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Observations on the Morphology of Sprouts in Olmec Art

by

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Several authors have noted the presence of botanical imagery in Olmec art, especially in the headdress of a deity represented on a number of objects, God I (Fig. 1) (Joralemon 1971,1976). In his seminal "Study of Olmec Iconography" of 1971, David Joralemon pointed to the cleft elements in these images as representations of vegetation and identified the small circular elements which often appear in the headdresses as "seed corn dots." (Joralemon 1971:13) The subsequent studies of the headdresses of Olmec and Maya kings by Virginia Fields concluded that the central element of these headdresses is specifically maize, citing the clear representation of a maize ear and flanking vegetation (Fields 1991:168-169) on a celt from El Sitio, Guatemala (Fig. 2).

Fig. 1

Fig. 2

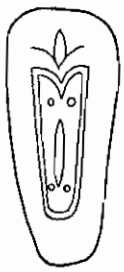

Fig. 3

The incorporation of the prominent maize imagery of the supernatural headdresses into those of human rulers, Fields argues, proclaims the rulers' control over the forces of agricultural fertility (Fields 1991:167). In this note, I propose a broader interpretation of the meaning of Olmec headdresses, as their botanical imagery can be identified not only as maize, but also as trees and/or beans and squash.

In addition to their appearance in the headdresses of Olmec supernaturals and kings, botanical elements also occur in a number of diagrams having the form of a quincunx. As Joralemon (1971, 1976) has shown, these diagrams may be as complex as the expanded version on an Arroyo Pesquero celt (Fig. 1), or as simple as the abbreviated version shown on a celt from La Venta Offering 1942-c (Fig. 3). In fact, Fields (1982) has shown that the four cleft elements which surround the Arroyo Pesquero figure are incorporated into the headband as the paired elements

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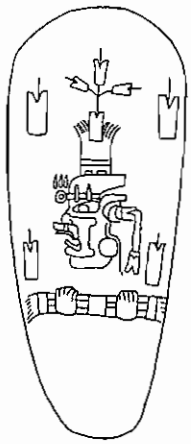


Fig. 4

that often appear on either side of the headband, as on another celt from Arroyo Pesquero (Fig. 4). The central plant form of the headdress derives from the central plant on the deity heads. Kent Reilly (1987, 1991) interprets the quincunx arrangement of the plant elements as a model of the Olmec cosmos, the deity in these images being the personification of the center axis of the world or world tree. Thus, kings wearing the attributes of this god, including his headdress, "center" themselves and become the incarnation of the world tree. Regarding the identity of the cleft elements, Virginia Fields (1991:169), following Joralemon (1971:13), suggests that they are representations of leaves. Linda Schele (1992), however, maintains that they are seeds. I follow Schele's interpretation for two major reasons. First, on the Arroyo Pesquero celt in Fig. 2, the cleft elements are marked with eyes. According to Brian Stross, the word for "eye " can be reconstructed as *wit am*, or "face seed" in proto-Mixe-Zoquean, likely the language of the Olmecs. Thus, as Schele (1992) points out, the eyes on the Arroyo Pesquero celt cleft elements could serve to identify the elements as seeds. Further, on the Arroyo Pesquero celt above (Fig. 4), the plant on the head of the central deity both emerges from and produces cleft elements. Under normal conditions, leaves would not produce plants directly; only seeds could be expected both to produce and to be produced by a plant. A third, and I think less convincing, reason why the cleft elements should be considered seeds is that the it is a widespread Maya practice to plant seeds in a quincunx pattern in sets of four or five (Stross On.d.:10-11).

But what kind of seeds are these? Although the EL Sitio celt clearly shows that maize is one of the products which springs from the cleft seed. the sprouts on other examples are not obviously maize. As Schele (1992) has noted, the Olmec sprouts may be divided into three types: single sprouts, sprouts with three leaves, and, more rarely. sprouts with two leaves. A celt from La Venta Offering 1942-c (Fig. 5) shows five sprouts of the first type. The trifurcated sprout appears

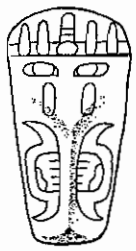


Fig. 5

commonly in the center of the headdress, for example on a celt from Las Tuxtlas, Veracruz (Piña Chan and Covarrubias 1964:fig. 1) and on the greenstone figure at Dumbarton Oaks (Fig. 6). Carved representations of the center gods from Teopanticuanitlan (Fig. 7) have trifurcated sprouts in the center of the headbands flanked by pairs of single-sprout seeds. The bifurcated sprout appears, for example, on the Chalcatzingo incised grayware vessel sprouting from the head of the central deity inside the bundle (see Joyce et al. 1991:fig. 2).

Fig. 6

Interestingly, from a botanical point of view, the bifurcated and trifurcated sprouts cannot represent maize- Maize belongs to the sub-class of angiosperms, or flowering plants, known as monocots, that is, plants the embryos of which have only one seed leaf, or cotyledon. When monocots such as maize sprout (Fig. 8), their leaves unfurl in a spiral pattern so that no two leaves occur opposite each other along the stem. On the other hand, the other sub-class of angiosperms called dicots is characterized by sprouts having bifurcated or trifurcated forms. This is because the dicot, by definition. has two cotyledons. When a dicot sprouts,

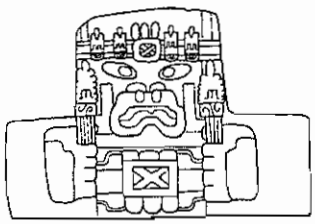


Fig. 7

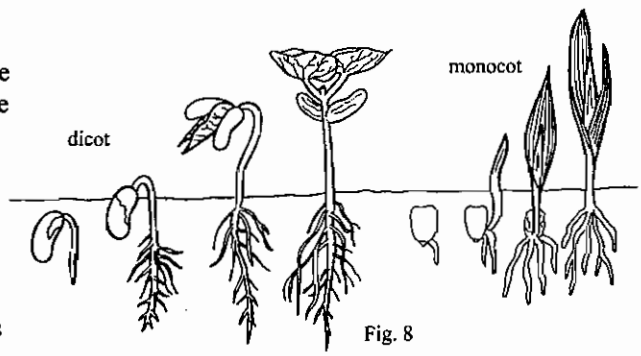


Fig. 8

then, the true leaves emerge from between the pair of opposing cotyledons (Fig. 8). I suggest that the bifurcated sprout in Olmec iconography represents the newly sprouted dicot before the true leaves appear, and that the trifurcated sprout represents a dicot at a slightly later stage, when the first true leaves begin to emerge from between the cotyledons. This suggestion may be supported by the observation that the branched forms of several of the plants sprouting from headdresses or the heads of center gods are very close to the form of the branch held by the figure on the stela from El Viejón (Fig. 9; compare with Fig. 10, another celt from Arroyo Pesquero). If this branch may be interpreted as a cutting for making fences or grafting, as Schele (1992) has recently suggested, then this supports the idea that the trifoliate and branched sprouts are dicots, for, as far as I know, all the plants cultivated by vegetative cuttings in Mesoamerica would be dicots. In addition, if the plant which springs from the center of the headdresses and from the head of the center god represents the world tree. This also strengthens the case for dicots because the tree species which are the best candidates for the canonical Olmec world tree, including the ceiba, are dicots.

Fig. 9

Fig. 10

Especially strong evidence favoring the dicot identification of trifurcated plant forms in headdresses appears in Zapotec iconography. In several representations, the god Cociyo is shown wearing a headband derived from Olmec iconography (Fig. 11). In most of these examples, the center sprout of the headband is shown with a single leaf. However, in certain noncalendrical versions of glyph C, which are iconographically related to the Cociyo headbands, trifoliate sprouts appear (Fig. 12; see Urcid 1992). The leaves of these sprouts are shown with branched veins, confirming their identity as dicots, as branched veins are typical of dicots. parallel veins of monocots.

In sum, it would appear that the single sprouts in Olmec art represent a monocot, the most likely candidate being maize, while the bifurcated and trifurcated sprouts are stylized representations of dicot sprouts. In addition to representing trees, it may be that the bifurcated and trifurcated sprouts are meant to symbolize the other two major cultigens in traditional Mesoamerican agriculture, beans and squash. which are dicots. We know that at least one of these plants, squash. was an especially important symbol of agricultural fertility, for a more-or-less anatomically accurate version appears in the bas-reliefs at Chalcatzingo. Because the plants in the Olmec headbands are represented in deliberately ambiguous ways, it would seem that the sprouts are not meant to represent a single speeies. It is instead possible that the depiction of single, double, and triple sprouts represents Mesoamerican agriculture in the sense of milpa farming. The different c]asses of sprouts signify the two different sub-classes of angiosperms, members of which make up the great Mesoamerican agricultural triad.

Fig. 12

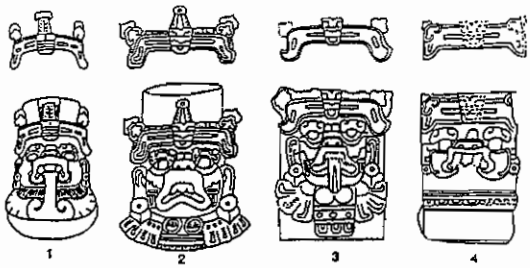
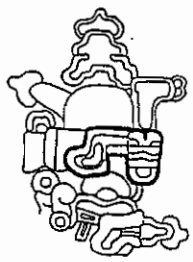


Fig. 11



1. MNA—vase without provenance
2. MA-TG/1456-BP
3. Santo Domingo del Valle
4. MA-debris of mound IV
5. Yuf-1a

If more than one kind of plant is indeed represented by the sprouts in Olmec art, then there are several implications for the understanding of Olmec and Mesoamerican royal authority. First, it would

suggest that royal power is compared not only to the forces manifested in the growth of maize, but to the forces of agriculture in general. This interpretation presents the Olmec kin@ as a kind of supernatural farmer, instead of a deity of maize only.

Further, as David Freidel (see Schele 1992) has pointed out, the presence of the full complement of milpa agriculture in Olmec headdresses strongly emphasizes the shamanistic basis of Olmec kingship. In the hunter-gatherer societies that would have preceded the Olmec, shamans would have been largely responsible for the domestication of plants and the selection of superior varieties. Finally, if a variety of plants are shown in the Olmec headdress, it would appear that symbolism of Olmec headdresses is no longer so different from that of the Maya. Instead of a transformation from the maize plant of the Olmec headband to the flower of the Maya (see Fields 1991, Schele 1992), we see a shift from what is for the Olmec probably tree foliage to the Maya flower, which also is likely from a tree.

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