Mesoamerican Lexical Calques in Ancient Maya Writing and Imagery

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Introduction

The process of calquing is a fascinating aspect of linguistics since it attests to contacts between differing languages and manifests itself in a variety of guises. Calquing involves loaning or transferring items of vocabulary and even phonetic and syntactic traits from one language to another.[1] Here I would like to explore lexical calques, which is to say the loaning of vocabulary items, not as loanwords, but by means of translating their meaning from one language to another. In this sense calques can be thought of as "loan translations," in which only the semantic dimension is borrowed. Calques, unlike loanwords, are not liable to direct phonological assessment, which would otherwise help to fix the donor culture and the time when the initial semantic borrowing took place. Mesoamerican calques are represented in the textual record of the ancient Maya, and since many such examples can be dated with some accuracy on the basis of associated calendrical statements, these greatly expand the time-depth of attestations and assist in the identification of

ancient cultural interactions which might otherwise go undetected.

What follows is a preliminary treatment of a small sample of Mesoamerican lexical calques as attested in the glyphic corpus of the ancient Maya. The present treatment is not intended to be exhaustive; instead it provides an insight into the types, antiquity, and longevity of Mesoamerican calques in the hopes that this foray may stimulate additional and more in-depth treatment in the future.

Calques in Mesoamerica

Lexical calques have occupied a privileged place in the definition of Mesoamerica as a linguistic area (Campbell et al. 1986:553-555; Smith-Stark 1994; Campbell 1997:344, 2004:81-82, 333-335). Calques form a specific subset of linguistic borrowing in which reliance is placed on literal translations of a foreign expression, phrase, or juxtaposition of words, rather than the direct phonetic adoption of a single foreign lexical item as a loanword. It is in this respect that calques have been thought of as "loan translations." The term *calque* is itself a loanword from the French verb *calquer* "to trace, reproduce, or copy" especially in reference to the reproduction of illustrations on translucent tracing paper (known as *papier-calque*).

An oft-cited example is worth repeating here to illustrate the notion further: the Americanism *skyscraper* was calqued into French as *gratte-ciel* "sky-scratcher," German as *wolken-kratzer*, "cloud-scratcher," Spanish as *rasca-cielos* "skies-scraper" (Campbell 2004:81), and Danish as *sky-skraber* "cloud-scraper." Another noteworthy calque attested in

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[1] Thus, for example, the distinctive Nawatl phoneme *tl* [λ] may have originated due to influence from Totonakan (Kaufman 2001:9, 12). In much the same way, the basic word order of Classical Nawatl—which is predominantly VOS (verb-object-subject)—contrasts with other Yuto-Nawan languages, which tend to be SOV (Haspelmath et al. 2005:330-333), and consequently it is clear that the dominant word order of Nawan is a result of its Mesoamerican acculturation (Kaufman 2001:24-28). Likewise, the dialects of Nawatl that exhibit SVO appear to be recent and can be said to have developed under influence from Spanish (see Campbell 1985:103; Hill and Hill 1986:237).

European languages is the term for "exhibit," which is found in French as *exposition* (i.e., *ex-position*), in German as *aus-stellung*, in Danish as *ud-stilling*, in Swedish as *ut-ställing*, and in Polish as *wy-stawa* (Una Canger, personal communication 2009). In all of these examples the terms are multi-morphemic and are structured in the same fashion with an initial element for "out" followed by corresponding items for "placement" or "position" to constitute calques for "exhibit." In one of the earlier treatments of such calques in Mesoamerica, Terrence Kaufman (1973:477) referred to such constructions as types of specific metaphors employed in lexeme formation (see also Smith-Stark 1994:17-18; Montes de Oca Vega 2004:226-227). What is clear from these examples is that whereas calques appear to be careful and literal word-for-word translations, this is a function of the bilingualism of the context as well as the aptitude of the donor or recipient language to translate the original lexeme, prior to incorporation. Therefore calques for the most part are not direct and perfectly matching translations as the ideal definition would have it, but only nearly so.

Another good example of a calque that I have encountered as part of my fieldwork in Belize concerns the name of a particularly venomous snake, known formally as the fer-de-lance, or terciopelo (*Bothrops asper*) (Beletsky 1999:262; Schlesinger 2001:223-225; see also Krempel and Matteo 2009:6). The snake is more commonly known as the *barba amarilla*, "yellow beard," in Spanish, or as the *yellow-jaw tommygoff* in Belizean Kriol.[2] The notion of "yellow buccal area" is essentially descriptive since it refers to the yellowish mandibular scales, which contrast greatly to the rest of the snake's dark colouration. This observation also constitutes the basis for the compound *k'an-ti'*, literally "yellow-mouth," the original name of the snake in the area, as indicated by a Yukatek informant from the village of Soccutz (Oscar Chi, personal communication 2001). Interestingly, *k'an-ti'* appears to be a loanword from Ch'olan, as the expected Yukatekan form **k'an-chi'* is unattested. What is clear is that the modern Spanish and Kriol attestations are direct word-for-word translations, or calques, of the widespread Ch'olan term.

The most in-depth and detailed treatment of Mesoamerican calques to date is the study conducted by Thomas Smith-Stark, who compared 52 different calques throughout 34 Mesoamerican languages and a series of 21 adjoining and distant Amerindian languages as control sets (Campbell et al. 1986:553-555; Smith-Stark 1994). As stated above, calques have been investigated for their potential as diagnostic areal delineators in the definition of Mesoamerica as a linguistic area (see also Campbell 1997:344-346, 2004:81-82, 333-335). Calques, in their role as semantic vehicles between linguistically-disparate cultures, should also be highly revealing with regard to identifying the donors of the underlying and

culturally-laden concepts (and often the corresponding tangible referent). Calques, however, are not liable to direct phonological assessment, which would otherwise help to fix the donor culture and the time when the concept was initially borrowed, as is otherwise the case with loanwords. How then can one determine the period when the borrowing or cultural influence took place and the time-depth of particular calques? The glyphic texts of the ancient Maya provide us with a tantalizing opportunity, since Mesoamerican calques are attested in the written record of the Classic period (AD 250 – 950) and their temporal incidence can be assessed on the basis of associated calendrical statements. This contrasts sharply with previous treatments where full reliance was placed on modern or colonial vernaculars in Mesoamerica. In fact, upon first reading Smith-Stark's (1994:19-21) list of Mesoamerican calques, I was immediately struck by the pervasiveness of concepts that form an integral part of the ancient Ch'olan language and culture recorded in glyphs (see Houston et al. 2000; Lacadena and Wichmann 2002; Wichmann 2006:280-284). What follows is a preliminary treatment of some representative examples of Mesoamerican lexical calques as attested in the glyphic corpus of the ancient Maya.

The Present Study

In the present study I have reanalysed the list of calques provided by Smith-Stark (1994:19-21) and defined three sub-classes (see Table 1). I have maintained the numeric designations that Smith-Stark attributed to each calque for the sake of consistency and ease of cross-referencing.

The first sub-class encompasses all items that are in fact targeted by a single-morpheme term or two close cognates. Included in this sub-class are items such as (19) "day" = "sun," where we have *k'in*[3] with the meanings of both "sun" and by extension "day" as attested in the Maya languages pertinent to the study of Classic Maya glyphic inscriptions. The Maya languages that are here deemed most significant to the study of Classic Maya glyphic texts are: Yukatek, Itza', Mopan, Lakantun, Ch'orti', †Ch'olti', Ch'ol, Chontal, Tzeltal, and Tzotzil (see Lacadena and Wichmann 2002;

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[2] In Kriol *tommygoff* refers to large vipers as seen in *tommygoff* (*Porthidium nasutum*), *jumping tommygoff* (*Atropoides nummifer*), and *green tommygoff* (*Bothriechis schlegeii*) (Beletsky 1999:262-263).

[3] In this paper, all dictionary entries are provided as in the original sources unless there is sufficient consensus to present a form in an updated modern orthography, especially for Mayan languages. Otherwise all entries are presented as they are in the original source. Angled brackets < … > are used to render either colonial spellings of terms, or more recent items whose spelling or orthography is deemed inadequate. Names of culture groups are left in their original spellings as for example Mixtec, Aztec, and Otomi, but the language names are updated as with the case of Mixtek, Nawatl, and Hñähñu, respectively.

Sub-class 1

	2. bark = back (of tree)	*paat*	attested
+	3. eye = fruit / seed (of face)	*hut ~ ut*	attested
+	8. witch(craft) = (related to) sleep / dream	*way ~ wahy*	attested
	10. fiesta = (big) day	*k'in*	attested
	12. twenty = man / person	*winik ~ winaak*	attested
	13. lime(stone) = (stone) ashes	*tan*	possibly attested
	19. day = sun	*k'in*	attested
	20. month = moon	*uh*	attested
	23. read = count	*xok*	attested
	24. write = paint	*tz'ihb*	attested
	25. suck = kiss / smoke (cigar(ette))	*tz'utz'*	attested
	34. mouth = edge	*ti'*	attested
	38. blue = green	*yax ~ ya'ax*	attested

Sub-class 2

	1. door = mouth (of house)	*ti'-il ... y-otoot*	attested
	2. bark = skin / pelt (of tree)	*(u-nuhkul-te')*	partly attested
	coating = skin / pelt of house	*nuhkul naah*	attested
+	5. boa / large snake = deer-snake	*chij-kan ~ chan*	attested
	9. cramp = (related to) deer	*X chij ~ chij X*	attested
	14. wrist = neck (of hand)	*(u-*nuk'-k'ab)*	not attested
	16. river = (big) water	*lakam-ha'*	attested
	21. branch = arm (of tree)	*u-k'ab-te'*	attested
	fin = arm (of shark)	*k'ab-al xook*	attested
	26. eclipse = (moon / sun) is hidden	*uh / k'in nam ~ na'm*	attested
+	28. vein = road of blood	*(u-bih-k'ik')*	partly attested
	35. a) thumb = mother (of hand)	*(u-na'-k'ab)*	partly attested
	35. b) finger = child (of hand)	*(y-al-k'ab)*	partly attested
	36. mano / pestle = hand / child (of metate / mortar)	*(u-k'ab / y-al *ka' ~ *cha')*	not attested
	43. feline = red predatory animal	*(chak-bola'y)*	partly attested
	44. gold / silver = excrement of the sun	*ta'-k'in*	attested
	45. otter = water-dog	*ha'-tz'i'*	attested
	46. anteater = (related to) honey	*chaab ~ kab*	attested
	47. cedar = god-tree	*k'uh-te'-el*	attested
	50. pataxte = feline-cacao (Theobroma bicolor)	*bahlam-kakaw*	possibly attested

Sub-class 3

	4. knee = head (of leg)	*(*pix ~ *pi'x) = (u-jo'l-ook)*	not attested
	6. moon = respected woman	*uh = ix-uh*	attested
	18. wife = (inalienably possessed) woman	*y-atan = ixik-is*	attested
+	52. soot = nose of (fire)wood	*sabaak / sibik = (u-*ni'-te')*	partly attested

Table 1. Mesoamerican calques attested in ancient Maya glyphic texts. Classic Maya items in parentheses are reconstructions where individual lexical items are documented but the compound form is not attested. Items marked with an asterisk are expected glyphic forms that have not been documented in the glyphic corpus as yet. The plus sign indicates items that are discussed in the present paper. Data presented in this table are based in part on: Kaufman and Norman 1984; Lacadena 2001; Boot 2002; Kaufman 2003; Lacadena and Wichmann 2004, as well as Kaufman and Justeson 2007:201-202. Erik Boot (personal communication 2009) corroborated the existence of the calque *ta' k'in* "gold/silver" based on a glyphic example at Chichen Itza.

Kaufman 2003; Wichmann 2006:280-284). This sub-class of calques therefore refers to single-morpheme lexical items which by metonymy or semantic widening have come to encompass the gamut of notions listed (see Smith-Stark 1994:17; Campbell 2004:254-255, 257-260). Strictly speaking this first sub-class does not adequately fall under the rubric of calques, since by definition calques are viewed as multi-morpheme constructions (Una Canger, personal communication 2009; see also Campbell and Mixco 2007:26-27). However, the repeated association of a discrete group of comparable concepts with single-morpheme lexical items, across language groups and cultures of Mesoamerica, is what appears to have prompted this revision to the definition, as applied by Terrence Kaufman (1973), Thomas Smith-Stark (1994), and Lyle Campbell (1997, 2004).

The second sub-class corresponds squarely to the definition of calques, since it exhibits a greater degree of morphological complexity where a particular notion—for which no native term inherently exists—is expressed by means of a paired compound or metaphorical construction relating two seemingly disparate lexemes. This practice of lexeme formation is known for several Mesoamerican languages and is more properly referred to as a *difrasismo*, a Spanish term first introduced by Mexican friar Ángel María Garibay Kintana (León-Portilla 1969:77, 1992:54-55; Montes de Oca Vega 1997, 2004, 2008; Máynez 2009). Attesting to the antiquity of difrasismos as literary devices and poetic expressions in Mesoamerican languages are the many examples found in Classic Maya glyphic texts, preceding the well-known Nawatl examples by several centuries (Knowlton 2002; Hull 2003:135-142, 301; Stuart 2003; Kettunen 2005). However, it is important to remark that a difrasismo in a particular language is just that, unless it is semantically borrowed into another language, at which point it can also be treated as a calque. Examples of Mesoamerican difrasismos that are not included in Smith-Stark's list of calques include Nawatl <*mitl chimalli*> ~ *mītl chīmalli* "arrow shield" for "guerra, batalla" (Karttunen 1992:52, 149; Molina 2001:57r), which must also be a calque since a paired construction with comparable martial connotations exists in the Classic period texts of the ancient Maya as *took' pakal* "flint shield," wherein *took'* refers to flint-tipped spears (Houston 1983; Stuart 1995:301-304, 339; Martin 2001:178-179; Knowlton 2002:10; see also Genet 2001:283-298) (Figure 1a-c).[4] Another important difrasismo is *petlatl ikpalli* "mat throne" for "regal authority"
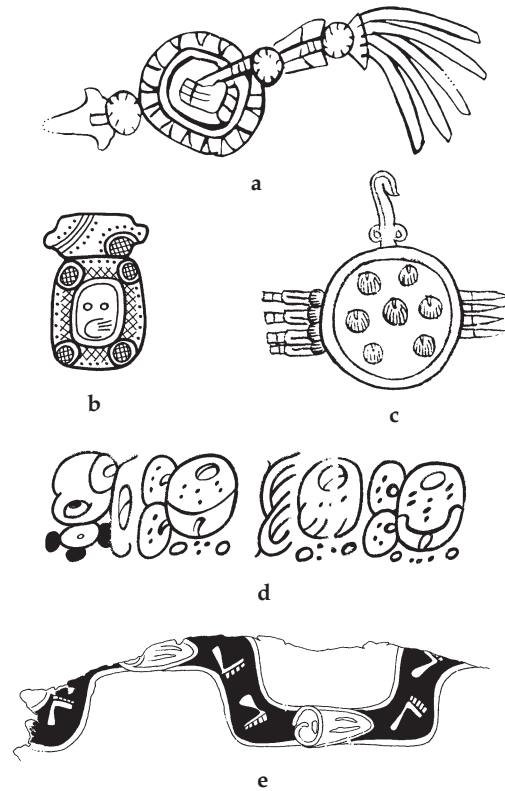

Figure 1. (a) Teotihuacan dart and shield sign (Teotihuacan, Techinantitla; drawing by Saburo Sugiyama); (b) flint and shield collocation in Maya writing (Tikal, Structure 5D-1-1st, Lin. 3; drawing by Simon Martin); (c) arrows and shield sign, topped by an atlatl, in Aztec writing (Codex Mendoza, fol. 13r); (d) *luumil pitziil – kabal pitziil* (K7749); (e) road of blood connecting human hearts (Teotihuacan, Zona 5A, Portico 18, Mural 2). Drawings by Christophe Helmke except as indicated.

(Léon Portilla 1969, 1992; Knowlton 2002:9), attested in the Dresden Codex as *pohp tz'am* "mat throne" (Schele and Grube 1997:123; Knowlton 2002:10) reaching back to the earliest digraphic examples of the logogram **AJAW** "king," which are composed of iconographic elements representing a cushion and a throne (see Boot 2000). Similarly (28) "vein" = "road (of blood)" is attested in Yukatek as *beel k'i'ik'* "road-blood" (Bastarrachea et al. 1992:71) and in Tzotzil as *be ch'ich'* "road blood" (Delgaty and Ruíz Sánchez 1986:19), which also occurs in Nawatl as <*eztli ioui*> literally "de la sangre su camino" (Siméon 1977:153), a calque that can be traced back to the Early Classic murals of Teotihuacan (Figure 1e). Another difrasismo that is known from Nawatl and Tzotzil is an expression of humility, employed in formal discourse, in which "dirtiness" and "muddiness" function as constructs for "person" or one's "body" (Laughlin 2004:56; Montes de Oca Vega 2004:237-238). Thus in Nawatl <*in tlalli, in zoquitl*> "the earth, the mud" (Dibble and Anderson 1976:154) and in Tzotzil *yo jlumal, yo kach'elal* "my earth, my mud" (Haviland 1988:399, 400; Montes

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[4] The earliest attested example of the *took'-pakal* difrasismo dates to 9.10.15.0.0 – AD 647 (Pusilha, Stela D) (Stuart 1995:304), whereas the earliest central Mexican iconographic counterparts date to the Early Classic (c. AD 300-500) as seen on the textual imagery of Teotihuacan (Figure 1a). These datings suggest that this calque may have its origins in central Mexico, spreading subsequently to the Maya area at some point after the late fourth-century AD.

de Oca Vega 2004:237) are both metaphorical constructions for "human body." This difrasismo is all the more remarkable since it appears in a deprecatory caption to a Late Classic Maya gladiatorial scene in which the vessel is said to be a *yuk'ib luumil pitziil … kabal pitziil* "drinking-implement of the dirty ballplayer … the earthy ballplayer" (see Zender 2001; Taube and Zender 2009:175-177) (Figure 1d). Also included in this sub-class are notable calques such as (35a) "thumb" = "mother of hand." In this sub-class no word for "thumb" exists in isolation of the metaphorical constructions *na' k'ab*, as attested in Yukatek (Barrera Vásquez et al. 1980:556), Ch'olti' (Morán 1695:107), and Ch'ol (Attinasi 1973:284, 297), or *me' k'ob-ol* in Tzotzil (Laughlin 1975:232, 524) and <*zme cab-tic*> in Tzeldal (Ara 1986:445), in which *me'* is a reverential term of address to elder women, while *k'ob* and <*cab*> are cognates of *k'ab*.

The third sub-class is comparable to the second where a metaphorical pairing or difrasismo targets a particular lexeme, but in addition another term also exists to complete the equation. Items included under this third sub-class are rare, though a noteworthy example is (42a) "rainbow" = "(related to) snake" where in Yukatek we have *chéel* "rainbow" (Bastarrachea et al. 1992:13) and *ya'ax ka'an*, lit. "green snake/sky," which also denotes rainbows (Barrera Vásquez et al. 1980:972; Bastarrachea Manzano 2006).

I have deleted the items from Smith-Stark's listing that are not commonly represented in the Mayan languages under consideration, such as (51) "town" = "water-mountain." This calque is aptly documented in Nawatl as the difrasismo <*altepetl*> or *āl-tepētl* "pueblo, o rey.[no]" (Karttunen 1992:9; Molina 2001:fol. 99v, 4r) as well as in Pochutek *a-t'bet* (Boas 1917:12), Hñähñu *andehe-nt'öhö*, Totonak *čúčut-sipi*, Mixtek *nduta-yucu*, Sayultek *nɨ'-jkopak*, and Olutek *nɨ-kopa'k* (Montes de Oca Vega 2004:244-245, see Kaufman 1994), but these cases are limited in their distribution to the west of the Isthmus of Tehuantepec (Smith-Stark 1994:36) suggesting a different stratum of cultural interaction. I therefore present an abridged list of 34 items, but due to limitations of space cannot present all the modern linguistic data that pertain to these calques and will focus on glyphic attestations. Also I restrict my attention to three calques that each illustrate the three sub-classes of calques and leave others to a summary treatment in tabular form (see Table 1). Since the focus is on the glyphic attestations of calques it should be remarked that not all of the 34 calques listed are in fact represented in the ancient Maya script (or remain to be recognised), due in part to the formal tone and contents of the preserved glyphic texts. In other cases the two lexical elements involved in a calque are attested in the glyphic corpus, but their compounding has not yet been documented. It is hoped that this study can serve to stimulate additional research on the subject and illuminate the antiquity of interactions that the ancient Maya maintained with their neighbours, with whom they shared cultural precepts that filtered into the lexical domain as calques.

Sub-class 1: (3) eye = fruit (of face)

One of the most illustrative examples of a lexeme that encompasses what we might otherwise class as distinct entries, under the rubric of "conceptual calque," is the Classic Maya term for "face, eye" as well as "fruit." The phonology of the lexeme is somewhat turbulent, with many attested reflexes: *ut*, *jut*, *hut*, and *wut* in the four Ch'olan languages (Morán 1695:17; Wisdom 1950:474, 749; Aulie and Aulie 1978:132; Keller and Luciano 1997:144; Kaufman 2003:324, 325; Sattler 2004:399; Zender 2004a:203). In contrast, several lines of epigraphic evidence indicate that the term and its alteration can be documented as *hut > ut* in the Classic period.

In dedicatory phrases adorning ceramic vessels of the Classic period (known as Primary Standard Sequences) the intended contents were frequently marked as a type of cacao-based beverage. One such variety is recorded in a compound that includes *ut* as its stem (see MacLeod 1990:391-395). In its simplest form this compound is rendered as:

(1) **ti-yu-ta-la** $_2$**ka-wa**
  ti y-ut-al   *kakaw*
  PREP 3SG.A-fruit-REL[5]   cacao
  "For the fruit of cacao"
  (K3230, E1-F1; c. AD 670 – 800) (Figure 2a)

Alternate and rarer spellings of the same compound exist including **yu-ta-li** (K1335) and examples where, by the rebus principle, the phonetic value of a logogram replaces that of the typical syllabic signs. Thus on vessel K0791 we see the compound spelled as **ta-yu-TAL**, whereas on K1004 it is written as **ti-yu-TAL**. These examples can be analysed and understood in exactly the same manner as (1). This compound and its variants testify that *ut* denotes the "fruit," or in this case the pulp of cacao beans, which was used in the elaboration of rich and fragrant beverages.

However, there is a distinct **HUT ~ UT** logogram in the script, which represents a stylised eyeball. In most contexts the logogram refers specifically to "eye, face" and is used in opaque constructions referring to supernatural entities and gods. Examples involving this logogram include:

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[5] The following abbreviations are used in this paper: 3SG: third person singular; A: Set A (ergative); ABS: absolutive Set B; ABSTR: abstractivizer; AG: agentive; EXIST: existential particle; INST: instrumental; IP: inalienable possession; IV: intransitive verb; M: male; NC: numeral classifier; NOM: nominalizer; PASS: passive; POSS: possessive; PREP: preposition; REL: relational; SPEC: specifier; THEM: thematic suffix; TOP: toponymic suffix; TV: transitive verb.
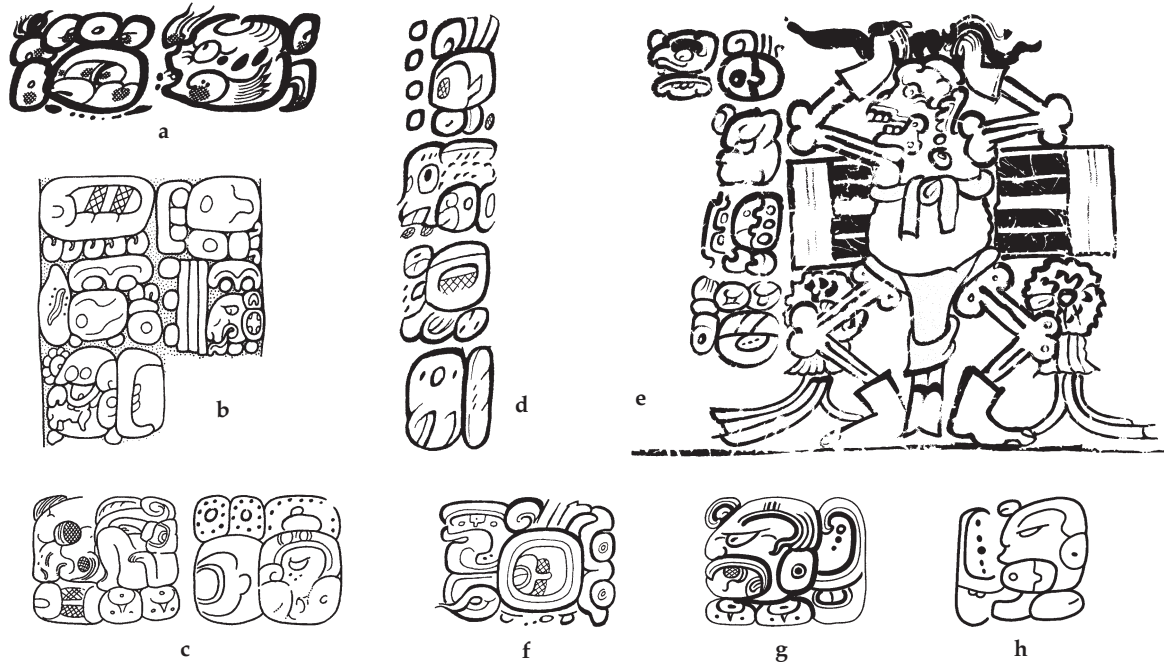
Figure 2. (a) *ti yutal kakaw* (K3230; drawing by Mark Van Stone); (b) *taaj utal took' utal Waxaklajuun Ubaah Chan* (Copan, Stela 11; drawing by Barbara Fash); (c) *ch'ok Unen K'awiil (h)utal k'uh* (Palenque, Temple XIX, Stucco Panel; drawing by David Stuart); (d) *Kan Hut Jo'l uk'uhuul Ajpakal Tahn* (Comalcalco, Urn 26, Pendant 1b; drawing by Marc Zender): (e) Kan Hut Jo'l depicted as a skeletal figure (K3395 / MS0739); (f) Uk'ahk' Hutal Ek' (Museo Regional de Yucatán #10-426169; drawing by Simon Martin); (g) relational pair **XIB**[**CHAB**] > **sa** in a collocation for *sajal*, part of a titular sequence (K7970); (h) relational pair **XIB**[**UT**] > **sa** in a collocation for *jasaw*, part of the posthumous name of Jasaw Chan K'awiil I (Tikal, Burial 116, MT 44).

(2)   **ta-ji**   **u-UT-tu**   **TOK'**   **u-UT-tu-la?**   **18-u-BAH CHAN-na**
        taaj   *ut-[al]*   *to[o]k'*   *ut-[a]l*[6]   *waxaklajuun u-ba[a]h chan*
        obsidian   face-ABS.IP   flint   face-ABS.IP   eighteen 3SG.A-image snake
        "Obsidian is the face, flint is the face of Eighteen-Images-of-the-Snake"
        (Copan, Stela 11, B3-A5; AD 820 – 9.19.10.0.0) (Figure 2b)

(3)   **ch'o-ko**   **UNEN-ne**   **K'AWIL-la**   **u?**[7]**-UT**   **K'UH**
        ch'ok   *unen*   *k'awiil*   *ut-[al]*   *k'uh*
        young   infant   theonym   face-ABS.IP   god
        "The young infant K'awiil is the face of the gods"
        (Palenque, Temple XIX, Stucco Panel, D5-D6; AD 714 – 9.14.2.9.0) (Figure 2c)

(4)   **4**   **hu?-HUT-tu**   **JOL-la**   **u-K'UH-li**   **a-pa-ka-la TAN-na**
        kan   *hut*   *jo'l*   *u-k'uh-[uu]l*   *a[j]-pakal ta[h]n*
        four   eye   skull   3SG.A-god-POSS   M.AG-shield chest
        "Four-Eyes-Skull is the god of Ajpakal Tahn"
        (Comalcalco, Urn 26, Pendant 1b, B1-B4; AD 765 – 9.16.14.1.7) (Figure 2d)

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    [6] I take the **u** signs that precede the Eyeball logogram on Copan Stela 11, to simply function as initial vocalic phonetic complements as **u-UT** > *ut*, and not as possessive prefixes. If this is the case then initial phonetic complements to body parts may mark the *absence of possessive prefixes* thereby implying that absolutive suffixes are meant to be rendered or reconstructed by the reader if these are not explicitly written (see Grube 2010). Similar patterns of phonetic complementation render the initial vowel when it is not marked for possession: "heart" **o-OL** > *o[h]l-[is]*, and "foot, leg," **o-ke** > *ok-e[l]*. This is supported by what may be the archaic absolutive suffix for body parts –*al*, for which see examples in (2) and (5), and "hand" *k'ab-al* (see Zender 2004a:207).

    [7] If the examples in (2) all record initial phonetic complements **u** to *ut*, then it seems likely that this particular sign which precedes **UT** should function similarly and would thus be yet another variant of **u**. Nevertheless, the possibility remains that the initial sign provides a rare **hu** syllabogram as a phonetic complement to **HUT**.

In these examples we see the same logogram used to refer to either "face" or "eye" to denote particular supernatural entities or to function as qualifiers thereof. Thus in (2) we have a couplet where obsidian and flint are the "faces" of the supernatural *Waxaklajuun Ubaah Chan*, an entity known to originate in the lore of Early Classic Teotihuacan (see Taube 2000a:270-289; Nielsen 2003:93-94, 106, 208, 245). In (3) the infant aspect of the supernatural *K'awiil*—here in the guise of the patron deity GII of the Palenque Triad—is designated as "the face of the gods" (see Stuart 2005a:42 and K1440).[8] This particular godly qualifier closely compares to another, in which *o'hl-is k'uh* "the gods' heart" is referred to (see Stuart et al. 1999:150-151). With (4) we see the logogram **HUT** used in the proper name of the god *Kan Hut Jo'l*, an entity that is said to belong to a priestly personage named *Ajpakal Tahn* (see Zender 2004b:254, 259, 544). This same supernatural is depicted as an animated skeletal figure on an unprovenanced ceramic dish, originally from a central Peten site (Figure 2e; see Grube and Nahm 1994:706).

In another example (5), represented on a ceramic skeuomorph of a pumpkin, the logogram **UT** forms part of the proper name of the original owner of the vessel, one said to be the sovereign of *Ahkankeej*, modern-day Acanceh in Yucatan (Schele and Grube 2002:20-21).

(5) **u-K'AK'**   **hu?-HUT-la**   **EK'**
     u-k'a[h]k'   *hut-[a]l*   *ek'*
     3SG.A-fire   eye-ABS.IP   star
     "Fire is the Stars' Eye"
     (Museo Regional de Yucatan:10-426169, pA5;
      c. AD 550 – 650) (Figure 2f)

Bridging the notions of "fruit" and "face" is another set of examples involving a special class of signs known as "relational pairs" (Zender 1999:70-83; Stuart 2003). Relational pairs stem from the scribal practice in which two signs are juxtaposed to form a third, which carries phonetic and semantic values that are disassociated from those of the two initial signs. As such the underlying structure of relational pairs is functionally quite similarly to difrasismos, but in some cases it remains unclear if the individual graphemic elements were meant to be read or

whether the initial part of the reading occurred only at the semantic level and remained unvoiced. Of note are the two relational pairs that function as the syllabic sign **sa** (Figure 2g, h). These relational pairs freely substitute for the typical syllabogram **sa** as part of the title **sa**jal as well as the words *ja**sa**w* "banner" and *pa**sa**j* "dawn" seen in the regnal and posthumous names of kings at Tikal and Copan (see Colas 2009:199-203). These relational pairs represent a human profile that in isolation carries the logographic value **XIB** "person." In the first case the logogram **CHAB** "earth, honey, bee" covers the mouth, as though the whole construction was meant to depict someone eating honey (Figure 2g). Possibly explaining the phonetic value of this relational pair are the entries <ça> "dulce" and <çalez> and <zalavel> "endulzar" in Ch'olti' (Morán 1695:105, 111; Marc Zender, personal communication 2001). With this interpretation in mind, the second relational pair (Figure 2h), which depicts the same construction but with the **UT** eyeball logogram substituting for **CHAB**, is readily understood. Here too, then, the human profile is seen eating something sweet, though in this case the person's mouth is filled with fruit, rather than honey.

Sub-class 2: (5) boa / large snake = deer-snake

In 1989, Stephen Houston, David Stuart, and Nikolai Grube independently deciphered the logogram **WAY** based on syllabic complementation and substitution sets (Figure 3a) (Houston and Stuart 1989; Grube and Nahm 1994). Matching reflexes in modern and colonial Maya languages indicate that *way* is the widespread intransitive verbal root "sleep, dream" (see Kaufman 2003:1257-1259) and terms building on this stem refer to "witchcraft" and "animal companion spirits," which are otherwise known as *nawal* in Yukatek, a loanword from Nawatl *nāwal-li* "witch, sorcerer" (Barrera Vásquez et al. 1980:563; Houston and Stuart 1989:1-2, 5-6; Miller and Taube 1993:122-123, 176; Molina 2001:fol. 63v; Kaufman 2003:1368; Helmke and Nielsen 2009). This interrelation is clear in Tzotzil where *vay* is "sleep" (Laughlin 1975:365, 504), whereas *vay-i-hel* is "animal companion spirit of witch" (Laughlin 1975:365), and in Ch'ol where *wəy* is "sleeping" and *wəy-ba:* is "art of a sorcerer, divination" (Attinasi 1973:332). In Yukatek *way* is "ver visiones entre sueños," "transfigurar por encantamiento," and significantly *ah way* is "brujo, nigromántico, encantador" (Barrera Vásquez et al. 1980:916), as is *aj way* in Itza' (Kaufman 2003:1260). Thus the presence of the calque (8) "witch(craft)" = "(related to) sleep / dream" is attested in languages of the Tzeltalan, Ch'olan, and Yukatekan Maya language groups.

To these entries should be added the Classic Maya terms, which are the source of many of these reflexes. The verb *way* "to sleep, dream" is attested in the script in its passive inflection, as *wahy-aj* "slept, dreamt," as is

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[8] This godly qualifier of GII calls to mind the stucco frieze of the Late Preclassic Structure 2-c1 at Calakmul, Mexico. This 20-m wide frieze depicts a celestial scene, in which the skies are framed—as would be a human face—by two gigantic and quadrangular earflares (Rodríguez Campero 2008:15, Fig. 3). An archaic form of the thunder and rain deity Chaahk descends from the heavens across "the face of the sky." Comparable iconographic programs presenting simplified sky bands framed between two giant earflares are found on monuments at Takalik Abaj, Kaminaljuyu, and even in the Proto-Classic murals of San Bartolo, suggesting that this "face of the heavens" notion formed a relatively commonplace iconographic program in the centuries leading up the Classic period (see Helmke 2012).
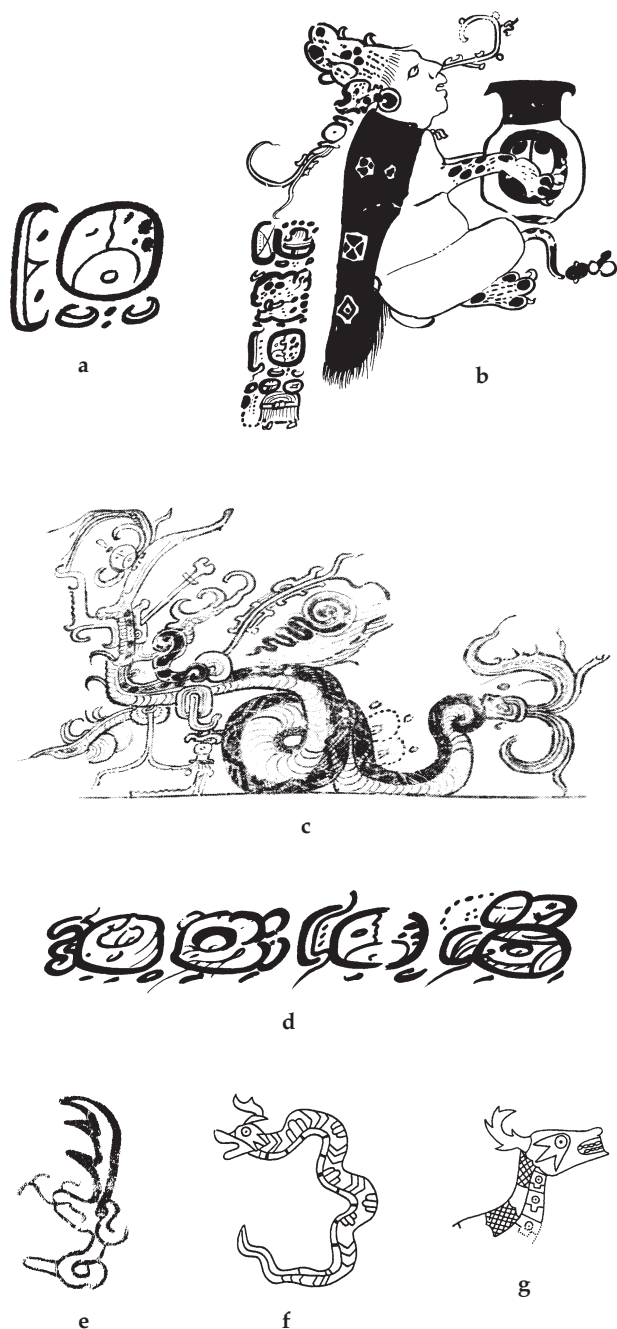
Figure 3. (a) **u-WAY-ya** collocation (K0771; drawing by David Stuart); (b) example of a *wahy* entity and its associated caption: *Nupu'l Bahlam uwahy k'uhul Mutu'l ajaw*, "Counterpart Jaguar is the *wahy* of the godly Mutu'l (Tikal) king" (K3120; drawing by Mark Van Stone); (c) depiction of a deer-snake in Maya imagery (K0531; adapted from a photograph by Justin Kerr); (d) glyphic caption referring to deer-snake (K0531); (e) example of a deer-snake at Teotihuacan (Teotihuacan, La Ventilla, Plaza de los Glifos, Glyph 11); (f-g) horned serpents rendered on Mississippian artefacts from Spiro, Oklahoma (*f* adapted from Reilly 2007:Fig. 3.2; *g* adapted from Brown 2007:Fig. 4.6).

the noun derived from this verb, which is nominalized as *wahy* (Kaufman 2003:1260; Zender 2006; Helmke and Nielsen 2009:50-54). In its nominalized form, the term is marked for possession as *u-wahy*, for "his/her *wahy*," or in its unpossessed form as *wahy-is* (Zender 2004a:200-202, 2006).[9] In the Classic period the predominant constructions involving the **WAY** glyph are of the following structure: (1) name of supernatural entity (2) *u-wahy* (3) name of human agent, Emblem Glyph, or toponym (Figure 3b). These constructions serve as captions to supernatural creatures that are the melding of different animals, partly decomposed human figures, and other grizzly entities such as monstrous skeletal centipedes (see Grube and Nahm 1994). While the preferred interpretation for the **WAY** glyph in the 1990s was as a reference to supernatural animal companion spirits, in 2005 David Stuart suggested that these horrific entities should be viewed as incarnations or personifications of particular ailments and diseases (Miller and Taube 1993:72, 78; Stuart 2005b, see also Zender 2006; Helmke and Nielsen 2009). Stuart based his interpretation on glosses for "brujería" and "sorcery," such as Itza' *waay(il)* (Hofling and Tesucún 1997:661) and Tojolabal *wayjel* (cognate of Tzotzil *vayihel*): "nagual, animal compañero." "Se dice que el *swayjel* es mandado por el brujo para enfermar a la gente" (Lenkersdorf 2004:141, cited in Stuart 2005b:161). This is all the more suggestive when we consider the following entry for *wáay* in Yukatek: "familiar que tienen los nigrománticos brujos o hechiceros, que es algún animal, que por pacto que hacen con el demonio se convierten fantásticamente; y el mal que sucede a tal animal, sucede también al brujo cuyo familiar el animal es" (Barrera Vásquez et al. 1980:916; see also Bastarrachea et al. 1992:129). To this should also be added the following gloss for *way* in Yukatek: "contagio; infectionamiento; sahornamiento; contagiar" (Barrera

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Vásquez et al. 1980:915), which conclusively reveals the overlap between sleep, dreams, witchcraft, animal companions, animal transformation, and by extension curses, spells, and diseases. Consequently the possessive constructions involving the term *wahy* in the Classic should be seen as references to the supernatural entities, spiritual counterparts that one could access in one's sleep, and embodiments of particularly malign ailments, wielded as curses.

One such *wahy* is an entity that combines snake and deer attributes. Most frequently this creature is rendered as a large partly-coiled snake with the antlers and the large bulbous ears of a deer (Schele 1989:146; Grube and Nahm 1994:693-694). The glyphic captions that accompany such depictions include the following:

(6) **[chi]CHIJ** **KAN-nu** **u-WAY-ya** **K'UH[ka]-[KAN-la?]AJAW**
   chij *chanu[l]* *u-wa[h]y* *k'uh-[ul] kan-[u]'l ajaw*
   deer snake 3SG.A-sleep[nom] god-ABSTR snake-TOP king
   "The deer-snake is the 'curse' of the godly Kanu'l king"
   (K0531, H1-K1; c. ad 670 – 800) (Figure 3d)

Here we are left in little doubt that the pan-Mesoamerican deer-snake, also known as the <*maçacoatl*> ~ *masā-kōwātl* in Nawatl (Sahagún 1979, Book 11, fol. 82v; Karttunen 1992:142; Molina 2001:fol. 50r) was, at least for the Classic Maya, viewed as one of the terrible *wahy* creatures. Interestingly, today the reflexes of the Classic *chij-chan* refer to "boas" (*Boa constrictor*) or other notoriously large snakes, as attested in Ch'orti' by the entries *chicchan* and *chihchan* (Wisdom 1950:694, 721, 771), which are supernatural horned serpents that are related to earthquakes, landslides, storms, and other phenomena (see Schele 1989:147; Hull n.d.:8-9, 1999). Undoubtedly these stem from *chijk-chan* and *chij-chan*, respectively. In Chontal boas are known as *masacu'*, *masacún*, or *masacub* all obvious loans from Nawatl (Keller and Luciano 1997:18, 321, 361, 371, 502). In Tzotzil we have *čih-čon* "striped snake" (*Pituophis lineaticolis*) (Laughlin 1975:118, 123, 124, 506), where *čih* is "deer" (Laughlin 1975:117, 426) and *čon* is a broad term for "animal," but referring especially to snakes (Laughlin 1975:123-124, 506). In Tzeldal, we have the entries <*ghuchchon*> "especie de víbora" and <*ghuch chan*> "víbora que come venados" (*Boa constrictor*) (Ara 1986:296, 475), in which <*ghuagh*> is "venado bermejuelo" (Ara 1986:296, 475) and <*chon*> is cognate to Tzotzil *čon*. What prompted a shift in the ethnotaxonomy from a supernatural creature associated with maladies and witchcraft to a particular class of reptile that is said to consume deer, however, remains unclear.

The references and depictions that we have for such ancient Maya *chij-chan* date predominantly to the Late Classic period (AD 550 – 800). It is therefore noteworthy to point out the deer-snakes that are represented in the Plaza de los Glifos, at La Ventilla, Teotihuacan (Figure 3e), which have been dated to c. AD 300 – 450 (Cabrera Castro 1996; Taube 2000b:13-15, 35; Nielsen and Helmke 2011:348, 349, 352). Also of interest in this regard are the "horned serpents" attested in the iconography of the Mississippian mound-builders (see Lankford 2007) on artefacts that date to anywhere between AD 1200 – 1450, corresponding to the Late Postclassic of Mesoamerica (Figure 3f).[10] Another type of horned serpent, the *Sisiyutł*, is known from the mythology of the Kwakwaka'wakw, Nuu-chah-nulth, and other cultures of the Northwest Coast of North America (Boas 1897:371-372, 1966; Curtis 1915:279-282; Holm 1972:57; Jonaitis 1991:60-61, 90-91, 182-183, 224-225).[11] Although diffusion from Central Mexico via the American Southwest is possible, recent research suggests that these horned serpents are instead reflections of an ancient and deep-seated stratum of Amerindian mythologies (Nielsen and Helmke 2011:355-357). What is truly remarkable is that the earliest reference to a "deer-snake" in Mesoamerica may be found in the glyphic passage on Stela 10 of Kaminaljuyu, Guatemala (G6-H6), a monument that has been dated stylistically to between 50 BC – AD 100 (Mora-Marín 2005:71, citing a personal communication from David Stuart; see also Parsons 1986:69-70, 120, 128; Fahsen 2001:90). The example in question is rendered glyphically as T671.764 (Thompson 1962:271–275, 363–365), possibly read *chij-ka'an* "deer-snake." Here the spelling suggests that the text was rendered in proto-Ch'olan-Tzeltalan and provides an early form of the fifth day of the Tzolk'in calendar, known as <*Chikchan*> in sixteenth-century Yukatek (Thompson 1960:75; Schele 1989:147). As such, Kaminaljuyu and Teotihuacan would appear to be, based on present evidence, some of the earliest places to exhibit the notion of "deer-snakes," and presumably the associated connotations and mythology.

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[10] These horned serpents are known in the Mississippian literature as "Horned Water Serpents" that are typically associated with the aquatic Underworld and lakes as supported by the myths of North American Indians, particularly the Sioux, Creek, Cherokee, Shawnee, Fox, Ojibwa, Algonquin, and Micmac (see Lankford 2007:110-119). Such horned serpents are known as *a-bich-kam* (Algonquin) and *che-pich-kaam* (Micmac), and among the Fox Indians they are known to cause illness and swelling of the limbs or jaw (Lankford 2007:119-120).

[11] The *Sisiyutł* of the Northwest Coast cultures is an aquatic double-headed snake with curled horns atop each of its heads. It is a creature of great strength and "a human who caught sight of this creature might suffer a horrible death … contact with a *sisiyutł*'s blood is also said to petrify human skin"; conversely "those fortunate enough to acquire its scales, spines, or blood might use it to their own advantage" (Jonaitis 1991:61).

Sub-class 3: (52) soot = nose of (fire)wood

In the following case study I examine the glyphic elements that comprise a calque that is attested in its most complete form in the iconography. In this particular case there is some overlap between language, writing, and imagery and I thus find myself relying on all these datasets, reviewing each constituent item in turn. The first element to establish is the term "soot" which in many Maya languages is the same as "ink" since the fine-powdered carbon particles of soot serve as the essential material from which ink was made in pre-Hispanic times. The cognate sets include *sabak* and *säbäk* in Yukatek and Itza', <*zibic*> ~ *sibik* in Ch'orti', Ch'ol, Chontal, and Ch'olti', as well as *sibak* in Tzeltal, Tzotzil, and Tojolabal (Morán 1695:95; Wisdom 1950:635; Laughlin 1975:309, 507; Forbee-Losee 1976:374; Aulie and Aulie 1978:104; Barrera Vásquez et al. 1980:707; Hofling and Tesucún 1997:550, 890; Keller and Luciano 1997:215; Kaufman 2003:506). An alternate cognate set includes *abak* in Yukatek, Ch'ol, and Tzeldal, or *obak* in Tzotzil as well as *y-abak* and *y-abäk* in Yukatek and Itza', and <*yabaac*> in Ch'olti' (Morán 1695:125; Attinasi 1973:237; Laughlin 1975:65, 507; Barrera Vásquez et al. 1980:1, 960; Ara 1986:239; Kaufman 2003:507). To varying degrees the terms listed all encompass the following glosses: "tizne, carbón, pólvora, hollín, pólvora de armas" or "soot, carbon, charcoal, black powder, lampblack, gunpowder."

The corresponding terms in ancient Maya inscriptions are rendered syllabically as **sa-ba-ka** for *sabak* (Lacadena 2001:233; Boot 2002:69) and as **ya-ba-ki**, *y-abaak* (Lacadena 2001:237) demonstrating that variants of the two major cognate sets can be traced back to the Classic period. Consequently it seems reasonable to attribute the value **ABAK** to the corresponding logograms, yielding *yabak* when prefixed by **ya-** and *sabak* when prefixed by **sa-**. This conclusion was reached by Nikolai Grube when he first proposed the decipherment of the logograms for "soot, ink" (Coe and Kerr 1997:150-151; Grube n.d.). More recently several epigraphers have attributed the logogram with the value **SIBIK** (Grube et al. 2002:II-6) in keeping with the phonetic complementation in **-ki**, the widespread distribution of this cognate among all Ch'olan languages, and the affinity of the script to this language group. Thus, while the exact phonetic value of the logogram remains problematic since it may well have been polyvalent over the area and time periods of its usage, it is clear that the most likely values are closely in keeping with those documented for colonial and modern reflexes.

In the Classic period we see this logogram especially in reference to the scribal arts where it refers to "ink" (Figure 4a and b). Otherwise the "soot, ink" logogram also appears as part of a toponym referring to a little-known kingdom in Chiapas. The toponym is written as **SIBIK-TE'** and most references to this place are made in the inscriptions of Tonina. The texts painted on the walls
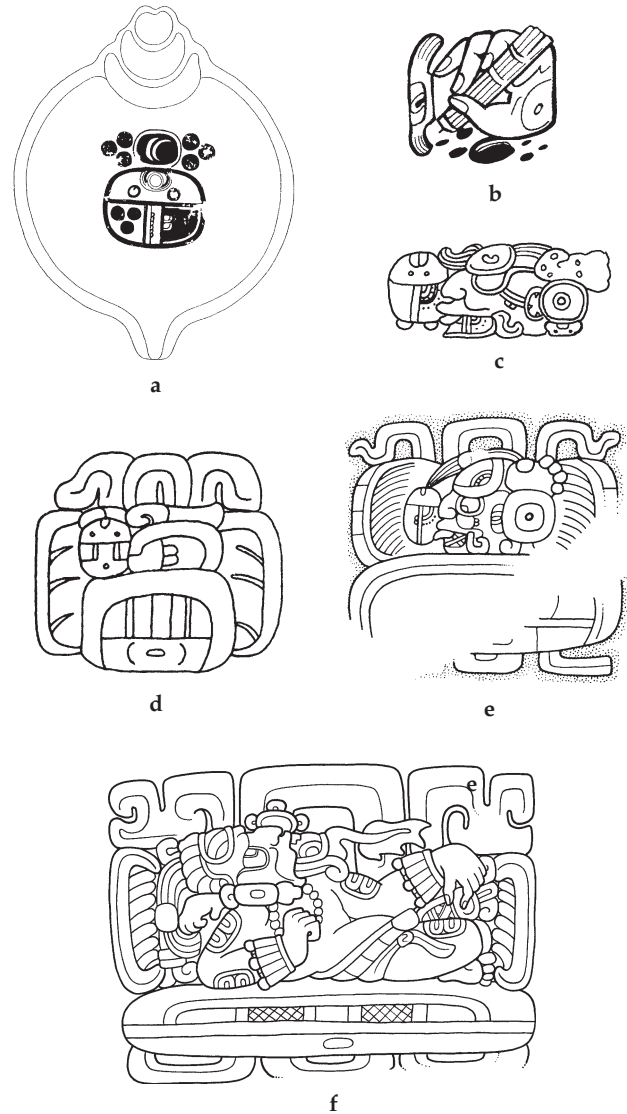

Figure 4. (a) Ceramic skeuomorph of a bisected conch shell inkwell adorned with the logogram "ink" (Tikal, Burial 116; drawing in Culbert 1993:Fig. 65a); (b) relational pair for the verb **TZ'IB** "write/paint"; note the "ink" logogram below the hand that grasps a writing implement (K1440; drawing by Simon Martin); (c) head variant of the Patron of Pax in an Initial Series Introductory Glyph (Copan, Stela 9; drawing by Karl Taube); (d) logographic spelling of the Patron of Pax as **SIBIK-TE'** in an Initial Series Introductory Glyph (Palenque, fallen stucco now in the Museo de las Américas, Madrid; drawing in Thompson 1950:Fig. 23.36); (e) head variant of the Patron of Pax in an Initial Series Introductory Glyph (Yaxchilan, Lintel 48; drawing by Ian Graham); (f) full-figure variant of the Patron of Pax in an Initial Series Introductory Glyph (Quirigua, Zoomorph B; based on drawings by Matthew Looper and Karl Taube).

of the Jolja (a.k.a. Joloniel) and Yaleltsemen caves record the pilgrimages made to these sites by lords of *Sibikte'* (see Grube et al. 2002:II-6; Helmke 2009:52, 79, 86, 151, 160-163). In Yukatek the cognate *sabak che'* is glossed as
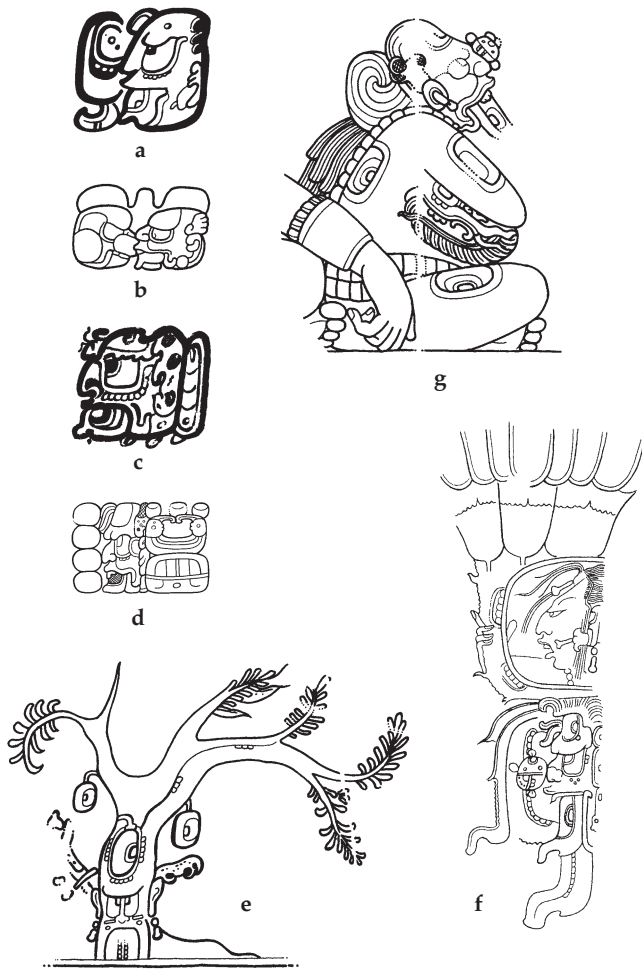
Figure 5. (a) *jawante'*: tripod dish (K4669; drawing by Nikolai Grube); (b) *kalo'mte'*: exalted regal title (Tikal, Stela 12; drawing by Simon Martin); (c) *te'el*: qualifier to *kakaw* (Buenavista del Cayo, K4464; drawing by Christophe Helmke); (d) *chante' uwayhaab*: date (Copan, Hieroglyphic Stair; drawing by Christophe Helmke); (e) head of the Patron of Pax as a qualifier to a gourd tree (K1226; drawing by Marc Zender); (f) Patron of Pax juxtaposed to a youthful Maize God (Tikal, Burial 116, Miscellaneous Text 55B; drawing by Annemarie Seuffert with minor restorations by Christophe Helmke); (g) winged Patron of Pax (Museo Amparo throne-back; drawing by Marc Zender).

"árbol de cuyo humo hacen tinta para escribir" (Barrera Vásquez et al. 1980:707), while in Itza' *säbäk che'* is identified specifically with the "palo de quina" (*Exostema mexicanum*) (Atran and Ucan Ek' 1999:41). These entries indicate that in addition to a toponym, the compound also refers to an ethnotaxon for a particular class of trees utilized in the elaboration of ink pigment.

Closely tied to the matter at hand is a supernatural entity that in the epigraphic literature has been termed the "Patron of Pax." This designation owes to the fact that this supernatural presides in the so-called Initial Series Introductory Glyphs when the date recorded falls in the sixteenth month, known as *Pax* (see Thompson 1960:104-107, 115-116, Fig. 23). Usually we see the head variant of this supernatural (Figure 4c), but in rare cases the full-figure variant is also rendered (Figure 4f). In these cases the Patron of Pax is depicted with the logogram for "soot, ink" affixed to his nose, and most revealingly in a substitution set from Palenque, the Patron of Pax is rendered in conventional logograms as **SIBIK-TE'** (Figure 4d). Based on these data it is clear that the Patron of Pax was known as *Sibikte'* in the Classic period.

Demonstrating this substitution set are the examples in which the head of the Patron of Pax, when it occurs in isolation of the "soot, ink" logogram, is employed as the logogram **TE'**. This phonetic value is attested in cases where the sign helps to spell out the following entries:

(7) **ja-wa-TE'**
     jaw-a[n]-te'
     face up.IV-EXIST-?
     "Face up ?" (tripod dish)
     (K4669, B3; c. AD 670 – 800) (Figure 5a)

(8) **KAL-ma-TE'**
     kal-[o]'m-te'
     hack.TV-AG-tree
     "Tree-hacker" (exalted title)
     (Tikal, Stela 12, D4; AD 527 – 9.4.13.0.0) (Figure 5b)

(9) **TE'-le**
     te'-[e]l
     tree-SPEC
     "Forest" (qualifier to *kakaw*)
     (Buenavista del Cayo, K4464, E1; AD 693 – 728+) (Figure 5c)

(10) **3-TE'-TUN-ni**
     ux-te'-tuun
     three-NC-stone
     "Three Stones" (toponym)
     (Calakmul, Structure 5, Hieroglyphic Stair, pB2; c. AD 600 – 650)

(11) **4-TE'-u-WAY-HAB**
     chan-te'-u-way-ha[a]b
     four-NC-3SG.A-?-year
     "4 Wayeb" (date)
     (Copan, Hieroglyphic Stair; AD 749 – 9.15.17.12.16) (Figure 5d)

In addition, several examples exist in which the head of the Patron of Pax serves as a qualifier, a semantic determinative, or personification element to trees in iconographic contexts, which further testifies to the reading of this sign as **TE'** (Figure 5e; see also K0998, K4546, and K1345). The iconic depictions of the Patron of Pax in the script and imagery further indicate that "soot, ink" is

intimately associated with his nose. Since the head of the Patron of Pax serves logographically as **TE'** the depictions of his name render the whole calque iconically as "soot is the nose of wood." Supporting this conclusion are two additional representations of the Patron of Pax in imagery outside of the script. The first example is depicted on one of pair of incised human bones that were recovered from Burial 116 at Tikal (Figure 5f). Here the Patron of Pax is juxtaposed to a youthful Maize god, and here again the "soot, ink" logogram is affixed to his nose demonstrating that it serves as an essential qualifier to this supernatural entity. The other example represents a winged Patron of Pax (Figure 5g), again with the "soot, ink" glyph balancing off the tip of his nose, in a mythological scene where the associated caption refers to his "descent from the Six-Sky-Place as the messenger of God D" (Zender 2005:12, 13).

In sum, the calque "soot is the nose of (fire)wood" can be said to have existed in the Classic period, although the present study has not found conclusive evidence for the existence of this calque among colonial and modern Maya languages (though see Smith-Stark 1994:Table 1).

Conclusion

What this study has uncovered are the possible trajectories of calques that existed in Classic Maya culture. Some calques have subsisted in the Maya area to the present, while others have greatly diffused throughout Mesoamerica (and beyond). Thus the notion of "deer snake" has been documented outside of Mesoamerica as far south as Costa Rica (Ara 1986:475), and "horned serpents" are attested in the Mississippian cultural complex (e.g., Lankford 2007) and as far north as the Northeast and Northwest Coast cultures. In contrast, other calques that existed in the Classic period have now ceased to exist. Consequently, the picture is much more dynamic and complex than has heretofore been supposed. This has implications for understanding cultural networks in Mesoamerica as well as the distribution of calques as areal features. Thus while certain Mesoamerican calques can be traced back to at least the Late Classic (c. AD 650 – 800) what remains to be done are detailed studies with the specific aim of assessing the temporal and spatial incidence of individual calques. The present treatment should also be extended to the other glyphic calques tabulated at the onset as a basis from which to expand this foray to a Mesoamerican scope.

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The Further Adventures of Merle (continued)

MERLE GREENE ROBERTSON

Itsimte

One time in April, 1970, when I was in Sayaxche with my students Paul Saffo, Jeff Smith, Don Hart, Dick Millard, Jim Kinslow, and Steve Hyde, getting ready to go to Dos Pilas, Joya Hairs, an archaeologist friend who worked at Kaminaljuyu, said she was going to Guatemala City, and that we could have her jeep to go to a new site that she just recently saw—Itsimte. We took her up on it as Itsimte was quite a ways away with no road or trail to it. So we set out the next morning with Joya's brother, who lived in Sayaxche, driving—driving like crazy, through savannas, through fences, and banging into trees—but we finally got there without losing anyone. We parked the jeep at the foot of a high mound and proceeded to climb up the grade that had previously been ascended on horseback when the soil was soaking wet, so it was rutted dried mud we were negotiating all the way. Having to walk crooked because of the dried mud, we were all pretty sore campers when we finally reached the site, six kilometers up.

Upon arriving, we were immediately struck by the looting that was going on. One stela that was lying down had a saw cut that went all the way across the top. The base was still standing, but portions were already missing. Another stela had a three-inch-thick slab neatly sawed off the top. Another had large holes drilled in it, I suppose where they would next be sawing. As the students gathered evidence about who the culprits might be, I hurriedly did rubbings of two stelae that were still intact (Figure 1). We almost ran down the hill, we were so eager to get away before the looters returned. I was taking my boots off before getting in the jeep when a fellow in a white tee shirt came running toward us. Then from behind the bushes, four more men in army uniforms came at us with machine guns. I wasn't afraid, as I had papers from FYDEP in my pocket asking for police protection in the jungle of El Peten. I thought that as soon as they saw who we were, they would apologize and that would be it. No. They practically tore the jeep apart looking for "their loot" that we were stealing. Tranquil kept telling me not to show them my papers, but after enough time had gone by with this guy's gun at my stomach, I showed them my papers. They took a look, and then let us go, but said nothing. We drove off. In a minute Paul said, "You know, the insignias on their arms were paper." When we arrived at Sayaxche,
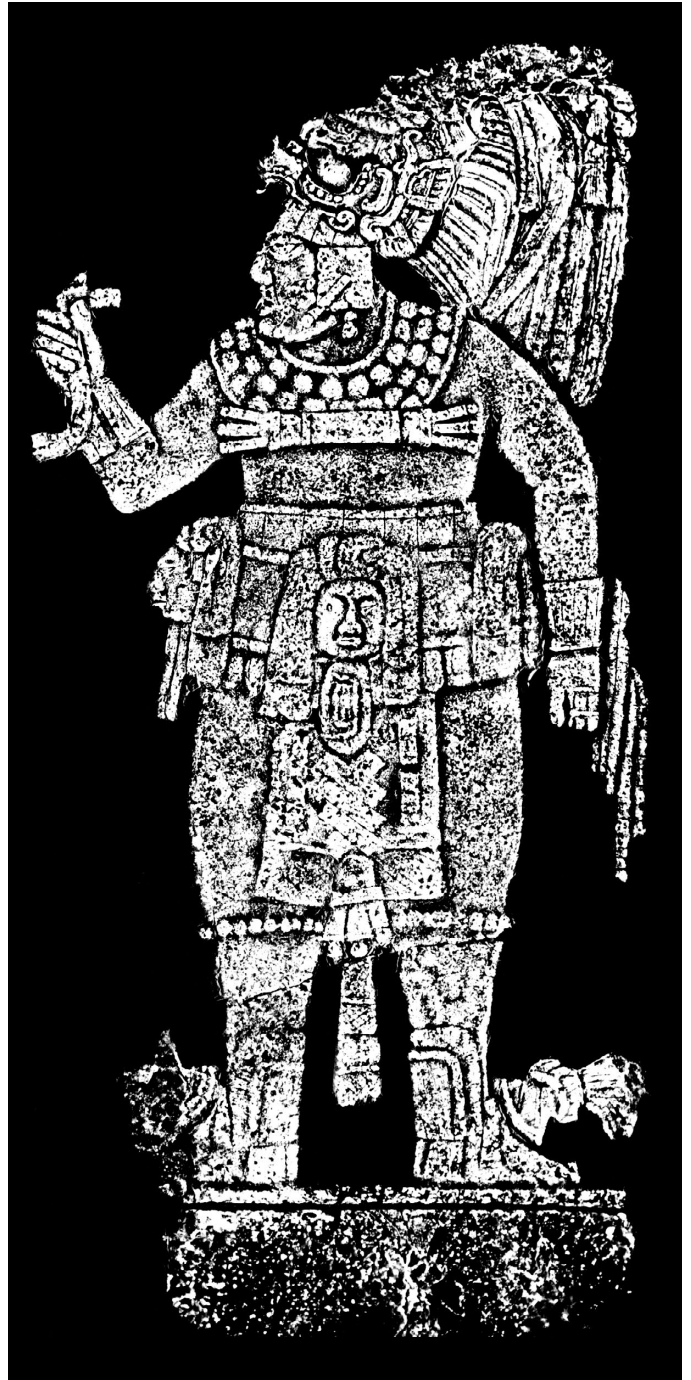

Figure 1. Rubbing of Itsimte-Sacluk Stela 1 (Maler's Stela 4).

Figure 2. Camp at Naranjo.

we told Julio. He called the police, and the first thing they asked me was what the mens' hands looked like. I had noticed that they didn't look any different from mine. He said they were probably from the city, off for a lark, stealing monuments and selling them.

The problem now was that the driver of our jeep and our guide were from the area and might be recognized by the looters, so their whole families might be in danger of being killed. Another possibility was that the rest of us would be taken as hostages, or killed. The policeman was surprised that they hadn't already killed us. We were advised to leave Sayaxche as soon as possible. I got in touch with Samayoa, our FYDEP protector, by radio, and told him what had happened. He said he would be in Sayaxche and take us to safety in two days. That was too long for me. We already had *permiso* papers to work at Naranjo near the Belize border so, packing all night, by morning we were ready to hide in a truck that took us to Melchor.

Naranjo

By 3:30 on April 3, 1970, we had arrived at the junction into Melchor. The truck dumped us and all of our gear in the middle of the road and turned back. While the students stayed with the luggage, Tranquil and I walked into town to find a place to stay and someone to take us to Naranjo. There was no hotel, but a kind woman said she could put us up in three rooms. As there were not enough beds in the rooms, Paul Saffo, being the youngest, and Tranquil were assigned to mattresses on the balcony. It turned out that they were the only two who got any sleep. There were so many bedbugs in the others' beds that they got no sleep at all. These beds cost $1.00 each, and that is all they were worth, considering the bedbugs. Breakfast, however, was gourmet—armadillo, fried eggs, frijoles, tortillas, and all the coffee we wanted—35 cents a person. All of the policemen in the area were eating breakfast at the same time. They took their breakfast and dinner there every day. Finding someone to take us to Naranjo was our problem then. Plenty of men wanted to do this, but then they had no truck, or if they had a truck they said it would be wrecked trying to get up the climb to Naranjo. We finally ran into Rafael Morales, whom I knew from Tikal, and who also worked with Ian Graham at Naranjo earlier that year.

He said he would get a fellow with a truck and take us. Off we went, muddy road all the way, and so steep that in places we all had to get out and push the truck.

We finally arrived in this beautiful deep jungle—carosa palms 150 feet tall, sweeps other palms of 40 feet. As both Rafael and our guide Julio had worked there, it was easy finding the stelae. Our camp was already set up from Ian's trip, so we just cleaned it all up, buried the tin cans, and made ourselves at home (Figure 2). A deer-skin chair was still there. I had my tent, and the boys all had their hammocks. Don was made cook. Dinner the first night was rice curry, shrimp, chutney, tortillas, apricots, coffee, and one small drink of rum mixed with Tang. We always had good food when in the jungle. Our "john" was an immense ceiba tree with high folds at the bottom that was just perfect.

Everyone was assigned a monument to clean and take notes on—size, condition, depth of carving, etc., while I did the rubbings of everything there. We all worked constantly all day long for five days. The only problem was the ticks. We all had them, but Jeff Smith managed to always have the most. We figured they came from the deer-skin chair. Evenings were spent pulling ticks off each other. On the last day at Naranjo, I had been working non-stop from breakfast, finally finishing Stela 25, the earliest example of the formative phase of the Late Classic period at this site (Figure 3). It showed a simply clad figure holding, almost vertically, a ceremonial bar with serrated knives protruding from the wide-open jaws of a serpent, instead of the manikin figures usually shown on ceremonial bars. When I arrived back at our camp at dusk dinner was ready. They sat me down on a stool, and proceeded to take my boots off. Now that is when I should have been suspicious. Next I was offered my

Figure 3. Rubbing of Naranjo Stela 25.

glass of rum and Tang, and we all cheered. Why wasn't I suspicious by then? I got up and was going to my tent to get a dry shirt, when I tripped over a vine and fell. Now, here the story changes. All of the boys insisted I was drunk. They had put all of their portions of rum in my glass, and as it was mixed with orange Tang, I could not tell the difference. To this day these now-grown men insist they were right.

Dos Pilas

Dos Pilas was the first site I went to in the Petexbatun. This was in 1971. Ian Graham, from England, and I were the only non-Guatemalans working in El Peten, Ian recording the hieroglyphs and I recording the art. I worked at Dos Pilas three times, always more-than-sharing time with the darn mosquitoes. I thought they would be so heavy with my blood that they would just fall and die, but no, they were very persistent buggers. And if it wasn't the mosquitoes it was the constant rain, or always being on the alert for stela robbers who were known to be in the vicinity. Just getting to Dos Pilas was a major undertaking. Seemed straight up, up, up, mud all the way, so much mud that I could hardly walk in my mud-encased boots. The second time was even worse. It took one and a half hours to get from Sayaxche to the starting place in the Petexbatun where you start to go up to Dos Pilas. The river was so high that there was no place where we could see to pull up to the shore. As a matter of fact, we had to get out of the boat and, standing hip-deep in water, pole the canoe into what looked like a shore. It took about fifteen minutes to get the gear all sorted so it could be carried by the workers with tump lines on their heads. Tump lines are made by stripping the green bark from a tree about 2½ inches in diameter and pulling with all one's force to skin it. This bark strip is then tied to a gunny sack that has been oiled, making it waterproof. The tump line holding the sack of supplies is then put across the carrier's forehead.

Where there should have been a trail, there was none. It was 17 kilometers up to Dos Pilas, but climbing over and around the huge trees made the distance much further. A hurricane had blown down many huge mahogany trees that we had to climb over. Watch for snakes when doing that: they love logs to hide behind and snatch archaeologists. I knew, so I was careful. It took five hours to reach Dos Pilas. After managing to get there with a storm that was fast approaching, I discovered almost immediately that looters were either still there, or upon hearing our approach, had hidden, or went down to the river below. This was the time looters had just stolen the eight-foot-tall Stela 17 that I had done the rubbing of two years before (thankfully it was documented). The stela was cut into three pieces, and the entire front sawed off with a power saw. In doing this, the inscriptions on the sides were also ruined. One of my workmen went to Sayaxche to report the theft. Six policemen came to investigate, but there was

nothing they could do—it was gone. Later, this stela was found sandwiched between two slabs of marble, ready to be shipped to Puerto Barrios. The prisoner panel, however, was missing.

While Poncho went back to Sayaxche to report the theft, we were fast making our camp—*champas* for our hammocks and a *champa* for cooking. The storm did come roaring in the middle of the night and blew the ridge pole of my champa on top of me, just missing my head. I was not hurt, but it was a tricky business building another champa in the dark, in pouring rain. That night we all slept in soaking wet clothes. Nevertheless, Dos Pilas was always my favorite Maya site. The stelae there are spectacular, and for the most part in pristine condition. It was a joy doing rubbings of them, in spite of the mosquitoes. My favorite was the 14-foot-tall Stela 2, depicting an over-life-size figure who wears an immense eagle-down headdress with a Mexican year-sign in it (Figure 4). What captured my astonishment and awe however, as the ink was tapped on to the paper little by little, was the nine-inch-tall owl wearing a "bow tie" that hangs just below the skull necklace around the figure's neck. This stela took forever to finish, not just the figure, but the piles of hieroglyphs above the figure's head that had to be very carefully done for interpretation by the epigraphers.

Doing the rubbing of the elegant Late Classic Stela 16 was a challenge, working in alternate periods of rain and sun. Everything was so overgrown that at first I did not realize that the stela was so high up, but as I climbed, I saw that it was half buried in forest debris. A pit had to be dug for me to get to the bottom of the monument, but as it rained so much, the pit soon filled with water. That meant the water had to be bailed out continually, leaving me soaking wet and muddy. All the time I was doing this rubbing, I was balancing myself on the side of this steep, muddy mound.

The ultimate highlight at Dos Pilas was the "Processional Stairs" (Figure 5). I came upon them accidentally while struggling through the underbrush and bumped into what looked like a step. It was so dense there that the brush and trees in front had to be cut to let in sunlight so I could take pictures and also to see what was there. Voila! When the area was finally cleared by Tranquil, his brother, and me, we were looking at something that had not been seen for over 1000 years. On one stairway is a long row of dignitaries, some standing facing the central figure, while the others stand facing forward. All wore long flowing wide gowns highly decorated that were split down the middle. All wore decorated boots, some low and some high. At the center of the stair were two bound bundles like the Tikal Emblem Glyph with hieroglyphs above them. Surprisingly, these figures were in almost pristine condition. They were so beautiful and so unique that after photographing everything, I then spent two days making detailed sketches of all of the stairs, as well as notes on the depth of carving and differences in designs on the figures' gowns in my field book.

Since I was there, a new hieroglyphic stairway was discovered in 2001 by the caretakers of the site, and then excavated by Federico Fahsen and a team from the Cancuen Archaeological Project of Vanderbilt University and the Universidad del Valle de Guatemala. From these newly discovered steps much more of the history of Dos Pilas has come to light. Today you can even drive to Dos Pilas. Don't think I would like that. So much of the beautiful forest will be gone, as well as the hundreds of parrots and other rare birds who made this area their home.
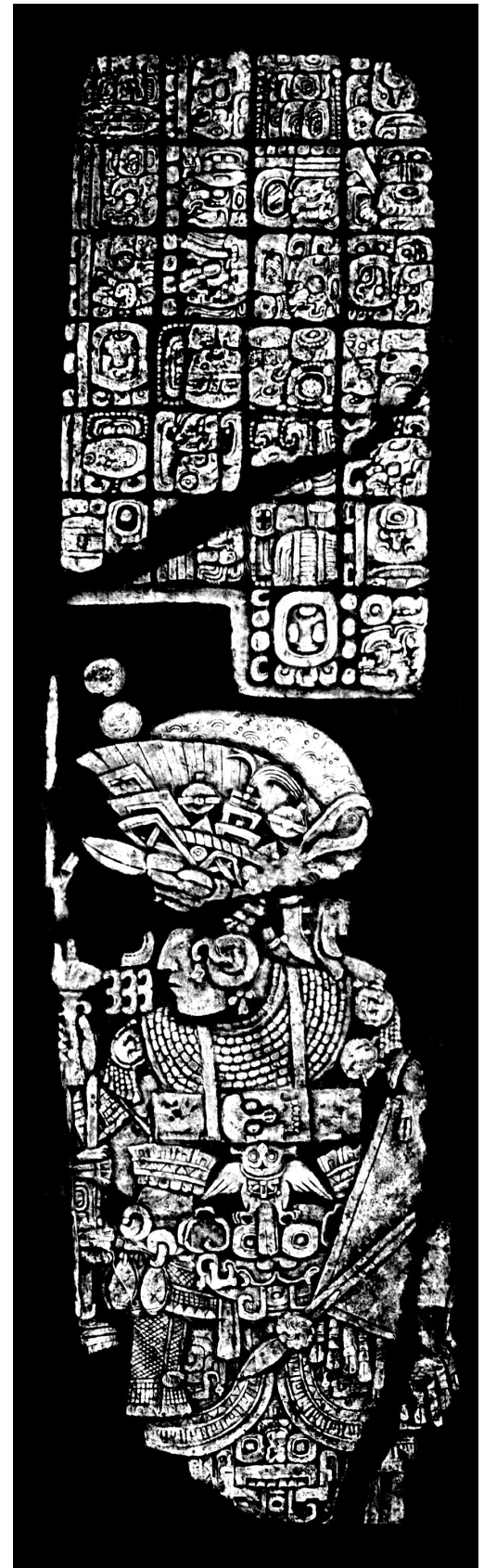

Figure 4. Dos Pilas Stela 2.

Figure 5. Making rubbings of the Processional Stairs.