

**Mortuary Chocolate among the Ancient Maya:
An Iconographic Analysis of the Exemplar from the Spouted Vessels of Colha**

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by

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In this thesis, I investigate the iconography on a Preclassic spouted vessel (“chocolate pot”) from the Maya site of Colha, Belize. I begin by historically contextualizing the vessel’s form, which is generally believed to have been used to froth nonalcoholic chocolate drinks, and culturally contextualizing the ritual use of cacao, which appears in mortuary contexts because of its association with rebirth. I then discuss the association between chocolate drinks and gourd containers—an association that is mythologically based in early and contemporary Maya creation myths—which continues to bear out with the use of ceramic vessels that imitate gourds. Finally, I move on to the case study vessel, the iconography of which I break into three parts: the punctated band on the vessel’s shoulder, the quatrefoil extending from the punctated band, and the volutes extending from the lobes of the quatrefoil. I argue that the punctated band is an index of gourd skeumorphy, as the incising visually corresponds to a recent decipherment for gourd in the Classic Mayan hieroglyphs. The quatrefoil and volutes together represent an animated flower or cave mouth, or perhaps both, given that one represents life, and the

other, supernatural communication with ancestors and deities. After discussing these parts discretely, I discuss how they function as a single unit. The punctated band opens toward the spout, highlighting the rituality of the act of blowing into the vessel to produce froth. By doing so, the preparer breathed life into the drink so the drink might give new life to the partaking deceased. At the same time, the preparer's breath animated the vessel's iconography, activating its invocation to link the realms of the living and the supernatural and allowing the deceased to be born again into the world of the ancestors.

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Introduction

Colha is a unique site for exploring a slice of the long history of cacao's use in ancient and modern Maya mortuary rituals because of its large number of spouted vessels. Archaeologists from the Colha Project have discovered each of these spouted vessels in the context of burials, and three were shown to contain cacao residue (Hurst et al. 2002: 289). The spouted vessel collection features examples of modeled gourd effigies, as well as three incised spouted vessels. Of these three, one exhibits rather complex iconography for the period in which it was produced, the Late Preclassic (300 BC–250 BCE). In this thesis, I put the iconography of this one vessel in historical and social context: first, I discuss cacao and its evolution as a beverage, then its social context and ritual use. Finally, I discuss the relationship between cacao and gourd vessels, which share mythological ties to rebirth and birth, respectively, as I then argue that the punctated band on the vessel, as with other similar vessels, is an index of gourd skeumomorphy. The remaining iconography on the vessel—a quatrefoil extending from the punctated band around the vessel's shoulder, and wind volutes extending from each lobe of the quatrefoil—is related to the vessel's ritual use, tying together the concepts of the *axis mundi*, supernatural communication symbolized through watery portals to the underworld, breath-as-life, and rebirth.

An Evolution of Cacao and Chocolate Beverage Production

In 2002, when three Preclassic spouted vessels from Colha tested positive for theobromine (Hurst et al. 2002: 289), 600 B.C. became the earliest known date for cacao preparation and consumption in Mesoamerica. Even earlier evidence at Puerto Escondido pushed this date back to at least as early as 1100 BC (Henderson et al. 2007: 18937). Now, evidence from Paso de le Amada and El Manatí suggests even earlier liquid cacao consumption in Mesoamerica: Powis and colleagues report that the Pacific coast Mokaya people drank chocolate or cacao as early as 1900-1500 BC, while the Gulf Coast pre-Olmec people were doing so by 1750 BC (Powis et al. 2007). The preparation of these beverages in these earlier formative contexts—that is, whether they were made with chocolate or with cacao fruit—is poorly understood, but the development of chocolate drinks may be reflected by changes in the morphology of vessels used to store and prepare liquid cacao and the chocolate derived from its seeds .

The drink made from cacao fruit is not the same as that which is made from chocolate: with no apparent chocolatey flavor, drinks made from cacao are “mildly sweet and refreshing” (Green 2010: 318). Contained in large, football shaped pods, this pulpy fruit encases seeds which can then be processed to yield chocolate. Alcoholic “cacao chicha,” as Henderson and Joyce call it (2006: 140), is the alcoholic beverage that is produced by the fermentation of cacao fruit, which ferments naturally when left soaking in its juice (Green 2010: 320). In contrast, the chocolate drink that is generally believed to have been invented with the advent of spouted vessels is made from cacao seeds, which are allowed to ferment in their pulp, and are then dried, toasted, ground, and mixed with water (Henderson et al. 2007: 18937). In contrast to drinks made from fermented

cacao fruit, chocolate drinks are nonalcoholic. The question of which drink came first cannot be answered using gas chromatography-mass spectrometry, since both drinks leave the chemical signatures theobromine and caffeine (Henderson et al. 2007: 18939), but the shift in vessel types used for cacao beverage production at Puerto Escondido may support the theory that cacao beverages originated as a fruity alcohol rather than nonalcoholic chocolate (ibid.).

Circa 1400–1100 BC, bottles with long, narrow necks were used for liquid cacao storage at Puerto Escondido, Honduras (Joyce and Henderson 2010: 160). At this same site, a spouted vessel with theobromine residue was discovered, dating from 1000– 700 BC (Henderson and Joyce 2006: 143). The earlier vessel form would have only been suitable for storing and pouring the liquid cacao, but the later form would have allowed the preparer to froth beverages within by blowing into the spout. The spout on the vessel and many vessels like it are believed to have been used for frothing rather than pouring because of the steepness of the spout: in a laboratory reenactment, McAnany and colleagues have observed that a spout angled too steeply relative to a vessel’s rim makes the vessel ill-suited for pouring, as liquid would have spilled from the unrestricted main orifice of the jar (McAnany et al. 1999: 138). Instead, they suggest that “the spout channeled the flow of air into the body of the vessel...an action [which] would have aided the frothing of chocolate” (ibid).

Joyce and Henderson (2010) posit that the shift in vessel forms at Puerto Escondido points to a transition from using alcoholic cacao beverages to using nonalcoholic chocolate beverages. The fermentation of liquid cacao would have required much preparation in advance of feasting events; conversely, nonalcoholic chocolate

requires less planning to produce. Chocolate drinks are therefore better suited for being procured on short notice, as they may have served to “reduce the risk in hosting” (Joyce and Henderson 2010: 170). However, without the fermentation process that gives alcoholic cacao its froth—the most valued part of the drink (Coe and Coe 1996: 50)—nonalcoholic chocolate would need to be frothed mechanically. The shift toward non-alcoholic chocolate would have thus inspired the need for new means of producing the froth, a call to action that seems to have been answered by the innovation of spouted vessels.

As with the appearance of spouted vessels in the Preclassic period to meet the need for novel means of frothing, the disappearance of the spouted vessels in the Classic period is probably due to improved methods for frothing, or even changed attitudes about how the froth should have been produced. Various depictions of liquid cacao preparation on Classic vases show that “the process of frothing chocolate...was by pouring the liquid from one vessel into another to raise the foam,” while later processes of frothing, perhaps introduced by the Spanish, involved beating the chocolate with a *molinillo* or swizzle stick (Powis et al. 2002: 94). In a blog post titled “Forgetting Chocolate: Spouted Vessels, Coclé, and the Maya,” Houston writes that the practice of frothing by blowing to the practice of frothing by pouring “might have followed shifts in perceived hygiene,” though he concedes it would be “impossible to prove”:

Did some find it disagreeable to drink chocolate touched, perhaps, by another’s saliva...particularly that of a servant? Or was the change motivated by a need for heightened drama? I have seen this myself. On the north coast of Asturias, Spain...I once admired a waiter pouring cider from beaker to cup. Not a drop spilled as he drew the beaker further and further away, attaining at last an arc over a yard long. (Houston 2017)

The pour innovation in frothing, then, is not only associated with drama and performativity—analogous, perhaps, to this dramatic pouring of cider in Asturias, or even Japanese tea ceremonies—but also corresponds with the shift from using spouted vessels to using cylinder vases, the most elaborate of which are masterful polychromes designed to impress.

Social Context and Ritual Use of Cacao

While the social context of consuming cacao varies spatially and temporally, its status in these variable contexts as a ritual object remains consistent. At the early sites of Puerto Escondido (Henderson and Joyce 2006) and San Andrés (Seinfeld 2007), cacao beverages were consumed in aggrandized ritual feasting, while in contemporaneous Colha, cacao beverages are associated with mortuary ritual, as spouted vessels at the site have been found exclusively in burial contexts (Powis et al. 2002: Table 1). The use of spouted vessels in mortuary ritual appears to have been widespread in the area surrounding Colha: other Belize sites that have contained spouted vessels in burial contexts include Cuello (Kosakowsky 1987: 59, 65, 84), K'axob (McAnany et al. 1999: Table 4), Lamanai (Pendergast 1981; Powis 2000), and several others (for a comprehensive list, see Powis et al. 2002: Table 1).

In later Mesoamerican societies, there is more variation in the ritual use of spouted vessels: for “[those] for which we have data on social alliances, cacao was a primary object of exchanges between social groups, marking betrothal, marriage, and children’s life cycle rituals” (Henderson and Joyce 2006: 151) In the Late Postclassic, as recorded in the pre-Hispanic Mixtec Codex Nuttall, cacao is also shown in the aforementioned contexts, in addition to funerary and ancestor veneration ceremonies (ibid.).

Cacao has strong mortuary associations and uses in ancient and modern Maya burial practices because it is linked to beliefs about rebirth. It is one of the symbolic crops ideologized as the world tree, much like maize—and world tree renderings sometimes

conflate the two. To ideologize these plants as the world tree is to put them at the center of the universe, around which all else revolves and is sustained:

In Atiteco myth, before there was a world...a solitary deified tree was at the centre of all that was. As the world's creation approached, this deity became pregnant with potential life; its branches grew one of all things in the form of fruit...Eventually this abundance became too much for the tree to support, and the fruit fell. Smashing open, the fruit scattered their seeds; and soon there were numerous seedlings at the foot of the old tree. The great tree provided shelter for the young 'plants', nurturing them, until finally it was crowded out by the new. Since then, this tree has existed as a stump at the centre of the world. This stump is what remains of the original 'Father/Mother' (Ti Tie Ti Tixel), the source and endpoint of life. (Carlsen and Prechtel 2016: 27).

It is not surprising, then, that cacao and maize are conflated in representations of the Maize God (Martin 2006), and are now associated with Christ in contemporary Maya religion. In Ruth Bunzel's account of the K'iche' myths of Chichicastenango, cacao is the superlative ritual object because Christ himself ordained it (Bunzel 1952: 240-41). The blessing of ceremonial cacao offerings is called "Resuscitation of Our Lord" (Bunzel 1952: 232-33). For the K'iche' at the time of Bunzel's ethnography, then, cacao is likened to the body of Christ, particularly before and during the process of his resurrection.

McNeil (2010: 309) notes that the frequent depiction of ancestors as cacao trees or maize plants may be related to concepts of rebirth in contemporary Maya groups that "the soul of the dead is reborn to a new life" (Christenson 2001: 206). Drawing further from Christenson, McNeil (ibid.) explains that the Tzutujil Maya of Santiago Atitlán plant a tree over each grave, "representing the rebirth of the individual" (Christenson 2001, Fig. 6.37). Other versions of this practice involve the application of this rebirth ritual through the symbolism of the quincunx, an emblem of the world tree rather than a

tree proper. According to McNeil, “Cacao and other goods are commonly offered in sets of five in Maya ceremonies as the number 5 is tied to the concept of the quincunx, where offerings placed in a square represent the four corners of the Maya world and an offering placed in the center represents the axis mundi, which joins the world of the living with that of the Underworld and the heavens” (McNeil 2010: 310). Though this is enough to indicate that this practice may have been conceived as a way of joining the living world with the underworld in a passageway opened for the soul’s traversal, the mythological associations of cacao suggest even stronger links between cacao and rebirth.

McNeil concluded her chapter by suggesting that cacao offered to the deceased may have been “deemed necessary to awake and sustain the souls of the dead” (McNeil 2010: 312). Though nearly 2,000 years after the interment of Colha’s spouted vessels, the association of cacao with rebirth in the *Popol Vuh* may provide some insight on the role of cacao in Preclassic as well as Classic mortuary rituals. As Michael Grofe describes in his paper “The Recipe for Rebirth,” the freshly dead bodies of the Hero Twins are prepared in a manner that “parallels the complex, multi-stage process of refining cacao” (Grofe 2007: 11). Based on the pun that Grofe identifies between cacao and fish, he argues that the Twins’ rebirth as fish may be a metaphor for their rebirth as cacao. What’s more, after “their resurrection as fish-men in Xibalbá, the Hero Twins develop a special talent for being able to bring themselves and others back to life, and to raise buildings that have been burned down” (Grofe 2007: 55). This association between cacao and rebirth, of course, is further substantiated by ethnographic evidence of the link between cacao and the resurrection of Christ discussed in the previous paragraph.

The fact that cacao beverages tended to be consumed from gourd containers is mythologically explained in the *Popol Vuh*. As the story goes, Hun Hunahpu's decapitated head is placed in *Puk'b'al cha'j*: "this tree is said to be a calabash, or gourd tree (*Crescentia cujete*), and the skull of Hun Hunahpu, a calabash gourd" (Grofe 2007: 6). The calabash head of Hun Hunahpu, Grofe argues further, is conflated or confused with cacao, as the *Puk'b'al cha'j* tree is rumored in Xibalbá to be full of sweet fruit. Grofe postulates that "if the fruit in question is cacao, it would explain the rumors circulating in Xibalbá," but if it is in fact a calabash, "perhaps the [rumored] sweetness refers to the cacao beverage contained within it" (Grofe 2007: 7).

It is also worth noting that the calabash tree and the cacao tree exhibit cauliflory, a trait in which large produce grows directly from the trunk of the tree (Young 1994: 83–84). This unusual trait, which makes hanging fruit appear to resemble "heads hung in a tree" (Grofe 2007: 6), might have been acknowledged in a folk taxonomy in which these trees were thought of as being members of the same family, or at least counterparts in a form/function (cup/drink) relationship. As a cacao-calabash tree himself, "the Hero Twins may metaphorically represent cacao seeds," which the Lords of Death would later grind and drink (Grofe 2007: 10).

Though no cacao imagery has been discovered on the Preclassic San Bartolo murals, the calabash figures prominently in the San Bartolo North Wall as a site of fertility. Framed within Sustenance Mountain, five newborn babies emerge from a calabash, while just outside of Sustenance Mountain, the Maize God receives a flowering calabash from a man who has retrieved it from within the mountain. Quite literally, in both the San Bartolo murals and in the *Popol Vuh*, the calabash fruit contains the

potential for life: it bears children. This is even more literal among the Tzutujil Maya of Santiago Atitlán. When maize is sown, the inhabitants of Santiago Atitlán practice a ceremony “in which a maize drink called *maatx*, which to the Tzutujil represents semen,” is drunk from a calabash that represents a skull (Carlsen and Prechtel 2016: 31), probably a remnant of the Hun Hunahpu myth in the *Popol Vuh*.

To drink from the skull of Hun Hunahpu—or in earlier contexts like San Bartolo, simply the receptacle of life—one imbibes what is framed as a life-giving sustenance and may then be reborn. Only then is one fit for travel to the underworld, perhaps in the same way as the much later Hero Twins in the *Popol Vuh*. Like the underworld-defeating twins, who were conceived by way of the life-giving saliva of their calabash father, the deceased’s symbolic partaking of the calabash’s liquids may have been thought necessary in facilitating travel to the underworld and allowing successful passage therein.

Throwback to the Ancestral Container: Gourd Skeumorphy in Clay Vessels

Gourds were scraped and dried for food storage before ceramics were used in ancient Mesoamerica, and they continue to be used alongside clay vessels today. Ceramic technology manifested in the region during the Barra ceramic phase (1900-1700 BC), a morphologically distinct phase during which gourds were essentially reproduced in clay:

Barra ceramic technology copied the styles of fancy gourd vessels and was adopted for competitive social display—perhaps linked to feasting (Clark and Blake 1994). Most Barra phase pottery consists of flat-bottomed tecomates (neckless jars) or deep, incurved bowls... These ceramics were not designed for cooking, but for holding liquids, presumably beverages such as chicha (corn beer), chocolate, or atole (a drink of ground corn and chocolate). (Powis et al. 2007)

Skeumorphy, both of gourd-reminiscent pottery and in general, has been discussed at length by Stephen Houston (2014: 31–73). More than a human compulsion toward mimesis, the representation of one medium as another may “result from nostalgic emotion, the pull of traditions perceived to be invariant” (Houston 2014: 58). Other explanations include “a search for permanence,” “ludic wit,” “metaphoric and semantic marking,” “contrastive value,” and “claimed transubstantiation” (ibid.). Though none of these motivations should be discounted more than any other, “metaphoric and semantic marking” may be a particularly salient force behind gourd skeumorphy in ancient Maya pottery.

As Houston explains, in cases of metaphoric and semantic marking, “the creation of objects or buildings fits within local linguistic or conceptual notions of resemblance and divergence” (ibid.). Like the Spanish word *jícara*, from Classic Nahuatl *xicalli*, it may be that the Classic Mayan word *tzimaah* (“gourd” or “jícara,” proposed in Stuart 2018) underwent semantic broadening, if it can be called that. Like *jícara*, the word

tzimaah may have originally referred simply to the calabash (also called bottle gourd, or *tecomate*)—and thus to the dried calabashes used as containers for hot ritual drinks like cacao or atole beverages—later broadening to refer to ceramic containers that carried on the function of the former gourd containers (Stuart, personal communication 2018). If ceramics were simply “carr[ying] the function” of gourds “into [a] new form” (Houston 2014: 57), then making certain ceramics gourd-like may have been a visual way of keeping earlier rituals of consumption alive, similar to the way that phones today visually and auditorily harken back to landlines in spite of being materially updated.

Though calabashes originated as general food containers, cacao preparation and presentation was, and still is in some modern communities, linked particularly to gourd containers, whether organic or ceramic. According to Green, “Most Maya drank atole from gourd bowls. These light bowls made of the scraped and cleaned half hulls of the calabash tree (*Crescentia cujete* L.) are widely used today for atole or chocolate. Some elite atole drinking vessels in the past were made of clay and a few resemble gourds” (Green 2010: 323). It is not surprising, then, that vessels related to drinking or preparing cacao are often gourd skeumorphs. Moreover, the possible ritual associations of calabash containers with birth and rebirth is likely the reason for the stability of their use in cacao consumption.

Food storage containers modeled after calabashes would have been simple enough for potters to achieve. When scraped and dried, calabashes are spherical with incurving rims. “Tecomate” bowls (named after the *tecomate*, or calabash) were sculpted in this same form. In contrast to pottery styles that emulated the calabash were gadrooned vessels molded into distinctly ribbed squash shapes. Though more morphologically

complex, these vessels were common enough in ancient Mesoamerica, especially among vessels with spouts. Since these fleshier types of soft-shelled squash do not lend themselves very well to being scraped and dried, vessels emulating these seem to index gourds more broadly, of which the soft-shelled are most iconic. Perhaps after some time, incurving ceramic bowls (“tecomates”) no longer brought to mind the gourds after which they were originally modeled, but were food storage containers in and of themselves, calling to mind only other ceramics of the same type. Thus overstressed gourd skeumorphy in ritual beverage receptacles—with technically incorrect features suggesting ribbed, soft-shelled gourds rather than hard-shelled gourds—may have served to visually reinforce the gourd origins from which they were likely distanced in the absence of more marked skeumorphy.

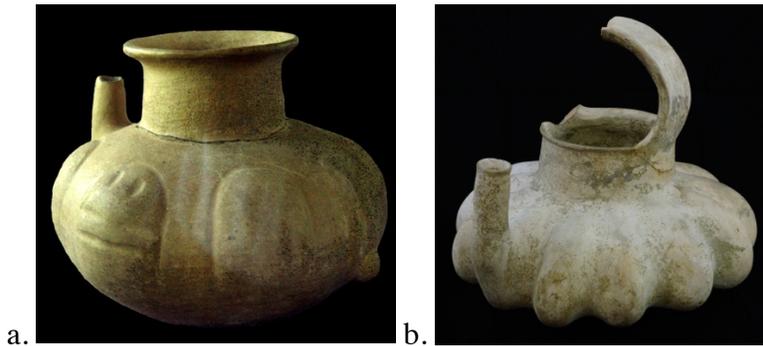


Figure 1. Spouted vessels with soft-shelled gourd flutes. a) Spouted vessel from Northern Honduras (Henderson et al. 2007: 2), b) Spouted Huastecan vessel (photo by Bruce Templeton, courtesy of the Center for Archaeological & Tropical Studies).

The Colha Spouted Vessel Collection through a Case Study on its Exemplar

A comprehensive description of the Colha spouted vessel collection is included in Valdez (1987), where ceramics excavated from Colha between 1978 and 1986 are described, including the eight spouted vessels that were excavated from Colha during this time. Other descriptions of the Colha spouted vessel collection are included in Anthony (1987), Anthony and Black (1994), Potter (1980, 1982), and Sullivan (1991). Additionally, the collection, in part or in whole, will be 3D-modeled by the author on Agisoft Metashape and then published online for public use, somewhat concurrently with the completion of this thesis.

In this section, I will focus on unpackaging the iconography on a single vessel from the collection (Fig. 5c), to which I refer from here on as the spouted vessel collection exemplar, or simply, the exemplar. The metaphors invoked in the exemplar's iconography may be visually unique to the vessel, but the cultural meanings therein may extend to the other spouted vessels in the collection, as well as spouted vessels associated with mortuary ritual at other sites. Its iconography can be parsed into three distinct features: the punctated band around its shoulder (Fig. 2), the quatrefoil extending from the punctated band (Fig. 6), and the volutes extending from the four lobes of the quatrefoil (Fig. 9).

The Punctated Band: A “New” Gourd Skeumorph

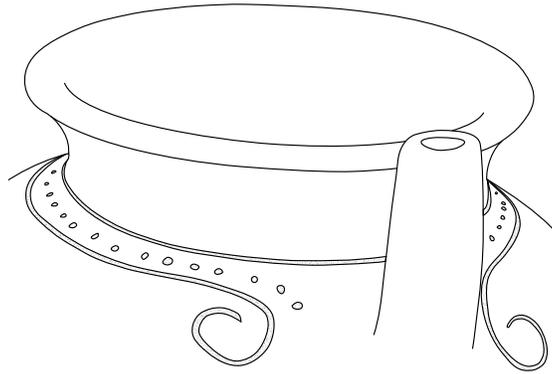


Figure 2. The punctated band incised on the exemplar from the Colha spouted vessel collection, front view (Illustration by author, courtesy of the Colha Project).

Three spouted vessels from Colha feature soft-shelled gourd flutes (Fig. 3), but two others exhibit incised punctated bands around the shoulders (Fig. 5a, c), and one other an incised band around the shoulder along with what are probably incised abstractions of gourd flutes (Fig. 5d). Incised punctated bands are common on Preclassic ceramics, but the potential signifying value of such decoration has not been sufficiently analyzed. I argue that punctated bands circling gourd-shaped bowl rims or gourd-shaped vessel bodies may in fact index gourd skeumorphy.



Figure 3. Gadrooned, gourd-shaped spouted vessels from Colha. a. c) Unnamed black and fluted spouted vessel (Valdez 1987: 105; photo by Bruce Templeton, courtesy of the

Colha Project). b. Unnamed black, fluted, and red stuccoed spouted vessel (Valdez 1987: 109; photo by Bruce Templeton, courtesy of the Colha Project). c. Unnamed red and modeled spouted vessel (Valdez 1987: 121; from Valdez 1987: 24a, 24b).

The first line of support for this argument is the fact that both dried gourd vessels and ceramic gourd skeumorphs are already particularly linked to cacao drinking and preparation. The second line of support is based in David Stuart’s recent decipherment for gourd, *tzimaah*. The **tzi** syllabogram also functions as the logographic **TZIMAAH** (Stuart 2018), from which its syllabic value is presumably derived. Not only does this sign have a logographic reading, but one of its variants (the “spotted kan” sign) is also iconic of artistically rendered gourds, as Stuart (2018) points out in an image of vessel K1453 (Fig. 4a).

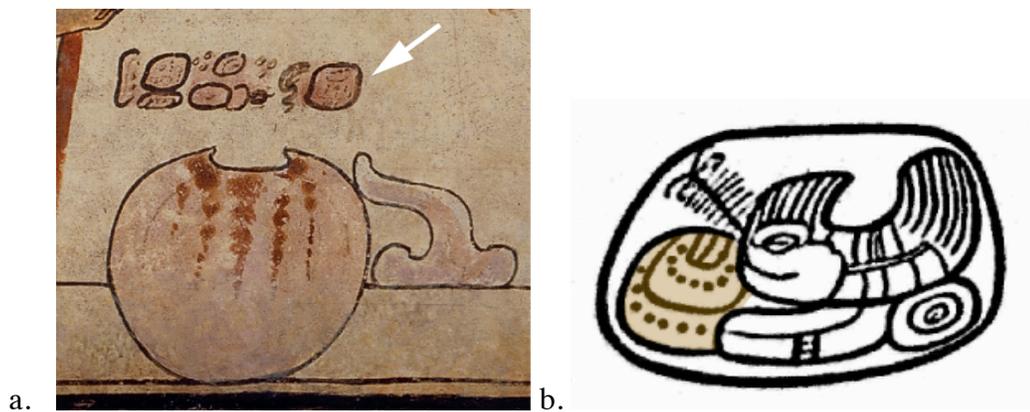


Figure 4. Variants of the gourd logogram. a. **TZIMAAH** written above a gourd on K1453 (from Stuart 2018). b. Glyph cluster, reading “ta tzimaah(?) kakaw,” “for gourd-cacao(?)” (transcription, translation, and image from Stuart 2018; color on **TZIMAAH** my own).

Other **TZIMAAH** variants, perhaps less iconic than that featured in Fig. 4a, nonetheless feature a ring or two of dots around their mouths, sometimes framed by a set of parallel lines (Fig. 4b). In other words, these variants of **TZIMAAH** appear to exhibit punctated bands. Because of where these bands tend to appear on vessels—shoulders on necked jars and rims on neckless jars and bowls—they seem to delineate where the top of

the gourd has been severed. This particularly makes sense with necked jars, since dried gourd vessels were neckless; the neck clearly exceeds the boundaries of the gourd body being evoked. The incised band around the shoulders of the Colha spouted vessel pictured in Figure 5d, though without punctuation marks, appears to have this same function of gourd body demarcation. Once the band on the vessel is read this way, the playful semi-circular incisions on its body seem like abstractions of fluting, which become more apparent when compared with a vessel like that shown in Figure 1a.

Having said all this, the potential for punctated bands to index gourds in the context of ceramic vessels is probably oblique. The dotted line that sometimes encircles the mouths of gourds, as in some **TZIMAAH** variants, is probably not functionally all that different from dotted lines encircling open mouths in general. Examples of the latter include depictions of dotted lines encircling the centers of flowers, rimming the interiors of open spondylus shells, spanning the bony centipede-maw-as-portal-to-the-underworld, and marking the snout of the dog glyph (**OOK**) and other similar mammalian glyphs.

It is not clear whether this mouth-centric use of dotted lines signifies in the same vein as dotted lines used to represent “rough, corrugated surfaces, including testicles and turkey wattles as well as cacao pods,” which are usually evident on the logograms depicting them (Ogata, Gómez-Pompa, and Taube 2006: 87). On gourd logograms—though not all variants have horizontal lines of dots like we see with the exemplar—all variants do have lines of dots. In the “spotted **KAN**” variant, which is more common than the variant with horizontal bands, three such lines spray outward from the gourd’s mouth, probably stylistically representing the fluting present on many soft-shelled gourds. Dotted lines have also been used to delineate wrinkly skin surrounding macaw eyes, emphasize

barbing on stingray spines, and, perhaps—as in stone (**TUUN**) and flint (**TOOK'**) glyphs—suggest concoidal fractures on rock.

The signifying function of dotted lines in mouth-centric contexts and dotted lines in rough-signifying contexts is not mutually exclusive, of course; roughness may be the primary meaning of the motif, and is perhaps the motivation in mouth-centric contexts. In the examples cited in the previous paragraph, flower centers are hairy, spondylus shells spiny, bones bony, and dog snouts whiskery. Perhaps the variation of dotted lines on **TZIMAAH** playfully signified the representation of different kinds of gourds. Vertical band variants may have represented soft-shelled gourds, while horizontal band variants may have represented calabashes, with dotted lines surrounding the point of severance to emphasize that the top of the calabash has been cut off, thereby producing a rough edge.

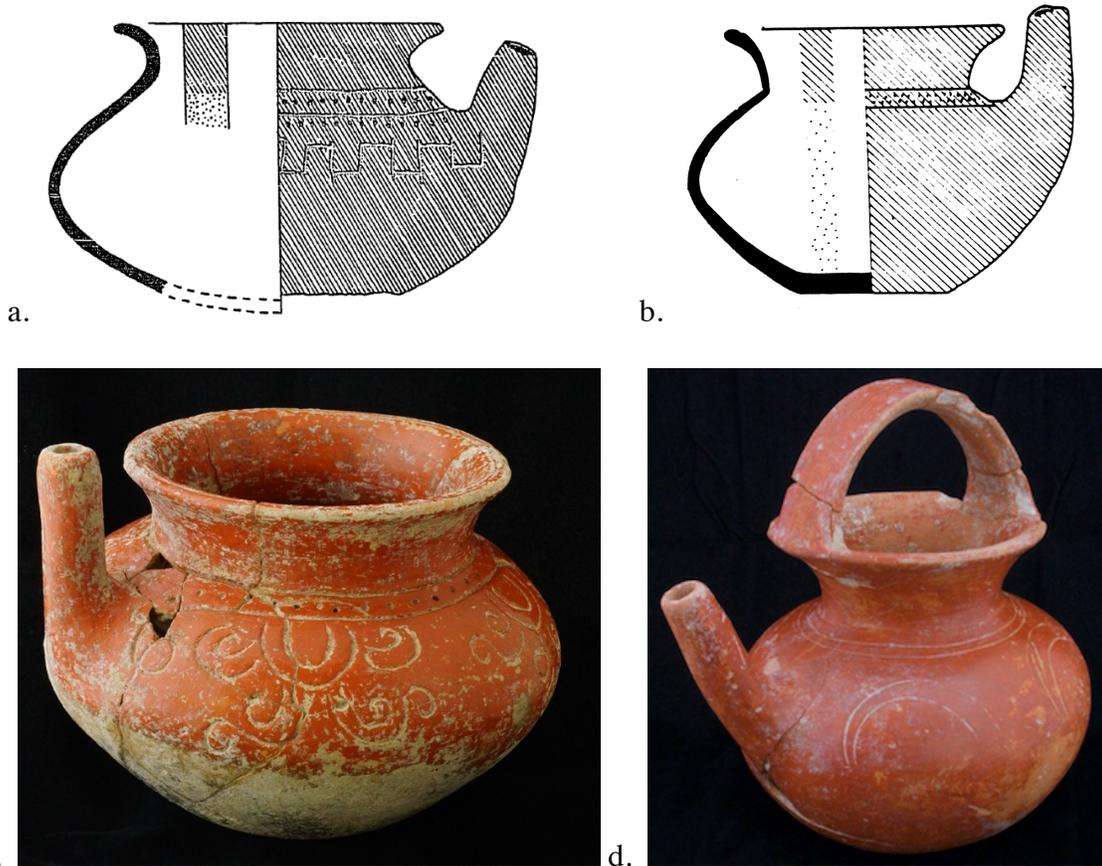


Figure 5. Incised spouted vessels. a. Spouted vessel from Colha with incised and punctated band around shoulder dating (from Valdez 1987: 27a). b. Spouted vessel from Cuello with incised and punctated band around shoulder (Kosakowsky 1987: 6.29d). c. Spouted vessel from Colha with incised and punctated band around shoulder (Photo by Bruce Templeton, courtesy of the Colha Project). d. Spouted vessel from Colha with incised band around shoulder but no punctation (Photo by Bruce Templeton, courtesy of the Colha Project).

The Quatrefoil: Flowers, Caves, and the World Tree Quincunx

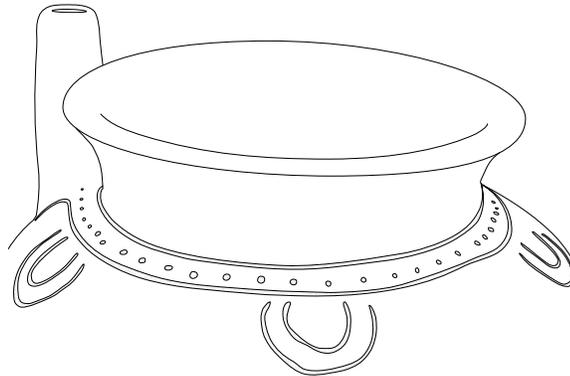


Figure 6. The quatrefoil incised on the exemplar from the Colha spouted vessel collection, back view (Illustration by author, courtesy of the Colha Project).

Initially, I believed the punctated band and the four U-shapes extending from it formed a composite sign that was a prototypical skyband, as each U-shape appeared to me to be the bottom part of an IK' ("wind") sign. The top of the IK' signs—usually a short horizontal band—was in this case the single band that unified all four. At least one example of a spouted vessel with a skyband exists—the Diker Bowl (Doyle 2016)—and its skyband is even composed of IK' signs. I proposed the skyband reading to David Stuart, but he suggested that the U-shaped appendages are floral (personal communication, 2018). Since there are four of these U-shapes—which are even petal-like—they form a quatrefoil or quincunx from above, symbolizing the *axis mundi*.

The symbolism of flowers, quatrefoils, and quincunxes in ancient Mesoamerican ontologies are distinct, but often overlap (Stuart 1992; Taube 2004; Guernsey 2010).

Quatrefoils without discrete centers are particularly associated with cave openings and the watery underworld accessed therein (Guernsey 2010: 75), while quincunx shapes and arrangements evoke the sacred center, i.e., the center of the universe: the *axis mundi* or world tree that links the three layers of the cosmos (McNeil 2010: 310). Flowers in front view can be depicted either as quatrefoils or quincunxes, often accompanied by four sets of breath or scent scrolls (Fig. 7). In profile, they are often represented as trefoils, and some floral jade ear spools are **IK'** shaped when depicted in profile. The **IK'** sign, in fact, probably originated from the archetypal iconography of floral jade ear spools (Taube 2005).



Figure 7. Breath scrolls emanating from quatrefoil flowers. a. Quatrefoil flower with **IK'**-shaped wind scrolls from House E, Palenque (from Houston and Taube 2000: 5i). b. Early Classic flower from the Deletaille tripod (from Houston and Taube 2000: 5f). c. Flower from Late Classic vase (from Houston and Taube 2000: 5h).

Though the “petals” of the quincunx on the vessel visually correspond with floral quatrefoils, the composite band-and-four-petals sign is not necessarily a flower. The possibly floral lobes simultaneously evoke the more basic quincunx, and its symbolism of the world tree. Cacao, both materially and iconographically, coincides frequently with world tree and quincunx iconography: the cacao tree is commonly represented as the world tree in ancient Maya art, while cacao pods are arranged in quincunxes both in ancient Maya art and contemporary Maya practice. However, representations of cacao as the world tree tend to appear outside the context of immediate cacao consumption,

whereas cacao quincunxes are particularly linked with cacao consumption and cacao ritual practice.

Examples of the link extend beyond ancient Mesoamerica, evidenced by one container from Peru (Fig. 8a), a Tembladera-style vessel with four cacao pods protruding from around the shoulder (Ogata et. al 2006: 83). Early Classic and Late Classic Maya vases have similar motifs: the lid on Kerr vase 7456 has four modeled cacao pods arranged around a monkey holding a fifth (Fig. 8b); Kerr vase 8234 features a repeating motif of a monkey surrounded by what appear to be four cacao pods (Fig. 8c); and, as pointed out by Green, Kerr vase 2777 (Fig. 8d) is painted with “repeated clusters, possibly of cacao fruits, in a quincunx pattern with a cross-cut pod as the center” (2010: 323). If the clusters on K2777 are cacao pods, they are uncharacteristically round, in contrast to the distinctive almond shape that is usually used to depict cacao pods. That said, the interior detail of the presumed pods—a line of dots—are frequent markers of cacao pods. What may be happening on the repeating motifs on K2777 is a conflation of cacao and floral iconography, with the image consisting of three visual layers: the five cacao pods, a quincunx, and a floral quatrefoil.

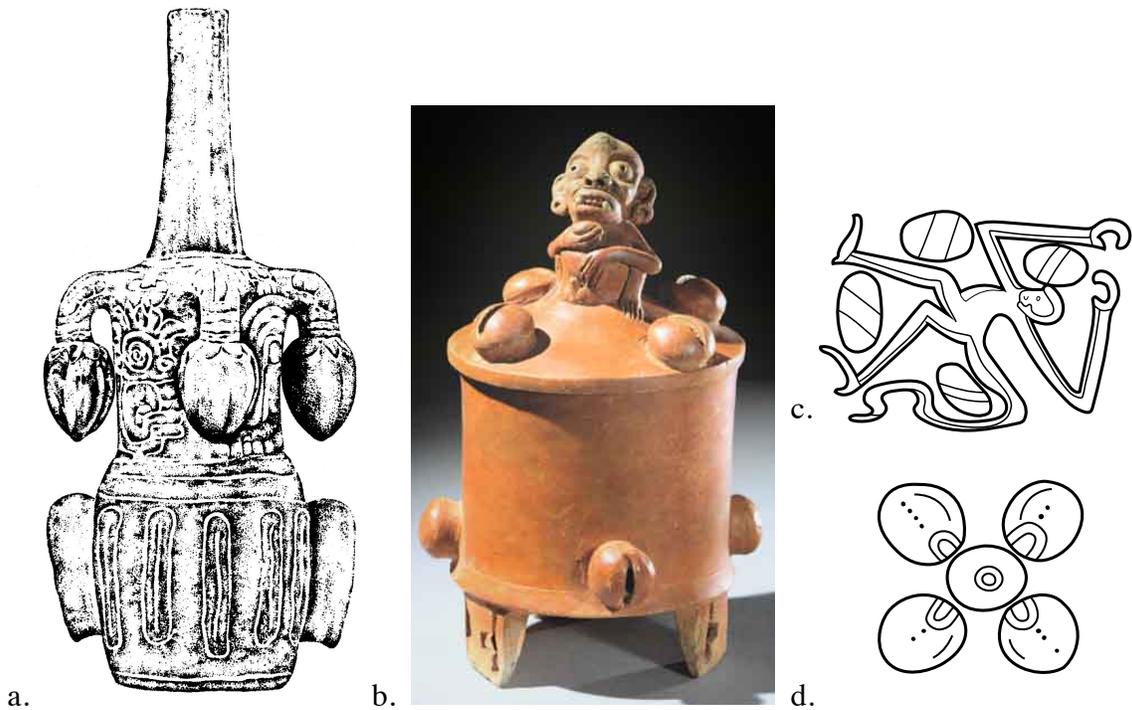


Figure 8. Depictions of cacao pods in quincunx arrangements. a. Tembladera-style bottle with spider monkey incised on trunk and cacao pods sprouting from shoulder (Illustration by Kata Faust after Bonavia 1994: Photograph 6). b. Early classic tripod vessel (K7456) with monkey and cacao pods (photo by Kerr). c. Monkey and cacao detail from vessel K8234 (Illustration by author after Kerr). d. Cacao quincunx detail from K2777 (Illustration by author after Kerr). For a discussion of the association between cacao and monkeys, see Ogata, Gómez-Pompa, and Taube (2006: 86–89).

The Volutes: Life, Breath, and Rebirth



Figure 9. The volutes, quatrefoil, and punctated band incised on the exemplar from the Colha spouted vessel collection, back view and front view (Illustration by author, courtesy of the Colha Project).

Frothing a cacao beverage by blowing air into it through a spout seems inherently imbued with the ritual performativity that might be suspected of a practice consisting in animation achieved through breath and breathing, so it is no coincidence that the volutes extending from the four lobes around the exemplar's punctated band appear to be wind volutes. To further highlight the equivalence of the performativity of frothing with breath, the bottom line forming the punctated band is not continuous, but opens toward the spout, curling outward at the ends in a manner reminiscent of the wind volutes on the rest of its body. This iconography seems to point to the act of breathing/frothing as an integral part of the object's ritual use. The mortuary context of such ritual use, which has already been shown to relate strongly to concepts of birth and rebirth, suggests that breath may symbolize a vital step in the beverage's preparation because breath serves to animate the beverage—and its drinker by extension—with life, or new life, in the deceased's case.

For the ancient Maya, and several Maya groups today, breath was and continues to be conceived of as the life essence, or life force. Guiteras-Holmes describes the *ch'ulel*, or Chenalhó Tzotzil concept of the inner soul: "It is as air...It is the impalpable essence of the individual" (Guiteras-Holmes 1961: 296). In Mam belief, "breath constitutes the soul essence [of the inner soul], which continues after death" (Taube 2004: 72). Finally, the Ch'orti believe that "the wind gods blow life-giving breath into the newly born child and remove it at death" (Taube 2004: 72). For the Classic Maya, too, breath symbolized life itself: one of the most common death phrases in inscriptions refers to "the expiration of the breath soul" (Taube 2004: 74).

Wind volutes, especially in sets of four, frequently coincide with quatrefoil imagery, both in representations of flowers and caves. Quatrefoils in the Preclassic were

explicitly linked with open mouths (Guernsey 2010: 77; Fig. 8), connoting entrances into the earth. As a cave or earth mouth breathes, so too does a flower, its scent an index of its breath (Stone and Zender 2011: 223). This similarity between caves and flowers (in that both are conceived as quatrefoils and as things that live and breathe)—along with the shared ability of caves and the *axis mundi* to pierce the cosmos—is what poses difficulty in divorcing the concept of the quincunx (*axis mundi*), the basic “mouth” quatrefoil associated with supernatural communication (caves), and floral quatrefoils (flowers conflated with caves).

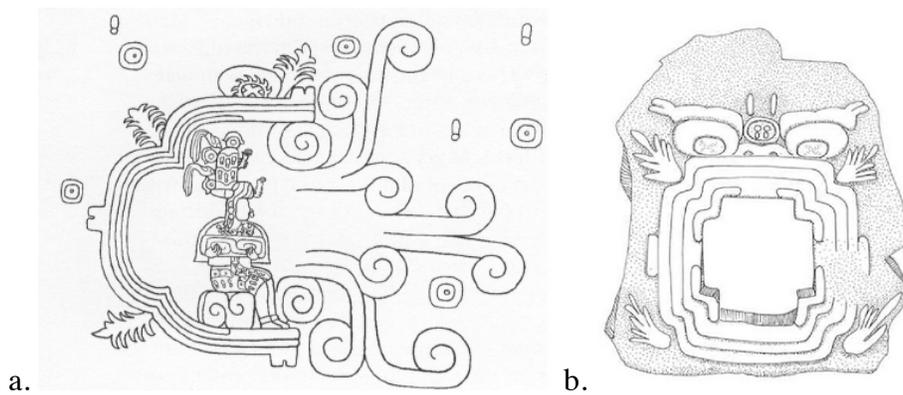


Figure 10. Animated cave quatrefoils. a. Chalcatzingo Monument 1; ruler seated in exhaling quatrefoil cave (from Taube 2004: 18d). b. Chalcatzingo Monument 9; quatrefoil as open mouth (from Guernsey 2010: 3a).

At the same time, it is likely that the exemplar’s visual confusion of these separate symbols is an intentional conflation serving to integrate the interrelated concepts of each into a visual and conceptual metaphor. The animation of the exemplar’s contents may have simultaneously animated its iconography, symbolically triggering the piercing of the world tree into the world below, or the opening of a quatrefoil portal to the underworld, or the proliferation the sweet fragrance escaping from the vessel, alluded to in the incised whorls of floral scent. While unique to the collection exemplar, this iconography may be an illustration of general beliefs surrounding cacao use in mortuary rituals at Colha.

These beliefs may not be as clearly spelled out on the other Colha spouted vessels or on spouted vessels generally speaking, but it may be that many of the conceptual metaphors and overlapping realms of meaning (between birth, rebirth, life, and death) would have been understood in the context and use of spouted vessels in mortuary rituals.

Conclusion

I have argued that incising on three of Colha's spouted vessels are skeumorphic of the gourd containers that preceded ceramic technology. This incising visually corresponds to a recent decipherment for gourd in the Classic Mayan hieroglyphs. The Colha exemplar in particular conflates this gourd skeumorphy with a quincunx, a floral quatrefoil, and iconography of the ancient Maya literalization of life force: wind, or breath. Given their mortuary context, the vessels are generally believed to have been used in mortuary ritual. Based on my reading for the exemplar, as well as evidence from Classic period and contemporary mortuary rituals, I argue, finally, that the act of preparing cacao was integral to the rituals for which the vessels were used. In the case of the exemplar, by blowing into the spout of the vessel in order to froth the cacao beverage, the preparer animated it with life, and by extension, animated the world tree that framed its contents—linking the realms of the upper, middle, and underworld and allowing the deceased to be born with new life into the world of the ancestors.

Though the interpretation I provide is specific to the exemplar, the general cultural meanings surrounding its iconography have persisted in various contexts into the Classic, Colonial, and modern day. Little has been said of what the ritual use of spouted vessels in mortuary contexts might have looked like; rather, it is simply assumed because the vessel forms are rare and are frequently discovered in burials. Discussions of mortuary ritual are inherently speculative given our inability to reconstruct them. However, the associations between chocolate and calabash vessel forms with birth and rebirth, between the quincunx and quatrefoil with supernatural travel and communication, and between breath and the soul or animation, are substantiated by material, epigraphic,

and ethnographic evidence. Perhaps these associations, which are so neatly spelled out on the exemplar, generally represent ideas about how spouted vessels were used in mortuary practice in other contexts, as well.

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