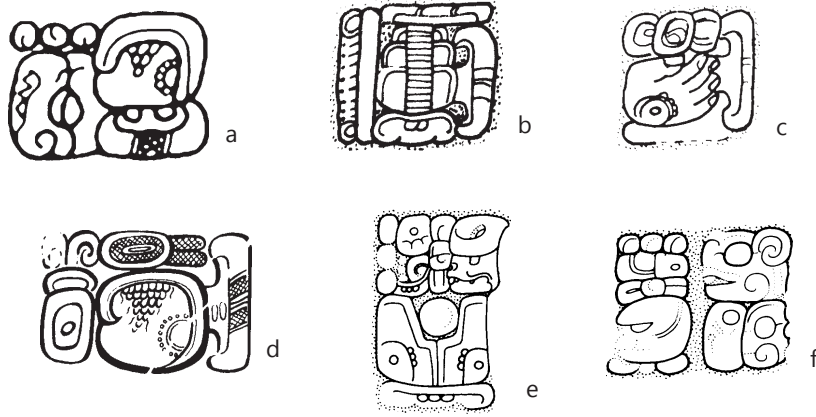


Figure 9. Examples of oikodonyms and place names that likely refer to structures or building parts. **a** **cha-hu-ku-NAH** < *chahuk+nah*, “Thunder-House” = Piedras Negras Structure J-6? (PNG Trn. 1, K’4; drawing by Stefanie Teufel in Teufel 2004: 549), **b** **AJ-5-CHEN?^{na}-NAH** < *aj=ho’ chen?-Ø+nah*, “He of Five Platform?-Hous(es)” = either proper name or collective count (PAL PT, I14; drawing by Merle Greene Robertson in Robertson 1985: fig. 258), **c** **K’AL-HUN^{na}-NAH** < *k’al-Ø+hun+nah*, “Headband-Tying-House” = Palenque Palace House A-D? (PAL PT, Q14; drawing by Merle Greene Robertson in Robertson 1985: fig. 258), **d** **SAK-nu-ku-NAH** < *sak nuk+nah*, “White Cover-House” = Palenque Palace House E (PAL 96G, A8; drawing by Merle Greene Robertson in Robertson 1991: fig. 264), **e** **3-a-ha-2^{na}** < *ux ah-Ø+?*, “Three Awakening?-Ballcourt” = Tonina Ball Court (TNA Mon. 141, C4a; drawing by Ian Graham in Graham and Mathews 1999: 173), **f** **3-a-ha-la e-bu** < *ux ah-al e[h]b*, “Three Awakened? Stairway” = ? (NAR HS. 1 VII, O2b-P2a; drawing by Ian Graham in Graham 1978: 109).

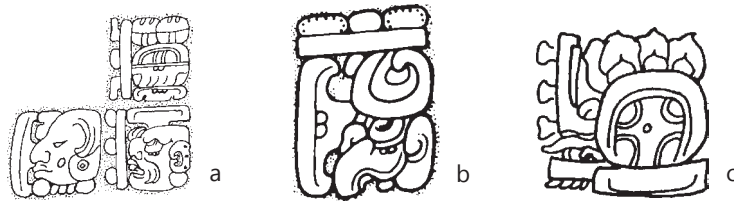


Figure 10. Examples of naonyms and place names that likely refer to temples or secular buildings. **a** **6-CHAN^{na}-AJAW NAH-la 8-CHAK-NAH** < *wak chan+ajaw+nah-[a]l waxak cha[h]k+nah*, “Six Sky-Lord-Houses Eight *Chabk*-House” = Palenque Temple of the Cross (PAL TC, D10-D11; drawing by Merle Greene Robertson in Robertson 1991: fig. 9), **b** **6-HAB-NAH** < *wak hab+nah*, “Six *Tun*-House” = Tortuguero temple of Mon. 6 (TRT Mon. 6, I12; drawing by Ian Graham in Gronemeyer 2006: pl. 12), **c** **SQUARE.NOSED.BEAST-K’AN-JAL-NAH** < ? *k’an jal+nah*, “? Yellow Reed-House” = Palenque Temple of the Foliated Cross (PAL TFCB, H1; drawing by Merle Greene Robertson in Robertson 1991: fig. 13c).

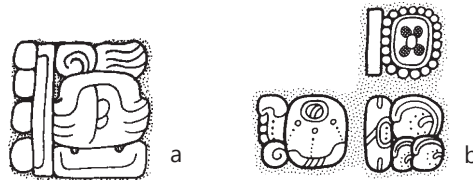


Figure 11. Examples of necronyms and place names that likely refer to tombs or funerary shrines. **a) 9-ET-NAH** < *balun e[h]t-nah*, “Nine Companion?-House” = Palenque Temple of the Inscriptions (PAL TI-W, T11; drawing by Merle Greene Robertson in Robertson 1983: fig. 97), **b) 5-JAN wi-tzi CHAK-ku-pi** < *ho’ jan+witz chak kup*, “Five Maize-Flower?-Mountain Great ?” = Burial place of *Itzam Ahk Wi’ Takin Chay* of Cancuen (CNC P. 1, P5-P6; drawing by Yuriy Polyukhovych).

reference is made to the town of Mani. By comparing an account on f. 5r of the *Chumayel* (Gordon 1913) with a concordance analysis of epigraphic contexts, Tokovinine (2013: 24-26) concludes that the Classic Mayan concept of *ch'en* subsumes place in the ‘ordered’ landscape of humans, including artificial features (Tokovinine 2013: 29). This reminds to the *kàaj / k'áax* dichotomy still existent in modern Yucatan (Le Guen 2005; Stone 1994: 15-18; Taube 2003). On the other hand, *kab* in the inscriptions seems to refer to ‘land’ as a political concept and not as a landmark or the ‘wilderness’ (Tokovinine 2013: 43-44) as opposed to agricultural lands. Within the ‘place name formula’, *chan+ch'en* refers to the all-embracing ‘world concept’, in which all places abound (Tokovinine 2013: 41), and is often (but not exclusively)¹⁹ used in narratives involving supernaturals or mythological accounts. More profane then, and bound to political narratives, is the *kab+ch'en* (Tokovinine 2013: 36-38) kenning for the actual site and its domain.

The syntax, morphology and semantics of toponyms

There are several structural methods to identify toponyms that alone may already provide strong evidence for the identification of a place name. The most fundamental approach by a combination of the syntactic position with context was established by Stuart & Houston (1994: 3-18) by the ‘place name formula’. It is often a secondary statement to a preceding action, where the place name is introduced as a prepositional phrase

19 For example in the ‘axing’ event against Tamarindito mentioned on TAM HS. 2 III, K2-P1: **3-OK 18-BIX-OL CH'AK^{ka}-SUM?-la u-CHAN-CH'EN^{na} ju-bu-yi u-TOK'-PAKAL^{la}** < *ux OK waxaklabun bix+o[h]l ch'ak-Ø+sum?-[a]l-Ø u-cha-Ø [u-]ch'en jub-uy-i-Ø u-tok' [u-]pakal*, ‘9 Ok 18 Kumk'u, it [was] the Tamarindito-axing, it [is] his place, [where] his flint, his shield [were] put down.’ The attestations of *kab+ch'en* and *chan+ch'en* would require a more thorough analysis in terms of the predicate and syntactic arguments to better understand all nuances.

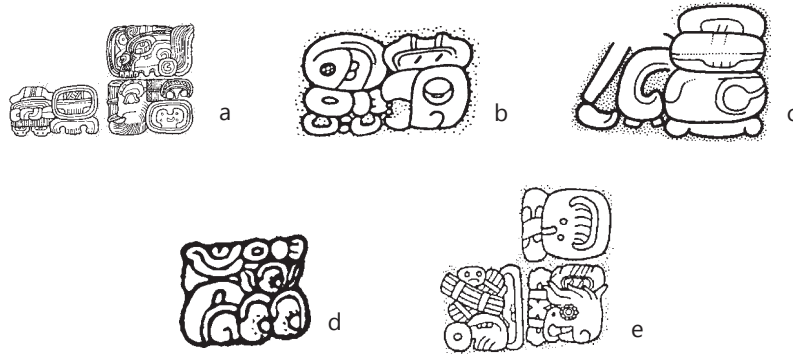


Figure 12. Examples of toponyms in prepositional phrases. **a)** **UH-ti YAX-MUT-la-CHAN^{na} CH'EN-ta-u-CH'EN** < *uht-i-Ø yax mut-[a]l chan-Ø ch'en ta u-ch'en*, “it happened [in] Tikal, it [is] the place, in his cave” (TIK St. 39, Bp7-Bp8; drawing by Linda Schele in Schele and Freidel 1990: fig. 4.14), **b)** **u-ti-ya YAX-a** < *u[h]t-Ø=iy yax a[']*, “it happened [at] Yaxha” (DPL HS. 2 E III, D2; drawing by Ian Graham), **c)** **CH'AK^{ka}-SUM?-la u-CHAN-CH'EN^{na}** < *ch'ak-Ø+sum?-[a]l-Ø u-chan-Ø [u-]ch'en*, “it [was] the Tamarindito-axing, it [was in] his place” (TAM HS. 2 III, M1-N1; drawing by Sven Gronemeyer in Gronemeyer 2014: pl. 31), **d)** **STAR.WAR-yi ti SEIBAL** < *?-[V]y-i-Ø ti ?*, “star war’ in Seibal” (AGT St. 2, A2; drawing by Ian Graham in Graham 1967: fig. 5), **e)** **ta-li WIL-TE'-NAH K'INICH-YAX-K'UK'-MO'** < *tal-i-Ø wil+te'+nah kinich yax k'uk'+mo'*, “He arrived [in] the *Wil-Te'-Nah, K'inich Yax K'uk' Mo'*” (CPN Alt. Q, B4-B5; drawing by Linda Schele in Schele 1989: fig. 1).

following an inflected form of the verb *u[h]t*, ‘to happen’, frequently followed by the compounding of landscape descriptions, such as *kab+ch'en* (Figure 12a-b). Of course, other verbs may also form statements parallel to the place name formula (Figure 12c).

But even if a place name is not identified by a following place indicator, the fixed word order of Classic Mayan allows an easy isolation of place names, both appellatives and proper names, in the syntagma (Figure 12d-e). The prepositional phrase is always preceding the agent, and as the predicate is often an intransitive verb, it directly follows the predicate (also after stative constructions), while the preposition itself is often omitted (cf. Stuart & Houston 1994: 13-18) in writing and likely in language.

Besides certain key words from the natural and built environment, toponyms frequently also feature typical affixes that help to identify a locative use. Most overt is the suffix *-nal*, ‘-place’ (Stuart & Houston 1994: 21), which itself is probably a contraction of a collective abstractive *nah-al*, ‘house-place’ (cf. Stuart 1998: fn. 3), or connects to maize and the *milpa* (Tokovinine 2013: 8-10). The relevance of maize and local self-identity must not be underestimated (Tokovinine 2013: 115-122). The conception

to eat local corn to pertain to a group is still present in modern Maya communities (e.g. Christenson 2006: 212-213). Related (and rarely substituting) is the somewhat still enigmatic ‘locative’ *-Vl* suffix (Houston, Robertson & Stuart 2001: fn. 12; Lacadena & Wichmann 2005: 21-28) that is occasionally attached to emblems when not used as a mere politonym (Colas 2004: 231-232).²⁰ Occasionally, the instrumental *-ib* suffix may also indicate a place name.²¹

Part of the formation of toponyms is their internal morphosyntax that is decoupled from suffixation patterns. In the most simple case, we have monomial appellatives as proper names, as for example with *peten* (Figure 4b) or *ahin* (Figure 7a). Most frequent is the structure of a specifier (S) plus a generic term (G). While the qualifying element can comprise of one or more elements, the generic term is usually a singular appellative, and the majority of examples are nominal. We have the combination of adjectives plus nouns, e.g. ${}_{(S)}lakam$ ${}_{(G)}ha'$ (Figure 3h); substantival qualifiers and a noun, e.g. ${}_{(S)}kol-ol$ ${}_{(G)}te'$ (Figure 1c); numerals (plus classifier) and a noun, e.g. ${}_{(S)}chan+te'$ ${}_{(G)}sak$ *bih* (Figure 6a, note that the generic term is bipartite, but one standing expression); or nominal compounds, e.g. ${}_{(S)}k'ahk'+$ ${}_{(G)}witz$ (Figure 1d). Enhancements of the specifier are possible, e.g. with ${}_{(S)}bax+tun+$ ${}_{(G)}witz$ (Figure 1a), ${}_{(S)}ux$ *witz* ${}_{(G)}a[']$ (Figure 3j), or ${}_{(S)}sak$ *nuk* ${}_{(G)}nah$ (Figure 9d). To a lesser degree, toponyms are a sentence name with an internal syntax, e.g. ${}_{(S)}y-o[h]m-\emptyset$ ${}_{(G)}pi$ (Figure 7h) or the more complex ${}_{(S)}y-e[h]m-al-\emptyset$ *k'uk'* ${}_{(G)}lakam$ *witz* (Figure 8e), where the positions in the syntagma take the role of specifier and generic term (note that this complex pattern involves a nested (S)-(G) pair for the generic term in the latter example). Currently, no overt patterns of how toponyms (from an etic and taxonomic perspective) are formed can be identified, and even less by the still poorly understood emic notions. By the current state of research, there is no discernable relational pattern between the designated feature and its eponym or etymology.

Besides overt eponyms (more for the ancient Maya, often less for the epigrapher), the syntax and morphology of toponyms carries underlying semantics that are inherent to the Classic Mayan language and contribute a largely opaque facet to the etymology

20 See for example Figures 12a and c. Linguistic support, often tangling concepts of abstraction or collectiveness, is hard to find in grammatical descriptions, e.g. from CHL *-(l)el - -(l)ol* (Schumann Gálvez 1973: 27) or ITZ *-il* (Hofling & Tesucún 2000: 108); but more the result of lexical analyses (e.g. Lacadena & Wichmann 2005: 23-24). The pan-Mayan *-Vl* suffix is also attested in many contexts of positional instrumentals that describe places, e.g. TZO *k'ot-eb-al*, ‘purgatorio’ (García de León 1971: 30).

21 In many Mayan languages, the instrumental can also derive a noun of locative meaning (Wichmann 2002: 6), but more as the place of the verbal action as an appellative (e.g. *way-ib*, ‘dormitory’), sometimes further derived by a *-Vl* suffix. Enigmatic remains the **4-KIP-pi-bi** < *chan kip-ib* spelling on CPN Alt. G, D3, involving the Copan emblem glyph (with the *kip* reading suggested by Péter Bíró, Nikolai Grube, Guido Krempel, Christian Prager and Elisabeth Wagner in 2010). Its syntactic embedding is unclear, but it stands in a context with the toponym *chan witik* in block C1 which resembles the common *ux witik* urbanonym.

or conceptualisation of place names. For example, substantival roots can be suffixed with a *-Vil* that is likely attributive²² (as for example in *bub-ul ha'*, Figure 3a), while other toponyms do not feature it (for example in *ik'+a[']*, Figure 3d). Another evident pattern among toponyms is the use of cardinal numerals in the first position (also see the following section on artificial landscape divisions). While some numerals may indeed be descriptive (see Footnote 15, Figure 6a), one must also consider the mantic load of numerals and their many, still poorly understood, connotations (Christian Prager, personal communication, November 24, 2014), e.g. *balun* as 'nine / many' or *ux* as 'three / abundance'. Questions as exemplified by the two cases have thus far only received little attention in the epigraphic research, and there are certainly many more connotations to be found if thorough context analyses take place.

Toponyms in their socio-political context

One category hitherto excluded from the taxonomic discussion are toponyms that originate from or are related to artificial divisions or denominations, i.e. which pertain to an artificial or social division of the natural landscape – subsumed as politonyms. The most granular level identifiable in the epigraphic record is the so-called 'emblem glyph' first discussed by Berlin (1958) and later recognised as a title (Mathews & Justeson 1984: 216-217) within nominal phrases. The nature of the variable emblem (Figure 13) has been discussed by several authors as the place name of a site and the territory it was governing (Barthel 1968: 120; Berlin 1958: 111; Grube 2000a:553; Kelley 1976: 215; Marcus 1976: 11; Mathews 1985, 1988, 1991). But emblems are more, amalgamating the self-identity of the ruling house and above all its king as the embodiment of the territory he is ruling (Gronemeyer 2012), equating 'city' as the seat of power and 'polity'.

Pursuing this idea, one might even speculate if oikonyms exist at all in Classic Maya toponymy as a category. While epigraphers often equate them by the place name formula with emblem glyphs (see footnote 15), some emblems may have derived from certain smaller toponymic units as the nucleus of a royal court. At the same time, an endonymic origin of an "intra-group self-projection" (Gronemeyer 2012: 30) is possible. There is the notable impression that emblems indeed regularly follow the (S)-(G) pattern of other toponymic categories (e.g. *yax a[']*, Figure 3k or *pa'+chan*, Figure 13d) that may explain their origin, e.g. by natural features (e.g. *bax+tun+witz*, Figure 1a). Others (e.g. *bak-al*, *kan-al*, or *mut-al*, Figure 13a-c) do not only often differ from attested toponyms,

22 For example, compare the *ka[h]k+witz* compound (Figure 1d) for 'Fire-Mountain' with the *ka[h]k-[a]l jul* spelling on YAX Lnt. 24, D1 as 'fire-spear' = 'torch'. The *-Vil* suffix seems to indicate a non-intrinsic property. In such constructions, the second substantive expresses the object that is made for the first substantive, or pertains to it, or enables it to come to being (Tozzer (1921: 38) already referred to such constructions in YUK as "attributive relationship"). It is important to stress that this suffix does not appear to be derivational, but is a modifier.

but also feature no specifier, not to mention deviating patterns (Houston 1986), such as *k'uh-Ø k'an t-u-mak* for Caracol lords. Emblem glyphs also interfere with mythonyms (Helmke 2012). Likewise, emblem glyphs of different nature may be paired (cf. Bíró 2011: 51-56; Gronemeyer 2012: 23-26; Helmke 2012: 99). As it seems, the eponymy of emblems is multi-faceted, as the emergence of a royal court is an individual process and therefore the genesis of an emblem as well, together with all power-political developments over time.

Emblems are also sometimes elevated to refer to a regional level, where they may interfere with another distinct class of politonyms. The best evidence comes from the Tamarindito emblem (Figure 13d) whose eminence likely originates from the site's Early Classic role as the regional hegemony (Buechler 2012: 529-536, fn. 4; Gronemeyer 2013: 8). In a text from the reign of the Dos Pilas king K'awil Chan K'inich, when Tamarindito was subordinated to Dos Pilas, there is one interesting detail about hierarchies of place names. For the 9.15.10.0.0 period ending, AGT St. 1, D6-10 mentions that the patron gods were accompanied by people from the 'eight provinces', people from the 'Tamarindito' domain and that it happened at Aguateca in the Tamarindito domain.²³ The context suggests that the 'Tamarindito' emblem possibly refers to the Petexbatun region as a whole, while its political sovereignty was lost.

The passage from AGT St. 2 also seems to equate the *sum?-al* emblem with *waxak-pet*, a division into eight 'provinces'. The mention of regional provinces following the pattern of a numeral and the classifier *-pet*, 'province, plot of land' is attested in other areas as well (Figure 14). The earliest datable context is from TIK St. 31, F8-E14 (Figure 14i), when Yax Nun Ahin took the '28-provinces' under the auspices of Sihaj K'ahk' at the *Wil-Tē'-Nah* (cf. Stuart 2011: 6). It is unclear whether the action described took place at Teotihuacan or a substitution *Wil-Tē'-Nah* at Tikal, but it is possibly related to the "New Order" (Martin & Grube 2000: 34) that the *entrada* established in the Peten lowlands (Tokovinine 2013: 115). This is also the highest number attested with *pet*, later examples do not exceed 13, indicating a fragmentation of the political landscape (compare to the later 4-*pet* in Tikal, Figure 14a).²⁴

23 The passage under question reads: **yi-chi-NAL^a CHAK-K'AWIL yi-ta-ji 8-PET AJ-SUM? u-ti-ya K'INICH-PA'-WITZ ti SUM?-la** < *y-ich-nal-Ø cha[h]k k'awil y-it-aj-Ø waxak+pet aj=sum?[-al] u[h] t-Ø=iy k'inich pa'+witz ti sum?-[a]l*, 'it [was] in the presence of GI and GII, they were accompanied by the eight-province Tamarindito-people, it happened at Aguateca, in the Tamarindito realm'.

24 Peter Mathews (personal communication, October 14, 2014) considers the 28-*pet* concept to be of even greater ancestry, originating from the Late Preclassic hegemonies of Nakbe and El Mirador, into whose succession Tikal was set, also in relation to the numbered *tzuk* partitions. Despite the later 'balkanisation' into different numbered *pet* provinces, vestiges of the old group identity of the 28 among several dynasties in the southern Peten and Belize can still be found in the Late Classic with the *waxak-k'al ajaw-taak | winik* titles (Tokovinine 2013: 113-115, fig. 61), e.g. on DPL P. 19, F1b-G1a. The title can also be specified by cardinal directions, e.g. *el-Ø+k'in waxak-k'al* on NAR

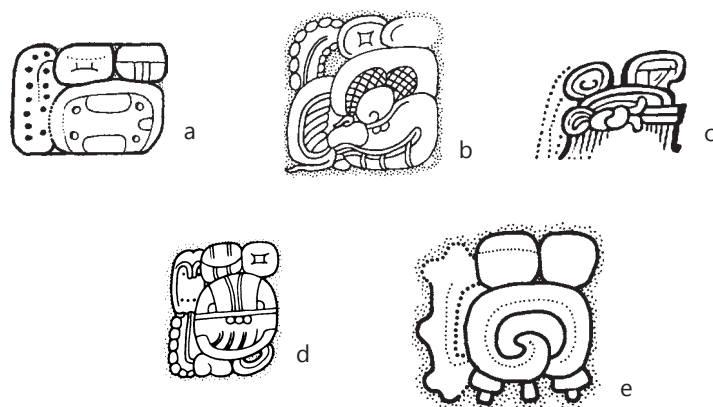


Figure 13. Examples of emblem glyphs. **a)** **K'UH-BAK-AJAW** < *k'ub-Ø bak[-al]+ajaw* = Palenque / Tortuguero / Comalcalco (TRT Bx. 1, F1; drawing by Sven Gronemeyer in Gronemeyer 2006: pl. 1), **b)** **K'UH-^{ka}KAN-AJAW** < *k'ub-Ø kan[-al]+ajaw* = Dzibanche / Calakmul (CRN HS. 2 X, A2, drawing by Berthold Riese in Mayer 1987: pl. 28), **c)** **K'UH-MUT-AJAW** < *k'ub-Ø mut[-al]+ajaw* = Tikal / Dos Pilas (TIK Msc. Hombre, C5; drawing by Rene Ozaeta in Fahsen 1988: fig. 4), **d)** **K'UH-PA'-CHAN-AJAW** < *k'ub-Ø pa'+chan+ajaw* = Yaxchilan (YAX Lnt. 46, F7; drawing by Ian Graham in Graham 1979: 101), **e)** **K'UH-SUM?-AJAW** < *k'ub-Ø sum?[-al]+ajaw* = Tamarindito / Arroyo de Piedra (TAM St. 2, C5; drawing by Sven Gronemeyer in Gronemeyer 2013: pl. 5).

Another politonym of the structure numeral plus classifier plus noun (Figure 15) sometimes follows the numbered provinces title (Figure 15a-b) and also takes the form of a demonym (Figure 15c-d). Several examples were independently recognised as place names by Tokovinine (2013: 16-18, fig. 8). That a larger geographical area of socio-political importance is indicated, is best demonstrated by the (5-*pet*) 5-*pet* 3-*hab te'* combination (note that only modern YUK features *haab* as a numeral classifier for 'years' (Miram 1983: 292)). On K2914, it is associated with Yuknom K'awil, and on K1383 with Tzahkaj K'awil, both entitled as *bah kab* and carrying the *nun* title associated with

St. 21, B11-B12. On the other hand, related sites should feature identical *pet* numbers. There are two instances with 6-*pet*, but their provenance is uncertain. The example of Figure 14d is attributed to Champerico, while the example of Figure 14e is allegedly said to come from Uaymil; while both sites are geographically separated. Likewise, we also have a *ho'+pet kab* from PAL HCEF, F2, far away from the north eastern Peten examples. But there is one important difference in both cases: although the #-*pet* part is the same, one example is followed by *kab*, the other is not. Tokovinine (2013: 44-45, fig. 26) details several other numbered *kab* toponyms, some with *pet*, others without (e.g. *huk kab*, TIK MT. 16, J1). But the *pet* attribution might also base on reasons other than geographic proximity to form a 'province', and the numbered *kab* toponyms might yet indicate something different (e.g. note that the 7-*kab* is associated with *Aj Wosaj* of Naranjo, a site in the 7-*tzuk* division).

the kings of Rio Azul (Houston 1986: 5-7). The vessel K7524 (Figure 14c) mentions the title sequence in relation to Tut K'in Chahk Jil[el], the lord of *Buk'*, or Los Alacranes.²⁵ Other ceramic vessels stylistically associated with the North-East Peten (specifically the sites of Rio Azul and Xultun) also mention *3-hab te'*, but without the *5-pet* before. Furthermore, *3-hab te'* has, like other place names, its own *way* figure (Grube & Nahm 1994: 706). The patterns leave little doubt that the *3-hab te'* sphere comprises an area around Los Alacranes, Rio Azul, Holmul, and Xultun, while not all of these sites seem to pertain to the *5-pet* provinces, suggesting it to be an independent and intersecting division of the *3-hab te'* area (as it precedes it, like the inferior *kinich pa'+witz* does on AGT St. 1 before *sum[-al]*, the name of the *8-pet*).

The line of argument is completed by two vessels painted in a north-eastern Peten style. K5022 (Figure 15c) in a Xultun style and K7720 painted in a Holmul manner (but likely also from Rio Azul or Xultun (Krempel & Matteo 2012: 164)) mention an *3-hab te' ajaw* named K'inich Lamaw Ek', associated with the *13-tzuk* division (see below), attested for same region in the Late Classic (Beliaev 2000: 65). While there is a Motul de San Jose lord of the same name (Tokovinine & Zender 2012: 45-46), it is probably a namesake, because of the *13-tzuk* division. Support comes from K2295, a vessel similar in style to the north-eastern Peten school, but painted by a Motul artist (named with the proper *7-tzuk* title) for a Rio Azul ruler (Krempel & Matteo 2012: fig. 9a).

Tokovinine (2013: 16) noted that *3-te' tun* (Figure 15e), previously considered as a proper Calakmul toponym (Stuart & Houston 1994: 28), also appears in Oxpemul. Intriguing is the case of the title sequence on OXP St. 7, C1-C5, where the ruler is referred to as an *3-te' tun kalomte'*, while carrying the 'bat head' emblem glyph that was in use in Calakmul before the 'snake head' interlude and later became the emblem glyph in Oxpemul (Gronemeyer 2013: 26-29; Grube 2005: 95; Martin 2005). Even more intriguing is the case of NAR HS. 1 VI, N2-L3 that creates different demonyms for both toponyms²⁶ and clearly separates *3-te' tun* from *chik nabb*.

The identification of areal politonyms of the structure numeral plus classifier plus noun also allows to reconsider the nature of *3-te' kuh* in the epigraphic record. It was previously considered the toponym of an unlocated Tabasco site (Gronemeyer 2006:

25 Another mention of *buk' ux+hab te'* comes from a lidded vessel recently excavated in Tz'ibatnah (Guido Krempel, written communication, June 13, 2013), west to Rio Azul (Kovač, Hulínek & Szymanski 2011) and one from the unprovenanced vessel K5241, but without any other politonyms. With the mention of *buk'+ajaw* on ALC St. 1, B3 and ALC St. 2, B3 among different rulers, Grube (2005: 91-93, 2008: 195, 196) was able to relate this toponym to Los Alacranes. It is also mentioned in connection with a captive on XUL St. 21, pE4.

26 The passage reads: ^{ka}**KAN-la ta-3-TE'-TUNⁿⁱ-AJ-chi-ku-NAB** < *kan-[a]l ta ux+te' tun aj=chik+na[h]b*, 'the Calakmul [lord] in *Ux Te' Tun*, He of *Chik Nabb*'.

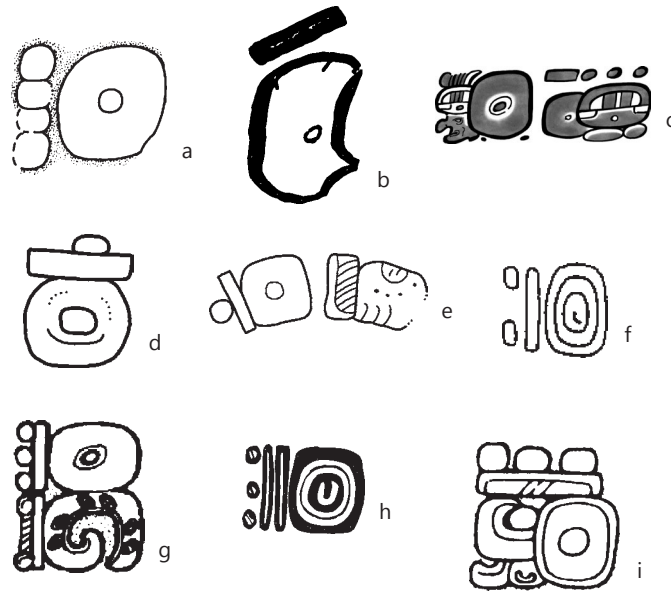


Figure 14. Examples of numbered province divisions with pet. **a) 4-PET** < *chan+pet* (TIK St. 13, A8a; drawing by William Coe in Jones and Satterthwaite 1982: fig. 19), **b) 5-PET** < *ho'+pet* (RÁZ K1383, F4a, drawing by Sven Gronemeyer), **c) 5-PET 5-PET 3-HAB-TE'** < *ho'+pet ho'+pet ux+hab te'* (COL K7524, N1-O1; drawing by Sven Gronemeyer), **d) 6-PET** < *wak+pet* (CHP St. 4, C5a; drawing by Sven Gronemeyer), **e) 6-PET ka-ba** < *wak+pet kab* (UYM Mirror Back, L1-M1; drawing by Sven Gronemeyer), **f) 7-PET** < *huk+pet* (OXX Msc. 30, B1; drawing by Miguel García Campillo in García Campillo and Lacadena 1988: fig. 6), **g) 8-PET AJ-SUM** < *waxak+pet aj=sum[-al]* (ÁGT St. 1, D8b; drawing by Ian Graham in Graham 1967: fig. 3), **h) 13-PET** < *uxlajun+pet* (COL K3064, C1; drawing by Persis Clarkson), **i) 8-20-wa-PET** < *waxak-k'al+pet* (TIK St. 31, F12; drawing by William Coe in Jones and Satterthwaite 1982: fig. 52b).

39-40), because it was twice the target of belligerent actions from Tortuguero.²⁷ But a closer investigation of the epigraphic evidence from Tortuguero, Palenque and other Tabasco sites²⁸ suggests that 3-*te' kuh* was somehow related to the entire region between the Gulf Coast and the northern slopes of the Chiapas highlands.

27 It was also supposed that the relations to the related lineage in Palenque were unfriendly because of these incidents (Grube, Martin & Zender 2002: 19), as an individual from 3-*te' kuh* attended the accession ceremony of K'inich Ahkul Mo' Nahb III of Palenque (PAL T19B-W, J1-M1), and his mother Ix Kiniw Mat (PAL T21B-P, B5-A7) also originates from there (Stuart 2005: 129-131).

28 Among the war campaigns of Bahlam Ajaw of Tortuguero, 3-*te' kuh* is associated with the first (TRT Mon. 6, E11) and last (TRT Jd. 1, B9-B10) 'star war' event, while several other military actions took place in between. Most likely, Bahlam Ajaw sought to gain control of the economic resources

A final category of areal politonyms are the numbered *tzuk* titles (Figure 16) first contextually discussed by Beliaev (2000), while *tzuk* means ‘division’ as a noun and numerical classifier. Like we have the few examples of 5-*pet* preceding 3-*hab te*’ (Figure 14c), there are also attestations where 13-*tzuk* follows 3-*hab te*’, indicating a larger order (Figure 16f). It also follows *bah kab* in several instances (e.g. on K2295, K7720, K8015), a title intimately connected to the king as the embodiment of his own polity (Houston, Taube & Stuart 2006: 7, 61, 62-63).²⁹ Beliaev described the 7-*tzuk* (Motul de San Jose and eastern Peten) and 13-*tzuk* (Tikal and north-eastern Peten), while subdivisions per the cardinal directions are possible (Figure 16c). Later research also isolated 9-*tzuk* in northern Belize (Helmke *et al.* 2012: 84-86) and 6-*tzuk* in Nim Li Punit (NMP St. 2, H4). Interestingly, such divisions are absent from the western Maya area.

It is important to note that the *tzuk* references are always used as an epithet and thus indicate a group identity (Tokovinine 2013: 98). While the titles also appear as a self-identity,³⁰ they are also preferred as an exonymic identifier and may refer to a geopolitical or ethnic identity (Beliaev 2000: 75-77; Tokovinine 2013: 102-105), an ‘us’ and ‘them’. This pattern seems to be more accentuated with the 7-*tzuk* division, e.g. a Naranjo king is never referred to as 7-*tzuk* on monumental inscriptions at Naranjo, but only on portable objects possibly made for him by outsiders (Tokovinine 2013: fn. 51), and possibly manufactured at Naranjo as royal gifts. The usage of the *tzuk* titles is thus also a rhetoric device to evoke some difference and social demarcation, sometimes

and trade network of the Tabasco lowlands by ultimately conquering Comalcalco (Gronemeyer 2006: 58-59, tab. 2), attacking sites along the way. The mention of 3-*te’ kuh* is thus almost like a narrative parenthesis to summarise the war events in Tabasco. Also, COL St. Antwerp (Mayer 1995: pl. 114) erected for Ix Ok Ahin of the unlocated site of *Pomoy* mentions a sculptor and an *abnab* person from 3-*te’ kuh*.

29 It is also interesting to note that the position of *bah kab* among the epithets of numbered territorial divisions is variable. In most cases, it is in a position after, e.g. on K1383 with nun 5-*pet* 3-*hab te’ bah kab*, while it may also precede, as with *nun bah kab* 5-5-*pet* 3-*hab te’* on K2914. Normally, the order of epithets in any nominal phrase seems to remain rather constant, although variations are possible. In this case, we must ask whether the position of *bah kab* is indication that the ruler in question was only so for his own polity or actually having domain over a larger area, instead of only being part of it.

30 For example on K8015, I1-L1, a north-eastern Peten style vessel, we encounter **K’UH BAX-WITZ-AJAW ba-ka-ba 13-TZUK** < *k’uh-Ø bax+witz+ajaw ba[h] kab wxlahun+tzuk*, ‘a God [is] the Xultun-King, the Countenance of the Earth, [in] 13 Divisions’. A difficult question to answer is the case of K2295 made by a Motul scribe, indicated by *u-tz’i[h]b k’uh ik’a[’]=aj och+k’in 7-tzuk*, made for a 3-*hab te’ ajaw bah kab* 13-*tzuk* person. The Motul emblem seems to be made into a demonym by an enclitic agentive, not untypical for external references. If the scribe did not sign by himself, it has to be an external reference added later, possibly supported by the fact of the two different styles of writing.

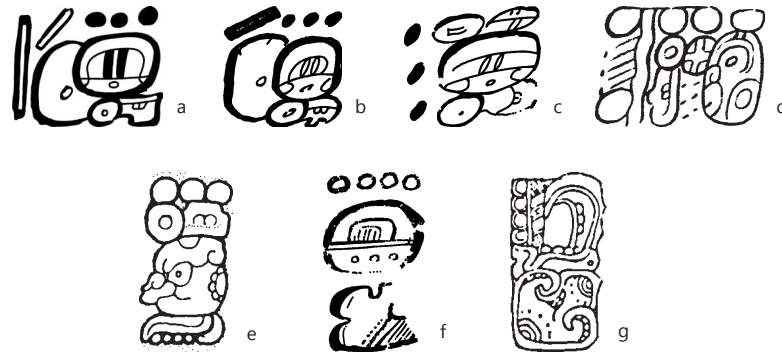


Figure 15. Examples of numbered areal divisions with different nouns. **a** 5-5-PET 3-HAB-TE' < *ho'[+pet] ho'+pet ux+hab te'* (RAZ K2914, N7; drawing by Sven Gronemeyer), **b** 5-PET 3-HAB-TE' < *ho'+pet ux+hab te'* (RAZ K1383, F4; drawing by Sven Gronemeyer), **c** 3-HAB-TE'-AJAW < *ux+hab te'* (COL K5022, B5; drawing by Sven Gronemeyer), **d** AJ-3-TE'-K'UH < *aj=ux+te' k'uh* (PAL T19B-W, M1; drawing by David Stuart in Stuart 2005: pl. 1), **e** 3-TE'-TUN < *ux+te' tun* (CLK St. 89, D5; drawing by Nikolai Grube in Mayer 1989: pl. 7), **f** 4-HAB?-WITZ < *chan+hab witz* (SBT Las Pinturas Fragment; drawing by Sven Gronemeyer), **g** 9-TE'-wiWITZ < *balun+te' witz* (CPN St. I, C3a; drawing by Barbara Fash in Schele 1987: fig. 2).

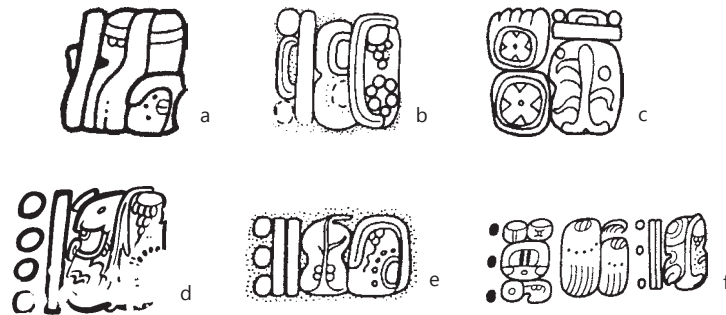


Figure 16. Examples of numbered tzuk titles. **a** 6-tzu-ku < *wak+tzuk* (NMP St. 2, E4; drawing by Stephen Houston in Grube, MacLeod and Wanyerka 1999: fig. 4a), **b** 7-tzu-ku < *huk+tzuk* (TIK Alt. 8, B2; drawing by William Coe in Jones and Satterthwaite 1982: fig. 30), **c** OCH-K'IN-7-TZUK < *och-Ø+k'in huk+tzuk* (TPX TPMO 067, A6; drawing by Stefanie Teufel in Teufel 2000: fig. 107), **d** 9-TZUK^{ku} < *balun+tzuk* (CUY Vessel, Q7; drawing by Christophe Helmke in Helmke *et al.* 2012: fig. 9), **e** 13-tzu-ku < *uxlajun+tzuk* (DPL HS. 2 III W, D2; drawing by Ian Graham), **f** 3-HAB-TE'-AJAW ba-ka-ba 13-TZUK^{ku} < *ux+hab te' ba[h] kab uxlajun+tzuk* (COL K7720, B3-B5; drawing by Alexandre Tokovinine in Tokovinine 2013: fig. 55h).

even in a pejorative manner.³¹ Certainly, more research on the distribution and context patterns of numbered *tzuk* titles is needed.³²

Based on the scarce evidence we have, it is possible to propose a hierarchy of politonyms. The smallest unit is the polity ruled by a (*k'uh*) *ajaw*. Polities in turn may form a numbered *pet* province (Figure 14). These may be part of partitions designated by numbered nouns (Figure 15). There is no full congruence, but only an intersection between these socio-political levels. The widest geographic coverage is then provided by the numbered *tzuk* titles (Figure 16). It is also important to note that the mention of certain numbered regional divisions and titles may simply be a snapshot of political organisation at a certain time, and demarcations may shift.

Another socio-political aspect of toponyms is their function to derive demonyms, being a subset of socionyms. The most common way is with the agentive proclitic *aj=* or the female classifier *ix* as the 'title of origin' (Stuart & Houston 1994: 7-18), especially in the context of non-royal persons. As such references are usually made to people from a certain site, we may expect oikonyms as the smallest unit of reference (e.g. Figures 1c, 3a-b, 4d, 7f). Only in rare instances, such as the *aj=lakam ha'* on BPK Lnt. 4, B1-C1, smaller scaled taxonomies are used, in the case mentioned to possibly refer to a member of the royal household or referring to the court in a disrespectful manner. In several instances of war rhetorics, an emblem can also be referenced simply by *aj=* or *winik* to deny the royal status of the defeated lord (footnote 30; Gronemeyer 2013: 18), especially his *k'uh* essence (Gronemeyer 2013: 32-34). Emblem glyphs with (*k'uh*) *ajaw* are thus a demonym as well, although restricted to the ruler and his lineage, more an autonym, but also used as a xenonym. Titles indicating a social role can also be used with larger scaled politonyms, as the example of the *3-hab te' ajaw* demonstrates, and such larger areas can also serve as a title of origin, as with *aj=3-te' k'uh* (footnote 27).

31 Compare to the war report of Bajlaj Chan K'awil against his (half-)brother Nun Ujol Chahk in the fratricidal war between Dos Pilas and Tikal. Here, the victorious Dos Pilas king refers to his relative as a *mut-al winik*, 'Tikal-Person' (DPL HS. 4 III, C2-E1), and describes the defeat as *witz-aj u-jol-[i]luxlahun-tzuk mut-[a]l winik*, 'piled up were the skulls of the 13 Divisions and Tikal-People' (DPL HS. 2 W III, C2-E1).

32 A vexing case is ARE Alt. 2, pA1-pB1 (Grube 2008: 180-182) that mentions *k'uh kab 13-tzuk* and lists 13 emblem glyphs, including Motul de San Jose, Tikal, Edzna, and Palenque. Except Tikal, none is otherwise associated with 13-*tzuk*, and especially Motul is always 7-*tzuk* in other texts. But the text of the altar may refer to yet another concept of '13 gods' mentioned in other texts (Tokovinine 2013: 106-109).

Conclusions

The field of toponymy in Maya writing is a topic that deserves a more detailed review than previous studies were able to provide or the present overview can offer. There is an enormous potential to the general field of onomastics, especially in comparison with other more studied areas, such as anthroponyms in Classic Mayan (Colas 2004). Although the evidence scanned through and compiled for the taxonomy is fragmentary, one impression becomes manifest in comparison with the empirically backed up linguistic patterns of anthroponyms as worked out by Colas (2004): The structural variability is smaller. Personal names basically exhibit the same nominal structure as toponyms (e.g. *chak sutz*, 'Great/Red Bat', PAL SLAV, E1a; *k'an mo'+hix*, 'Yellow/Precious Macaw-Jaguar', PAL TISL, E53), as well as stative, possessive constructions (e.g. *y-ich'ak-Ø ba[h]lam*, 'It/He [is] the Claw of the Jaguar', AGT St. 2, F2). Particular to anthroponyms are verbal sentence names (e.g. *baj-l-aj-Ø chan k'awil*, 'K'awil Hammers [in?] the Sky', DPL HS. 4 I, N1-M2) that can be as complicated as an antipassive construction in a relative clause with a head noun (e.g. *ka[h]k'-Ø til-iw-chan-Ø cha[h]k*, 'It [is] Fire [what] Chahk Heaven-Drills', NAR St. 21, A9-A10). And while Colas (2004) also examined the regional and temporal preferences for certain anthroponym structures, a similar survey is missing for toponyms.

Both onomastic fields combined may provide a substantial contribution to language geography in a diachronic perspective, eventually tracing the language furcation of the Ch'olan branch and demarcating it from other neighbouring Greater Lowland Languages (i.e. Yukatekan and Tzeltalan). At least for the structure of epithets in nominal phrases, Lacadena (2000) was able to identify vernacular differences, and possibly a closer examination of onomastics might be of service as well to contribute to an overall picture.

A context analysis of toponyms may not only provide deeper insights into Maya rhetorics, but also a closer correlation between the etic taxonomy and emic concepts as expressed in the different 'place name formula' configurations (also see the discussion among the different sub-classes of oikodonyms), as exercised to a certain degree for *ch'en* (Tokovinine 2013: tab. 2). Moreover, a multivariate mapping of toponyms and their contexts may enhance our insights of how and where royal power was exercised, both within a city or polity, and between polities. This especially concerns the larger territorial units that subsume individual polities. It will foster our understanding of territorial organisation and its social conception, and to possibly identify regional varieties, e.g. considering the absence of numbered divisions in the western lowlands (with a possible exception in Palenque, see Footnote 24). Other group identities can be made out, e.g. those following quadripartite patterns or the numbered **XE1°XQ3-ni** compounds (e.g. on K1383, J1), and to what extent these adhere to yet unrecognised territorial organisations and thus politonyms can only be guessed at the moment.

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References cited

- Arriola, Jorge Luis
1973 *El libro de las geonimas de Guatemala: diccionario etimológico*. Ciudad de Guatemala: José de Pineda Ibarra.
- Aulie, Wilbur & Evelyn de Aulie
1978 *Diccionario ch'ol-español, español-ch'ol*. Vocabularios Indígenas, 21. México, D.F.: Instituto Lingüístico de Verano.
- Aveni, Anthony
1992 *Conversing with the planets*. New York: Times Books.
- Barrera Vásquez, Alfredo
1993³ *Diccionario maya. Maya-español, español-maya*. México, D.F.: Porrúa.
- Barthel, Thomas
1968 Historisches in den klassischen Maya-Inschriften. *Zeitschrift für Ethnologie* 93: 119-156.
- Bauer, Gerhard
1996 Übergangsformen zwischen Eigennamen und Gattungsnamen. In: Eichler, Ernst, Gerold Hilty, Heinrich Löffler, Hugo Steger & Ladislav Zgusta (eds.): *Namenforschung: Ein internationales Handbuch zur Onomastik*. Vol. 2. Berlin: Walter de Gruyter, 1616-1621.
- Beliaev, Dmitri
2000 Wuk Tsuk and Oxlahun Tsuk: Naranjo and Tikal in the Late Classic. In: Colas, Pierre, Kai Delvendahl, Marcus Kuhnert & Annette Schubart (eds): *The sacred and the profane: Architecture and identity in the Maya lowlands*. Acta Mesoamericana, 10. Markt Schwaben: Anton Saurwein, 63-81.
- Berlin, Heinrich
1958 El glifo “emblema” en las inscripciones mayas. *Journal de la Société des Américanistes* 47: 111-119. <http://www.persee.fr/doc/jsa_0037-9174_1958_num_47_1_1153> (10.02.2016).
- Bíró, Péter
2011 Politics in the western Maya region (II): Emblem glyphs. *Estudios de Cultura Maya* 39: 31-66. <<http://www.journals.unam.mx/index.php/ecm/article/view/32629/29952>> (10.02.2016).

- Boot, Erik
 2009 *The updated preliminary Classic Maya - English, English - Classic Maya vocabulary of hieroglyphic readings*. <<http://www.mesoweb.com/resources/vocabulary/Vocabulary-2009.01.pdf>> (10.02.2016).
- Bricker, Victoria & Harvey Bricker
 1986 The Mars table in the Dresden Codex. In: Andrews, Wyllys (ed.): *Research and reflections in archaeology and history: Essays in honor of Doris Stone*. Middle American Research Institute Publications, 47. New Orleans: Middle American Research Institute, 51-79.
- Brito Sansores, William
 1981 *Toponimia maya de Quintana Roo*. Cancún: Fondo de Formento Editorial.
- Buechler, Jeff
 2012 *Maya socio-political interaction and domestic architecture in the Petexbatun, Guatemala*. PhD thesis. Department of Anthropology, University of Illinois, Chicago. <http://indigo.uic.edu/bitstream/handle/10027/9491/Buechler_Jeff.pdf?sequence=1> (10.02.2016).
- Callaway, Carl
 2011 *A catalogue of Maya era day inscriptions*. Master thesis. Department of Archaeology, La Trobe University, Melbourne. <<http://arrow.latrobe.edu.au/store/3/4/8/4/2/public/MasterVersion.pdf>> (10.02.2016).
- Cassidy, Frederic
 1996 Place name study: Getting started. In: Eichler, Ernst, Gerold Hilty, Heinrich Löffler, Hugo Steger & Ladislav Zgusta (eds.): *Namenforschung: Ein internationales Handbuch zur Onomastik*, Vol. 2. Berlin: Walter de Gruyter, 1426-1429.
- Chase, Arlen & Diane Chase
 1987 *Investigations at the Classic Maya city of Caracol, Belize: 1985-1987*. Pre-Columbian Art Research Institute Monograph, 3. San Francisco: Pre-Columbian Art Research Institute.
- Christenson, Allen
 2006 You are what you speak: Maya as the language of maize. In: Sachse, Frauke (ed.): *Maya ethnicity: The construction of ethnic identity from preclassic to modern times*. Acta Mesoamericana, 19. Markt Schwaben: Anton Saurwein, 209-216.
- Colas, Pierre
 2004 *Sinn und Bedeutung Klassischer Maya-Personennamen: Typologische Analyse von Anthroponymphrasen in den Hieroglyphen-Inschriften der Klassischen Maya-Kultur als Beitrag zur Allgemeinen Onomastik*. Acta Mesoamericana, 15. Markt Schwaben: Anton Saurwein.
- Eichler, Ernst, Gerold Hilty, Heinrich Löffler, Hugo Steger & Ladislav Zgusta
 1995 *Namenforschung: Ein internationales Handbuch zur Onomastik*, Vol. 1. Berlin: Walter de Gruyter.
 1996 *Namenforschung: Ein internationales Handbuch zur Onomastik*, Vol. 2. Berlin: Walter de Gruyter.
- Ensor, Bradley E.
 2003 Islas de los Cerros: A coastal site complex near Comalcalco, Tabasco, México. *Mexicon* 25(4): 106-111.

- Fahsen, Federico
 1988 *A new Early Classic text from Tikal*. Research Reports on Ancient Maya Writing, 17. Washington, D.C.: Center for Maya Research. <<http://www.mesoweb.com/bearc/cmt/RRAMW17.pdf>> (11.02.2016).
 2002 *Rescuing the origins of Dos Pilas dynasty: A salvage of hieroglyphic stairway #2, structure L5-49*. <<http://www.famsi.org/reports/01098/01098Fahsen01.pdf>> (11.02.2016).
- Fash, William, Alexandre Tokovinine & Barbara Fash
 2009 The House of the New Fire at Teotihuacan and its legacy in Mesoamerica. In: Fash, William & Leonardo López Luján (eds.): *The art of urbanism: How Mesoamerican kingdoms represented themselves in architecture and imagery*. Washington, D.C.: Dumbarton Oaks, 201-229.
- Förstemann, Ernst
 1872 *Altddeutsches Namenbuch, Zweiter Band: Ortsnamen*. Nordhausen: Ferdinand Förstemann.
- García Campillo, José Miguel
 2002 *Antroponimia y toponimia en las inscripciones mayas clásicas de Yucatán*. PhD thesis. Facultad de Geografía e Historia, Universidad Complutense de Madrid. <<http://eprints.ucm.es/2432/1/H0025701.pdf>> (11.02.2016).
- García Campillo, José Miguel & Alfonso Lacadena
 1988 Los jeroglíficos de Oxkintok. In: Misión Arqueológica de España en México / Proyecto Oxkintok (ed.): *Oxkintok 1*. Madrid: Ministerio de Cultura, 91-107.
- García de León, Antonio
 1971 *Los elementos del tzotzil colonial y moderno*. Centro de Estudios Mayas, Cuaderno 7. México, D.F.: Universidad Nacional Autónoma de México (UNAM).
- Gordon, George
 1913 *The Book of Chilam Balam of Chumayel*. University of Pennsylvania Museum Anthropological Publications, 5. Philadelphia: The University Museum.
- Graham, Ian
 1967 *Archaeological explorations in El Peten, Guatemala*. Middle American Research Institute, Publication, 33. New Orleans: Tulane University.
 1978 *Naranjo, Chunhuitz, Xunantunich*. Corpus of Maya Hieroglyphic Inscriptions, 2(2). Cambridge: Harvard University.
 1979 *Yaxchilan*. Corpus of Maya Hieroglyphic Inscriptions, 3(2). Cambridge, : Harvard University.
 1982 *Yaxchilan*. Corpus of Maya Hieroglyphic Inscriptions, 3(3). Cambridge: Harvard University.
 1996 *Seibal*. Corpus of Maya Hieroglyphic Inscriptions, 7(1). Cambridge: Harvard University.
- Graham, Ian & Eric von Euw
 1975 *Naranjo*. Corpus of Maya Hieroglyphic Inscriptions, 2(1). Cambridge: Harvard University.
 1977 *Yaxchilan*. Corpus of Maya Hieroglyphic Inscriptions, 3(1). Cambridge: Harvard University.
- Graham, Ian & Peter Mathews
 1999 *Tonina*. Corpus of Maya Hieroglyphic Inscriptions, 6(3). Cambridge: Harvard University.
- Graham, Ian, Lucia Henderson, Peter Mathews & David Stuart
 2006 *Tonina*. Corpus of Maya Hieroglyphic Inscriptions, 9(2). Cambridge: Harvard University.

- Gronemeyer, Sven
- 2006 *The Maya site of Tortuguero, Tabasco, Mexico: Its history and inscriptions*. Acta Mesoamericana, 17. Markt Schwaben: Anton Saurwein.
- 2012 Statements of identity: Emblem glyphs in the nexus of political relations. In: Źrałka, Jarosław, Wiesław Koszkuł & Beata Golińska (eds.): *Maya political relations and strategies*. Contributions in New World Archaeology, 4. Kraków: Uniwersytet Jagielloński/Polska Akademia Umiejętności, 13-40. <<http://www.cnwajournal.org/wp-content/uploads/2013/07/Statements-of-Identity-%E2%80%93-Emblem-Glyphs-in-the-Nexus-of-Political-Relations1.pdf>> (11.02.2016).
- 2013 *The monuments and inscriptions of Tamarindito, Peten, Guatemala*. Acta Mesoamericana, 25. Markt Schwaben: Anton Saurwein.
- Grube, Nikolai
- 2000a The city-states of the Maya. In: Hansen, Mogens Herman (ed.): *A comparative study of thirty city-state cultures*. Det Kongelige Danske Videnskaberne Selskab Historisk-filosofiske Skrifter, 21. Copenhagen: C. A. Reitzels Forlag, 547-565.
- 2000b Monumentos esculpidos e inscripciones jeroglíficas en el Triángulo Yaxhá-Nakum-Naranjo. In: Wurster, Wolfgang (ed.): *El sitio maya de Topoxté: investigaciones en una isla del Lago Yaxhá, Petén, Guatemala*. Materialien zur Allgemeinen und Vergleichenden Archäologie, 57. Mainz: Verlag Phillip von Zabern, 249-268.
- 2005 Toponyms, emblem glyphs, and the political geography of southern Campeche. *Anthropological Notebooks* 11: 89-102. <http://www.drustvo-antropologov.si/AN/PDF/2005_1/Anthropological_Notebooks_XI-1_6.pdf> (11.02.2016).
- 2008 Monumentos esculpidos: epigrafía e iconografía. In: Šprajc, Ivan (ed.): *Reconocimiento arqueológico en el sureste del estado de Campeche 1996-2005*. BAR International Series, 1742. Oxford: Archaeopress, 177-232.
- Grube, Nikolai & Barbara MacLeod
- 1989 *A primary standard sequence on Copán Altar K*. Copan Notes, 55. Austin: The Mesoamerica Center.
- Grube, Nikolai, Barbara MacLeod & Phil Wanyerka
- 1999 *A commentary on the hieroglyphic inscriptions of Nim Li Punit, Belize / Un comentario sobre los textos jeroglíficos de Nim Li Punit, Belice*. Research Reports on Ancient Maya Writing, 41. Washington, D.C.: Center for Maya Research. <<http://www.mesoweb.com/bearc/cmr/RRAMW41.pdf>> (11.02.2016).
- Grube, Nikolai, Simon Martin & Marc Zender
- 2002 Palenque and its neighbors. In: Grube, Nikolai (ed.): *Notebook for the XXVIth Maya Hieroglyphic Forum at Texas, March 2002*. Austin: University of Texas.
- Grube, Nikolai & Werner Nahm
- 1994 A census of Xibalba: A complete inventory of “way” characters on Maya ceramics. In: Kerr, Justin (ed.): *The Maya vase book: A corpus of rollout photographs of Maya vases*, volume 4. New York: Kerr Associates, 686-715.
- Grube, Nikolai & David Stuart
- 1987 *Observations on T110 as the syllable ko*. Research Reports on Ancient Maya Writing, 8. Washington, D.C.: Center for Maya Research. <<http://www.mesoweb.com/bearc/cmr/RRAMW08.pdf>> (11.02.2016).

Helmke, Christophe

- 2012 Mythological emblem glyphs of ancient Maya kings. In: Helmke, Christophe , Jarosław Żrałka & Monika Banach (eds.): *Proceedings of the 1st Cracow Maya Conference: Archaeology and epigraphy of the eastern central Maya lowlands*. Contributions in New World Archaeology, 3. Kraków: Polska Akademia Umiejętności/Uniwersytet Jagielloński, 91-126. <<http://www.farkha.nazwa.pl/contributions/pcnwa/cnwa/CNWA3.4.pdf>> (11.02.2016).

Helmke, Christophe, Jaime Awe, Shawn Morton & Gyles Iannone

- 2012 The archaeological and epigraphic significance of Cuychen, Macal Valley, Belize. In: Morris, John, Jaime Awe, Melissa Badillo & George Thompson (eds.): *Archaeological investigations in the eastern Maya lowlands: Papers of the 2011 Belize Archaeology Symposium*. Research Reports in Belizean Archaeology, 9. Belmopan: Institute of Archaeology, National Institute of Culture and History, 75-89. <<http://static-curis.ku.dk/portal/files/47897786/RRBAVol9.pdf>> (11.02.2016).

Hoffing, Charles & Francisco Fernando Tesucún

- 2000 *Itzaj Maya Grammar*. Salt Lake City: University of Utah Press. <<https://muse.jhu.edu/books/9781607812180>> (11.02.2016).

Houston, Stephen

- 1986 *Problematic emblem glyphs: Examples from Altar de Sacrificios, El Chorro, Río Azul, and Xultun*. Research Reports on Ancient Maya Writing 3. Washington, D.C.: Center for Maya Research. <<http://www.mesoweb.com/bearc/cmr/RRAMW03-OCR.pdf>> (11.02.2016).
- 1993 *Hieroglyphs and history at Dos Pilas: Dynastic politics of the Classic Maya*. Austin: University of Texas Press.

Houston, Stephen, John Robertson & David Stuart

- 2001 *Quality and quantity in glyphic nouns and adjectives / Calidad y cantidad en sustantivos y adjetivos glíficos*. Research Reports on Ancient Maya Writing 47. Washington, D.C.: Center for Maya Research. <<http://www.mesoweb.com/bearc/cmr/RRAMW47-OCR.pdf>> (11.02.2016).

Houston, Stephen & David Stuart

- 1989 *The Way glyph: Evidence for "co-essences" among the Classic Maya*. Research Reports on Ancient Maya Writing 30. Washington, D.C.: Center for Maya Research. <<http://www.mesoweb.com/bearc/cmr/RRAMW30-OCR.pdf>> (11.02.2016).

Houston, Stephen, Karl Taube & David Stuart

- 2006 *The memory of bones: Body, being, and experience among the Classic Maya*. Austin: University of Texas Press.

Ishihara, Reiko, Karl Taube & Jaime Awe

- 2006 The water lily serpent Stucco masks at Caracol, Belize. In: Morris, John, Sherilyne Jones, Jaime Awe & Christophe Helmke (eds.): *Archaeological investigations in the eastern Maya lowlands: Papers of the 2005 Belize Archaeology Symposium*. Research Reports in Belizean Archaeology, 3. Belmopan: Institute of Archaeology, National Institute of Culture and History, 213-223. <<https://www.academia.edu/1486995>> (11.02.2016).

Iwaniszewski, Stanisław

- 1987 El templo del dios descendiente en Tulum: Enfoque arqueoastronómico. In: Centro de Estudios Mayas (ed.): *Memorias del Primer Coloquio Internacional de Mayistas*. México, D.F.: Universidad Nacional Autónoma de México (UNAM), 209-217.

- Jones, Christopher & Linton Satterthwaite
 1982 *Monuments and inscriptions of Tikal: The carved monuments*. Tikal Report, 33A. Philadelphia: University of Pennsylvania.
- Kamianets, Wolodymyr
 2000 Zur Einteilung der deutschen Eigennamen. *Grazer Linguistische Studien* 54: 41-58. <https://static.uni-graz.at/fileadmin/gewi-institute/Sprachwissenschaft/GLS_Download/GLS_54_-_Kamianets.pdf> (11.02.2016).
- Keller, Kathryn & Plácido Luciano
 1997 *Diccionario chontal de Tabasco (mayense)*. Vocabularios Indígenas, 36. Tucson: Summer Institute of Linguistics.
- Kelley, David
 1965 The birth of the gods at Palenque. *Estudios de Cultura Maya* 5: 93-134.
 1976 *Deciphering the Maya script*. Austin: University of Texas Press.
- Kirchhoff, Thomas
 2011 „Natur“ als kulturelles Konzept. *Zeitschrift für Kulturphilosophie* 5(1): 69-96.
- Kovač, Milan, Drahošlav Hulínek & Jan Szymanski
 2011 Tz'ibatnah: el nuevo sitio Maya del norte de Petén. In: Arroyo, Bárbara , Lorena Paiz, Adriana Linares & Ana Lucia Arroyave (eds.): *XXIV Simposio de Investigaciones Arqueológicas en Guatemala, 2010*. Ciudad de Guatemala: Ministerio de Cultura y Deportes/Instituto de Antropología e Historia (IDAEH)/Asociación Tikal, 428-437.
- Krempel, Guido & Sebastian Matteo
 2012 Painting styles of the north-eastern Peten from a local perspective: The palace schools of Yax We'en Chan K'inich, Lord of Xultun. In: Helmke, Christophe, Jarosław Żrałka & Monika Banach (eds.): *Proceedings of the 1st Cracow Maya Conference: Archaeology and epigraphy of the eastern central Maya lowlands*. Contributions in New World Archaeology, 3. Kraków: Polska Akademia Umiejętności and Uniwersytet Jagielloński, 135-172. <<http://www.farkha.nazwa.pl/contributions/pcnwa/cnwa/CNWA3.6.pdf>> (11.02.2016).
- Kripke, Saul
 1980 *Naming and necessity*. Cambridge: Harvard University Press.
- Lacadena, Alfonso
 2000 Nominal syntax and the linguistic affiliation of Classic Maya texts. In: Colas, Pierre R., Kai Delvendahl, Marcus Kuhnert & Annette Schubart (eds.): *The sacred and the profane: Architecture and identity in the Maya lowlands*. Acta Mesoamericana, 10. Markt Schwaben: Anton Saurwein, 119-128.
 2009 Apuntes para un estudio sobre literatura maya antigua. In: Gunsenheimer, Antje, Tsubasa Okoshi Harada & John Chuchiak IV (eds.): *Text and context: Maya literature in a diachronic perspective / Texto y contexto: perspectivas intraculturales en el análisis de la literatura maya yucateca*. Bonner Amerikanistische Studien, 47. Aachen: Shaker, 31-52.
- Lacadena, Alfonso & Søren Wichmann
 2005 Harmony rules and the suffix domain: A study of Maya scribal conventions. <<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.539.4305&rep=rep1&type=pdf>> (11.02.2016).

- Le Guen, Olivier
 2005 Geografía de lo sagrado entre los Mayas Yucatecos de Quintana Roo: configuración del espacio y su aprendizaje entre los niños. *Ketzalcalli* 2(1): 54-68. <<http://pubman.mpdl.mpg.de/pubman/item/escidoc:1552192:2/component/escidoc:1552193/Ketzalcalli-2005-1%20copia.pdf>> (11.02.2016).
- Looper, Matthew
 2000 *The quatrefoil 510cd as 'Cave'*. Glyph Dwellers Report, 7. Davis: Maya Hieroglyphic Database Project, University of California. <<https://nas.ucdavis.edu/sites/nas.ucdavis.edu/files/attachments/R7.pdf>> (11.02.2016).
 2003 *Lightning warrior: Maya art and kingship at Quirigua*. The Linda Schele Series in Maya and Pre-Columbian Studies, 4. Austin: University of Texas Press.
- Lounsbury, Floyd
 1991 Distinguished lecture: Recent work in the decipherment of Palenque's hieroglyphic inscriptions. *American Anthropologist* 93: 809-824.
- MacLeod, Barbara & Alejandro Sheseña
 2013 Ritos agrícolas mayas clásicos desarrollados en cuevas. In: Sheseña, Alejandro (ed.): *Religión maya: rasgos y desarrollo histórico*. Tuxtla Gutiérrez: Universidad de Ciencias y Artes de Chiapas, 201-224.
- MacLeod, Barbara & Andrea Stone
 1994 The hieroglyphic inscriptions of Naj Tunich. In: Stone, Andrea (ed.): *Images from the underworld: Naj Tunich and the tradition of Maya cave painting*. Austin: University of Texas Press, 155-184.
- Marcus, Joyce
 1976 *Emblem and state in the Classic Maya lowlands*. Washington, D.C.: Dumbarton Oaks.
- Martin, Simon
 2005 Of snakes and bats: Shifting identities at Calakmul. *The PARI Journal* 6(2): 5-15. <http://www.mesoweb.com/pari/publications/journal/602/SnakesBats_e.pdf> (11.02.2016).
- Martin, Simon & Nikolai Grube
 2000 *Chronicle of the Maya kings and queens. Deciphering the dynasties of the Ancient Maya*. London, Thames & Hudson.
- Mathews, Peter
 1985 Early Classic monuments and inscriptions. In: Willey, Gordon R. & Peter Mathews (eds.): *A consideration of the Early Classic period in the Maya lowlands*. Institute for Mesoamerican Studies Publication, 10. Albany: State University of New York at Albany, 5-55.
 1988 *The sculpture of Yaxchilan*. PhD thesis. Department of Anthropology, Yale University, New Haven.
 1991 Classic Maya emblem glyphs. In: Culbert, Patrick (ed.): *Classic Maya political history: Hieroglyphic and archaeological Evidence*. Cambridge: School of American Research, 19-29.
- Mathews, Peter & John Justeson
 1984 Patterns of sign substitution in Mayan hieroglyphic writing: The "affix cluster". In: Justeson, John & Lyle Campbell (eds.): *Phoneticism in Mayan hieroglyphic writing*. Institute for Mesoamerican Studies, 9. Albany: State University of New York, 185-231.

- Mayer, Karl Herbert
 1987 *Sculptures of unknown provenance*, Supplement 1. Maya Monuments, 4). Berlin: Von Flemming.
 1989 *Sculptures of unknown provenance*, Supplement 2. Maya Monuments, 4). Berlin: Von Flemming.
 1995 *Sculptures of unknown provenance*, Supplement 4. Maya Monuments, 7). Graz: Academic Publishers.
- Milbrath, Susan
 2000 *Star gods of the Maya: Astronomy in art, folklore, and calendars*. The Linda Schele Series in Maya and Pre-Columbian Studies. Austin: University of Texas Press.
- Mill, John
 1846 *A system of logic, ratiocinative and inductive: Being a connected view of the principles of evidence and the methods of scientific investigation*. Vol. 1-2. New York: Harper & Brothers. <<https://archive.org/details/systemoflogicrat01millrich>> (11.02.2016).
- Miller, Arthur
 1982 *On the edge of the sea: Mural painting at Tancah-Tulum, Quintana Roo*. Washington, D.C.: Dumbarton Oaks.
- Miller, Mary & Stephen Houston
 1987 The Classic Maya ballgame and its architectural setting: A study of relations between text and image. *RES: Anthropology and Aesthetics* 14: 47-66. <<https://www.academia.edu/15777799>> (11.02.2016).
- Miller, Mary & Simon Martin
 2004 *Courty art of the Ancient Maya*. New York: Thames and Hudson.
- Miram, Helga Maria
 1983 *Numeral classifiers im Yukatekischen Maya*. Hannover: Verlag für Ethnologie.
- Morton, Julia
 1987 *Fruits of warm climates*. Miami: Florida Flair Books.
- Ochoa, Angela
 1987 Nombres de lugar en huasteco. In: Guzmán Betancourt, Ignacio (ed.): *De toponimia y topónimos: Contribuciones al estudio de nombres de lugar provenientes de lenguas indígenas de México*. México, D.F.: Instituto Nacional de Antropología e Historia (INAH), 135-146.
- Pacheco Cruz, Santiago
 1967 *Breviario de toponimias mayas*. Mérida: Imprenta Gamboa Guzmán.
- Prager, Christian
 2003 Zahlklassifikatoren in Hieroglyphen-Inschriften der klassischen Maya-Kultur: Beobachtungen zu T87. *Wayeb Notes* 2. <http://www.wayeb.org/notes/wayeb_notes0002.pdf> (11.02.2016).
 2013 Übernatürliche Akteure in der Klassischen Maya-Religion: Eine Untersuchung zu intrakultureller Variation und Stabilität am Beispiel des k'uh "Götter"-Konzepts in den religiösen Vorstellungen und Überzeugungen Klassischer Maya-Eliten (250 - 900 n.Chr.). PhD thesis. Philosophische Fakultät, Rheinische Friedrich-Wilhelms-Universität, Bonn. <<http://hss.ulb.uni-bonn.de/2014/3539/3539.htm>> (11.02.2016).

- Prager, Christian, Elisabeth Wagner, Sebastian Matteo & Guido Krempel
 2010 A reading of the Xultun toponymic title as B'aax (Tuun) Witz Ajaw "Lord of the B'aax-(Stone) Hill". *Mexicon* 32(4): 74-77.
- Réjon Garcia, Manuel
 1910 *Etimologías mayas: los nombres de varias poblaciones yucatecas, algo sobre su origen*. Mérida: Imprenta Gamboa Guzmán. <<http://bdh-rd.bne.es/viewer.vm?id=0000133370&page=1>> (11.02.2016).
- Robertson, Merle Greene
 1983 *The Temple of the Inscriptions*. The Sculpture of Palenque, 1. Princeton: Princeton University Press.
 1985 *The late buildings of the palace*. The Sculpture of Palenque, 3. Princeton: Princeton University Press.
 1991 *The Cross Group, the North Group, the Olvidado, and other pieces*. The Sculpture of Palenque, 4. Princeton: Princeton University Press.
- Roche Canto, Conrado
 1987 *Patronímicos y locativos en topónimos mayas*. Mérida: Self-published.
- Romero Castillo, Moisés
 1987 Toponimia maya de Yucatán. In: Guzmán Betancourt, Ignacio (ed.): *De toponimia y topónimos: Contribuciones al estudio de nombres de lugar provenientes de lenguas indígenas de México*. México, D.F.: Instituto Nacional de Antropología e Historia (INAH), 105-129.
- Roys, Ralph
 1965 *Ritual of the bacabs*. The Civilization of the American Indian Series, 77. Norman: University of Oklahoma Press.
- Schele, Linda
 1987 *Síela I and the founding of the city of Copán*. Copán Notes, 30. Copán: Copán Mosaics Project.
 1989 *A brief commentary on the top of Altar Q*. Copán Notes 66. Copán: Copán Mosaics Project.
- Schele, Linda & David Freidel
 1990 *A forest of kings: The untold story of the Ancient Maya*. New York: William Morrow.
- Schele, Linda & Mary Ellen Miller
 1986 *The blood of kings: Dynasty and ritual in Maya art*. Fort Worth: Kimbell Art Museum.
- Schumann Gálvez, Otto
 1973 *La lengua chol, de Tila (Chiapas)*. Centro de Estudios Mayas, Cuaderno 8. México, D.F.: Universidad Nacional Autónoma de México (UNAM).
- Stone, Andrea
 1994 *Images from the underworld: Naj Tunich and the tradition of Maya cave painting*. Austin: University of Texas Press.
- Stuart, David
 1985 *The Yaxha emblem glyph as Yax-ha*. Research Reports on Ancient Maya Writing, 1. Washington, D.C.: Center for Maya Research. <<http://www.mesoweb.com/bearc/cmr/RRAMW01.pdf>> (11.02.2016).
 1995 *A study of Maya inscriptions*. PhD thesis. Department of Anthropology, Vanderbilt University, Nashville. <<https://www.academia.edu/3048577>> (11.02.2016).

- 1998 “The fire enters his house”: Architecture and ritual in Classic Maya texts. In: Houston, Stephen (ed.): *Function and meaning in Classic Maya architecture*. Washington, D.C.: Dumbarton Oaks, 373-426.
- 2005 *The inscriptions from Temple XIX at Palenque: A commentary*. San Francisco: The Pre-Columbian Art Research Institute. <<http://www.mesoweb.com/publications/stuart/TXIX-spreads.pdf>> (11.02.2016).
- 2011 Some working notes on the text of Tikal Stela 31. <<http://www.mesoweb.com/stuart/notes/Tikal.pdf>> (11.02.2016).
- Stuart, David & Stephen Houston
 1994 *Classic Maya place names*. Studies in Pre-Columbian Art & Archaeology, 33. Washington, D.C.: Dumbarton Oaks.
- Tate, Carolyn
 1992 *Yaxchilan: The design of a Maya ceremonial city*. Austin: University of Texas Press.
- Taube, Karl
 1992 *The major gods of ancient Yucatan*. Studies in Pre-Columbian art and archaeology, 32. Washington, D.C.: Dumbarton Oaks.
- 2003 Ancient and contemporary Maya conceptions about field and forest. In: Gómez-Pompa, Arturo, Michael Allen, Scott Fedick & Juan Jiménez-Osornio (eds.): *The lowland Maya area: Three millennia at the human-wildland interface*. New York: Food Products Press, 461-492.
- Tent, Jan & David Blair
 2009 *Motivations for naming a toponymic typology*. Australian National Placenames Survey Technical Paper, 2. South Turrumurra: Australian National Placenames Survey. <<http://www.anps.org.au/documents/anpstechpaper2.pdf>> (11.02.2016).
- Teufel, Stefanie
 2000 Interpretación de artefactos del Entierro 49. In: Wurster, Wolfgang (ed.): *El sitio maya de Topoxté: investigaciones en una isla del Lago Yaxhá, Petén, Guatemala*. Materialien zur Allgemeinen und Vergleichenden Archäologie, 57. Mainz: Phillip von Zabern, 149-158.
- 2004 *Die Monumentalskulpturen von Piedras Negras, Petén, Guatemala*. PhD thesis. Philosophische Fakultät, Rheinische Friedrich-Wilhelms-Universität, Bonn. <<http://hss.ulb.uni-bonn.de/2004/0343/0343.htm>> (11.02.2016).
- Thompson, Eric
 1972 Sufijos numerales y medidas en yucateco. *Estudios de Cultura Maya* 8: 319-339. <<http://www.journals.unam.mx/index.php/ecm/article/view/34005/31031>> (11.02.2016).
- Tokovine, Alexandre
 2013 *Place and identity in Classic Maya narratives*. Studies in Pre-Columbian Art and Archaeology, 37. Washington, D.C.: Dumbarton Oaks.
- Tokovine, Alexandre & Marc Zender
 2012 Lord of windy water: The royal court of Motul de San José in Classic Maya inscriptions. In: Foias, Antonia & Kitty Emery (eds.): *Motul de San José: Politics, history, and economy in a Classic Maya polity*. Gainesville: University of Florida Press, 30-66.

Tozzer, Alfred

- 1921 *A Maya grammar*. Papers of the Peabody Museum of American Archaeology and Ethnology, 9. Cambridge: Peabody Museum of American Archaeology and Ethnology.

Wagner, Elisabeth

- 2006 Ranked spaces, ranked identities: A view from Late Classic Copán on local hierarchies, community boundaries, and the question of an emic notion of the Maya cultural sphere. In: Sachse, Frauke (ed.): *Maya ethnicity: The construction of ethnic identity from the Preclassic to modern times*. Acta Mesoamericana, 19. Markt Schwaben: Anton Saurwein, 143-164.

Wanyerka, Phil (ed)

- 2002 *The proceedings of the Maya Hieroglyphic Workshop. March 9-10, 2002*. Austin: University of Texas.

Wichmann, Søren

- 2002 *Hieroglyphic evidence for the historical configuration of eastern Ch'olan / Pruebas jeroglíficas para la configuración histórica del ch'olan oriental*. Research Reports on Ancient Maya Writing, 51. Washington, D.C.: Center for Maya Research. <<https://www.academia.edu/13313758>> (11.02.2016).

Willson, Robert

- 1924 *Astronomical notes in the Maya codices*. Papers of the Peabody Museum of American Archaeology and Ethnology, 6(3). Cambridge: Peabody Museum of American Archaeology and Ethnology.

Wisdom, Charles

- 1950 *Materials on the Chorti language*. Microfilm Collection of Manuscripts on Middle American Cultural Anthropology, 28. Chicago: University of Chicago.

Yoshida, Shigeto

- 2013 La ortografía del maya “reducido” en Yucatán colonial. *ラテンアメリカ・カリブ研究 (Raten'amerika Karibu kenkyū)* 20: 1-20.

Zelinsky, Wilbur

- 2002 Slouching toward a theory of names: A tentative taxonomic fix. *Names: A Journal of Onomastics* 50(4): 243-262.