Hieroglyphs on Maya vessels

David Stuart

Our present understanding of the elite and religious culture of Classic Maya civilization owes much to the vivid scenes and hieroglyphic texts displayed on ceramic and stone vessels. The seemingly countless images of courtly gatherings, conversing gods, battles and ball games, offer a glimpse of Maya life that is seldom apparent on the carved public monuments. Hieroglyphic texts on vessels likewise hold a special fascination, for they sometimes describe and name the actors and events portrayed in the painted or carved scenes. Moreover, glyphs on pottery are of great use when considering larger questions about the nature of the Maya script. The comparative study of the highly repetitive texts on vessels, for example, opens a door on new decipherments that have great bearing on all aspects of Maya epigraphy, and consequently, many larger issues of Maya civilization. It is no exaggeration to state that glyphs on vessels comprise the largest and most important body of Classic texts apart from the stone monuments.

This essay is an introduction of sorts to the study of glyphs on Maya vessels. I hope to illustrate some of the basic texts we find on Maya vases, bowls, and dishes, and to analyze some of their structures. But in no way can this claim to be a comprehensive treatment of the subject. The evidence now at hand is simply too new and vast to allow any such treatise in the space here provided. A commentary on the religious components of vessel texts would alone require a more extensive study. Therefore I will concentrate here on the highly repetitious text that appears on so many vessels, known collectively as the Primary Standard Sequence.

The Primary Standard Sequence

Michael Coe pioneered the study of hieroglyphs on pottery with the publication of *The Maya Script and his World* in 1973. In compiling numerous painted scenes and hieroglyphs from vessels, Coe noticed the highly repetitious nature of the inscriptions that ran, usually, around the outside rim of vases and bowls. He called the repeating text the “Primary Standard Sequence” of glyphs. Each example contained a fixed sequence of signs and sign combinations, some more abbreviated than others. When Coe presented his study, no hieroglyph in the sequence was readable. He surmised, nevertheless, that these texts probably were of a religious or mythic theme, given the predominance of painted scenes of supernaturals in their company. Coe specifically suggested that the Sequence may be a mortuary chant or ritual formula, analogous to the Egyptian Book of the Dead.

The decipherment of the Primary Standard Sequence (hereafter PSS) has advanced since Coe's initial findings and suppositions. Specifically, the availability of more pottery texts has allowed for a more refined understanding of their internal structures and forms. The following paragraphs present a brief summary of these revealing structural patterns.

First we must understand that historical names are present in almost all examples of the Standard Sequence. Each example has its main “subject,” who is named at or near the end of the passage. On occasion we can recognize these as rulers of certain city-states: a short text on an onyx bowl in the Dumbarton Oaks Collection, for example, names an Early Classic ruler also mentioned in the king-list of Palenque. Another bowl (Kerr no. 1698) names a known ruler of Ucanal, named “Shield Jaguar” (the same name as the celebrated Yaxchilan ruler, but certainly a different individual). But why are these rulers and other high-ranking personages named on these vessels? To answer this, let us look at the structure of the PSS as it appears before these names.
THE MAYA VASE BOOK

In a system that may be too simplistic to reflect nuances of the pattern, I have divided the PSS into three forms that progress from simple to elaborate:
1. Possessed noun / Personal Name
2. Possessed noun / Prepositional Phrase / Personal Name
3. Introducing glyphs / Possessed noun / Prepositional phrase / Personal Name

Here follows summary descriptions of each of these structures, with some commentary and illustrated examples.

The first pattern (Figure 1) consists of two parts: usually the so-called "Wing-Quincunx" (a descriptive term of Coe's), and a personal name. The Wing-Quincunx, and those glyphs that are structurally similar (to be discussed momentarily) are basic components of all examples of the PSS. The Wing-Quincunx takes a number of visual forms (Figure 2). Three signs compose its most common form, and all are probably CV syllables. The first sign is always yu (T61/62). The middle sign represents a wing (T76/77), a pair of wings, or, very rarely, a full-figure of a bird (T236), but its phonetic value is not securely established. The third element is one of the various forms of bi, usually a "quincunx," but sometimes also represented by a simian head or a footprint. On a very few examples a final la follows the bi.

When the yu sign is in an initial position, as here, it may represent the pre-vocalic pronoun y- and the initial u- of some possessed nominal or verbal root. The structure of the PSS points to such a possessive function, since the Wing-Quincunx, as the first glyph, precedes a personal name. The final bi sign might indicate that the possessed root ends in -b, giving us something like "his uCVb."

Stephen Houston and Barbara Macleod have independently arrived at a more complete phonetic decipherment of the Wing-Quincunx. They note that the verb for "to drink" is uch' (in Cholan languages) or uk' (in Yucatecan languages). The noun for "drinking cup" often adds an instrumental suffix (-Vb) to this root, together with the noun suffix (-VI). Thus in modern Chol (Aulie and Aulie 1978:125) we find uch'ibl."taza." Chorti has the slightly different form ucp'ir (Wisdom, n.d.) (the p is phonologically equivalent to b of other western Mayan languages, as is Chorti r to l). In Colonial Tzotzil the term is uch'obil (Laughlin 1988:I, 159), and Yucatec has the gloss uk'bil. Since the phonetic clues of the Wing-Quincunx show that the possessed root is likely uCVb, Houston and Macleod posit that the middle sign, the wing, to be a chV or kV syllable. Uses of the wing sign in other glyphs suggest that ch't is the most likely reading, yielding the full form yu-ch't-bi, or y-uch'-ib(l). The most basic component of the PSS on vases therefore seems to read "the drink-
As would be expected, the Wing-Quincunx occurs on bowls and cylindrical vases, but never on inscribed plates or dishes. In its place, as Houston and Taube (1987) demonstrate, is the combination u-la-ka, for u lak, “the clay plate of...” It stands to reason, therefore, that the personal name found in all PSSs refers to the cup’s owner.

Decipherments such as these seem a far cry from the staid historical formulae of the public inscriptions. But we must understand that Maya hieroglyphic texts do not merely relate name-and-date outlines of ancient history. We know that texts may directly mention the artifacts, monuments or buildings upon which they are inscribed. Glyphs on a shell or jade plaque, for instance, will very often provide information on the owner of an object and the type of object in hand. Mathews (1979) was the first to identify such name-tags with his recognition of the glyph u-tu-pa as u tup, “the jewel of...” on a jade earspool from Altun Ha, Belize. Longer texts on monuments or buildings also make some reference to their own physical settings, giving dates for erection and dedication rites, and labelling information along the lines of y-otot, “the house of...” are very common. Sometimes included in such passages are the actual proper names for artifacts and monuments. It is of little surprise, then, to find that glyphs on pottery work in much the same way.

As we have seen, different glyphs designate different vessel types (Figure 3). The Wing-Quincunx is confined mostly to cylindrical vases, round bowls, or generally any pot that would hold a reasonable amount of drink. On flat round plates we sometimes find u lak, “the plate of...” in a structurally identical position. Houston has shown me another glyph, u-ha-wa-te that may designate plates with legs. Other glyphs representing possessed nouns may remain undeciphered, but it stands to reason that these too would refer to types of vessels or their contents.

Now that the most basic form and meaning of the PSS is clearer, let us turn to elaborations on the simple pattern: Often between y-uch’-ib’-il (or a similar possessed noun) and the possessor’s name are several glyphs not yet discussed. The intervening sequence may take various forms, but in nearly all cases the first of the new glyphs is introduced by the preposition ti or ta (Figure 4). This may indicate that the new elements of the PSS form a prepositional phrase that modifies the possessed vessel reference.

The phrases mostly fall into several types, but again this may be too simple a division. The phonetic elements ta-tsi / te-le / ka-ka-wa are quite common after the Wing-Quincunx. Also in this position one may find the sequence ta-yu-ta-la / ka-ka-wa. On occasion the two seemingly combine in some manner, as in ta-yutal / i-tsi / te-le / ka-ka-wa. Another phrase, much rarer than the others, is the single glyph introduced by the same preposition, ta-u-Iu. We should take note that the first two forms share ka-ka-wa, which presumably corresponds to Mayan kakaw.
that is, "cacao" (often abbreviated as ka-wa) (Stuart 1988b). Moreover, the combination of the simpler third form of the phrase, u-lu, can perhaps be read ul, "atole, corn gruel." Both cacao and atole were important and well-known drinks in ancient Mesoamerica. I suggest that these prepositional phrases are elaborations on the sequence which tell us something of the function of the vessels, namely their use as containers for specific types of beverages.

But the signs that precede the ka-ka-wa glyph have yet to be explained. No readings are obvious, but the combination ts-i-te-le or i-tsi-te-le recalls the Yucatec entries for the botanical term itsimte or itsinte: "a plant with which the Indian women season posole, camote stew, and other things" (Pl Perez 1866-77:156). The glyphs might therefore tell us of a certain recipe for cacao beverages which make use of seasoning from the itsimte plant. Concerning the signs yu-ta-la before ka-ka-wa, I have no suggested decipherment.

Given this expansion on the PSS, then, it seems reasonable to suppose that pottery vessels were used as containers for beverages. Landa and other early chroniclers makes it clear that drinks were important in Maya ritual life. For example:

They make of ground maize and cacao a kind of foaming drink which is very savory, and with which they celebrate their feasts.

(Tozzer 1941:90)

The famed Princeton Vase shows a liquid (presumably some cacao or maize drink) being poured from a cylindrical vessel. It stands to reason that elaborately decorated Maya vessels were not always made for funerary purposes, but were rather the well-used beverage utensils of the deceased, used in both ritual and daily life.

The third and most elaborate form of the PSS reveals the addition of yet more components that we may call, in the absence of a better term, "introducing glyphs" (Figure 5). These precede the Wing-Quincunx and its structural relatives. Unfortunately much of this section eludes decipherment, but there is strong evidence that it refers, at least in part, to the manner of decoration of the vessel.

The passage that precedes the possessed noun may take several forms. A frequent component I call the "initial glyph," seen as the first glyph in all three examples in Figure 5. This glyph is often used to locate the starting point of a text running in a seemingly continuous band around a vessel's rim. The same glyph appears in the monumental inscriptions in a much
different environment. There it customarily precedes hieroglyphic dates or verbs, perhaps as a marker of emphasis within a larger narrative structure of a text. I cannot posit a tentative reading for the initial glyph in any such context, but we should keep its many uses in mind for future considerations.

A glyph whose main sign represents the head of God N usually follows the initial glyph. Usually T88 is its suffix. This glyph is often replaced by a stepped sign with associated affixes that must somehow be equivalent. Other glyphs appear in this position and thus seem closely related in general function. I must stress the point that the head glyph of God N must not necessarily be some proper name or designation. On the contrary, structural analysis of this God N head glyph in pottery and stone inscriptions leads me to believe that this glyph represents a verb whose unknown meaning seemingly has little to do with this deity. As a putative verb, the God N glyph appears in a variety of contexts to be discussed momentarily.

Occasionally the God N glyph and its relatives are altogether absent from the introducing section of the PSS. In such cases it is not unusual to find the combination ts'i-bi immediately after the initial glyph. In a previous paper I have outlined the evidence for reading this glyph ts'ib, "to paint, draw" (Stuart 1987). This glyph may tell us the manner of decoration of the vessel, but again this is a point we will soon discuss in fuller detail.

With few exceptions, the combination na-ha-la, or sometimes simply na-ha, follows ts'ib. I have combed the dictionaries for a reading based on nahal, but none seems adequate in this context. Perhaps this is rather some grammatical suffix to ts'ib, but this is a matter best left open for the moment. God N and ts'ib sometimes appear together, but in such instances the pronoun u is customarily added as a prefix to ts'ib. Near the close of these initial glyphs,

![Figure 5](image)

**Figure 5** Three PSS texts employ sequences of "introducing glyphs" before the Wing-Quincunx. Note the ts'i-bi spelling for ts'ib, "paint," before the na profile glyph in all three texts.
and immediately before the possessed noun of the PSS, is found the combination hi-chi, occasionally spelled yi-chi. Macleod (1989) believes that this is related to the Yucatec term hech, “writing surface,” and Tzeltalan jehch, a classifier for pages. The apparent association of the hi-chi glyph with ts’w, “to write, paint” is certainly in keeping with such a reading.

Our discussion of the structure of the PSS made note of the fact that ts’ib was an important element within the curious set of glyphs that preceded the possessed noun, or probable vessel reference. It was suggested that this was some allusion to the vessel’s painted mode of decoration, and indeed ts’ib occurs almost always on painted vessels. The numerous ceramic and stone vessels that bear relief carving or incised decoration do not have ts’ib in their PSS texts. In place of ts’ib on these vessels is the so-called “lu-bat” glyph. The pattern of co-occurrence is visible in nearly all inscribed Maya vessels with extended versions of the PSS. We may tentatively conclude that the lu-bat glyph somehow refers to the mode of decoration found on objects that are carved or incised rather than painted. The glyph in question (Figure 6) usually appears as two signs, but in reality there are three constituents. The first sign is the syllable yu, and the second represents the head of a bat. As we have seen on the Wing-Quincunx, yu sometimes serves to indicate the initial pre-vocalic pronoun y- (“his, her, its”) before a noun or verb root beginning in u-. The sign may have a similar function here. Combined with the bat are the distinctive features of the lu syllable. In some examples, the lu and the bat signs are separated, revealing their proper reading order. The bat sign is not yet deciphered, although I previously felt that a similar sign may represent the syllable ts’i in some spellings of ts’ib. I doubt that this is the function here, however. Other circumstances of its use suggest that the bat head may correspond to another syllable altogether, perhaps of Consonant-u value. In any event, it remains impossible to venture a complete phonetic decipherment of the lu-bat glyph (yu-lu-?). We must remain cautious in any attempt to apply a precise translation to the lu-bat glyph, since no phonetic decipherment can yet be offered with assurance. Some meaning related to the act of carving or sculpting would fit the known environments of its use, but this is no guarantee of literal translation.

To summarize our findings thus far: The PSS as described first by Coe is similar to other texts on portable objects: it is, primarily, a descriptive “tag” for vessels of various types. The most fundamental tag simply names the owner of a given vessel, very likely the one for whom it was commissioned. More information about the vessel is presented in elaborations of this basic pattern. One extended form of the PSS speaks of the contents of the vessels, such as cacao drink, corn gruel, etc. The longest version of the PSS begins with a series of glyphs that, at least in part, may discuss the manner of the vessel’s decoration. Despite the inevitable variations on its internal structure, the PSS can be viewed as a fairly simple formula for tagging a vessel with the name of its owner and/or commissioner.

On rare occasion the PSS will have a Calendar Round date precede the introducing glyphs described above. I very much doubt that these dates relate in any way to the scenes rendered on pottery. Rather, given their placement in the PSS, I presume that these are the actual
dates of the painting or carving of a given vessel. In addition to references to types of decoration and vessel function, the date is one more elaboration on the pattern we have seen.

The PSS is not restricted to vessels. Variations appear in a variety of contexts, and all are distinguished by the nature of the possessed noun. Let us look for example at a portion of the text inscribed on the front of Lintel 25 from Yaxchilan (Figure 7). In its structure, the passage is essentially the same as any text painted or carved around a vessel's rim. We find it beginning with a date (3 Imix 14 Ch'en), and the verb is represented by the familiar God N head. The lu-bat comes next, replacing the u-t's 'ib seen on painted pottery, followed in turn by the possessed noun y-otot (yo-otot-ti), "the house of..." As we may expect, a personal name closes the passage. The house glyph here stands in the place of the Wing-Quincunx and related terms found on vessels, strengthening the interpretations of these glyphs as direct references to the objects upon which they are inscribed. The lintel of Yaxchilan was of course placed in an architectural setting, and its text "tags" the building with the name of the owner, "Lady Fist-Fish." In all respects, then, this is a true PSS.

The same text formula was used as a tag on clothing. In the celebrated paintings at Bonampak, one figure wears a skirt bearing two visible glyphs (Figure 8). Obviously these are but parts of a longer text that continues in a horizontal band along the back of the skirt to the opposite side. Note that the two visible blocks are, respectively, the initial glyph and the God N head familiar from the Standard Sequence. A more complete text appears on the clothing of the standing female portrayed on one side of Calakmuk, St. 9 (Marcus 1987: 162-163). We see in this short chain of glyphs many of the vital components of PSS: the initial glyph, t's'ib, and the hi-chi combination. Clearly these constitute one of the forms of the introducing passage of the Standard Sequence. It is interesting to note, however, that the most vital component, the possessed noun, is hidden behind a sash that falls from above. Like the glyphs on the skirt at Bonampak, this is a text that is not meant to be read. It is more a feature of the woman's dress that is included as another detail in her portrait. The ancient viewer, knowledgeable of this name-tagging formula, would not need to see all the components of this text. Conveniently for us, the name of the woman does continue from behind the sash, however, and so we have no trouble identifying her portrait.

From examples such as these it is best to see the PSS as a formulaic expression for the name-tagging of numerous types of objects from daily and ritual life -- drinking vessels, clothing, monuments, and presumably other artifacts. Declarations of material ownership seems a pervasive trait of the Maya nobility.
PAINTERS' SIGNATURES

The ts'ib hieroglyph, as we have seen, appears in pottery texts as a possible reference to painted decoration on pottery. But we have yet to mention another important context of the glyph. On some painted vessels, u ts'ib appears outside the PSS as the initial element in texts of varying length. The structure of such texts never varies: u ts'ib, "his painting...," followed by glyphs holding a personal name. The simple pattern can only be interpreted as an artist's signature. A brief glance at several examples of these putative "signatures" may allow us to recognize, by name, some of the celebrated artisans of Classic Maya civilization.

We begin with an illustration of one of the longest examples of this pattern, inscribed upon the lower edge of a vessel of unknown provenience that, as will be seen, may have come from the area of Naranjo, Guatemala (Figure 9). The u-ts'i-bi glyph is clearly recognizable at position X, but this is not a part of the PSS, which may clearly be seen at the upper rim of this vessel. Certain elements of the three glyphs that appear after u-ts'i-bi show us that these together constitute a personal name. Note in particular the i-ts'a-ti glyph imbedded in the block at Z, which very

Figure 9 Rollout drawing of inscriptions on a cylindrical vessel. The painter's signature has been separated out on the next page. (Figure 9a) After Coe 1973, no.47.
probably gives the word its'at, "artist, learned one." The block at A' reads a-ma-xa-ma, perhaps for ah maxam, "He of Maxam" (a place name?). Regrettably, we cannot read all the actual constituents of the individual's personal name at Y and the first part of Z. The protagonist's mother and father are named in the remaining thirteen glyph blocks. According to the text, the mother, named from C' to Q, is a lady from the site of Yaxha, Guatemala. The father's name, from S to W, is of very special note: as Coe notes (1973), it is the name of a ruling lord of the ancient city-state of Naranjo. We therefore see a simple two-part structure to this lengthy chain of glyphs: u ts'ib, "the painting of...," and an extended name phrase that includes information about the subject's immediate ancestry. Taken literally, and there is no reason not to do so, this second text must, I think, name the actual painter and calligrapher who decorated the surface of this elegant vase. The artist, or its'at as he is here called, was the child of the ruler of Naranjo. The signature on this vessel recalls the later documentary sources of central Mexico, such as the Relación de Texcoco and the Florentine Codex, that mention nobles and their common roles as scholar-painters. Mythic and iconographic evidence reveal that the role of the artist, or its'at, was a common pursuit among Maya royalty as well. The signature of the Naranjo prince is the most explicit confirmation of this supposition from the ancient sources. Personal signatures are very rare in the history of art. With only a few exceptions, (Attic vase painters come immediately to mind) ancient painters and sculptors preferred to remain anonymous. In most ancient traditions, the identity of the artist was altogether subordinate to the larger significance of the work itself. I believe that this is certainly true in most Mesoamerican traditions of art. Aztec artists, for all we know of their philosophical outlook and social status (León-Portilla 1959:258271), did not tag sculptures and paintings with markings that could be taken as personal signatures. The absence of artist's names is not due to the lack of a "true" system of writing in central Mexico. On the contrary, personal names were easily rendered in the Aztec script, even though in a somewhat simple system in light of Maya hieroglyphic writing. We must assume, therefore, that Aztec art was really never meant to be identified with the names of particular craftsmen. The sacred subject matter was not to be diminished by any intrusive, personal claim by the artist.

This makes the presence of signatures in Maya art all the more extraordinary. Early Maya sculpture and painting lack artists' names; signatures are only a characteristic of some Late Classic examples. Indeed, the span of time where we see sculptors' names at Piedras Negras lasts no more than 150 years. The signatures disappear with the onset of the Classic Maya collapse near 950 A.D. Within this short-lived period, we witness a profound deviation in the relationship between the artist and his work. Rather suddenly, the personal identities of painter and carver carries real significance for the art itself. For some reason that remains obscure, several painters of Late Classic times began to view their own names as impor-
tant features of the works they undertook to create. Within a short time the signatures fall away, and the artists are once again anonymous. The cultural and psychological factors behind such momentous changes are fascinating, and pertain directly to profound questions of how an artist, and the society of which he is a part, views his own craft.

HIEROGLYPHS AND THE PROVENIENCE OF VESSELS

It goes without saying that vessels lacking precise archaeological context limit our ability to understand these artifacts as cultural objects. But the inscriptions do allow us to identify the functions of some vessels and the names of individual artists and owners or patrons. Beyond this, glyphs do not hold many answers for reconstructing original provenience. Of course we have seen one vessel whose artist had family connections to the polity at Naranjo, and there is independent evidence that this and related vessels were manufactured at or near there (Reents-Budet 1987). Coe (1978:96) suggests that Naranjo was where all the vessels were illicitly excavated. But can we be sure that the grave robbers actually found all of these pots at Naranjo? This sort of question is important (and often ignored) for anyone who works with unprovenienced material bearing hieroglyphic texts.

But, to reiterate, hieroglyphs do not necessarily tell us that much about the original context of looted artifacts. To illustrate this point we need look no further than the excavation reports. Archaeological evidence suggests that Maya artists often traded their polychrome pottery far from their point of manufacture. Adams (1977:412-413) illustrates this point in his discussion of the vessels from Burials 96 and 128 at Altar de Sacrificios. On stylistic grounds, Adams concluded that 15 of the 19 pots in both burials “were imported from zones outside of the Altar de Sacrificios district.” These foreign vessels apparently were traded from the Middle Usumacinta region, the Central Peten, and the Alta Verapaz. I would not necessarily agree with Adams’ conclusion that these pots were originally brought to that site as funerary offerings. It seems just as likely, at least, that such vessels travelled over time, gradually coming to be owned by the deceased.

Another group of related vessels of early Tepeu date are surely by the same artist, one of these have been found in Burial 72 at Tikal (Coe 1965:39; Coggins 1975:Fig. 87) and another in Uaxactun Burial A23 (Smith 1955:Fig. 7f). A third pot by this artist is in the Kerr archive (No. 1288), and a fourth is in the collections of the Duke University Museum of Art (Bishop, et. al. 1985:Figs. 1a,b). The Tikal, Kerr, and Duke vases all name as their “owner” a Middle Classic Naranjo ruler called “Chief Double-Comb” by Closs (1985). It is very doubtful that Chief Double-Comb was the occupant of Burial 72 at Tikal, however. Similarly, it would be rash to conclude that the person named on the Uaxactun pot was the occupant of the tomb where the vessel was found. The same is true, I think, of any example of Maya pottery in funerary context. Archaeologists, including epigraphers and art historians, must therefore be careful in drawing their conclusions from information supplied by inscriptions on portable artifacts. With this said, it is quite conceivable that the three pots by Coe’s Naranjo painter originated from two or three burials, if not different sites altogether.

To summarize, very many Maya “funerary” vessels, including the three in Naranjo style under discussion here, were used to hold cacao beverages. Most pots were traded far and probably well used before finally resting in caches or with their owners in burials. Information provided by hieroglyphic texts on pottery can...
be very revealing about the persons who commissioned and decorated these vessels.

In briefly reviewing the PSS and artists' signatures on pottery, we see a reflection of the general advances made in recent years in the decipherment of Maya writing. Work in the specialized area of inscribed vessels has progressed rapidly, and will surely continue to do so. Of course, great credit for this must go to the availability of the Kerr archive of photographs. Publication of this monumental collection will surely lead to more exiting discoveries in glyphs and in most other aspects of ancient Maya culture.

REFERENCES

Adams, R.E.W.

Aulie, H. Wilbur and Evelyn W. de Aulie
1978 Diccionario Ch’ol. Instituto Lingüístico de Verano. Mexico, D.F.

Bishop, Ronald L., Dorie J. Reents, Garman Harbottle, Edward V. Sayre, and Lambertus Van Zelst

Closs, Michael

Coe, Michael D.

Coe, William R.

Coggins, Clemency

Houston, Stephen, and Karl Taube

León-Portilla, Miguel
1959 La filosofía nahuatl: estudio en sus fuentes. UNAM., Mexico, D.F.
<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perez, Juan Pio</td>
<td><em>Diccionario de la lengua Maya.</em> Merida.</td>
<td>1866-77</td>
</tr>
<tr>
<td>Schele, Linda, Peter Mathews, and Floyd Lounsbury</td>
<td><em>Parentage Expressions in Classic Maya Inscriptions.</em> Paper presented at the International Conference on Maya Iconography and Hieroglyphic Writing, Guatemala City.</td>
<td>1977</td>
</tr>
<tr>
<td>Wisdom, Charles</td>
<td><em>Chortl Vocabulary.</em> Unpublished manuscript.</td>
<td>n.d.</td>
</tr>
</tbody>
</table>