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Pus, Pustules, and Ancient Maya Gods: Notes on the Names of God S and Hunahpu

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In memory of Michael D. Coe

The young heroes, Hunahpu and Xbalanque, are key characters in the mythical sagas of the sixteenth-century K'iche', as recorded in the *Popol Vuh*. They defeated the nasty creatures that prevailed in a previous creation, triumphed over the deathly lords who had killed their father, and rose to the sky as the sun and the moon. Their significance goes beyond the study of early colonial K'iche' religion. Students have repeatedly pointed out their links with other Mesoamerican heroes in colonial and modern myths (Braakhuis 1990; Foster 1945:194-196; Girard 1966:226; Graulich 1987; Ichon 1973:86-91) and debated their correspondences with the gods that were depicted in Lowland Maya art or mentioned in the hieroglyphic inscriptions (Bassie-Sweet 2008; Chinchilla Mazariegos 2011, 2017; Coe 1973, 1978, 1989; Freidel et al. 1993; Kowalski 1989; Lounsbury 1985; Stone and Zender 2011; Taube 1985). The arguments have often incorporated explanations of the heroes' names, as evidence in favor or against various interpretations, even though the linguistic analysis and translation of their names has proved challenging (see discussions by Christenson 2003:94-95 and Tedlock 1996:239-40).

Students generally agree on the meaning of Hunahpu's name, following the opinion of Francisco Ximénez, who translated it in the early eighteenth century as *un cazador con cerbatana*, "One Blowgun Hunter" (1977:11).[1] While plausible, this translation is not unproblematic and is worth further examination. In this article I discuss the traditional view derived from Ximénez's translation and the ways in which modern scholars have interpreted the name. I trace the relationship between Hunahpu and the ancient Maya God S,[2] and highlight the significance of the black spots that blemish God S's body in ancient Maya art, which I interpret as pustules. I summarize the significance of pus and pustules in Mesoamerican solar myths and offer a reading for a name tag of God S as "One Pus." Finally, I suggest that the name of Hunahpu may have a similar origin, and comment on related glosses in the K'iche'an languages.

Ximénez's Translation

Ximénez analyzed the name of Hunahpu as consisting of the numeral one (spelled *hun* in his manuscript, and *jun* in modern K'iche' orthography) combined with *ahpu*, which would correspond to "blowgun hunter." There is no way to tell whether he came to that interpretation by himself or whether he consulted with native K'iche' speakers. Ximénez's translation agrees with the doings of Hunahpu and Xbalanque, who are described in the *Popol Vuh* as blowgun hunters. However, Allen J. Christenson pointed out a significant

[1] I employ the colonial orthography of the name Hunahpu, as spelled in Francisco Ximénez's manuscript of the *Popol Vuh*. I also keep the original spelling of other terms from colonial dictionaries, while providing modernized transcriptions.

[2] Following Taube (1992:115-119), I use the name "God S" to designate the ancient Maya spotted god, identified by Coe (1973, 1989). While the name "Hunahpu" has sometimes been applied to the ancient Maya spotted god, I use it strictly to refer to the hero of the *Popol Vuh*, also mentioned in other early colonial texts from highland Guatemala.

inconsistency:

> Hunahpu has generally been translated in the past as "One Master of the Blowgun" or "One Blowgun Hunter" on the assumption that *pu* is a shortened version of *[p]ub'* (blowgun). This may well be the original etymology of the name. In this section of the [*Popol Vuh*] text, Hunahpu is described as a great blowgun hunter. On the other hand, the authors of the *Popol Vuh* text consistently wrote the word for blowgun as *ub'* or *wub'*, not *pu*. It is therefore unlikely that the Quiché authors of the text had "blowgun" in mind when they wrote the name of this deity (Christenson 2003:94).

Neither *ahpu* nor *hunahpu* are attested in colonial K'iche' or Kaqchikel dictionaries with meanings related to blowgun hunting. Colonial dictionaries explained *Hunahpu* as the name of a day in the indigenous calendar, *"día a la quenta de los yndios,"* as glossed in a Kaqchikel vocabulary preserved in the American Philosophical Society (Anonymous n.d.a, unnumbered page). Another Kaqchikel vocabulary explained it as a day name meaning "rose" or "flower" (Vico n.d., f. 87v; Spanish: *Huna. pu. nombre de un dia de los Yndios. Significa rosa. o flor*).[3] This explanation was obviously derived from the meaning of the twentieth day name in Nahua calendars, called *Xochitl*, "flower." Local versions of the Nahua day names were known in colonial Guatemala, as shown by a 1685 Kaqchikel calendar that listed the twentieth day name as both Xochitl and Hunahpu, meaning "the flower or rose" (Rodriguez and Crespo 1957:19; cf. Caso 1967:15; Thompson 1971:87-88).

In his combined dictionary of K'iche', Kaqchikel, and Tz'utujil, Ximénez himself offered an explanation for Hunahpu that referenced the meaning of the Nahuatl day name but was surely influenced by his reading of the *Popol Vuh*: "Hunahpu: a day of the week: flower or rose; the name of one who they say was the redeemer: hunahpuvuch: one shooter opossum: name that they gave to the creator in their heathenism" (Ximénez 1985:291; Spanish: *Hunahpu–un día de la semana=flor o rosa; nombre de uno que dicen fue el redentor: /hunahpuvuch–un tirador tacuacín=nombre que daban al creador en su gentilidad*). Hunahpu Vuch appears among the names of creator deities listed in the first paragraphs of the *Popol Vuh*.

As Christenson noted, a probable explanation for Ximenez's translation is that he derived *pu* from *pub*, a variant for "blowgun" in colonial K'iche', which coexisted with *ub* in Domingo de Basseta's dictionary (2005:472). The blowgun is also called *pub'*, *puhb'*, *puub'*, or *puhb'al* in colonial Kaqchikel and other modern Eastern Mayan languages, including Tz'utujil, Uspantec, Poqomam, Poqomchi', Chuj, and Q'eqchi' (Coto 1983:43; Kaufman and Justeson 2003:927). In colonial and modern times, the meaning extended to firearms such as arquebuses and rifles. Thus Francisco de Varea noted, "they use it to say shotgun arquebus: *castilan pub*" (Varea n.d.:261; Spanish: *úsanlo para dezir escopeta arcabus: castilan pub*). Ximénez did not explain the loss of the final consonant of *pub'* or *ub'* in the name of Hunahpu, but he may have favored this translation because of its apparent consistency with the hero's role in the *Popol Vuh*.

A similar reasoning may explain the meaning of the twentieth day name in mid–twentieth century Poqomchi' calendars. In his day list from San Cristóbal Verapaz, Vicente A. Narciso (1976:82) translated the twentieth day name (spelled *Gukún-Aj-Pujm*) as "the hunter." Antonio Goubaud Carrera compiled two lists in Santa Cruz Verapaz. The first contains *Axpu*, without a gloss, while the second contains *Axpuh*, glossed as "hunter" (Goubaud et al. 1947:147, 151). However, the colonial and modern Poqom word for "blowgun" is *pub'* or *puhb'*, not *pu* or *puh* (Feldman 2000:48; Kaufman and Justeson 2003:927). This suggests that the meaning ascribed to the day name did not derive from linguistic parsing, but more likely from the day name's cultural connotations. While the blowgun is not mentioned in these calendrical glosses, there is a possibility that the modern Poqomchi' related the meaning of the day name to narratives that mentioned Hunahpu as the name of a mythical hunter. The colonial Poqom regarded Hunahpu as an important god, as shown by an entry in Pedro Morán's early eighteenth-century vocabulary (possibly originating from earlier compilations): "*pu*: preceded by *hunah*. Hunahpu was one of the most principal idols that they adored in their heathenism" (Feldman 2000:331; Spanish: *pu: anteponiéndole hunah. hunahpu era uno de los ídolos mas principales que adoraban en su gentilidad*).

Ximénez's translation of the name Hunahpu as "blowgun hunter" is generally accepted despite its drawbacks. But some authors have explored glosses based on other Mayan languages, assuming that the K'iche' hero's name was borrowed from them. The following section reviews translations of the name of the *Popol Vuh* hero based on Yucatecan and Ch'olan languages.

Yucatecan and Ch'olan Glosses

Neither the K'iche'an name of the twentieth day nor the glosses for "blowgun" or "blowgun hunter" coincide with those of Yucatecan and Ch'olan languages. Variants of Ajaw or Ajwal (Aghual in colonial orthography) designate the twentieth day in the Yucatec calendar, the Tzotzil and Tzeltal calendars of highland Chiapas, and the Chuj, Qanjob'al, and Jakaltek calendars of the Cuchumatanes region of northwestern Guatemala (see Caso 1967, Table 9). The day name corresponds to the lexeme *ajaw*, "lord" and its variants, which are very widespread. *Ajaw* (*ahau* in colonial orthography) is a term for "lord" in the K'iche'an languages, but it does not designate the twentieth day name in the colonial and modern calendars of the K'iche', Kaqchikel, Poqomchi', Mam, and Ixil, which employ the day name Hunahpu or its variants.

The terms for "blowgun" are also distinct. They include Tzeltal and Tzotzil *tuk'* (Ara 1986:388; Laughlin 1988:1:321), and Yucatec, Lacandon, and Itzaj *tz'on* or *tz'oon* (Barrera Vásquez 1991:889; Hofling 2014:367). Morán's Ch'olti' vocabulary listed *tzon*, while modern Ch'orti' dictionaries contain *huh te'*, "blowgun," and *jujrib'*, "shotgun, weapon," both related to the verb *huhta*, "blow the breath, blow on" (Hull 2016:181; Morán 1935:21; Wisdom n.d.). None of these terms relate to K'iche'an *pub', ub', or wub'*, and they have no bearing on the translation of the name Hunahpu.

While unrelated to Ximénez's translation, it is worth discussing the Yucatec term *p'uh* (*ppuh* in colonial orthography), glossed in the sixteenth-century Motul Dictionary as "to go hunting or beating game, to chase and beat [the game]" (Ciudad Real 2001:513; Spanish: *ir a caza o montería, ojearla y levantarla*). The dictionary also contains *ah p'uhob*, "hunter and beaters who go hunting" (Ciudad Real 2001:54; Spanish: *cazador y monteros que van a caza*). At first glance this seems close to the modern Poqom day name Axpuh and Ximénez's gloss for the name of the *Popol Vuh* hero as "hunter" or "blowgun hunter," although it would still be necessary to explain the glottal p' in the Yucatec word. The similarity fades upon closer examination. The semantic field of Yucatec *p'uh* is unrelated to blowgun hunting and, strictly, it does not refer to hunting. It refers to the act of chasing or beating the game, and it also conveys meanings such as "to agitate, to stir up, to unsettle," in contexts that are unrelated to hunting (Barrera Vásquez 1991:700). Rather than beating the game, techniques of blowgun hunting involve patient stalking of the prey and knowledge of its behavior (Rival 1996; Yost and Kelley 1983). Indeed, the *Popol Vuh* describes how Hunahpu and Xbalanque waited quietly behind a nance tree until Seven Macaw came to feed from its fruits, and then shot him (Tedlock 1996:78). Therefore, Yucatec *p'uh* does not provide a satisfactory explanation for the name of Hunahpu as a blowgun hunter.

Yet another alternative has been proposed. Citing a personal communication from David Stuart, Linda Schele and Peter Mathews (1998:370) derived the name Hunahpu from *puj*, a term for "reed" attested in Yucatec, Itzaj, Ch'ol, and Tzeltal (Kaufman and Justeson 2003:1153). They interpreted *ajpuj* as "he of the cattail reeds" and suggested that the name linked Hunahpu with mythical places of origin related to Tollan, the legendary city of Mesoamerican myths, whose Nahuatl name means "place of reeds." Ruud van Akkeren (2012:123-124) elaborated on this explanation, translating the name Hunahpu as "First of Tollan" and suggesting that the name was analogous to Ce Acatl, "One Reed," the calendrical name of Quetzalcoatl in highland Mexican myths. The correlations are circuitous, not the least because Acatl, "Reed," is the thirteenth day of the Nahua calendar, not the twentieth. In the *Popol Vuh*, Tollan was an important location in the migration of the K'iche' ancestors, but the text does not link it with Hunahpu.

The Blemished God

Maya scholars have long traced links between the *Popol Vuh* heroes and various aspects of Classic Maya calendrics and religion. In his review of ancient Maya day names, J. Eric S. Thompson (1960:88) asserted, "Ahau, then, was the day of the sun god." This was a curious inference, since the sign for the day Ajaw in the Maya inscriptions does not portray the Sun God. Rather than analyzing the hieroglyphic variants of the twentieth day, Thompson came to that conclusion partly from the substitution between the day names Hunahpu and Ajaw in highland and lowland Maya calendars. He did not mention the hero of the *Popol Vuh* in this context, but he related the gloss for the Poqomchi' day name in Goubaud Carrera's list (*Axpuh*, "hunter") with a Q'eqchi' myth that he himself collected in Belize, which described the solar hero as a blowgun hunter (Thompson 1930:120). Thompson also linked the Nahua name of the twentieth day, "Flower," with the young flower god Xochipilli, and suggested that the latter was the young Sun God in highland Mexican religion.[4]

Thompson's association of the twentieth day with the sun and with the mythical blowgun hunter merits attention. The animated variant of the Ajaw day sign in ancient Maya writing commonly portrays God S, a young god who is distinctively marked with black spots on his face and body, and who frequently wears a headband. With admirable insight, Michael D. Coe first identified this character on Classic Maya vessels, where he frequently appears as a blowgun hunter, shooting at birds or other animals. The calendrical correspondence of the day names Ajaw and Hunahpu was one of the reasons that led Coe to identify the spotted god—later designated as God S by Karl Taube—as a counterpart of Hunahpu (Figure 1; Coe 1989:167-168; Taube 1992:115-19). The correspondence of God S with the *Popol Vuh* character is tangible in many contexts, such as the recently discovered Stela 47 from Naranjo, which shows king Ajnumsaaj Chan K'inich with the attributes of God S. The associated text states that the king "dressed for the ball game," evoking the preferred activity of the heroes in the *Popol Vuh* (Martin et al. 2016).

Coe showed sympathy for Thompson's argument

[3] Sachse (2018) questioned the attribution of this vocabulary to Domingo de Vico and explored its links with other colonial dictionaries of highland Guatemalan languages.

[4] On Xochipilli's solar connotations, see Aguilera 2004; Fernández 1959; Nicholson 1971:418.

that the personified Ajaw day sign was a young solar god but did not pursue the full implications of that association. While his identification of God S as a Lowland Maya counterpart of Hunahpu is widely accepted, there has been little effort to explore the god's probable solar connotations. In previous work I argued that indeed the ancient Maya God S shared the qualities of Mesoamerican solar heroes. Both God S and Hunahpu embodied attributes

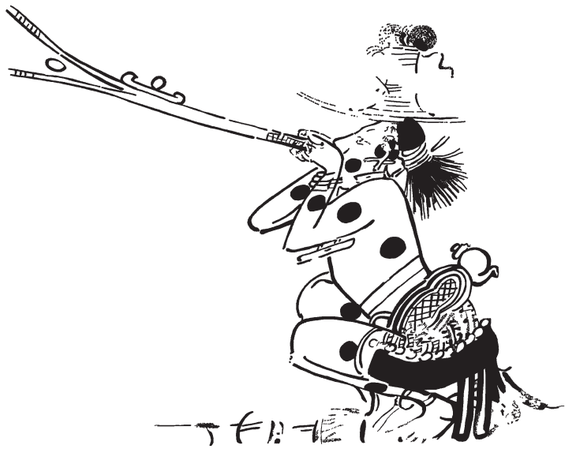

Figure 1. God S as a blowgun hunter; detail from Vase K4546 (drawing by Oswaldo Chinchilla).

Figure 2. God S holding a bloodletting implement; detail of ceramic plate (drawing by Oswaldo Chinchilla after Joralemon 1974:Fig. 14).

that are broadly associated with the heroes destined to become the sun in Mesoamerican myths. The arguments are presented elsewhere (Chinchilla Mazariegos 2011, 2017); the following paragraphs summarize those that are most relevant for present purposes.

In Mesoamerican myths, the solar and lunar heroes were monster slayers who defeated powerful foes that opposed their rise as luminaries. In modern myths those creatures often take avian forms, although they may also be serpents or unidentified monsters (for examples, see Bartolomé 1984; Oropeza Escobar 2007). In the *Popol Vuh*, the Hero Twins defeated Seven Macaw, the avian lord who pretended to shine as the sun in a previous era. Coe and other authors compared the *Popol Vuh* episode of Seven Macaw's defeat with ancient Maya representations of God S—sometimes a pair of nearly identical spotted gods—aiming a blowgun at a large and menacing avian creature (Coe 1989). Recent studies highlight related representations from other parts of Mesoamerica and suggest that myths involving monster-slaying solar heroes were not exclusive to the Maya but were widespread across the region in ancient times (Koontz 2008; Nielsen and Helmke 2015; Taube 2005; Urcid 2008).

Coe (1989:173) identified bloodletting as an important activity of God S in ancient Maya art. In several instances he is portrayed holding bloodletting instruments (Figure 2), and in the Late Preclassic mural paintings of Las Pinturas Sub-1 at San Bartolo, he pierces his genitals with a large pointed branch, shedding abundant blood (Taube et al. 2010). In this respect God S corresponds well with the personalities of other Mesoamerican solar heroes, who were usually stoic and endured hardship and self-sacrifice.

The distinction between the solar and lunar heroes is a critical problem in colonial and modern accounts of the origin of the sun and the moon. Narratives compiled throughout Mesoamerica elaborate on their contrasting demeanor, physical aspect, and sometimes gender (the moon was sometimes, but not always female), which explain why one of the heroes became the sun, and the other, the moon. While there are many versions, solar heroes are invariably described as male, and are generally temperate, disciplined, and restrained in their comportment. They are often poor, orphaned, and low in social standing. A recurrent attribute is their infirmity, and they are especially described as suffering from sores, buboes, or pimples (on Mesoamerican solar heroes, see Chinchilla Mazariegos 2011:97-149; Graulich 1987).[5]

This condition is especially well known in the case of Nanahuatl ~ Nanahuatzin, the Nahua solar hero.

[5] On the attributes of Mesoamerican lunar heroes, see Graulich (1987:300, 1997:125-126) and Chinchilla Mazariegos (2011:129-133, 2017:164-168).

The word *nanahuatl* meant "buboes" according to Alonso de Molina's sixteenth-century Nahuatl dictionary (Molina 1571:63). There is insufficient evidence to determine whether the god Nanahuatl was named after the ailment or the other way around. Be that as it may, Molina's entries show that the term also designated other exudates that oozed out like pus, such as *quauhnanahuatl*, "tree resin" (Molina 1571:86v; Spanish: *goma de árboles*).[6]

Bernardino de Sahagún's informants described how the solar hero Nanahuatl performed penitence by poking his sores to let the pus out. In the early seventeenth century, Hernando Ruiz de Alarcón described Nanahuatl as "a sick and pustulous person" (Ruiz de Alarcón 1984:71; Sahagún 1953:3-4). It should be stressed, however, that the belief was not exclusive to the Nahua. The solar hero reappears as a sickling in modern Huichol and Otomí myths, which describe him as a boy who was covered in pimples (Galinier 1990:693-99; McIntosh 1949:20; Mondragón et al. 1995:11). Alfredo López Austin (2013:209) noted that skin ailments are sometimes attributed to Jesus Christ, who is commonly associated with the sun in traditional Mesoamerican beliefs. He cited a Mixe-Popoluca narrative from southern Veracruz, which explained that God was covered with pimples, "like a mangy dog, with flies that went bugging him" (Oropeza Escobar 2007:255). López Austin also cited related beliefs from the Maya area. In his prayers, Shas Ko'w, an Ixil daykeeper from Nebaj, identified the

[6] The authors of the *Popol Vuh* were cognizant of the name of the Nahua deity and invoked it in a prayer among a series of paired names of creator gods. In his translation of this passage, Schultze-Jena (1944:187, cited by Tedlock 1996:294) pointed out the correspondence of the name Nanavac with the Nahua solar hero. Interestingly, the couplet "Youngest Nanavac, Sudden Nanavac" is immediately followed by "Falcon, Hunahpu" (Tedlock 1996:150; Christenson 2003:207).

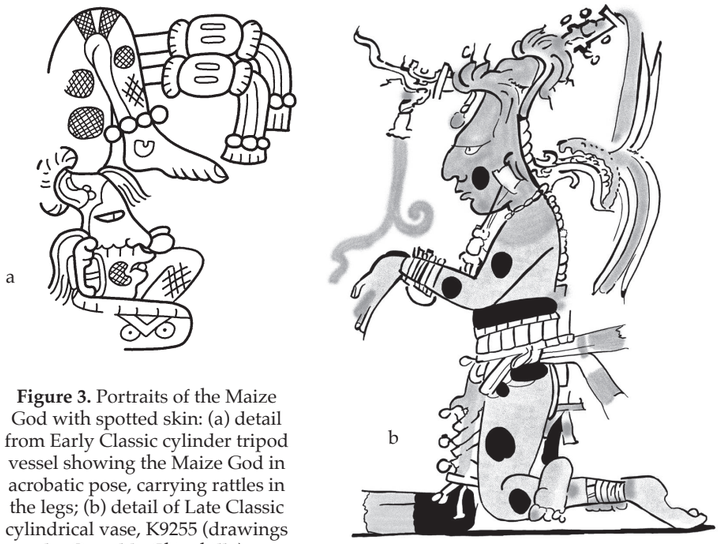

Figure 3. Portraits of the Maize God with spotted skin: (a) detail from Early Classic cylinder tripod vessel showing the Maize God in acrobatic pose, carrying rattles in the legs; (b) detail of Late Classic cylindrical vase, K9255 (drawings by Oswaldo Chinchilla).

sun as "Our Father who passes above us in the sky, the Holy Day, the Holy Dawn, he is the one who is perfect, because it is a perfect accomplishment that each day rises with precision at dawn." Yet Our Father appeared as a sick person while he was on earth. He could not walk and was covered with boils, to the point that people despised him for his stink (Colby and Colby 1981:137, 151). In highland Chiapas, the Tzotzil of San Miguel Larraínzar believed that Jesus Christ suffered from acne (Holland 1963:283).

The most obtrusive attributes of the ancient Maya God S are the dark spots that taint his face and body. They are often called "death marks" because of their presence in death gods, but other gods can also have them. Notably, they appear in some portraits of the Maize God (Figure 3), perhaps corresponding to mythical versions in which this normally handsome, untainted youth overlapped with his frequent companion, God S. In previous work, I suggested that they represent abscesses, pustules, or buboes, sometimes encircled by red halos that suggest swelling (Chinchilla Mazariegos 2011:134, 2017:177). These are the kinds of skin lesions that blemished Nanahuatl and other solar heroes in Mesoamerican myths. In this and other respects, God S embodies the physical appearance and demeanor of the mythical characters that were destined to become the sun.

The Name of God S

In an important contribution to Maya glyphic decipherment, Peter Mathews and John Justeson unraveled the substitution set of *ajaw* allographs. They demonstrated that ancient Maya scribes used the profile head of the spotted headband god (in full figure or head variant) as a sign for both the day name Ajaw and the royal title *ajaw*, "lord, ruler." They also noted that the sign sometimes appeared as a deity name coupled with the numeral one, which they read as "One Ajaw" and did not fail to notice a probable correspondence with the name Hunahpu in the *Popol Vuh* (Mathews and Justeson 1984:208-209).

Juun Ajaw is a generally accepted reading for the hieroglyphic name of

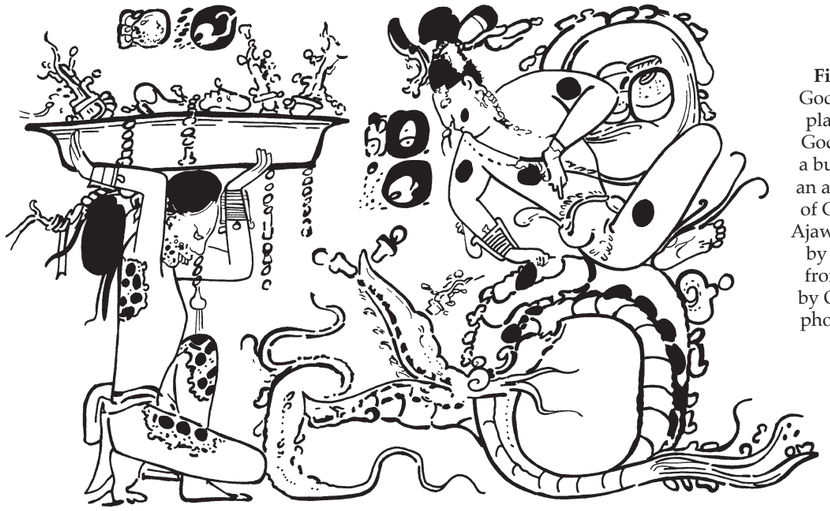

Figure 4. The Headband Gods: (left) God CH holds a plate containing the infant God S; (right) God S carries a bundle, while reclining on an aquatic serpent; the name of God S is written with the Ajaw day name sign, prefixed by the numeral one; detail from Vase K1004 (drawing by Oswaldo Chinchilla after photograph by Justin Kerr).

God S (e.g., Stone and Zender 2011:45). An important piece of evidence comes from Vase K1004 (Figure 4), where a portrait of God S is tagged as **JUUN AJAW**, spelled with the finger variant of the numeral one, combined with the Ajaw day sign. This is an odd example, since God S portraits are more commonly tagged with a different collocation, combining the numeral one with a profile head glyph that portrays a young man with a black spot on the cheek and a crosshatched cartouche ringed with black circular tabs on the back of the head (sometimes dubbed as "Chicchan" markings; e.g., Kelley 1976:67). This sign will be referred to as the "God S logogram" in the following paragraphs.

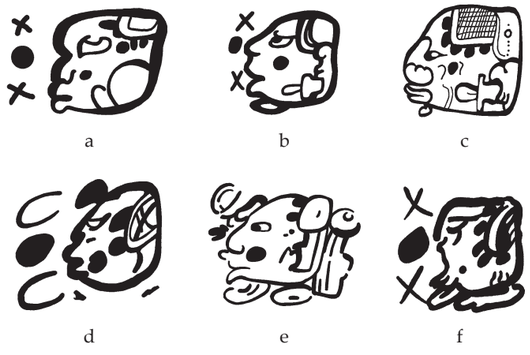

Figure 5. The God S logogram: (a) detail of Dresden Codex page 2a; (b) detail of Vase K7281; (c) detail of Vase K1183; (d) detail of Vase K1202; (e) detail of Vase K1222. (f) detail of Vase K2026. Cases *a–e* are associated with portraits of God S; note the absence of the headband in all examples (drawings by Laura Alejandra Campos and Oswaldo Chinchilla).

The God S logogram has two variants: (a) without a headband, and (b) with a headband. While the distinction is often disregarded, it should be noted that the name tags associated with portraits of God S correspond to the first variant, that is, they are consistently missing a headband (Figure 5). By contrast, the headband is normally present when the God S logogram is employed as an allograph for the *ajaw* royal title or as an allograph of the Ajaw day name (Figure 6).[7] Stuart (2015) showed that royal headbands are widely employed in Mesoamerican writing systems as logograms for "lord" or "ruler." He argued that this practice began as early as Middle Preclassic Olmec art and discussed later examples from Zapotec, Maya, and Nahuatl writing. In ancient Maya writing, Stuart noted, "the headband sign by itself can be used alone to write the word **AJAW**, in combination with other head signs to which it can be attached" (Stuart 2015). While most commonly attached to the God S logogram, the **AJAW** headband sign was sometimes dissociated from it and "worn" by animals, including vultures and raccoons, either as head variants or full-body signs. Mathews and Justeson (1984) showed

[7] There are occasional exceptions, in which the God S logogram, without a headband, substitutes for the **AJAW** logogram, particularly in Primary Standard Sequences. Examples include Vase K6813, and a vase in the collection of the San Diego Museum of Man (Looper and Polyukovich 2016). Equally exceptional is the use of the God S logogram without a headband for the day name Ajaw, which nevertheless appears in early examples that include a mural fragment from Las Pinturas Sub-1 at San Bartolo and an Early Classic jade celt plaque, probably from Río Azul, illustrated in Berjonneau et al. 1985:221 (Marc Zender, personal communication 2017).

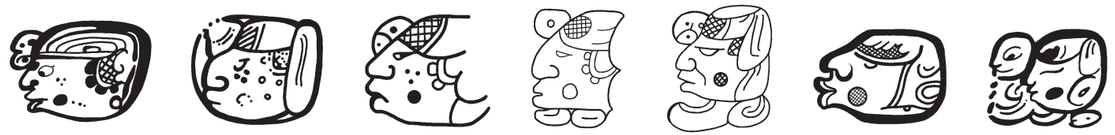

Figure 6. Examples of the *ajaw* royal title spelled using the God S logogram with a headband: (a) detail of plate from Tikal Burial 195; (b) detail of Arroyo de Piedra Stela 1; (c) detail of Piedras Negras Panel 2; (d) detail of Yaxchilan Hieroglyphic Stairway 3, Step 5; (e) detail of La Corona Element 56; (f) detail of Palenque Tablet of the 96 Glyphs; (g) detail of Cosmic Plate, K1609 (drawings by Laura Alejandra Campos).

that these headbanded animal variants substitute as **AJAW** allographs.

If the headband conveys the logographic reading **AJAW**, the question arises, does the God S logogram without a headband convey the same reading? There is no easy answer for this question, but it seems convenient to distinguish the God S logogram, which does not feature a headband and generally does not substitute freely with other **AJAW** logograms, from the **AJAW** logogram, either as day name or royal title, which characteristically wears a headband (see Figures 4 and 5). These observations call into question the commonly accepted reading of the God S name tags as Juun Ajaw. While the reading is plausible, a full decipherment of the God S logogram is still missing.[8]

Phonetic clues (syllabic substitutions or phonetic complements) are uncommon in God S's name tags. Zender (2004:4-5) assembled several examples of a deity name that shows the God S logogram conflated with the **TE'** logogram (in its "Pax God" variant), prefixed by the numeral seven. He argued that the **TE'** sign functioned as a numerical classifier, and suggested a reading for this name as *Huk Ajaw* or *Hukte' Ajaw*, "Seven Ajaw." One of Zender's examples, from Vase K3296, has the phonetic complement **wa**, suggesting a *–w* ending for the God S logogram. A *–w* ending is also suggested by the **wa** suffix in God S's name tag on vases K1222 and K2026, the latter also with a **TE'** postfix (Figure 5e–f).

There is an important case that offers a phonetically transparent reading for the name of God S. A portrait of the god on Vase K7727 is tagged with a glyphic caption formed by the numeral one and the syllabic collocation **pu-wa** (Figure 7). Alfonso Lacadena and Søren Wichman (2004:145) proposed the reading *Juun Pu'w*, which they translated as "one blowgun," based on examples from K'iche', Tzutujil, Kaqchikel, and Chuj. Christophe Helmke and Jesper Nielsen (2015:42) agreed and suggested that this term might be the source of the K'iche' name Hunahpu. However, the terms for "blowgun" in those languages are *pub'* or *pujb'*, while *pu'w* is not attested with that meaning in any Mayan language.

Perhaps more likely, *pu'w* is cognate with terms that mean "pus" or "pustules." Colonial Yucatec dictionaries render the word as *puuj* or *pujuw* (*puuh*, *puhuu*, or *puhub* in colonial orthography; Barrera Vásquez 1991:671; Bolles 2012:1794; Ciudad Real 2001:502). Other cognates include colonial and modern Tzotzil and Tzeltal *pojow* (*pojov* in Laughlin 1988:1:287), Ch'olti' *pojow* (spelled *pohou* in Morán 1935:52), and Ch'orti' *pohowi*, *po'w*, or *po'* (Hull 2016:343; Wisdom n.d.). Terrence Kaufman, William Norman,

[8] Parenthetically, the God S logogram (without a headband) seems to function as a phonetic complement for the **HUUN** logogram in a variant of Glyph F on Copan Stela I, substituting for the syllable **hu**. In parallel with examples involving other deity names, described by Zender (2014), this probable syllabic reading is independent from its logographic value in God S's name.

a

b

Figure 7. Details from Vase K7727: (a) portrait of God S; (b) drawing of name tag that reads **1-pu-wa**, *Juun Pu'w*. Photo and drawing by Oswaldo Chinchilla.

and John Justeson reconstructed the proto-Ch'olan term **pojow*, and proto-Maya **pojw* (Kaufman and Justeson 2003:1343; Kaufman and Norman 1984:129). If this interpretation is correct, the name tag of God S on vase K7727 raises the possibility that at least in certain contexts, the Classic Maya God S was named Juun Pu'w, "One Pus" or "One Pustule."

The available evidence is insufficient to determine whether the reading *pu'w* should be applied to the God S logogram.[9] Furthermore, the name tag of God S on vase K1004 suggests that the designations Juun Pu'w and Juun Ajaw coexisted in the Classic Maya Lowlands. One possible explanation is that the frequent use of the God S logogram with headband as a variant of the Ajaw day name led scribes to assimilate the name of the twentieth day with the name of God S, overlapping with Juun Pu'w. A similar overlap is present in Eastern Maya calendars of highland Guatemala, which applied the name of the hero, Hunahpu, to designate the twentieth day name.

The Name of Hunahpu

The solar identity of Hunahpu has been a subject of debate (Chinchilla Mazariegos 2017:168-170; Freidel et al. 1993:367-68; Milbrath 1999:96-100; Thompson 1960:218). The *Popol Vuh* did not describe the physical appearance of Hunahpu and Xbalanque, beyond the fact that they were young. The K'iche' text described how the heroes crowned their ordeal by rising to the sky as the sun and the moon but provided no clue about which one of them became which luminary. This ambiguity stands in marked contrast to the roughly contemporary K'iche' version of the *Título de Totonicapán*, which asserted, "they called the sun Hunahpu, the moon was called Xbalanqueh by them" (modified from Carmack and Mondloch 1983:174, who transcribed the name as Xbalanquej). While terse, this statement shows that Hunahpu was the solar hero in some K'iche' versions, regardless of whether the authors of the *Popol Vuh* conceived of him as such.

It is worth exploring whether the name of Hunahpu may relate to K'iche' *puj*, "pus." Colonial K'iche' and Kaqchikel dictionaries translate *puh* both in reference to pus (Spanish *podre, materia*) and to the lesions that produce pus, such as abscesses or pustules (Spanish *apostema*) (Basseta 2005:473; Coto 1983:40, 337, 425; Dürr and Sachse 2017:267; Varea n.d.:264). Cognates in other Eastern Maya languages include modern Poqom *puj* and *poj*, and Q'eqchi' *pojw* (Kaufman and Justeson 2003:1343-1344). Colonial texts consistently spell Hunahpu without a final h or j, but the final consonant may have been elided. In parallel, the name of Hunahpu's companion is spelled Xbalanque in Ximénez's manuscript, and Xbalanqueh in the Título de Totonicapán (Carmack and Mondloch 1983:68). The final part of Xbalanque's name is often interpreted as derived from *kej*, "deer" (*queh* in colonial orthography), although it may also derive from *q'ij*, "sun," or its Q'eqchi' cognate, *q'e* (Christenson 2003:95; Tedlock 1996:239; Van Akkeren 2012:126).

The dictionaries do not list an agentive *ajpuj*, referring to someone who has pus, or someone who has pustules, which is nevertheless plausible. For comparison, Basseta (2005:415) glossed *hoxoɛ* as *sarna*, "scabies," and *ah hoxoɛ* as *el leproso o sarnoso*, "the leper or one who has scabies."

A significant setback for this interpretation of the name is the spelling of *puh*, "pus," which was consistently written with a final h in the *Popol Vuh*. The text contains several references to pus, in connection with the geography of Xib'alb'a and the character of its denizens. To reach that dreadful place, the heroes had to cross rivers of blood and pus (*Puj Ya'*, or *puhia* in Ximénez's manuscript). One of the lords of Xib'alb'a was Ajal Puj (*ahal puh* in Ximénez's manuscript), commonly translated as "Pus Demon," who induced pus in the skin and the legs of people.[10] Pus was clearly regarded as a hideous substance associated with sickness and death. But those were also the connotations of the name of Nanahuatl, who nevertheless became the sun in Nahua myths.

The divergent orthographies indicate that the authors of the *Popol Vuh* did not associate the name of Hunahpu with pus or pustules. Instead, I suggest that the name was borrowed from an earlier Lowland Maya form, related to hieroglyphic *pu'w*, "pus." While unattested, a plausible agentive derivation is *ajpu'w*, referring to someone who has pus or pustules. The name of Hunahpu may derive from older forms of the name, including *Juun Pu'w*—the name of God S on vase K7727—and a hypothetic *Juun Ajpu'w,* with the meanings "One Pus" or "One Pustulous." In a similar way, *Hupu* and *Hunahpu* were interchangeable in colonial

[9] The collocation **JUN-pu-wa** reappears on bowl K793, in a caption associated with two young men, neither of which has the characteristic spots or other attributes of God S. Instead, one of them has a jaguar pelt patch around the mouth, suggesting that he impersonates God CH. Gods S and CH were frequently paired in Classic Maya art, and it is indeed possible that this caption alluded to God S, even if he was not portrayed on the bowl, as suggested by Van Akkeren (2012:124).

[10] Modern translators generally follow Campbell's (1983) interpretation of *ajal* as a loan from Ch'ol, based on a gloss in Aulie and Aulie's dictionary (1978:27). The Ch'ol term refers to a "bad spirit," "the spirit of the devil," who may appear as a woman who attracts men to sin with her, bringing about their death. However, glosses from colonial dictionaries suggest that the term was widespread in K'ichean languages. The *Vocabulario Copioso* (Anonymous n.d.b, page 8) contains "Ahal puh, ahal toɛob, ahalxic, ahal ɛanyu, nombres de demonios." These terms are likely related to colonial Pokom *ah ahalik*, "encantador, hechicero," and *ahalical*, "encante de encantador, hechizo" (Feldman 2000).

Pokom for the "name of an idol" (Feldman 2000:146). The interpretation of the hero's name as a loan word may explain the absence of glosses referring to pus in colonial K'iche'an dictionary entries for Hunahpu.

Interestingly, colonial K'iche' and Kaqchikel dictionaries translate the word *ahau* as "buboes" or "one who has buboes." The same meaning is attached to *q'alel*, a title of high rank in highland Guatemalan political hierarchies (Coto 1983:81, 440; Varea n.d., p. 9; Vico n.d., f. 4r). Coto (1983:74) explained that those who had buboes remained seated doing nothing, as if they were lords. While this explanation is credible, other sicknesses that caused people to remain idle were not called by the same name. Rather, I suggest that there was a more specific connection between buboes and lordship. The rationale may derive from the analogy of the day names Hunahpu and Ajaw. We can presume that ancient K'iche' and Kaqchikel day keepers were aware of this calendrical correspondence, and that it may have led them to link the royal title with infirmity, and particularly buboes. However, this does not explain why the colonial K'iche' and Kaqchikel dictionaries consistently associated the ailment with entries for *Ahau*, and not with entries for Hunahpu, which invariably refer to the twentieth day name.

Final Comments

In this paper, I questioned Ximénez's interpretation of Hunahpu's name, while acknowledging the reasons that led him to relate it to the blowgun and blowgun hunting. I offered an interpretation of the hieroglyphic name tag of God S on the Classic Maya vase K7727 as *Jun Pu'w,* "One Pus." Following the insights of previous authors (Helmke and Nielsen 2015; Van Akkeren 2012:123-124), I agree that this name tag provides a clue about the origin of the name of the sixteenth-century K'iche' hero. I suggest that the name of Hunahpu was likely derived from it or from a hypothetical form, *Juun Ajpu'w,* which is not attested in the extant corpus of Maya inscriptions. In support of my interpretation, I discussed the solar connotations of God S and Hunahpu, while noting the opacity that the authors of the *Popol Vuh* incorporated in their version of the origin of the sun and the moon.

The problem is compounded by the fact that the name Hunahpu was shared by the father and uncle of the Hero Twins, whose fate was to remain in the land of the dead. Indeed, their plight parallels mythical explanations about the origin of death compiled across Mesoamerica (Chinchilla Mazariegos 2017:226-230; López Austin 1992). The probability is that father and son overlapped in ancient and modern thought. Rather than the young hero's solar ascent, his and his father's journey to the realm of death were evoked by the meaning attached to the day name Hunahpu in a 1722 K'iche' calendar: "Hunahpu, who they say descended to hell" (Spanish: *"Hunahpu, que dicen que bajó al infierno"*; Weeks et al. 2009:76). The modern K'iche' associate the day Hunahpu with the dead (Schultze-Jena 1954:71; Tedlock 1996:286). From these references it appears that by the early eighteenth century, if not earlier, the solar connotations that are apparent in the *Popol Vuh* were blurred, while the mortuary connotations of the name Hunahpu were highlighted.[11]

My reading of God S's name caption on vase K7727 as *Juun Pu'w*, "One Pus" is consistent with the iconography of the pustule-ridden God S in ancient Maya art and with the solar destiny of Hunahpu in the *Popol Vuh*. These readings also echo the name and the affliction of the Nahua solar hero. More broadly, they echo the infirmities that characterized Mesoamerican solar heroes, and particularly their skin ailments. Rather than definitive solutions, these readings are intended to stimulate further discussion about the Maya solar heroes and the heroes of the *Popol Vuh*, their names, their deeds, and their mythical counterparts in the Maya area and elsewhere.

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References

Aguilera, Carmen
2004 Xochipilli, dios solar. *Estudios de Cultura Nahuatl* 35:69-74.

Anonymous
n.d.a Vocabulario de la lengua cakchiquel. Manuscript. American Philosophical Society Mss.497.43. V85.10.
n.d.b Vocabulario copioso de las lenguas cakchikel y 4iche. John Carter Brown Library, catalog number b5705183.

Ara, Domingo de
1986 *Vocabulario en lengua tzeldal según el orden de Copanabastla*. Mario Humberto Ruz, ed. Universidad Nacional Autónoma de México, Mexico City.

[11] Diego de Landa affirmed that Hunhau—likely a variation of Jun Ajaw—was the lord of Mitnal, the place of the dead in sixteenth-century Yucatan (Landa 1982:60; Taube 1992:116). This affirmation possibly evoked a version of the god's descent to the realm of death, in parallel with the *Popol Vuh*.

Aulie, H. Wilbur, and Evelyn W. de Aulie
1978 *Diccionario ch'ol-español, español-ch'ol*. Instituto Lingüístico de Verano, Mexico City.

Barrera Vásquez, Alfredo
1991 *Diccionario maya Cordemex, maya-español, español-maya*. Alfredo Barrera Vásquez, director; Juan Ramón Bastarrachea Manzano and William Brito Sansores, editors; Refugio Vermont Salas, David Dzul Góngora, and Domingo Dzul Poot, collaborators. 2nd ed. Editorial Porrúa, Mexico City.

Bartolomé, Miguel Alberto
1984 *El ciclo mítico de los gemelos Sol y Luna en las tradiciones de las culturas oaxaqueñas*. Instituto Nacional de Antropología e Historia; Centro Regional de Oaxaca, Oaxaca.

Basseta, Domingo de
2005 *Vocabulario de lengua quiché*. René Acuña, ed. Universidad Nacional Autónoma de México, Mexico City.

Bassie-Sweet, Karen
2008 *Maya Sacred Geography and the Creator Deities*. University of Oklahoma Press, Norman.

Berjonneau, Gerald, Emile Deletaille, and Jean-Louis Sonnery
1985 *Rediscovered Masterpieces of Mesoamerica: Mexico-Guatemala-Honduras*. Editions Arts 135, Boulogne.

Bolles, David
2012 *Combined Mayan-Spanish and Spanish-Mayan Vocabularies*. Electronic document: www.famsi.org/reports/96072/index.html

Braakhuis, H. E. M
1990 The Bitter Flour: Birth-scenes of the Tonsured Maize God. In *Mesoamerican Dualism*, edited by Rudolf van Zantwijk, R. de Ridder, and H. E. M. Braakhuis, pp. 125-147. ISOR Universiteit Utrecht, Utrecht.

Campbell, Lyle
1983 Préstamos lingüísticos en el Popol Vuh. In *Nuevas perspectivas sobre el Popol Vuh*, edited by Robert M. Carmack and Francisco Morales Santos, pp. 81-86. Editorial Piedra Santa, Guatemala City.

Carmack, Robert M., and James L. Mondloch, eds.
1983 *El título de Totonicapán*. Universidad Nacional Autónoma de México, Mexico City.

Caso, Alfonso
1967 *Los calendarios prehispánicos*. Universidad Nacional Autónoma de México, Mexico City.

Chinchilla Mazariegos, Oswaldo
2011 *Imágenes de la mitología maya*. Museo Popol Vuh; Universidad Francisco Marroquín, Guatemala City.
2017 *Art and Myth of the Ancient Maya*. Yale University Press, New Haven.

Christenson, Allen J., editor
2003 *Popol Vuh: The Sacred Book of the Maya*. O Books, Winchester and New York.

Coe, Michael D.
1973 *The Maya Scribe and His World*. The Grolier Club, New York.
1978 *Lords of the Underworld: Masterpieces of Classic Maya Ceramics*. Princeton University Press, Princeton.
1989 The Hero Twins: Myth and Image. In *The Maya Vase Book: A Corpus of Rollout Photographs of Maya Vases, Volume 1*, pp. 161-184. Kerr Associates, New York.

Colby, Benjamin N., and Lore M. Colby
1981 *The Daykeeper: The Life and Discourse of an Ixil Diviner*. Harvard University Press, Cambridge.

Coto, Thomás de
1983 *Thesaurus verborum. Vocabulario de la lengua cakchiquel y guatemalteca, nuevamente hecho y recopilado con sumo estudio, trabajo y erudición*. René Acuña, ed. Universidad Nacional Autónoma de México, Mexico City.

Ciudad Real, Antonio de
2001 *Calepino maya de Motul*. René Acuña, ed. Plaza y Valdés, Mexico City.

Dürr, Michael, and Frauke Sachse, eds.
2017 *Diccionario k'iche' de Berlin. El Vocabulario en lengua 4iche otlatecas: edición crítica*. Estudios Indiana 10. Ibero-Amerikanisches Institut; Gebr. Mann Verlag, Berlin.

Feldman, Lawrence H.
2000 *Pokom Maya and Their Colonial Dictionaries*. Report submitted to the Foundation for the Advancement of Mesoamerican Studies, Inc. Available: www.famsi.org/reports/97022/index.html

Fernández, Justino
1959 Una aproximación a Xochipilli. *Estudios de Cultura Nahuatl* 1:31-41.

Foster, George M.
1945 *Sierra Popoluca Folklore and Beliefs*. University of California Publications in American Archaeology and Ethnology 42(2):177-250. University of California Press, Berkeley.

Freidel, David, Linda Schele, and Joy Parker
1993 *Maya Cosmos: Three Thousand Years on the Shaman's Path*. Quill, New York.

Galinier, Jacques
1990 *La mitad del mundo. Cuerpo y cosmos en los rituales otomíes*. Universidad Nacional Autónoma de México; Centro de Estudios Mexicanos y Centroamericanos; Instituto Nacional Indigenista, Mexico City.

Girard, Rafael
1966 *Los mayas. Su civilización, su historia, sus vinculaciones continentales*. Libro Mex Editores, Mexico City.

Goubaud Carrera, Antonio, Juan de Dios Rosales, and Sol Tax
1947 *Reconnaissance of Northern Guatemala, 1944*. Microfilm Collection of Manuscripts on Middle American Cultural Anthropology, no. 17. University of Chicago, Chicago.

Graulich, Michel
1987 Los mitos mexicanos y mayas-quichés de la creación del Sol. *Anales de Antropología* 24:289-325.
1997 *Myths of Ancient Mexico*. University of Oklahoma Press, Norman.

Helmke, Christophe, and Jesper Nielsen
2015 The Defeat of the Great Bird in Myth and Royal Pageantry: A Mesoamerican Myth in a Comparative Perspective. *Comparative Mythology* 1:23-60.

Hofling, Charles Andrew
2014 *Lacandon Maya–Spanish–English Dictionary/Diccionario maya lacandón–español–inglés*. University of Utah Press, Salt Lake City.

Holland, William R.
1963 *Medicina maya en los altos de Chiapas. Un estudio del cambio socio-cultural*. Instituto de Antropología e Historia, Mexico City.

Hull, Kerry,
2016 *A Dictionary of Ch'orti': Mayan-Spanish-English*. University of Utah Press, Salt Lake City.

Ichon, Alain
1973 *La religión de los totonacas de la sierra*. Instituto Nacional Indigenista, Mexico City.

Joralemon, David
1974 Ritual Blood-Sacrifice Among the Ancient Maya: Part I. In *Primera Mesa Redonda de Palenque, Part II*, edited by Merle Greene Robertson, pp. 59-75. Robert Louis Stevenson School, Pebble Beach, California.

Kaufman, Terrence, and John Justeson
2003 A Preliminary Maya Etymological Dictionary. Report submitted to the Foundation for the Advancement of Mesoamerican Studies, Inc. Available: www.famsi.org/reports/01051/index.html

Kaufman, Terrence, and William Norman
1984 An Outline of Proto-Cholan Phonology, Morphology and Vocabulary. In *Phoneticism in Mayan Hieroglyphic Writing*, edited by John S. Justeson and Lyle Campbell, pp. 77-166. Publication 9. Institute for Mesoamerican Studies, State University of New York, Albany.

Kelley, David H.
1976 *Deciphering the Maya Script*. University of Texas Press, Austin.

Koontz, Rex
2008 Iconographic Interaction between El Tajín and South-Central Veracruz. In *Classic Period Cultural Currents in Southern and Central Veracruz*, edited by Philip J. Arnold III and Christopher A. Pool, 323-359. Dumbarton Oaks, Washington, D.C.

Kowalski, Jeff Karl
1989 *The Mythological Identity of the Figure on the La Esperanza ("Chinkultik") Ball Court Marker*. Research Reports on Ancient Maya Writing 27. Center for Maya Research, Washington, D.C.

Lacadena, Alfonso, and Søren Wichman
2004 On the Representation of the Glottal Stop in Maya Writing. In *The Linguistics of Maya Writing*, edited by Søren Wichman, pp. 100-162. University of Utah Press, Salt Lake City.

Landa, Diego de
1982 *Relación de las cosas de Yucatán*. Angel María Garibay Kintana, ed. Editorial Porrúa, Mexico City.

Laughlin, Robert M.
1988 *The Great Tzotzil Dictionary of Santo Domingo Zinacantán*. 3 vols. Smithsonian Institution, Washington, D.C.

Looper, Matthew, and Yuriy Polyukovich
2016 A Familial Relationship Between Nobles of El Perú (Waka') and El Zotz' (Pa'chan) as Recorded on a Polychrome Vessel. *Glyph Dwellers* 47: glyphdwellers.com/pdf/R47.pdf

López Austin, Alfredo
1992 Homshuk. Análisis temático del relato. *Anales de Antropología* 29:261-283.

López Austin, Alfredo, continued
2013 Cuando Cristo andaba de milagros: la innovación de un mito colonial. In *De hombres y dioses*, coordinated by Xavier Noguez and Alfredo López Austin, pp. 203-224. Gobierno del Estado de México; Colegio de Michoacán; Colegio Mexiquense, Toluca.

Lounsbury, Floyd G.
1985 The Identities of the Mythological Figures in the Cross Group Inscriptions at Palenque. In *Fourth Palenque Round Table, 1980*, edited by Elizabeth Benson, pp. 45-58. Pre-Columbian Art Research Institute, San Francisco.

Martin, Simon, Vilma Fialko, Alexandre Tokovinine, and Fredy Ramírez
2016 Contexto y texto de la Estela 47 de Naranjo-Sa'aal, Petén, Guatemala. In *XXIX Simposio de Investigaciones Arqueológicas en Guatemala, 2015*, edited by Bárbara Arroyo, Luis Méndez Salinas, and Gloria Ajú Álvarez, v. 2, pp. 615-628. Ministerio de Cultura y Deportes; Instituto de Antropología e Historia; Asociación Tikal, Guatemala City.

Mathews, Peter, and John S. Justeson
1984 Patterns of Sign Substitution in Maya Hieroglyphic Writing: The "Affix Cluster." In *Phoneticism in Mayan Hieroglyphic Writing*, edited by John S. Justeson and Lyle Campbell, pp. 185-231. Publication 9. Institute for Mesoamerican Studies, State University of New York, Albany.

McIntosh, John
1949 Cosmogonía huichol. *Tlalocan* 3(1):14-21.

Milbrath, Susan
1999 *Star Gods of the Maya: Astronomy in Art, Folklore, and Calendars*. University of Texas Press, Austin.

Molina, Alonso de
1571 *Vocabulario en lengua castellana y mexicana*. Antonio de Spinosa, Mexico City.

Mondragón, Lucila, Jacqueline Tello, and Argelia Valdez
1995 *Relatos huicholes*. Lenguas de México 11. Consejo Nacional para la Cultura y las Artes; Dirección General de Culturas Populares, Mexico City.

Morán, Pedro
1935 *Arte y diccionario en lengua choltí*. Facsimile edition. Publication 9. The Maya Society, Baltimore.

Narciso, Vicente A.
1976 Los indios pokonchíes. *Guatemala Indígena* 11(1-2):59-90.

Nicholson, Henry B.
1971 Religion in Pre-Hispanic Central Mexico. In *Archaeology of Northern Mesoamerica*, Part 1, edited by Gordon F. Ekholm and Ignacio Bernal, pp. 395-446. Handbook of Middle American Indians 10. University of Texas Press, Austin.

Nielsen, Jesper, and Christophe Helmke
2015 *The Fall of the Great Celestial Bird: A Master Myth in Early Classic Central Mexico*. Ancient America 13. Mesoamerica Center, University of Texas, Austin.

Oropeza Escobar, Minerva
2007 Mitos cosmogónicos de las culturas indígenas de Veracruz. In *Relatos ocultos en la niebla y el tiempo. Selección de mitos y estudios*, edited by Blas Román Castellón Huerta, pp. 163-259. Instituto Nacional de Antropología e Historia, Mexico City.

Rival, Laura
1996 Blowpipes and Spears: The Social Significance of Huaorani Technological Choices. In *Nature and Society: Anthropological Perspectives*, edited by Philippe Descola and Gísli Pálsson, pp. 145-164. Routledge, London.

Rodríguez, Raquel, and Mario Crespo M.
1957 Calendario cakchiquel de los indios de Guatemala, 1685. *Antropología e Historia de Guatemala* 9(2):17-29.

Ruiz de Alarcón, Hernando
1984 *Treatise on the Heathen Superstitions and Customs that Today Live Among the Indians Native to This New Spain, 1629*. J. Richard Andrews and Ross Hassig, trans. and ed. University of Oklahoma Press, Norman.

Sachse, Frauke
2018 Renaming Vico's Dictionary: Reconstructing the Textual Genealogy of the *Vocabulario copioso de las lenguas cakchiquel y 4iche*. *Indiana* 31(1):67-95.

Sahagún, Bernardino de
1953 *Florentine Codex. Book 7. The Sun, Moon, and Stars, and the Binding of the Years*. Arthur J. O. Anderson and Charles E. Dibble, eds. School of American Research, Santa Fe.

Schele, Linda, and Peter Mathews
1998 *The Code of Kings: The Language of Seven Sacred Maya Temples and Tombs*. Scribner, New York.

Schultze-Jena, Leonhard
1954 *La vida y las creencias de los indígenas quichés de Guatemala*. Editorial del Ministerio de Educación Pública, Guatemala City.

Stone, Andrea, and Marc Zender
2011 *Reading Maya Art: A Hieroglyphic Guide to Ancient Maya Painting and Sculpture*. Thames and Hudson, New York.

Stuart, David
2015 The Royal Headband: A Pan-Mesoamerican Hieroglyph. *Maya Decipherment*: mayadecipherment.com/2015/01/26/the-royal-headband-a-pan-mesoamerican-hieroglyph-for-ruler/

Taube, Karl
1985 The Classic Maya Maize God: A Reappraisal. In *Fifth Palenque Round Table, 1983*, edited by Merle Greene Robertson, pp. 171-181. Pre-Columbian Art Research Institute, San Francisco.
1992 *The Major Gods of Ancient Yucatan*. Dumbarton Oaks, Washington, D.C.
2005 Representaciones del paraíso en el arte cerámico del Clásico Temprano de Escuintla, Guatemala. In *Iconografía y escritura teotihuacana en la costa sur de Guatemala y Chiapas*, edited by Oswaldo Chinchilla and Bárbara Arroyo, U tz'ib, Serie Reportes 1(5):33-54. Asociación Tikal, Guatemala City.

Taube, Karl, William Saturno, David Stuart, and Heather Hurst
2010 *The Murals of San Bartolo, El Petén, Guatemala, Part 2: The West Wall*. Ancient America 10. Center for Ancient American Studies, Barnardsville.

Tedlock, Dennis
1996 *Popol Vuh: The Mayan Book of the Dawn of Life*. Rev. ed. Simon and Schuster, New York.

Thompson, J. Eric S.
1930 *Ethnology of the Mayas of Southern and Central Honduras*. Publication 274. Anthropological Series 17(2). Field Museum of Natural History, Chicago.
1960 *Maya Hieroglyphic Writing: An Introduction*. 2nd ed. University of Oklahoma Press, Norman.
1971 *Maya History and Religion*. University of Oklahoma Press, Norman.

Urcid, Javier
2008 An Ancient Story of Creation from San Pedro Jaltepetongo. In *Mixtec Writing and Society/Escritura de Ñuu Dzaui*, edited by Maarten Jansen and Laura van Broekhoven, 145-196. Koninklijke Nederlandse Akademie van Wetenschappen, Amsterdam.

Van Akkeren, Ruud
2012 *Xib'alb'a y el nacimiento de un nuevo sol. Una visión posclásica del colapso maya*. Editorial Piedra Santa, Guatemala City.

Varea, Francisco de
n.d. Calepino en lengua cakchiquel por fray Francisco de Varea hijo de esta S. Provincia del SS. Nombre de Iesus de religiosos de N. P. S. Francisco de Goatemala. Manuscript. American Philosophical Society, Mss. 497.43.V42.9.

Vico, Domingo de
n.d. Vocabulario de la lengua cakchiquel, con advertencia de los vocablos de las lenguas quiché y tzutuhil, se trasladó de la obra compuesta por el Ilmo. Padre el Venerable Fr. Domingo de Vico. Bibliothèque Nationale de France. Fonds Americaines No. 46, R. 7507.

Weeks, John M., Frauke Sachse, and Christian M. Prager
2009 *Maya Daykeeping: Three Calendars from Highland Guatemala*. University Press of Colorado, Boulder.

Wisdom, Charles
n.d. Chorti Dictionary, transcribed and transliterated by Brian Stross. Digital Manuscript.

Ximénez, Francisco
1977 *Historia de la provincia de San Vicente de Chiapa y Guatemala de la orden de Predicadores. Libros I y II*. Carmelo Sáenz de Santa María, ed. Academia de Geografía e Historia, Guatemala City.
1985 *Primera parte del tesoro de las lenguas cakchiquel, quiché y zutuhil, en que las dichas lenguas se traducen a la nuestra española*. Carmelo Sáenz de Santa María, ed. Academia de Geografía e Historia, Guatemala City.

Yost, James A., and Patricia M. Kelley
1983 Shotguns, Blowguns, and Spears: The Analysis of Technological Efficiency. In *Adaptive Responses of Native Amazonians*, edited by Raymond B. Hames and William T. Vickers, pp. 189-224. Academic Press, New York.

Zender, Marc
2004 Glyphs for "Handspan" and "Strike" in Classic Maya Ballgame Texts. *The PARI Journal* 4(4):1-9.
2014 On the Reading of Three Classic Maya Portrait Glyphs. *The PARI Journal* 15(2):1-14.