

The Old Fire God and his Symbolism at Teotihuacan*

El dios más antiguo de Teotihuacán es representado antropomórficamente sólo en esculturas de piedra y unas cuantas figurillas de barro que muestran un anciano con un recipiente sobre la cabeza, destinado a quemar incienso. Sin embargo, diversas formas gráficas o signos ostentan los parafernales rituales relacionados con esta deidad paternalista del fuego. Tales signos, a menudo, se combinan con imágenes de los diferentes aspectos del dios de la lluvia, que predominan en el arte de Teotihuacán. Con el surgimiento de deidades adicionales del fuego durante la era postclásica tardía, las interrelaciones de Xiuhtecutli, el sucesor del viejo dios del fuego Huehuetotl, con deidades de la lluvia se evidencian iconográficamente en los manuscritos pictográficos y en las esculturas. Finalmente, se puede decir que, si bien en Teotihuacán la imaginería del culto al dios de la lluvia ensombreció el culto al dios del fuego, este último no se eclipsó del todo aunque el reconocimiento de su importancia se vio disminuido en gran parte por la falta de comprensión de su simbolismo. La identificación e interpre-

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tación de los signos del culto al dios del fuego indujo a la revaluación de un signo compuesto - el grupo de los cuatro elementos - y a un intento de extraer una fórmula mnemónica de oración de las características peculiares atribuidas a estos cuatro signos. En consecuencia, cabe deducir que el desarrollo de las formas gráficas de Teotihuacán alcanzó la fase incipiente de un sistema parcial de escritura.

INTRODUCTION

It is generally recognized that manifestations of the Rain God cult predominate in Teotihuacan art. This deity was frequently portrayed on mural paintings and on pottery in various aspects and functions, accompanied by attendants and a variety of symbolic representations of water, rain and vegetation which reflect the supreme concern with agricultural fertility and sustenance.

Among the few other deity cults of apparently lesser importance, the cult of the Old Fire God has so far not been duly recognized. The reason is, perhaps, that this deity was not portrayed anthropomorphically except in stone sculptures of singular uniformity which are, primarily, censers. However, the existence of a Fire God cult in Early Classic Teotihuacan is evident in conventionally used signs which occur repeatedly on pottery and also on murals and which represent the cult objects. In the following these signs will be defined and interpreted.

As a point of departure I use Kubler's inventory of signs and images in his monograph "The Iconography of the Art of Teotihuacan" (1967). He recognized five iconographic clusters or complexes which are characterized by predominant images with varying associated forms. Due to the preponderance of compound figures in which a number of signs are combined in various relationships to form an image, the iconographic clusters overlap. For instance, the owl complex (or cluster) contains associated forms of the Rain God and the butterfly cluster. Elements of the latter are frequently noted on braziers which contain also fire symbols.

The iconographic clusters are composed of 45 "life forms" (14 human representations, 20 animal and vegetable forms, and 11 compound life figures). Included in this category are "old male figures" which are images of the Old Fire God, characterized by a wrinkled face. The 45 "life forms" occur in combination with one or more of the 52 "glyph signs". Kubler's (1967, table) list of images and signs - the first iconographic inventory compiled for Teotihuacan - also indicates occurrences at sites where Teotihuacan influence is evident, such as Monte Albán, Xochicalco, Veracruz and the Maya area. The glyph signs are labeled in descriptive terms ("crossed bands", "diamonds", etc.) some of which have been identified and interpreted previously.

Since it is the purpose of this study to determine the signs that pertain to the Fire God complex, a complex not specified in Kubler's work, his list of 52 glyph signs will be subdivided into two major deity complexes and other complexes of various connotations. There is no difficulty in assigning a glyph to a complex if the function of the object depicted is known; for instance, brazier - burning of incense - Fire God complex; aspergillum - ritualistic sprinkling of water - Rain God complex. Not all of the labels convey the meaning intended by the native artist but it can be inferred from positional associations with other signs or images.

Rain God complex

treble scroll
 scroll
 hanging drops
 water-eye, elongated
 half-star
 water tongue
 mountain, pointed
 mountain, rounded
 interlocking scrolls
 nose pendant, Rain God
 aspergillum
 diadem (with trilobe drops)
 diagonal scallops
 paired brackets ?
 four-element group

Calendric connotation

trapeze-ray (year sign)
 bar-and-dot numeral

Directional connotation

cross
 four-way hatching
 foot prints
 crossroads
 arrows (crossed)
 hand (isolated)

War aspects

arrows
 spear-thrower (atlatl)
 shield

Fire God complex

diamond
 saw-tooth ray
 comb-and-bar
 nose pendant, butterfly
 flames
 brazier (on head of Fire God)
 asterisks
 four-element group

Other signs

crossed bands
 stepped fret
 quincunx
 trilobe
 eye (round)
 teeth
 curl RE (Reptile's Eye glyph)
 mouth RE
 speech scroll
 temple
 cobweb ?
 tri-shingle
 feathers
 knife blade
 chevron band
 labret
 ear plug
 armadillo segments ?
 eggshells ?
 talud-and-tablero ornament

(A question mark indicates that the sign is not illustrated in Kubler 1967).

Since our main concern is with the signs attributed to the Fire God complex, I shall first deal with its emergence in Teotihuacan.

ORIGIN OF THE TEOTIHUACAN FIRE GOD

The gods of Teotihuacan were less numerous than those of the Aztec pantheon. Little is known about their origin. Links with the recently proposed Olmec pantheon (Joralemon 1971) are very tenuous.

Beside the Rain God, two other deities appear early in Teotihuacan (Tzacualli phase, A. D. 1 - 150). One of them, the God with the Mask (known as Xipe in the Late Postclassic) is portrayed on pottery and in figurines but does not seem to have been as important as among the Aztecs (von Winning 1976: 150-155).

The oldest god worshipped in the Basin of Mexico is the Old Fire God (known as Huehuetectl by his Náhuatl name). Sculptures in the round show him with a wrinkled face, toothless, or with only two teeth, seated cross-legged in a forward bent position, and with a basin on his head or back for the burning of incense (Fig. 2, a). The earliest representations are clay effigies from Cuicuilco and a stone Fire God figure has been reported from Ticoman (Nicholson 1971:96, fig. 5). Both sites are coeval. A revised chronological sequence subdivides Ticoman/Cuicuilco into four phases, instead of the one phase erroneously proposed by Vaillant which he equated with the beginnings of Teotihuacan. Cuicuilco is now considered to have been the main center which dominated the Valley of Mexico during the entire Late Preclassic. As such it contributed to the emerging Teotihuacan tradition. During its Tzacualli phase (=Teotihuacan I and IA), Teotihuacan completely overshadowed Cuicuilco which led to the cessation of its ceremonial function by A.D. 150. The antiquity of the Fire God, his introduction from Cuicuilco to Teotihuacan, and the duration of the basically unchanged manner of portrayal in stone, with a basin on the head, throughout the florescence of Teotihuacan, argue for the importance of the Fire God and his cult. In the Late Postclassic, which is best documented in respect to religious ceremonialism, the cult of the Fire God continued to be a very important one when Huehuetectl became identified with Xiuhtecutli ("Turquoise Lord", or "Lord of the Year") (Nicholson 1971a: 413).

The rise of the Fire God cult at Cuicuilco was attributed by Covarrubias (1957:39) to the cataclysmic eruptions of the nearby volcano Xitle. There may indeed have been spectacular displays of fire and smoke, but the lava flow which partially buried the site is now believed to have occurred as late as A.D. 400.

A ritualistic distinction between the domestic fire of the hearth and the sacred fire appears to have been made at least as early as the Late Preclassic, which is exemplified by the use of Old God censer sculptures. In the Late Postclassic the sacred fire involved the great New Fire ritual celebrated at the conclusion of a 52-year cycle. That this, for the Aztecs highly important, ceremony had its origin in Teotihuacan has been discussed elsewhere (von Winning, Ms.).

Evidence of a Fire God cult in Teotihuacan is limited to ceramic cult objects, mural paintings, and a few sculptures. The aforementioned stone figures in the round are the only anthropomorphic portrayal of the god. Significant, too, are the very elaborate incense burners of clay (incensarios) which show a stylistic evolution from simple hourglass-shaped vessels to large assemblages with a chimney and a profusion of attached, symbolically decorated clay plaques. These incensarios were used in temples while the smaller incense burners, consisting of double-chambered containers (candeleros), were used in individual rituals in each household (Fig. 2, c). The enormous quantities of candeleros found in Teotihuacan led to the assumption that toward the end of the Florescent Period there was a shift toward a more secularized worship, accompanied by a waning influence of the institutionalized priesthood (Millon 1973:62).

The burning of incense, to obtain favors from the gods, links a Fire God cult to all deities whose benevolence is sought. But the existence of anthropomorphic censers personifies the paternal aspect attributed to the Old Fire God, as father of the gods and of men. As such he occupies the highest hierarchical level. In addition, there are other manifestations of the Fire God cult which will be discussed in detail.

NOMENCLATURE

At this point a definition of terms is in order since the conventionalized designs have been variously called symbols, motifs, signs, glyph-signs, or glyphs. Joralemon's (1971:6) "Dictionary of Olmec Motifs and Symbols" is based on "breaking down Olmec representations into their component parts" in order "to isolate the basic character or elemental units of Olmec art". A second step is the "recognition of motif combinations and character complexes which frequently recur in Olmec art". This method has been used in analyzing the Teotihuacan Reptile's Eye glyph (RE sign) (von Winning 1961).

The use of the term glyph for the RE sign (to use Kubler's term) was deemed justified because it is rendered in a cartouche and conveys a message (Fig. 1, j). Another glyph, the trapeze-ray sign is frequent in Teotihuacan and elsewhere. It occurs without a cartouche and rarely with numerals (e.g. Fig. 10, c, and on the shell trumpets in Caso 1967:146, figs. 4, 5). A third glyph, which Caso named "glifo A", consists of a knot element within a cartouche (Fig. 24). It is of Zapotec origin, appears also in Xochicalco but rarely in Teotihuacan (Fig. 24, b, c).

Kubler uses the term "glyph-sign" or simply "sign", instead of symbol or motif, for the Reptile's Eye (RE), the trapeze-ray and the other graphic forms in his list that are not images. His choice stems from his recognition that "Teotihuacan sculptors and painters were seeking forms of logographic clarity and simplicity... by combining and compounding associative meanings in a quest for viable forms of writing" (Kubler 1967:15). It follows that the graphic system of Teotihuacan had reached the first stage of a partial writing system. As such it satisfies the three basic requirements postulated by Prem (1971:

113) who defined that a graphic system, in order to qualify as a writing system, must

- 1) function for the transmission of information (in the verbal or non-verbally fixed form)
- 2) be codified (contain symbols which have conventionally accepted meaning), and
- 3) be graphic (produced upon a medium and visually readable).

Such a system requires a high degree of internal regularity of the graphic forms which, in this case, can be demonstrated by referring to the accompanying illustrations and to previously published designs related to Teotihuacan iconography listed in the bibliography.

The graphic forms or signs (to retain Kubler's term) were engraved or painted on pottery, murals, and stone with few changes in configuration over a period spanning some four centuries. As a writing system, the Teotihuacan graphic forms are not suitable for text reproduction in the manner used by the Maya, nor can they be analyzed with recourse to texts in Náhuatl, the language presumably spoken in Teotihuacan. Therefore, at present, it is not possible to attribute phonetic values to any of the signs. Kubler (personal information) suggested that the question is not merely what language was spoken at Teotihuacan but how many languages and in which part of the city each was dominant. Hence he is of the opinion that the signs are non-phonetic, transcending the various languages as spoken for obvious reasons of communication needs. Still, it remains to be determined what the lingua franca was that Teotihuacan used in its commercial exchange system.

The presence of ritually significant signs on pottery can be understood, in general terms, as a mnemonic notation for the recital of prayers. Such a prayer for rain, fertility and sustenance is expressed by the Four-element group. Furthermore, a number of signs are related to the Fire God cult and express the objects pertaining to his cult.

Difficulties in decipherment increase the more the symbols depart from naturalistic toward abstract forms. If speech scrolls are accompanied by flowers, hanging drops, and conch shells, these adjectival components qualify the speech or chant as a prayer for rain. Thus, according to Prem's postulate (1971:114), a conventional agreement existed between the graphic symbol and retrieval of its content. A trapeze-ray (year) sign on a speech scroll must, by analogy, also contain a message but it is not readily decipherable.

SOURCES OF THE MATERIALS ILLUSTRATED HEREIN

Much of the decorated non-utilitarian pottery proceeded from the "palaces" or priestly residences of Tetitla, Yahualá, Tepantitla, etc., which are profusely decorated with mural paintings and, therefore, such ceremonial

pottery could have been used in rituals performed by the priests. Other non-utilitarian decorated vessels were found in secular residential compounds in Teotihuacan and in Teotihuacan settlements in the Valley of Mexico (San Miguel Amantla, Santiago Ahuixotla, Azcapotzalco) where no great ceremonial architecture and no mural paintings existed, and may have served in rites of a more domestic nature in temples which were attached to each residential compound.

The iconographic repertory of the Teotihuacan settlements in the Azcapotzalco region is essentially the same as that of Teotihuacan due to close contact throughout the florescence of the metropolis.

Among the materials used for this study are fragments of pottery and figurines which I acquired from residents in the Azcapotzalco region during 1939-1946 when numerous pits were dug for the extraction of clay used in making bricks. These materials are comparable to those published by Seler (1902-1915, 5: pls. 33 ff.) from the same source.

Pertinent are also the recently discovered ceramics from the Tiquisate-Escuintla region of Guatemala which show strong Teotihuacan affiliations. Fig. 15, d shows a bowl with two ball players and a Teotihuacan firewood bundle prominently displayed in a heraldic configuration. The bowl has been illustrated, with a brief comment, by Hellmuth (1975) who plans to interpret the design in a forthcoming publication.

THE SIGNS OF THE FIRE GOD COMPLEX

1. Diamond sign (Fig. 1, a)

1.1 Definition. A rhomboid standing on one of its obtuse angles, with a disk in the center. The rhomboid is flanked on each side by vertical bars or lines, the number of which varies between two and six, or more.

1.2 Occurrences. Invariably on the exterior of the basin on head or shoulders of stone sculptures representing the Old Fire God (Fig. 2, a). A prototype from Cuicuilco (Nicholson 1971:96, fig. 5) suggests that such effigies occurred as early as the Tzacualli phase (ca. A.D. 1-150); they continued through the Metepec phase (A.D. 650-750). These sculptures are known from Teotihuacan and Teotihuacan settlements in Azcapotzalco.

Candeleros (small twin-chambered clay containers for incense burning) show the diamond sign on the head band (Beyer 1921:86; Séjourné 1964: figs. 24-25) (Fig. 2, c).

Combined with the Comb-and-bar (C&B) sign on headdress (Figs. 3, a-d; 26, a) or on garments on figurines (Fig. 4, a).

On moldmade plaques attached to incensarios (Figs. 2, b, d-f; 4, c, e; 22, a) or to figurines (Fig. 4, b).

On planorelief (Figs. 4,d; 5,h,k) and incised pottery (Figs. 5,a-e,g,i,j; 8,c; 9,b; 18,a) the diamond sign is restricted to borders and frames.

Rarely on stuccoed-and-painted pottery (Fig. 5,f). On the Tepantitla mural the bats of two ball players are decorated with the diamond sign (Fig. 3,f). In a heraldic configuration at Tetitla (Fig. 25,a).

At Xochicalco (noted in Kubler 1967, Table) the diamond sign is a decorative component of a bar (numeral 5) and does not stand on its angle (cf. Caso 1967: 181, fig. 18,h,i). It is therefore not related to the Teotihuacan diamond sign which is absent in Xochicalco sculptures (Fig. 11,h).

1.3 Interpretation. Seler (1902-1915, 5:438) suggested that the eyes indicate brilliance ("das Leuchtende") which is a reasonable conclusion. Diamond-shaped eyes are a diagnostic of Chupícuaro figurines (400-1 B.C.) and this feature could have been introduced from the north when a strong intrusion of the Chupícuaro tradition during the Terminal Preclassic Cuicuilco IV phase manifested itself in the Valley of Mexico (H4 figurine tradition; Heizer and Bennyhoff 1972).

1.4 Conclusion. The diamond sign, a compound of rhomboid and bars, symbolizes fire and, by extension brilliance. Its association with braziers for the burning of incense qualifies the sign as an expression of the sacred fire as opposed to the fire in the hearth. The sign is restricted to Teotihuacan and Teotihuacan sites in the Valley of Mexico. In the context of the Four-element group (see section 9.2) the diamond sign connotes "an offering" implied in the burning of incense.

2. Saw-tooth ray sign (Figs. 1,b,c).

2.1 Definition. Two forms are distinguished: Saw-tooth ray A, a zigzag pattern of continuous obtuse-angled triangles (Fig. 1,b) and Saw-tooth ray B, a series of equilateral triangles (Fig. 1,c).

2.2 Occurrences.

2.2.1 Saw-tooth ray A: in diagonal, slightly curved bands as background on murals (Miller 1973: figs. 125-128, 221, 241, 245, 298 with flaming wood bundle, 317, 321). The sign is painted dark red over pink. On planorelief pottery on each side of firewood bundle C (Figs. 16,a,c; 17,a). In all instances the sign is accompanied by water symbols.

2.2.2 Saw-tooth ray B: When it occurs in circular arrangement in necklaces or pectorals its relationship to fire cannot be ascertained. If it is shown in a basin with flames the connotation with fire is obvious (Figs. 19,j,k). Other examples support this view:

The goggled profile figure carrying spears and an atlatl on the "Red Tlaloc mural", Tepantitla (Fig. 19,i) wears the Saw-tooth ray B sign on his back and he is shown in a basin which is also decorated with the sign. Seven flames emerge from the figure (the number 7 refers to the earth). Identification of the person as a Tlaloc on the strength that he wears a ring around the eye is

unjustified; this has been convincingly demonstrated by Pasztory (1974:11-15, fig. 14). It is more likely a deity or person related to aspects of warfare.

The border of Mural 3, Palace of the Jaguars, shows an unusual design of four stripes with Saw-tooth ray B, serrated C&B, dots (rain) and water signs (Fig. 26, b). These are the components of the Four-element group in which two fire signs and two aquatic signs occur (see 9.1). On the main motif of this mural, the Saw-tooth ray B occurs in the headdress, necklace, and pectoral, surrounding inverted owl heads (a war symbol) and water signs.

2.3 Interpretation. Both Saw-tooth ray signs signify radiant heat or brilliance. The rays of the sun are often indicated by a Saw-tooth ray B, e.g. in the solar disk carried by the fire serpent (Xiuhtcoatl) in Codex Vindobonensis 30 (Fig. 12, f).

3. Comb-and-bar sign (C&B), (Fig. 1, d).

3.1 Definition. Two or more vertical stripes or lines with several shorter lines that project horizontally at each end.

3.2 Occurrences. Mainly on planorelief (Figs. 4, d; 6; 7) and incised pottery (Figs. 5, c, d; 8; 9) in borders, frames and streamers.

Occasionally on headdress (Figs. 3, a-d) or garment (Figs. 4, a; 10, b) of figurines, or on objects attached to hand of figurine (Fig. 10, a).

On molded plaques and similar appliques, attached to pottery vessels or incensarios (Figs. 2, b; 10, d; 14, c; 18, d).

As component of a glyph with numeral 7 (Fig. 10, c). As a component of the Four-element group (see 9.1) in a mural (Figs. 26, b, d), on planorelief (Fig. 25, c) and incised pottery (Figs. 25, d, h, k, l; 26, c).

The C&B sign does not occur on Teotihuacan stone sculptures.

At Xochicalco on Stela 1 inside the RE glyph with numeral 7 and below, alternating with the quincunx (Figs. 11, f-h).

3.3 Comparisons with Maya "fire glyphs". The similarity between the C&B sign and the Maya glyph T563a (Thompson's Catalog 1962) is striking (Fig. 11, a). Its combination with flame affix T122 (Fig. 11, c) was first interpreted by Seler (1902-1915, 1:397) as a probable representation of burning wood or fire, which was confirmed by Beyer (1937:71). Zimmermann (1956:129) also regarded T1.122:563a as a firewood bundle (Z1357). Thompson's T563b, with crossed bands in the center instead of lines, corresponds to Zimmermann's glyph 1348 to which he attributed the meaning of gift, offering; both signs are comparable to the Teotihuacan firewood bundle A, B, and C (see 6.1 and Fig. 1, f).

In Thompson's opinion (1962:186) both T563a and T563b have "the more restricted meaning of sacred fire or bundle of firewood". Occurrences of T1.122 : 563 with images of fire drilling and torch bearers confirm the ritualistic or sacred aspect of the firewood bundle, e.g.:

Cod. Madrid 13, b - above a large flaming bundle; and 38, b - four times above God D and God B, both drilling fire. Cod. Dresden 40 - interpreted by Thompson (1972:100) as "his flaming fire...accompanied by an anthropomorphic macaw bearing a blazing torch in each hand, who was the manifestation of the sun which at noon descended to burn the sacrifice offered him."

The subject of Maya fire glyphs was discussed at length by Kelley (1968: 141-157) who dwelled on the difference between T563a and T563b, and questioned their inherent connotation of "sacred fire". Although he argued that "there is still no satisfactory reading for T122:563a", he emphasized that fire glyphs occur in texts of the 819 day count (cf. Thompson 1960: fig. 35: 6,7) and concluded that "these texts are highly reminiscent of making a new fire at the beginning of a 52-year cycle" (Kelley 1968:144). Recently, Barthel (1974: 186) confirmed the reading of T563 = zi, "firewood bundle" and by extension "gift".

The salient points of this review of the Maya glyph T563 are:

(a) close similarity between T563 and the Comb-and-bar sign confirm the latter as a firewood bundle (Teotihuacan Bundle F, i.e. a simplified firewood bundle without the knot element);

(b) likewise, T563b corresponds to Teotihuacan Bundle A, B, and C (bundles with knot element);

(c) a consensus that T563 occurs in ceremonial context invalidates Kelley's doubt that it connotes "sacred fire";

(d) occurrences of T563 in inscriptions dealing with the ritualistic cycle of 819 days (9x7x13) suggest that also the Teotihuacan firewood bundle signs are related to cycles shorter than the 52-year period, such as the 65 x 28 = 1820 day cycles (= 5 years) recently discovered by Prem (1974:357) in inscriptions at Xochicalco and which are also recorded in Cod. Peresianus and Dresden.

It can be concluded that the Teotihuacan firewood bundle signs are related to the completion of time periods of, as yet, undetermined length.

3.4 Variant: Serrated Comb-and-bar sign (Fig. 1, e).

3.4.1 Definition. The bars are flanked by two or three serrated elements instead of straight horizontal lines. A small circle, or a double circle (symbolizing chalchihuitl, "water"), is frequently placed between two such signs.

3.4.2 Occurrences. Mainly on molded plaques (Figs. 3, c, e; 13, c-f; 14, a-c; 18, c, d). Occasionally in borders of incised (Figs. 12, a-e, g, h [one circle is substituted by a pecten shell], 13, a; 18, a), on stuccoed-and-painted pottery (Figs. 5, f; 12, i) and on Tetitla murals (Figs. 26, b, d). Both the Comb-and-bar sign and the Serrated Comb-and-bar sign have similar, if not identical meaning.

3.5 Interpretation of the Comb-and-bar sign. On account of frequent associations with the diamond sign and because the Comb-and-bar sign contains bars comparable to those flanking the diamond, I had suggested (1958:6-7) that the C&B also symbolizes fire, perhaps in its aspect of lightning. This conclusion was based on occurrences in the Four-element group (which I called

"Four-symbol pattern", see 9.1), in which two fire signs and two water signs are combined and contrasted. I am now of the opinion that the Comb-and-bar sign, as well as its variant, the Serrated C&B, are an abstraction of the firewood bundle sign (Fig. 1, f) and represent a bundle of sticks. These in turn symbolize the "binding of the years" at the conclusion of certain time periods. Although the expression is used mainly for the completion of a 52-year cycle, ceremonies involving shorter (e.g. 5 year) periods cannot be ruled out. To substantiate this assumption it is necessary to consider the more naturalistic renderings of the firewood bundle signs.

4. Firewood bundle sign (Fig. 1, f).

4.1 Definition. In Teotihuacan representations of bundled sticks the bands or cords for tying and a large knot element are always in the center so that only the short ends of the stick are visible. The knot element varies in form depending on the method of decoration (planorelief, painted or carved). In Fig. 1, f the knot of bundle A consists of undulating lines, in B the knot is not shown, in C the knot is in the shape of a figure 8, in D the knot is indicated by interlocking curves.

4.2 Occurrences. See Table.

4.3 Interpretation. The sign can be readily recognized when depicted naturalistically. In conventionalized forms the knot element varies but the ends of the bundled sticks are retained. Five basic types, A-E (Fig. 1, f) can be distinguished in addition to the Comb-and-bar sign, which is a glyph-like abstraction of the bundle (Bundle F). Identification of the naturalistic bundles is supported by compounds of bundles with flames (Fig. 1, i).

5. Flames (Fig. 1, h).

5.1 Definition. A scroll, with end pointing upward, usually occurs in groups of two or three. Only in polychrome depictions can flames (red) be differentiated from smoke (black). Flames are occasionally shown upside down (Figs. 19, b, g; 21, a).

5.2 Occurrences. Planorelief (Figs. 17, b; 10, a; 11, b; 22, c, f) incised (Figs. 19, h; 20, c; 22, g), stuccoed-and-painted pottery (Figs. 19, d; 22, d). Molded appliqués (Figs. 19, a, j, k; 22, a) and large clay plaques in relief (Figs. 21, c, d). In headdress of figurine (Fig. 22, b; here as well as in Fig. 22, a, the scrolls are inverted and form a cluster of three flame elements). Murals (Figs. 19, i; 20, b; 23, a, b). Stone sculpture (Figs. 20, d; 21, a; 22, e; 24, a; 27, j) and at Xochicalco (Fig. 19, e). Affixed to Maya glyph T122.563a (Fig. 11, c).

5.3 Commentary. Flames, or by extension smoke signs, are readily identifiable. Seler (1902-1915, 5:504) noted their similarity with the Late Post-classic cuitlatl sign for excrement, filth, sin, and earlier Preuss (1903:216-217) pointed out that both signs, although identical in form, do have different meanings. Two kinds of flame signs appear in the codices of the Borgia group.

One type resembles cuitlatl and the Teotihuacan flame sign (cf. flames on atltlachinolli symbol, Borgia 69), the other flame sign has two asymmetrical volutes (Borgia 69 below the foot of Xiuhtecutli). The difference in meaning is evident when both types are combined, as in the emblem of Xiuhtecutli (Cod. Cospi 8) which consists of a flaming cuitlatl (Fig. 19,c).

5.4 Interpretation. Flames are always attached to an object, usually at the narrow side of a bundle of firewood, pointing upwards; hence, the bundle is burning. The compounds "flaming mouth" below the roof of a temple (Fig. 20,b), the "flaming bird-eye" (Fig. 19,b) and the "flaming star-disk" are emblems of possibly toponymical significance in which the flames have adjectival or even verbal function. Pasztory (1973:158) considers the open mouth with a double row of teeth as an emblem with sinister connotations, indicative of "fire, death, destruction, war or sacrifice", and the accompanying flames appear to support this view.

6. Flaming firewood bundle (Fig. 1,i).

6.1 Definition. A compound consisting of the firewood bundle with two or more flames projecting from one end. The position of the bundles may be vertical, diagonal, or horizontal.

6.2 Occurrences. See Table.

6.3 Commentary. Contextual associations imply a ritual function of the flaming bundles, they are not utilitarian torches. The formal similarity between the Teotihuacan firewood bundle (Figs. 1,f:A,B) and the Aztec xuhmolpilli sculptures reflect a common conceptual base and similar function. The bundle of sticks expresses the "binding of the years", a concept that is securely established for the xuhmolpilli and its association with the Aztec New Fire ceremony at the completion of a 52-year cycle.

Evidence for the celebration of a New Fire ceremony, from the Sun Pyramid of Teotihuacan, is a monumental stone block and two similarly carved slabs (Fig. 27,j). The motifs on these sculptures, according to Batres "parecen representar un xuhmolpilli". He also discovered at the same location a large stone incense burner with two relief panels decorated with the cord motif, and which may have been used during these rituals (Batres 1906:25-26, 2 pls.) (Figs. 27,h,i). Taking into account the extraordinary importance of the New Fire ceremony in the Late Postclassic religious system stressed, among others, by Nicholson (1971a: 413), and evidence of its commemoration in the Late Classic at Xochicalco (Fig. 27,a), it is reasonable to assume that the concept originated in Teotihuacan. Further support for this hypothesis will be discussed in a separate article (von Winning, Ms.).

7. Asterisks (Fig. 1,g).

7.1 Definition. As the name implies, the star-like design is an irregular arrangement of short lines radiating from a central point.

7.2 Occurrences. Asterisks are painted in black or red on wing-shaped plaques attached to large incensarios (Figs. 18, e, g, h) and they occur on a flaming bundle on a planorelief vessel (Fig. 22, c). The sign is associated with the knot element in the bundle sign (Figs. 18, e, g, h). By analogy, asterisks are a component of the Fire God complex.

8. Braziers

8.1 Definition. Two forms are distinguished. One is the basin on the head of Old Fire God sculptures (Figs. 2, a; 14, d), the other braziers are large complex assemblages, known as incensarios, with appliquéd moldmade plaques. These plaques depict mostly butterflies, or parts of butterflies (wings, head and eyes, proboscis, feelers). It has long been recognized that the butterfly symbolizes fire, perhaps because the erratic motions of butterfly wings are comparable to flames (Beyer 1910:98). In addition, there are small double-chambered containers known as candeleros which were used as household censers (Fig. 2, c).

Although Kubler (1967, Table) listed the braziers as a "sign" they are, in a strict sense, cult objects. In graphic representations they tend to resemble flaming firewood bundles (cf. Fig. 22, f).

9. Four-element group (Fig. 1, j).

9.1 Definition. A compound of four signs, usually in a rectangular frame, previously identified as the "Four-symbol pattern" (von Winning 1958:6-8, figs. 30, 32, 33, 37). Two of the signs, the Diamond and Comb-and-bar (= firewood bundle F) pertain to the Fire God complex, the other two are aquatic signs. The latter represent rain (numerous dots, dashes, or small circles), and water (on the ground, in rivers, lakes). The frame (or rope in Fig. 26, a) implies that the four signs combined convey a message. A tentative reading is given below.

9.2 Occurrences and interpretation. The order in which the signs occur within the frame varies and, apparently, does not alter the meaning of the text. For brevity I shall substitute "bundle" for the Comb-and-bar sign since it is an abbreviated firewood bundle. Likewise, the Diamond sign is indicative of the burning of incense and can therefore signify an "offering":

- Fig. 25, a bundle - water - rain - offering (1)
- 25, b bundle - rain - water - offering (2)
- 25, c rain - bundle - water - offering (3)
- 26, a water - offering - bundle - rain
- 26, c bundle - rain - offering - water (4).

When the four signs occur in a rectangular frame (Figs. 25, a-c; 26, a), or tightly bound with a knot element (Fig. 26, c), the compound expresses a cult theme, or more specifically, a prayer. The figurines which bear the compound on the forehead may be devotees of this cult, as Kubler suggested (1967:10-11).

Tentatively, a reading of the four signs in the group can be formulated with the following equivalents:

rain = fertility, abundance of crops, sustenance

water = sufficient rain (to form a pool of water)

diamond = burning of incense, an offering

comb-and-bar = firewood bundle, connoting (the completion of) a time period,

or paraphrased: "an offering for sufficient rain for a good harvest in the (coming) year (cycle)". Fig. 28, b shows this prayer notation in a functional context with an ornate speech scroll of a priest and with various aquatic signs.

SUMMARY AND CONCLUSIONS

The oldest god of Teotihuacan is portrayed anthropomorphically only in stone sculptures in the round and a few clay figurines which show an aged male with a basin on his head for the burning of incense. But various graphic forms, or signs, represent the ritualistic paraphernalia related to the cult of this paternalistic fire deity. These signs are identified and interpreted. They are often combined with imagery of the various aspects of the Rain God which predominate in Teotihuacan art. With the emergence of additional fire deities in the Late Postclassic, the interrelationship of Xiuhtecutli, the successor of the Old Fire god Hueheteotl, with rain gods is iconographically much in evidence in pictorial manuscripts and in sculpture. It can be concluded that, while imagery of the Rain God cult overshadowed the Fire God cult in Teotihuacan, the latter had not been completely submerged although recognition of its importance was so far obscured by a lack of understanding of its symbolism.

Identification and interpretation of the signs of the Fire God cult prompted a reevaluation of a compound sign, the Four-element group, and an attempt to extract a mnemonic prayer formula from the notational characteristics attributed to the four signs. It follows that the development of the Teotihuacan graphic forms had reached the incipient stage of a partial writing system.

TABLE

Occurrences of Firewood bundles type A to E, with and without Flames		Bundle type (see Fig. 1, f)	
		with flames	without flames
Planorelief pottery, Fig. 16, a-d; 17, a			C
" " Fig. 17, b; 22, c, f	B		
Incised pottery, Fig. 14, f			C
" " Fig. 18, a, b			D
" " Fig. 20, c; 22, g	B		
Relief-decorated pottery, Fig. 15, d			A
Stuccoed-and-painted pottery, Fig. 15, a			A
" " " " Fig. 22, d	B		
Molded plaques, Fig. 15, c			B
" " Fig. 18, c-j			D
" " Fig. 27, f			E ?
Clay censer cover, Fig. 14, d, e			A
Murals, Fig. 15, b			B
" Fig. 23, a, b	B		
Stone monuments, Fig. 20, d	x		
" " Fig. 22, e; 24, a	A		

NOTES

- (1) The four panels (two are reconstructed) with the compound sign project diagonally in four directions from a circular shield with a horizontal element on each side. In Miller's (1973: fig. 235) color reproduction the internal arrangement is the same for all four projections. Séjourné's line drawing (1966: fig. 136) differs, also in details of the accompanying priest, and it is not evident that the drawing is a reconstruction of missing parts of the mural. Perhaps the right side of the mural was intact at the time of Séjourné's exploration, although this seems unlikely. I have therefore relied on Miller's rendering based on the mural's in situ condition, Feb. 1971. Séjourné (1966:252) interpreted the configuration as the glyph for "movement" (ollin) which is debatable; however she recognized that it contains signs relating to fire. The colors in Miller's rendering are: bundle, red on blue; water, red on orange; rain, red on pink; offering, red on blue.

In a cogent analysis of Teotihuacan deities, Pasztory (1973) referred to this configuration as the X-and-circle emblem and related it to the "Teotihuacan Xochiquetzal", the probable predecessor of the Postclassic goddess Xochiquetzal. She is portrayed under two different aspects, one associated with fertility, the other of a more destructive nature. As a deity of

opposites it is understandable that her emblem, the Four-element group, is antithetical (water vs. fire) as Kubler had suggested and with which Pasztory agrees (Pasztory 1973:155). However, the Four-element group is relatively rare and on the basis of the few occurrences in varying context it would not seem prudent to link the group to a specific deity, inasmuch as it contains signs of the Rain God and signs of the Fire God cult.

The radial arrangement of the Four-element group around a disk (Fig. 25, a) has prompted Barthel (personal communication) to consider it a heraldic image of the universe with its four cardinal directions, comparable to the crossroad in Cod. Borgia 72, Vaticanus B 95, Fejérváry-Mayer 43, Laud 15, 28, etc. Unfortunately, the mural is incomplete and although the reconstructed rendering by Miller (1973: fig. 235), which supplements about one half of the original, is probably correct, the uncertainty remains. Yet, crossroads with footprints indicating direction and leading to a Bird's Eye glyph occur on Teotihuacan planorelief vessels (Fig. 7, c; von Winning 1961: figs. 5, b; 6) which indicates that the Teotihuacanos were familiar with this concept.

- (2) Bundle, black lines on red; rain, orange on white; water (shown as snails), black lines on blue; offering, white on black.
- (3) The water sign contains a jade disk (chalchihuitl).
- (4) Rain and water sign are compounded; on the right is the turquoise sign for water (cf. Thompson 1951).

REFERENCES

- Acosta, Jorge R.
1964 El Palacio del Quetzalpapalotl. "Memorias del Instituto Nacional de Antropología e Historia", 10. México.
- Aveleyra Arroyo de Anda, Luis
1963 La estela teotihuacana de La Ventilla. "Cuadernos del Museo Nacional de Antropología, INAH", 1. México.
- Barthel, Thomas S.
1974 Neue Lesungen zur Mayaschrift. "Tribus", 23:175-211. Stuttgart.
- Batres, Leopoldo
1906 Teotihuacan. Memoria... al XV Congreso Internacional de Americanistas... Quebec. México.
- Beyer, Hermann
1910 Über die Namenshieroglyphe des Kodex Humboldt. "Humboldt Festschrift": 95-105. Mexico.
1921 Nota bibliográfica y crítica sobre el quinto tomo de las memorias científicas de Selser. "Memorias y Revista de la Sociedad Científica Antonio Alzate", 40:57-64. México.

- 1937 Studies on the Inscriptions of Chichen Itza. "Carnegie Institution of Washington, Publ. 483, Contributions 21". Washington.
- Boas, Franz
 1911-1912 Album de colecciones arqueológicas. "Publicaciones de la Escuela Internacional de Arqueología y Etnología Americanas". México.
- Bolz-Augenstein, Ingeborg und Hans D. Disselhoff
 1970 Werke präkolumbischer Kunst. Sammlung Ludwig Aachen. "Monumenta Americana", IV. Berlin.
- Caso, Alfonso
 1928 Las estelas zapotecas. México.
 1935 El templo de Tenayuca estaba dedicado al culto solar? In: Tenayuca, estudio arqueológico de la pirámide de este lugar. Hecho por el Departamento de Monumentos de la Secretaría de Educación Pública: 293-308. México.
 1967 Los calendarios prehispánicos. "Universidad Nacional Autónoma de México". México.
- Codices (Facsimiles)
 1893 Codex Aubin. Histoire de la nation mexicaine. Reproduction du Codex de 1576. Paris.
 1974 Codex Borbonicus. Graz.
 1968 Codex Cospi, Calendario messicano 4093, Bologna. Graz.
 1901 Codex Fejérváry-Mayer. Commentary by E. Seler. Berlin.
 1972 Codex Dresden, see J. Eric S. Thompson.
 1966 Codex Laud. Graz.
 1968 Codex Madrid, see Codex Tro-Cortesianus.
 n/d Codex Mendoza. Photocopy Museo Nacional de Antropología. México.
 1968 Codex Peresianus (Codex Paris). Graz.
 1968 Codex Tro-Cortesianus. Graz.
 1902 Codex Vaticanus B (3773). Commentary by E. Seler. Berlin.
 1963 Codex Vindobonensis Mexicanus I. Graz.
 1949 Códice Azcatitlan. "Journal de la Société des Américanistes", n. s. vol. 38. Paris.
 1963 Códice Borgia. Comentarios de Eduardo Seler. México.
- Covarrubias, Miguel
 1957 Indian Art of Mexico and Central America. New York.

- Gamio, Manuel
 1922 *La población del Valle de Teotihuacán*, vol. I. México.
- Heizer, Robert F. and James A. Bennyhoff
 1972 *Archaeological Excavations at Cuicuilco, 1957*. "Research Reports, National Geographic Society":93-104. Washington.
- Hellmuth, Nicholas M.
 1975 *The Escuintla Hoards; Teotihuacan Art in Guatemala*. "Foundation for Latin American Anthropological Research, Progress Reports", 1:2. Guatemala.
- Joralemon, Peter D.
 1971 *A Study of Olmec Iconography*. "Studies in Pre-Columbian Art and Archaeology", 7. Dumbarton Oaks, Washington.
- Kelley, David H.
 1968 *Mayan Fire Glyphs*. "Estudios de Cultura Maya", 7: 141-157. México.
- Kubler, George
 1967 *The Iconography of the Art of Teotihuacan*. "Studies in Pre-Columbian Art and Archaeology", 4. Dumbarton Oaks, Washington.
- Linné, Sigvald
 1934 *Archaeological Researches at Teotihuacan, Mexico*. "The Ethnographical Museum of Sweden", n.s. Pub. 1. Stockholm.
 1942 *Mexican Highland Cultures*. "The Ethnographical Museum of Sweden", n.s. Pub. 7. Stockholm.
- Lothrop, Samuel K., William F. Foshag and Joy Mahler
 1957 *Pre-Columbian Art*. Robert Woods Bliss Collection. New York.
- Miller, Arthur G.
 1973 *The Mural Painting of Teotihuacan*. Dumbarton Oaks, Washington.
- Millon, René
 1973 *The Teotihuacan Map*. "Urbanization at Teotihuacan", I. Austin.
- Nicholson, H. B.
 1971 *Major Sculpture in Pre-Hispanic Central Mexico*. "Handbook of Middle American Indians", vol. 10, pt. 1:92-134. Austin.
 1971a *Religion in Pre-Hispanic Central Mexico*. "Handbook of Middle American Indians", vol. 10, pt. 2:394-466. Austin.
- Paszatory, Esther
 1973 *The Gods of Teotihuacan: A Synthetic Approach in Teotihuacan Iconography*. "Atti del XL Congresso Internazionale degli Americanisti", Vol. 1:147-159. Roma-Genova.
 1974 *The Iconography of the Teotihuacan Tlaloc*. "Studies in Pre-Columbian Art and Archaeology", 15. Dumbarton Oaks, Washington.

- Prem, Hanns J.
 1971 Calendars and Writing. "Contributions of the University of California Archaeological Research Facility", 11:112-132. Berkeley.
 1974 Überlegungen zu den chronologischen Angaben auf der Pyramide der gefiederten Schlangen, Xochicalco. "Ethnologische Zeitschrift Zürich", 1 (Festschrift Otto Zerries): 351-364. Bern.
- Preuss, Karl Theodor
 1903 Die Feuergötter als Ausgangspunkt zum Verständnis der mexikanischen Religion. "Mitteilungen der Anthropologischen Gesellschaft Wien", 33:129-233. Wien.
- Sáenz, César A.
 1964 Las estelas de Xochicalco. "Actas y Memorias del XXXV Congreso Internacional de Americanistas, México 1962", 2:69-86. México.
 1967 El Fuego Nuevo. "Instituto Nacional de Antropología e Historia, Serie Historia", 18. México.
 1968 Cuatro piedras con inscripciones en Xochicalco, México. "Anales de Antropología, Universidad Nacional Autónoma de México", 5:181-198. México.
- Séjourné, Laurette
 1959 Un palacio en la ciudad de los dioses (Teotihuacán). "Instituto Nacional de Antropología e Historia". México.
 1964 La simbólica del fuego. "Cuadernos Americanos", 23, 4:149-178. México.
 1966 Arquitectura y pintura en Teotihuacán. México.
 1966a Arqueología de Teotihuacán. La cerámica. México.
- Seler, Eduard
 1902-1915 Gesammelte Abhandlungen zur Amerikanischen Sprach- und Alterthumskunde, Bd. 1, 2, 5. Berlin.
- Thompson, John Eric S.
 1951 Aquatic Symbols Common to Various Centers of the Classic Period in Mesoamerica. "Proceedings of the 29th International Congress of Americanists", 1: 31-36. Chicago.
 1960 Maya Hieroglyphic Writing. An Introduction. 2nd. ed. Norman.
 1962 A Catalog of Maya Hieroglyphs. Norman.
 1972 A Commentary on the Dresden Codex. "Memoirs of the American Philosophical Society", vol. 93. Philadelphia.
- von Winning, Hasso
 1949 Shell Designs on Teotihuacan Pottery. "El México Antiguo", 7:126-153. México.

- 1958 Figurines with Movable Limbs from Ancient Mexico. "Ethnos", 23, 1: 1-60. Stockholm.
- 1961 Teotihuacan Symbols: The Reptile's Eye Glyph. "Ethnos", 26, 3: 121-166. Stockholm.
- 1965 Dual Pottery Molds from Mexico. "The Masterkey", 29, 2: 60-65. Los Angeles.
- 1972 Ritual "Bed Figures" from Mexico. In: Anecdotal Sculpture of Ancient West Mexico. The Ethnic Arts Council. Exhibition at the National History Museum of Los Angeles County. Los Angeles.
- 1976 Late and Terminal Preclassic: The Emergence of Teotihuacán. In: Origins of Religious Art and Iconography in Preclassic Mesoamerica. Edited by H.B. Nicholson. "UCLA Latin American Center Publications / Ethnic Arts Council of Los Angeles": 141-156. Los Angeles.
- Ms. The "Binding of the Years" and the "New Fire" in Teotihuacan. For: "Indiana", 5. Berlin.
- Zimmermann, Günter
- 1956 Die Hieroglyphen der Maya-Handschriften. Universität Hamburg. "Abhandlungen aus dem Gebiet der Auslandskunde", Bd. 62. Hamburg.

ILLUSTRATIONS

- Fig. 1: Standard forms
- a: Diamond sign.
 - b: Saw-tooth ray A sign.
 - c: Saw-tooth ray B sign.
 - d: Comb-and-bar sign (= firewood bundle F).
 - e: Serrated comb-and-bar sign.
 - f: Firewood bundles.
 - g: Asterisks.
 - h: Flames.
 - i: Flaming firewood bundle.
 - j: Four-element group.
 - k: Caso's Glyph A (knot element).
 - l: Twisted cord.
 - m: Firewood bundle, Cod. Borbonicus 36.
 - n,o: Triangle over trapeze (year sign).
 - p: Paper streamer and folded wrapping for xiuhmolpilli Fig. 20, d.
- Fig. 2: Diamond sign
- a: On basin of Huehuetotl sculptures, after Seler 1902-1915, 5:436, figs. 28-30.
 - b: Painted clay plaque, after Seler 1902-1915, 5:487, fig. 113.

- c: Candelero, after Beyer 1921: fig. 6.
- d-f: Molded plaques, provenience Santiago Ahuixotla.
 - d: 3 cm h, brown with residues of cinnabar, coll. HvW.
 - e: 6 cm h, brown, private coll. Mexico.
 - f: 5,6 cm h, buff, residues of yellow, coll. HvW.

Fig. 3: Diamond sign

- a-d: On headdress of Teotihuacan figurines, Santiago Ahuixotla, coll. HvW.
- e: On band of "bed figure" with tied arms, after von Winning 1972: fig. 2.
- f: Detail, ball court scene, Tepantitla mural, after Villagra in Aveleyra Arroyo de Anda 1963: fig. 12.

Fig. 4: Diamond sign

- a: On garment of molded figurine, buff, Santiago Ahuixotla, coll. HvW.
- b: On feathered shield held by figurine, 5 cm h, brown with traces of red and white, Santiago Ahuixotla, coll. HvW.
- c: Molded plaque with RE glyph, after von Winning 1961: fig. 14,d.
- d: Planorelief vessel lid with butterfly and Comb-and-bar sign, after Séjourné 1959: fig. 120.
- e: Moldmade plaque, 6 cm h, buff with red, Santiago Ahuixotla, coll. HvW.

Fig. 5: Diamond sign on incised redware or planorelief vessels

- a,b,g,i,j: bowls, Santiago Ahuixotla, coll. HvW.
- c-d: After von Winning 1961: figs. 10,i,l.
- e: Red on buff, incised to outline design, 17 cm h, Santiago Ahuixotla, private coll.
- f: Stuccoed-and-painted bowl (detail), after Lothrop, Foshag and Mahler 1957: pl. 34.
- h: After von Winning 1961: fig. 12,d.
- k: After Linné 1934: fig. 22.

Fig. 6: Comb-and-bar sign on planorelief vessels

- a: Flat-based bowl, each motif appears twice. Left: C&B sign flanked by footprints, RE glyph above. 4,3 cm h, 14 cm diam., black with traces of cinnabar, Santiago Ahuixotla, private coll.
- b: After von Winning 1961: fig. 3,a.
- c: After Seler 1902-1915, 5:511, fig. 163.
- d: Bowl with cylindrical supports, black with cinnabar, Santiago Ahuixotla, private coll. Mountain sign (top), Bird's Eye glyph, three C&B signs flanked by footprints; center: crossed bands.

Fig. 7: Comb-and-bar sign on planorelief vessels

- a: After von Winning 1961: fig. 2,f. Natural size.
- b: On streamers flanking Tlaloc face (?), water drop on right. Santiago Ahuixotla, coll. HvW. 9 cm h.
- c: C&B sign pending from "eye in feather frame" with footprints, Santiago Ahuixotla, coll. HvW. 11,4 cm h.

- d: With water sign (left), after Linné 1934: fig. 116.
 e: In frame with bivalve shell and footprints, Santiago Ahuixotla, coll. HvW. 6,5 cm h.
- Fig. 8: Comb-and-bar sign on incised redware, in borders and frames
 Santiago Ahuixotla, private coll.
 a, c-e, g-i: C&B sign alternating with double circle (chalchihuitl, water sign).
 f: In borders; center: mountain sign with inset rain motif, water scrolls.
 h, i: After von Winning 1961: figs. 10, h, i.
- Fig. 9: Comb-and-bar sign on incised redware
 Santiago Ahuixotla, private coll.
 a, d, e, h, i: After von Winning 1961: fig. 10.
 g, j: With diagonal Saw-tooth ray B sign (radiant heat).
- Fig. 10: Comb-and-bar sign
 a: On object attached to hand of figurine. C&B sign below turquoise sign. 10,8 cm h, buff, traces of red and white, Santiago Ahuixotla, coll. HvW.
 b: On garment of figurine fragment, turquoise sign on left. 7,5 cm h, brown, traces of white, Santiago Ahuixotla, coll. HvW.
 c: Cartouche with year sign and C&B, and numeral 7., after Caso 1967: fig. 3.
 d: C&B sign with year sign (above) and twisted cord (below) on molded plaques attached to large thick-walled vessel (one of two similar fragments), 12,5 cm h, buff with traces of red, Santiago Ahuixotla, coll. HvW.
- Fig. 11: Maya fire glyphs and Comb-and-bar on Xochicalco sculptures
 a: Glyph T563a and T563b, after Thompson 1962:183-186.
 b, d: Firewood bundle in combinations in inscriptions at Chichén Itzá, after Beyer 1937: figs. 184B, 185B, 188B.
 c: Glyph T1.122:563a, firewood bundle with flames, after Selser 1902-1915, 1:396, fig. 44; Tro. Cortesianus 38.
 e, h: Xochicalco, after Caso 1967:181, figs. 18, g-i.
 f: Xochicalco, Stela 1:A, after Sáenz 1964: pl. 2.
 g: Xochicalco, after Caso 1967:183, fig. 19, b.
- Fig. 12: Serrated Comb-and-bar sign
 a-e, g, h: Incised redware, Santiago Ahuixotla, coll. HvW.
 f: Xiuhcoatl carrying sun disk, Codex Vindobonensis 30.
 i: Base border on stuccoed-and-painted cylindrical tripod vase, after Lothrop 1957: pl. 33.
- Fig. 13: Serrated Comb-and-bar sign
 a: Incised redware tripod vase, 6,5 cm h, Santiago Ahuixotla, coll. HvW.
 b, d-f: Molded plaques with trapeze-ray (year) sign above serrated C&B, Santiago Ahuixotla, coll. HvW.

- c: Molded appliqué with butterfly, thin orange ware, after Seler, 1902-1915, 5:502, fig. 148, b.
- Fig. 14: Serrated Comb-and-bar sign and bundles of firewood
 a-c: Molded plaques with year sign and variant of RE glyph, Santiago Ahuixotla, coll. HvW.
 d: Firewood bundle with water drops on cover of incense burner, after Séjourné 1959: fig. 74, b.
 e: Firewood bundle and twisted cord, after Séjourné 1959: fig. 74, c.
 f: Incised redware, bundle and (left) water symbols, 10 cm h, Santiago Ahuixotla, coll. HvW.
- Fig. 15: Firewood bundles
 a: Stuccoed-and-painted cylindrical vessel, after Lothrop 1957: pl. 31.
 b: Bundle with water symbols below (bivalve shell, chalchihuitl); detail of border, Tetitla mural, after Miller 1973: fig. 301.
 c, c': Mold and cast of appliqué ornament, 8,7 cm h, after von Winning 1965: fig. 1.
 d: Firewood bundle above rubber ball (ball court marker?). One of two identical molded relief panels on Teotihuacan-Veracruz style tripod vessel, Tiquisate/Escuintla region, after Hellmuth 1975: pl. 11.
- Fig. 16: Firewood bundles (Type C) on plano-relief pottery
 a, c: Flanked by radiant (heat?) lines. (Saw-tooth ray A sign).
 b: With water drops in adjacent panel.
 a-d: Santiago Ahuixotla, coll. HvW.
- Fig. 17: Firewood bundles on plano-relief pottery
 a: Flanked by radiant (heat) lines; left, a waterdrop. Santiago Ahuixotla, coll. HvW.
 b: Flaming (?) firewood bundle on lid of tripod vessel, Teotihuacan, private coll.
- Fig. 18: Firewood bundles type D and E with knot element
 a: In medallions with year sign, diamond, RE glyph, alternating with tri-mountain signs, after von Winning 1961: fig. 10, g.
 b: Both panels contain the year sign with horizontal knot element, flanked by firewood bundle D in the right panel. Water drops and tri-mountain signs alternate with panels. After von Winning 1961: fig. 10, h.
 c-h: Molded plaques with firewood bundle D, serrated C&B and asterisks; c, after Gamio 1922: pl. 111, q; d-h, after Séjourné 1959: fig. 99.
 i, j: Molded appliqués, 3,8 cm h, buff, and 5 cm h, brown, Santiago Ahuixotla, coll. HvW.
- Fig. 19: Flames
 a, a': Dual mold (4,6 cm h) and cast of appliqué ornament, after von Winning 1965: fig. 5.

- b: Inverted flames below feathered eye sign, detail of planorelief vessel, after von Winning 1949: fig. 10.
- c: Flaming cuitlatl (excrement, sin) sign, after Preuss 1903: fig. 34 (Codex Cospi 8).
- d: Flaming hands, detail of two similar stuccoed-and-painted cylindrical tripod vessels, after Seler 1902-1915, 5:531, fig. 182, pl. 63.
- e: Flame above tecpatl sign, Xochicalco, Stela 2, after Sáenz 1964: pl. 3.
- f: Burning mass with smoke and flames, Teotihuacan, Temple of Agriculture mural, after Gamio 1922: pl. 33.
- g: Inverted flames, incised brownware, San Miguel Amantla, after Boas 1911-1912: pl. 62:18.
- h: Incised redware, Santiago Ahuixotla, coll. HvW.
- i: Goggled figure with weapons, Saw-tooth ray and flames, Tepantitla mural, after Miller 1973: fig. 195.
- j,k: Flames over basin containing Saw-tooth (radiant heat) sign, molded appliqué, Santiago Ahuixotla, coll. HvW.

Fig. 20: Flames

- a: Flames surrounding heraldic shield, planorelief vessel, after Séjourné 1966a: fig. 84.
- b: Flaming mouth at temple entrance, Tetitla mural, after Séjourné 1966: fig. 141 ("boca flamante").
- c: Flames over incense burner or firewood bundle; red-on-yellow incised tripod bowl, 9,5 cm h, Santiago Ahuixotla, coll. HvW.
- d: Monument from Sun Pyramid, Teotihuacan ("Batres' xiuhmolpilli"), after Gamio 1922: pl. 22, f.

Fig. 21: Flames

- a: Pillar, Palacio de Quetzalpapalotl, after Acosta 1964: fig. 103.
- b: Flames over jaws (?), after Séjourné 1966a: pl. 19.
- c,d: Flames on large relief clay slabs, 54 cm h, Teotihuacan, after Linné 1942: figs. 2, 3.

Fig. 22: Flames and flaming firewood bundles

- a: Plaque with flames, stacked firewood, year sign and diamonds, Santiago Ahuixotla, coll. HvW.
- b: Flames in headdress of goggled figurine; cast from mold, Santiago Ahuixotla. The lower part of the figure was apparently modified after leaving the mold. Coll. HvW.
- c: Flaming bundles, detail of planorelief cylindrical tripod, Xolalpan Grave 1, after Linné 1934: fig. 24.
- d: Flaming bundle or torch, detail of stuccoed-and-painted vessel, after Seler 1902-1915, 5:528, fig. 181.
- e: Flaming bundle with RE glyph and numeral 7. Teotihuacanoid Stela 1, Piedra Labrada, after Caso 1967:150, fig. 13.
- f: Flaming bundle with water signs (shell and chalchihuitl) and figure bearing weapons. Planorelief vessel, after Séjourné 1964: fig. 8.

- g: Flaming bundle, incised on blackware bowl, after Seler 1902-1915, 5:505, fig. 154.
- Fig. 23: Flaming firewood bundles, Tetitla murals
 a: As main motif, after Miller 1973: fig. 296.
 b: In border frame, after Miller 1973: fig. 298.
- Fig. 24: Flaming firewood bundle and Caso's Glyph A
 a: Teotihuacan style slab carved in low relief, with Tajinoid scrolls at base. 105 cm tall celebrant holding two flaming bundles (torches) and with two identical torches and Glyph A in headdress, after Bolz-Augenstein and Disselhoff 1970: pl. 20.
 b,c: Molded appliqués with Glyph A in feather frame, brown with residues of cinnabar (b, 5 cm long), Teotihuacan, coll. HvW.
 d: Glyph A with numeral 5; one of four carvings on stone block from Chalco, after Seler 1902-1915, 2:161, fig. 70, a.
 e,f: Glyph A with numeral 6, Xochicalco, after Caso 1967:172, fig.8.
 g: Glyph A with numeral 7 (Piedra del año 3 tochtli), after Sáenz 1968: fig. 1.
- Fig. 25: Four-element group
 a: Heraldic emblem in front of a profile figure; detail, Tetitla mural, after Miller 1973: fig. 235.
 b: Detail, stuccoed-and-painted vessel, after Lothrop, Foshag and Mahler 1957: pl. 32.
 c: Detail, planorelief vessel, after von Winning 1958: fig. 31.
 d-l: Incised buff ware; d,g, after von Winning 1958: fig. 32, others Santiago Ahuixotla, coll. HvW.
- Fig. 26: Four-element group
 a: Articulated figurine, moldmade body and head, 7 cm h, after von Winning 1958: fig. 13, b.
 b: Border, Mural 3, Palace of the Jaguars, Teotihuacan. From left to right: Saw-tooth ray (radiant heat), serrated C&B, dots (rain), water. After Miller 1973: fig. 47.
 c: Tied Four-element group flanked by drops and four-petalled flowers, after von Winning 1958: fig. 37.
 d: Mural, Tetitla. Top row: C&B (incomplete) sign and bundle; second row, dots (rain); third row, water; fourth row, serrated C&B sign. After Séjourné 1966: fig. 144.
- Fig. 27: The "binding of the years"
 a: Rock carving, Xochicalco, supposedly indicating the first New Fire ceremony in 1 tochtli, day 2 coatl. After Sáenz 1967: fig. 1.
 b,c: Bundles on stairs of substructure, Tenacuya Pyramid, after Caso 1935: pl. 3:16, 18.
 d: Toltec period wall panel, Mausoleum III, Chichén Itzá (completion of cycle), after Seler 1902-1915, 5:367, fig. 243.
 e: Twisted cord with year sign. Molded appliqué, buff with traces of red, 7 cm h, Santiago Ahuixotla, coll. HvW.

- f: Twisted cord below stacked firewood; left, tri-mountain sign. Molded appliqué, buff with traces of red, Santiago Ahuixotla, coll. HvW.
- g: Year 2 acatl with knotted cord indicating completion of 52-year cycle, Cod. Aubin 17.
- h,i: Twisted cord or knot element on front and back panels of stone incense burner, Sun Pyramid, Teotihuacan, after Seler 1902-1915, 5:429, figs. 17,a,b.
- j: One of two similar stone slabs with flaming bundles, related to "Batres' xiuhmojpilli sculpture" (see Fig. 20,d), from Sun Pyramid, Teotihuacan; after Batres 1906:25, pl. 2.

Fig. 28: The Four-element group as a notation of a prayer
 The prayer notation (Fig. 25,c) in proximity of a priest's speech scroll and aquatic signs. On the lower right, the priest's incense pouch. After von Winning 1949:135-136.

Fig. 29: The Four-element group (Four symbol pattern)
 Tentative interpretation of the prayer formula.

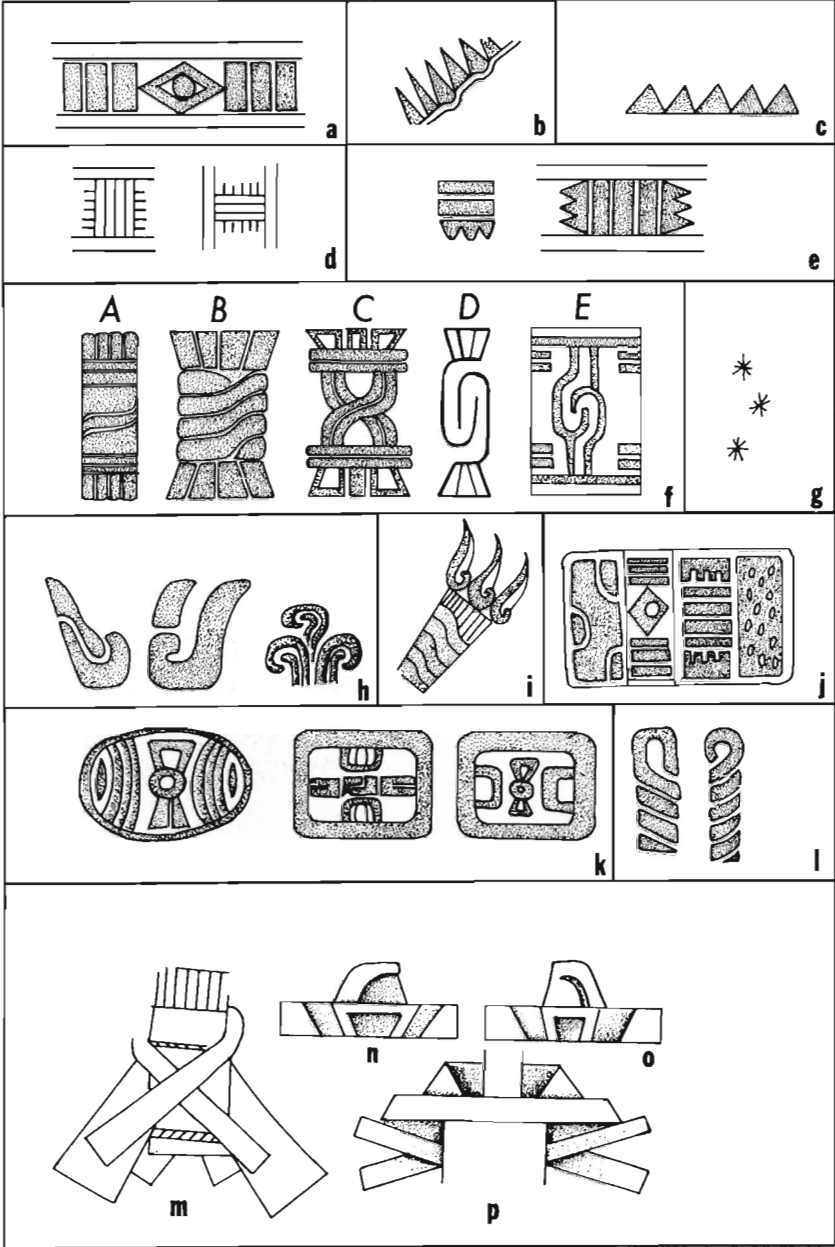


Fig.1

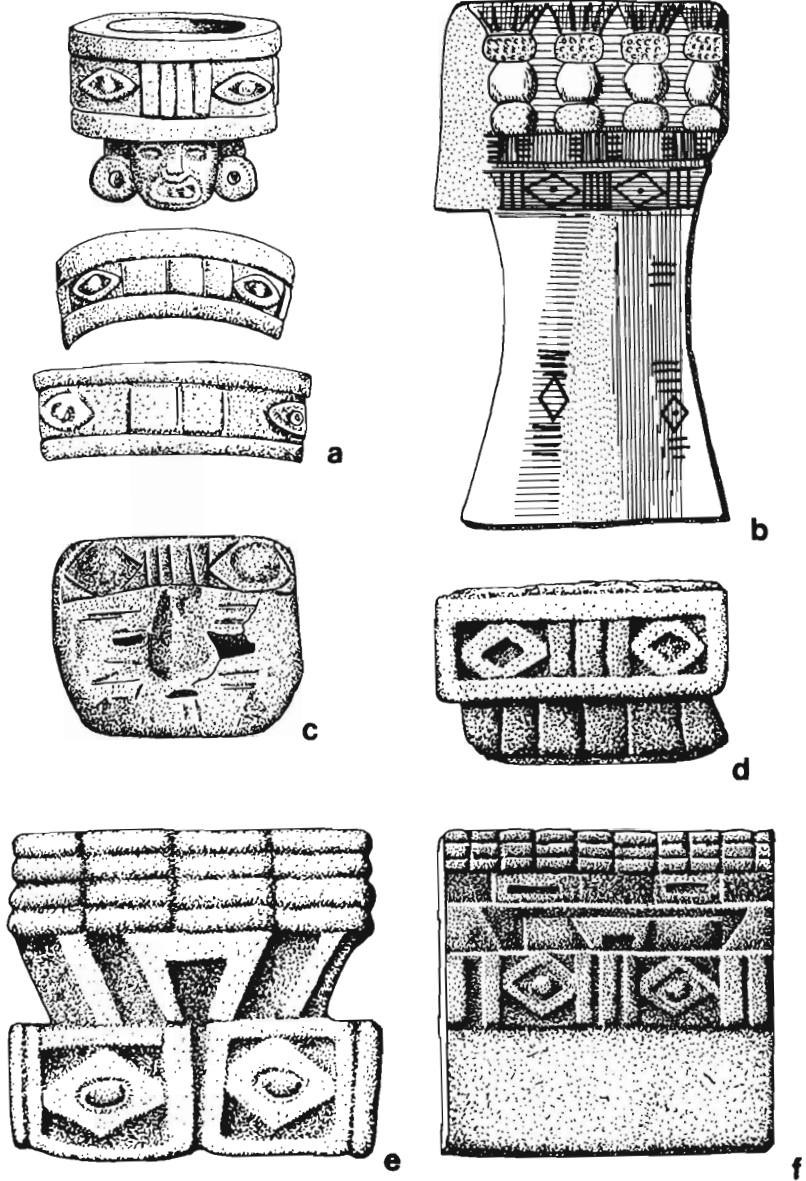


Fig. 2

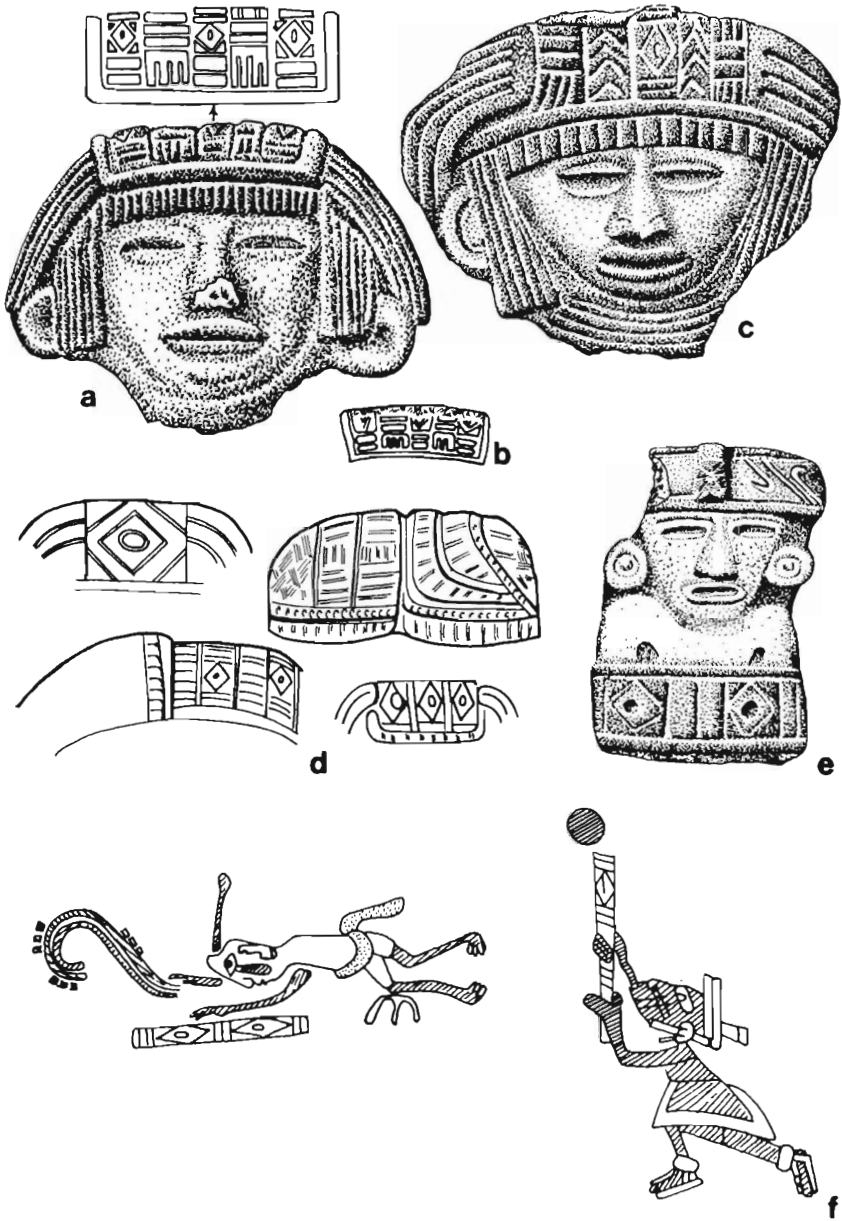


Fig. 3

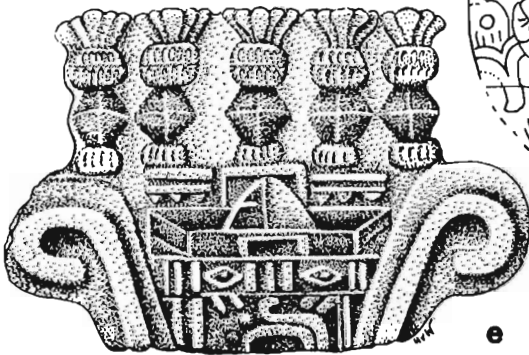
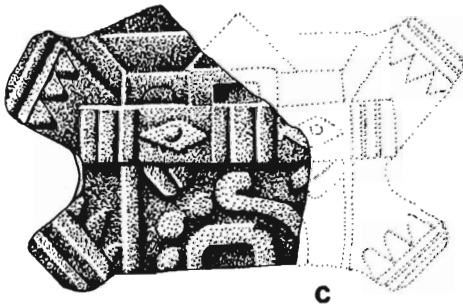
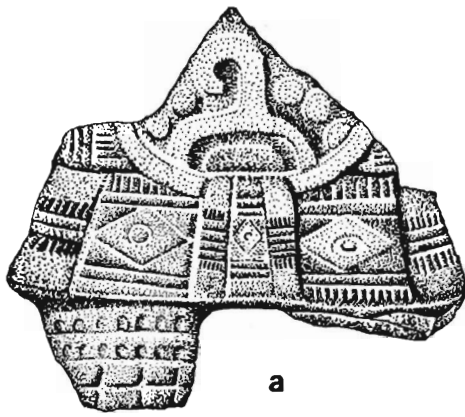


Fig.4

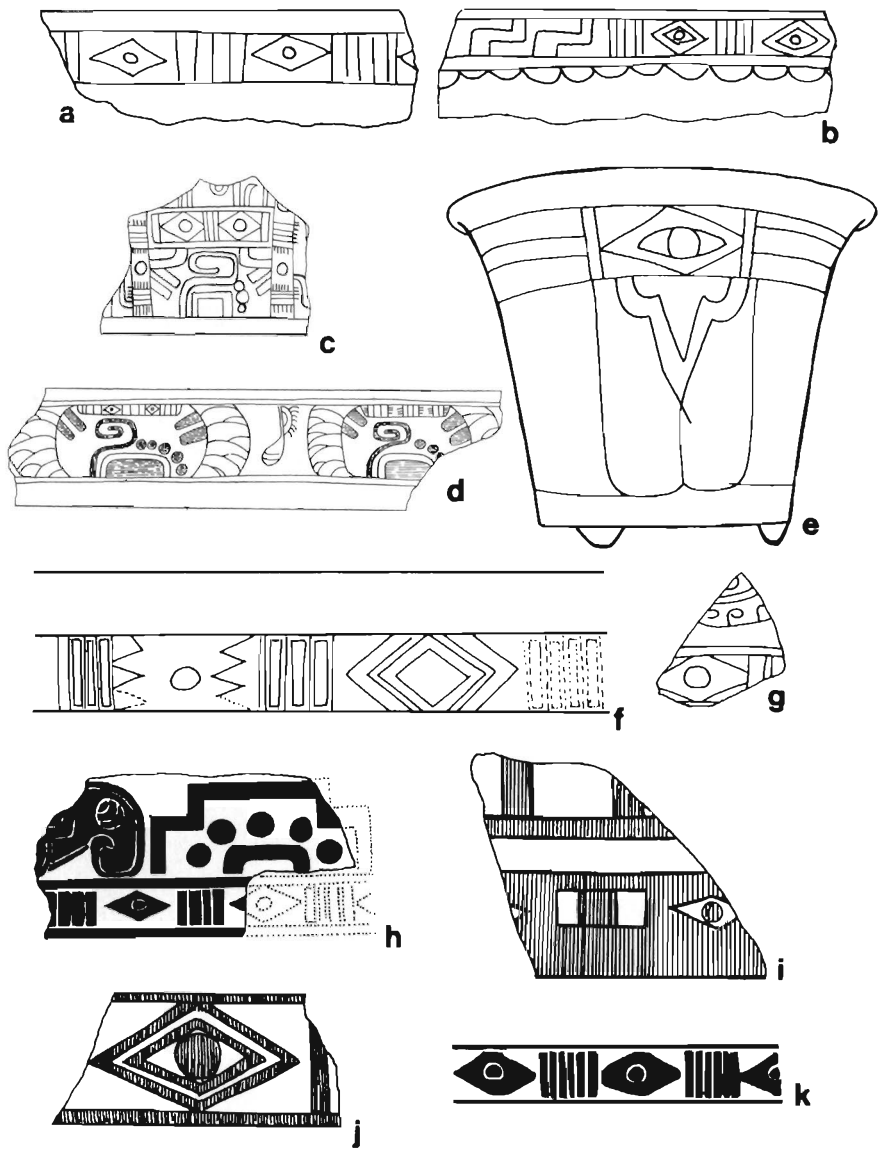


Fig.5



Fig.6



Fig.7

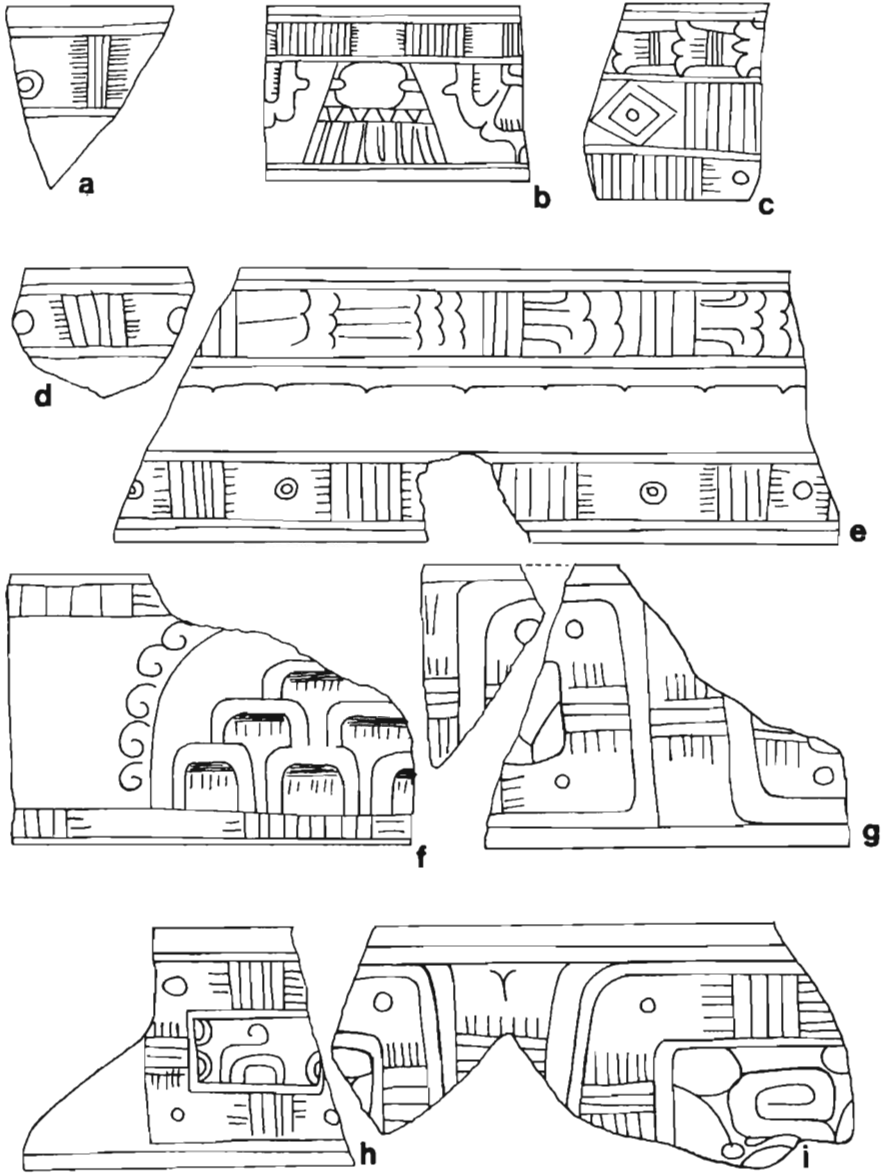


Fig.8

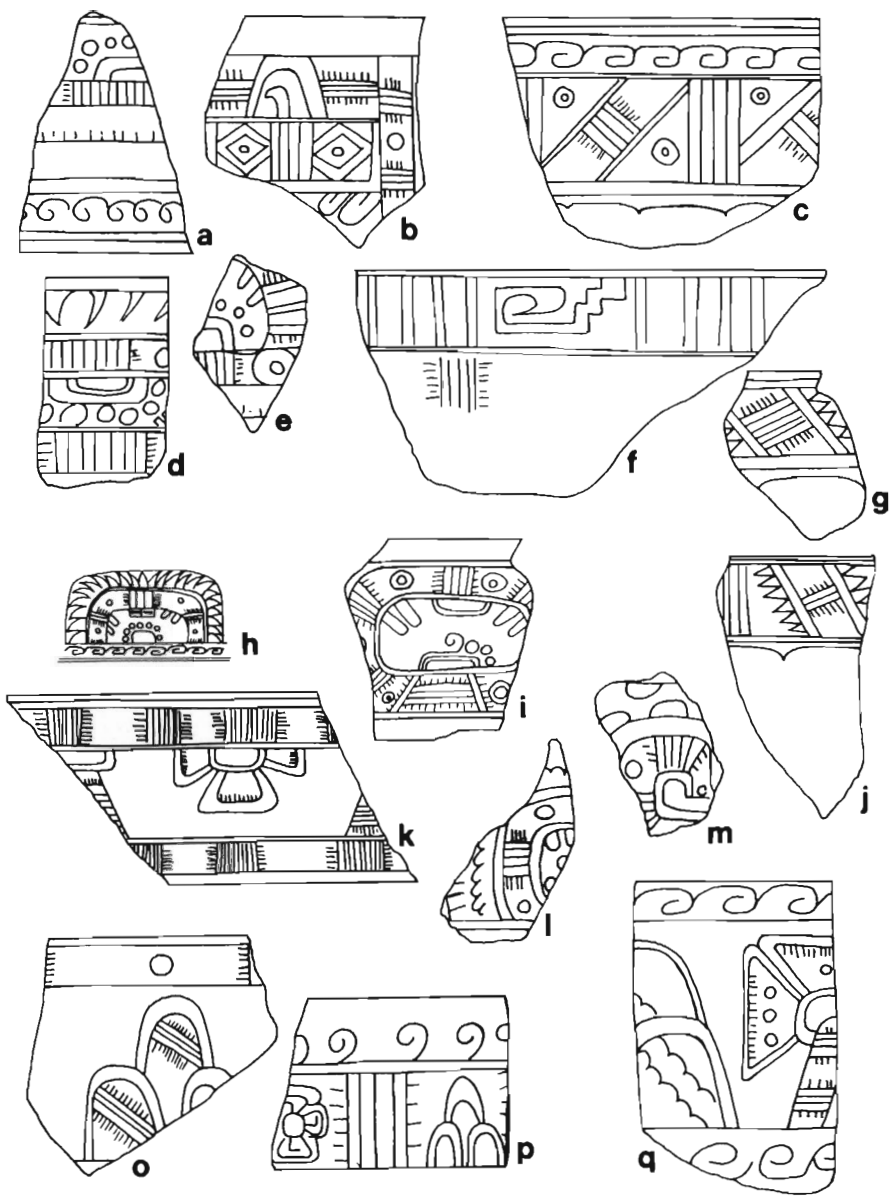


Fig.9

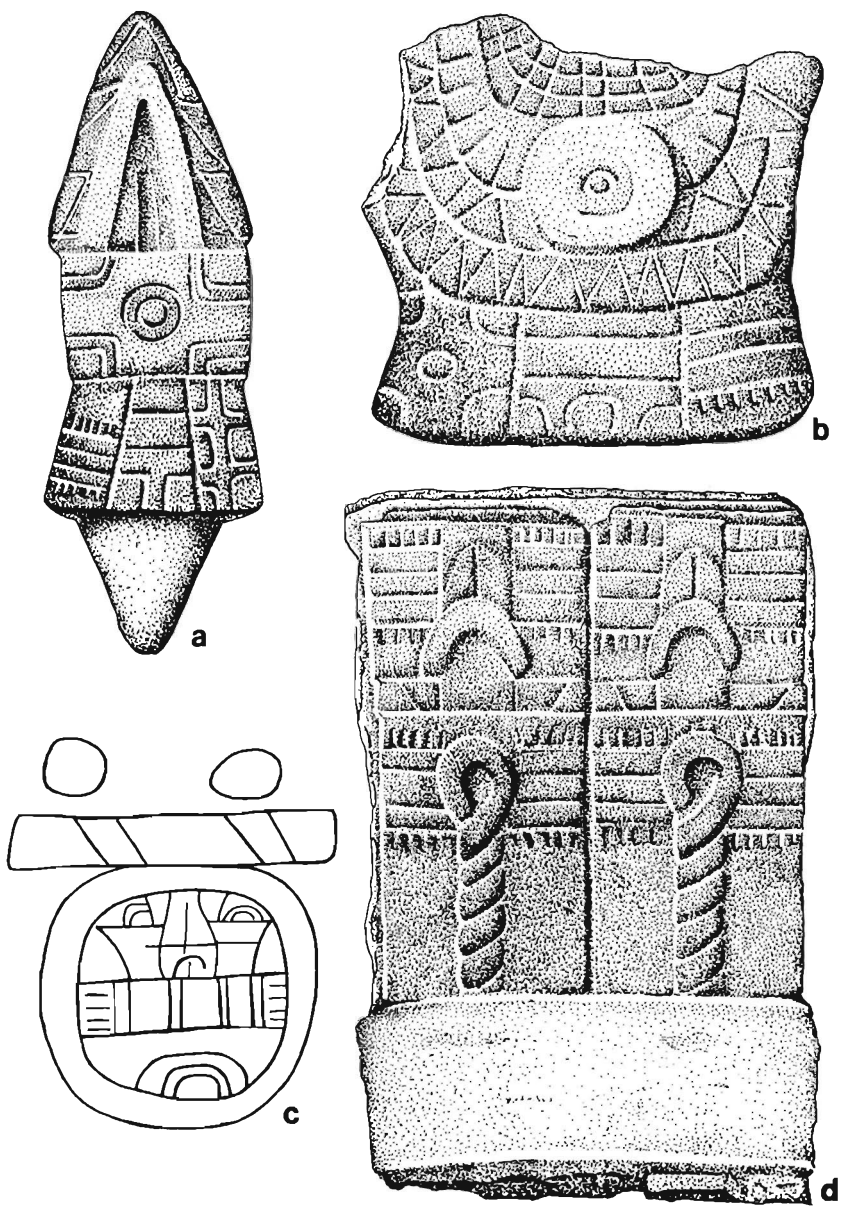


Fig. 10

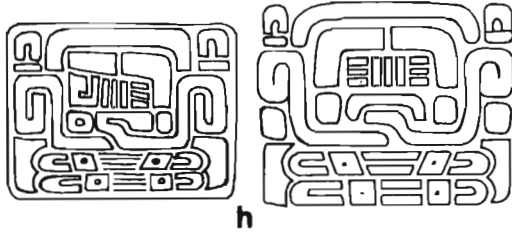
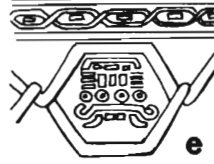
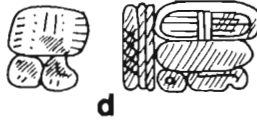
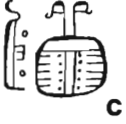
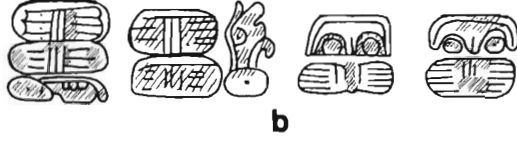


Fig. 11

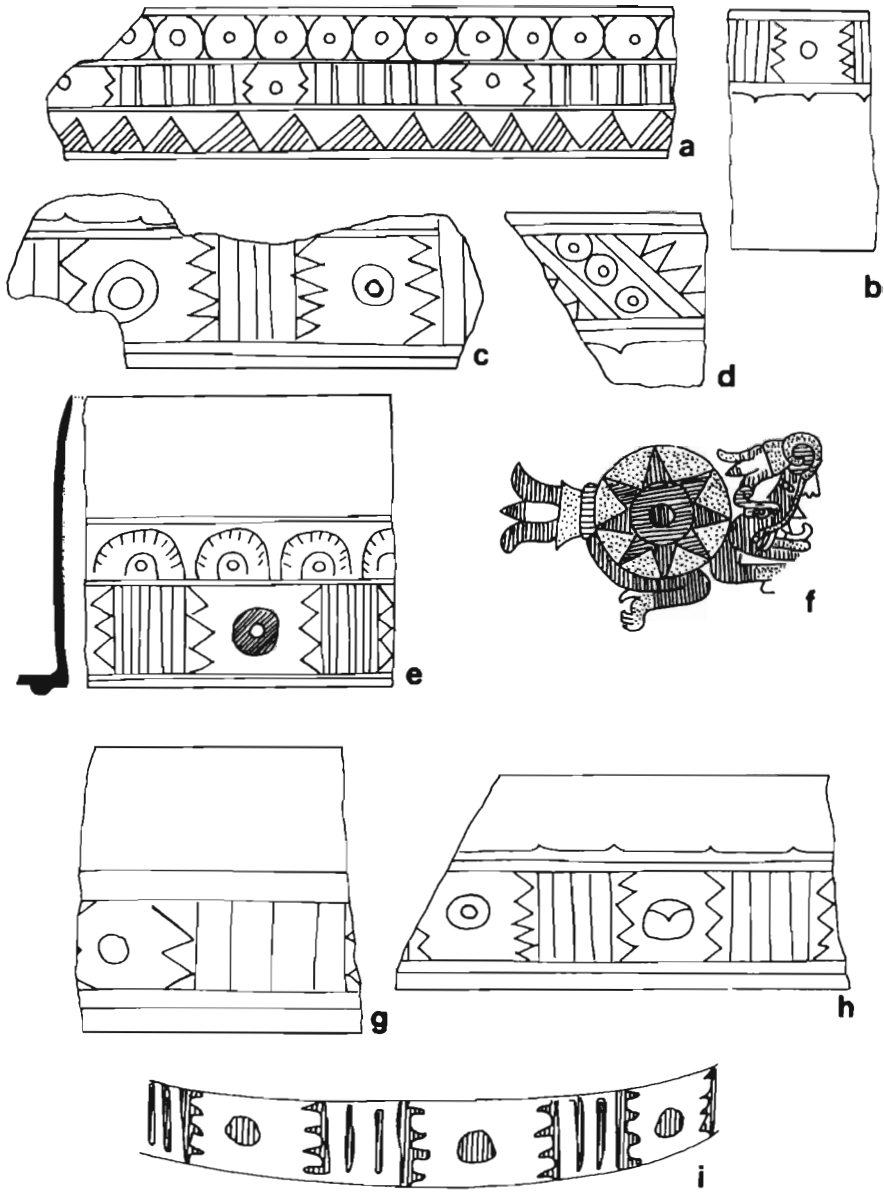


Fig. 12

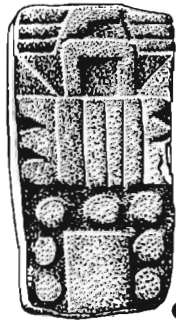
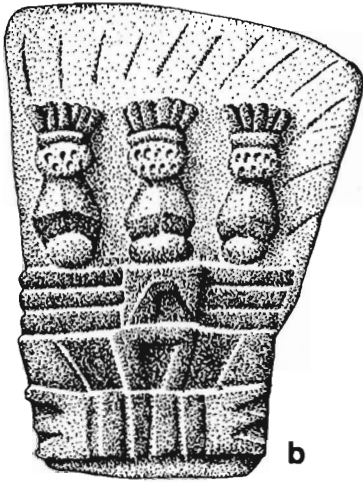
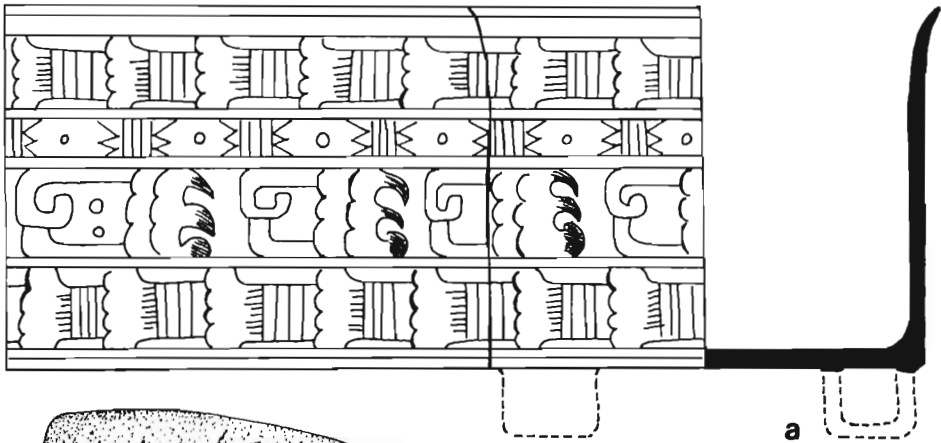


Fig. 13

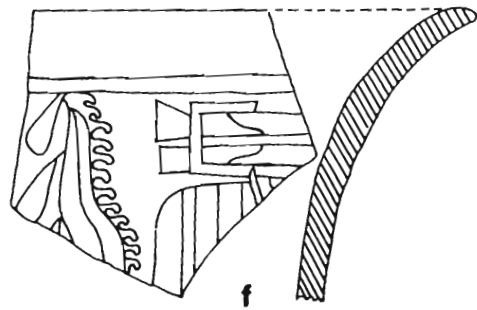
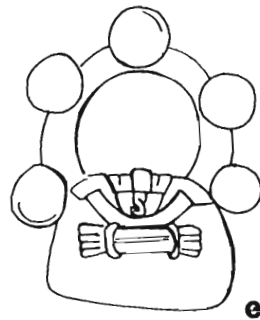
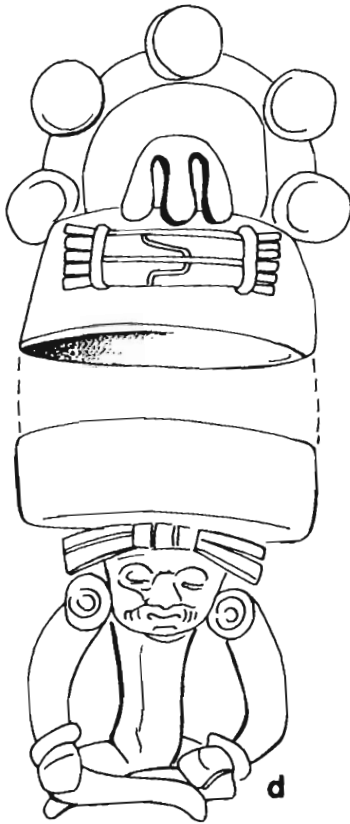
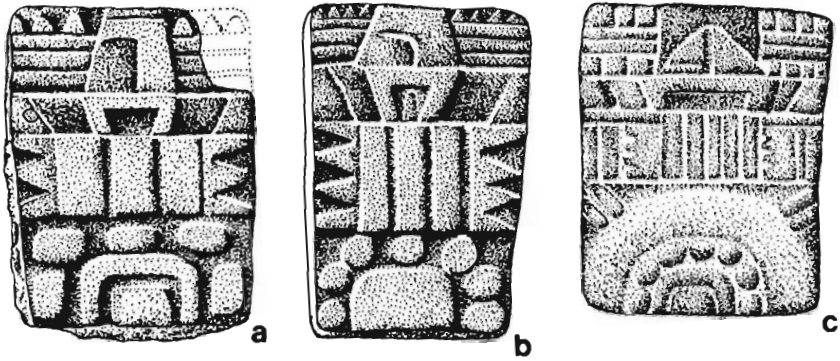


Fig. 14

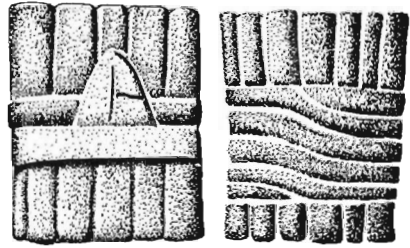
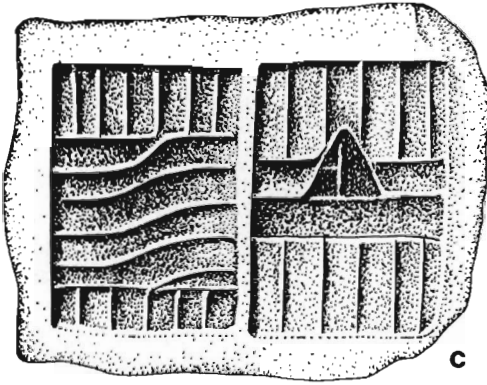
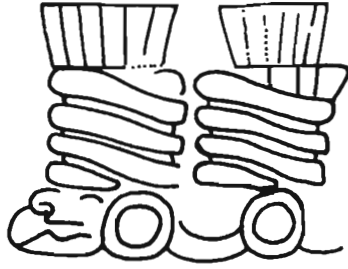
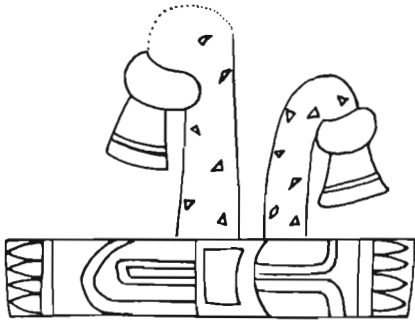


Fig.15



Fig. 16



Fig. 17

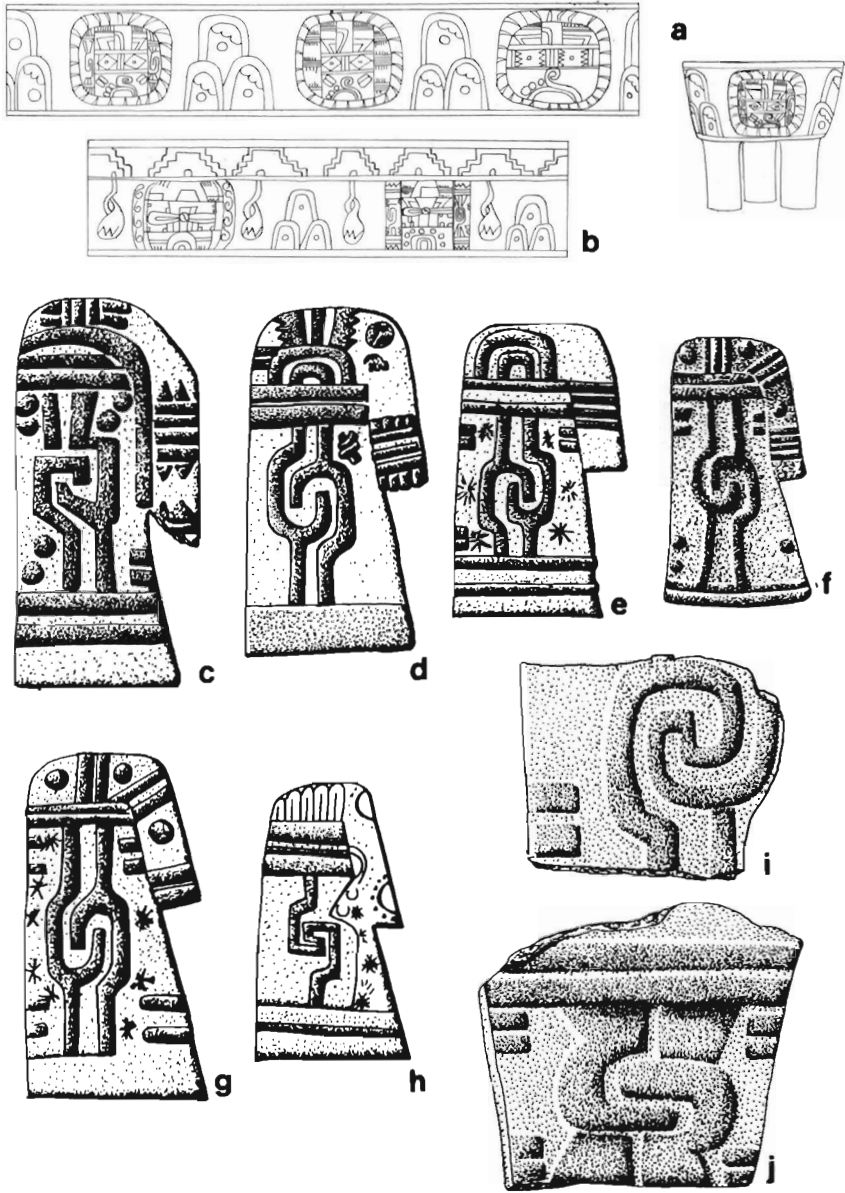


Fig. 18

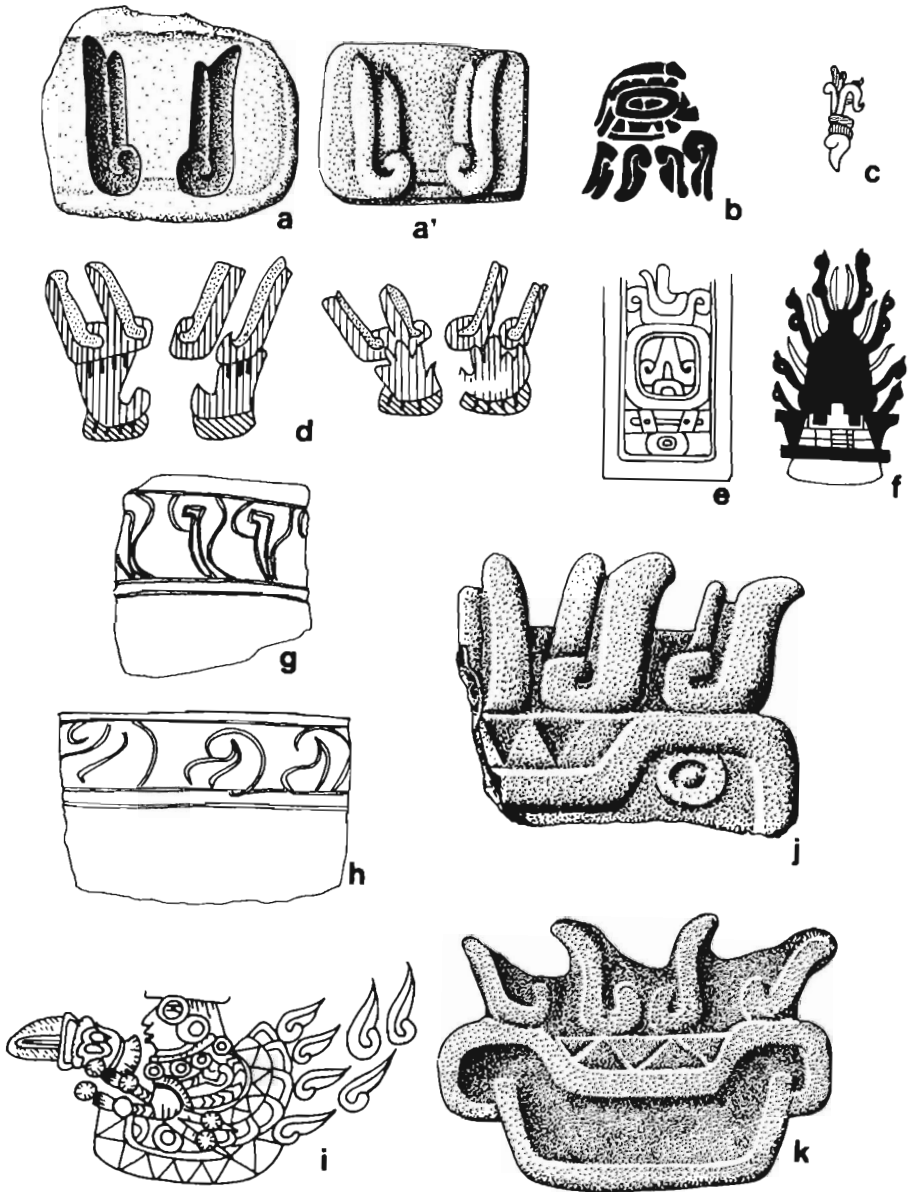
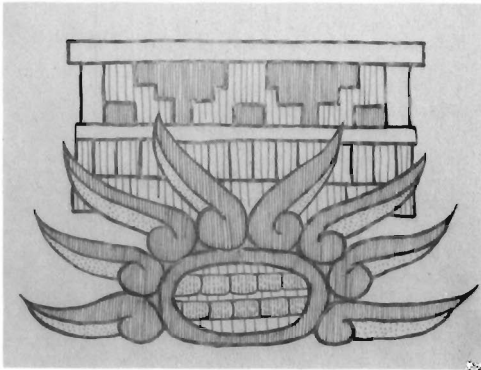


Fig. 19



a



b



c



d

Fig. 20

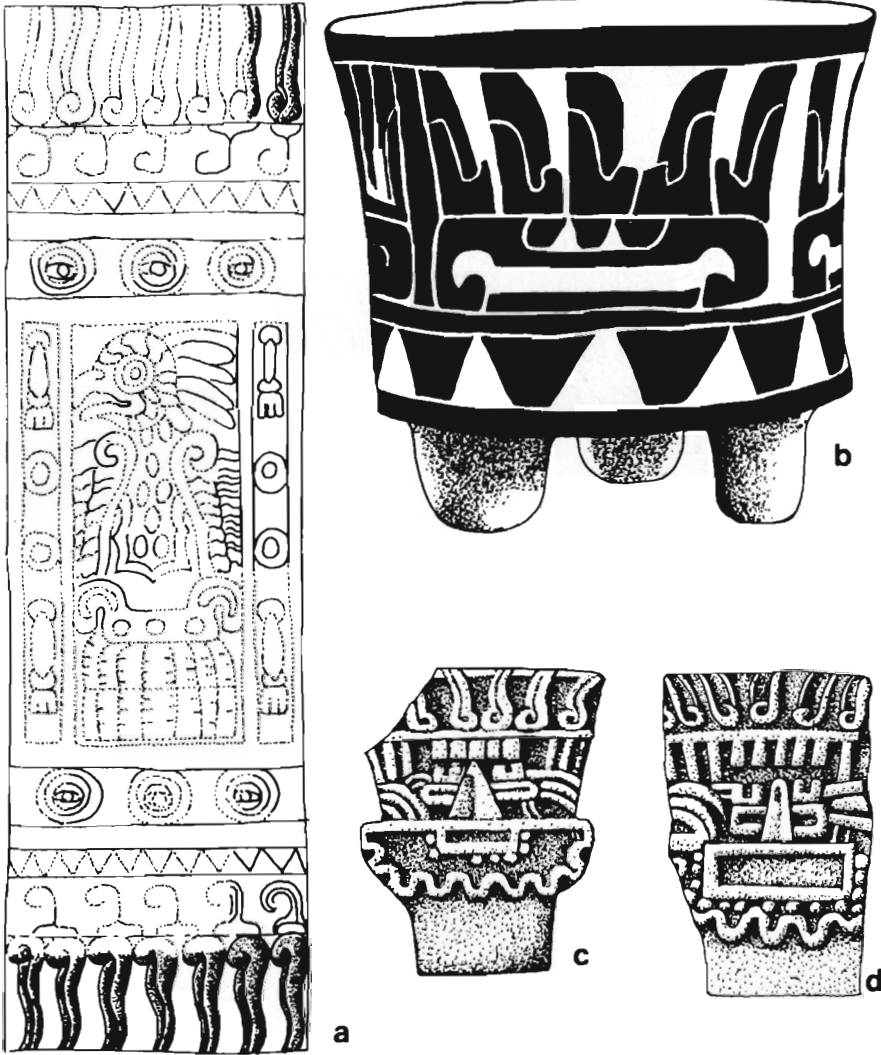


Fig. 21

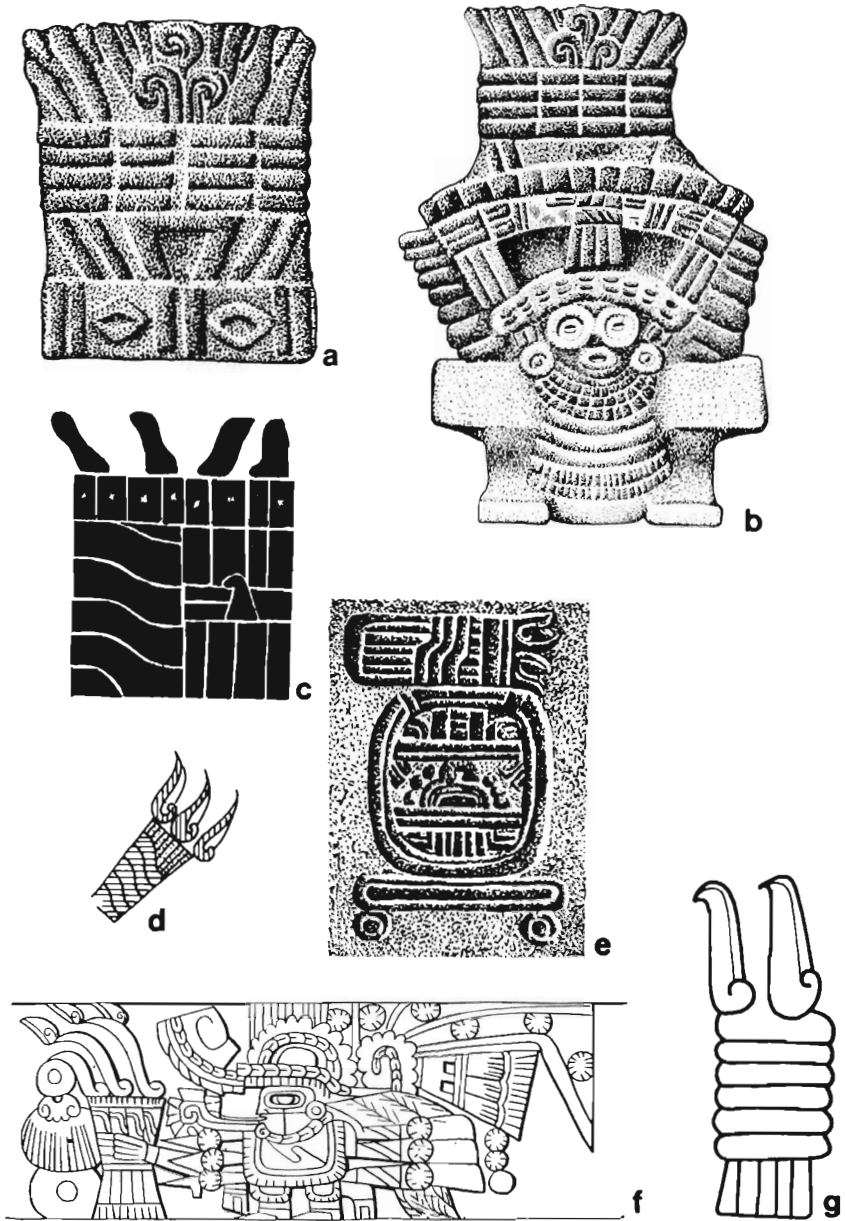


Fig. 22

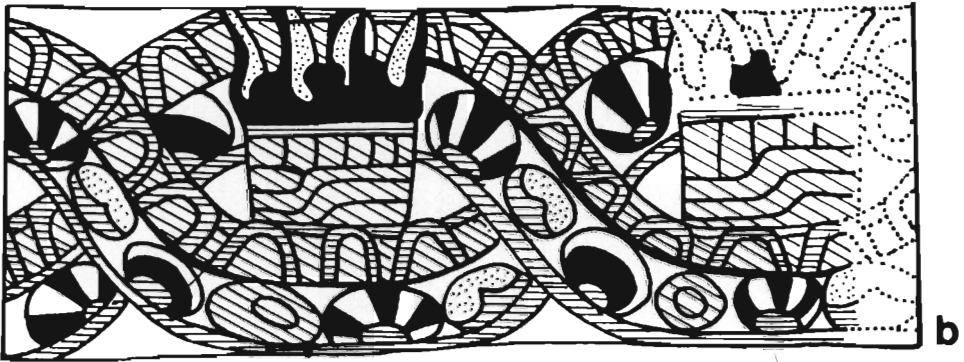
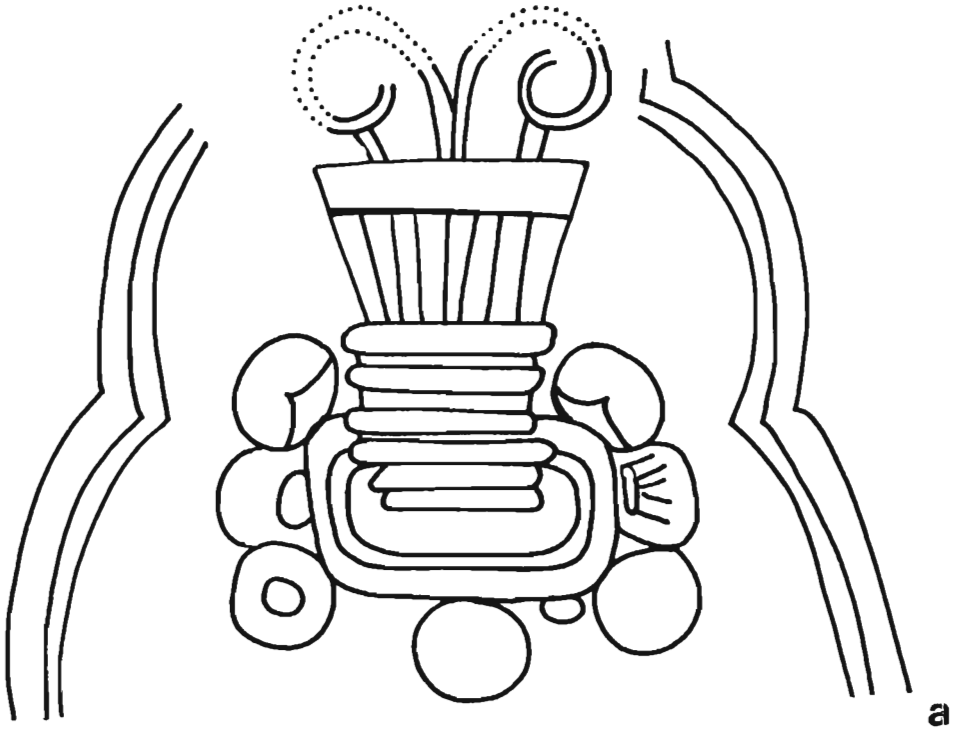
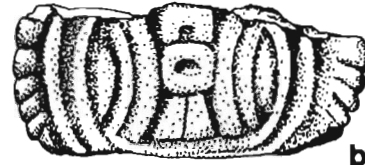


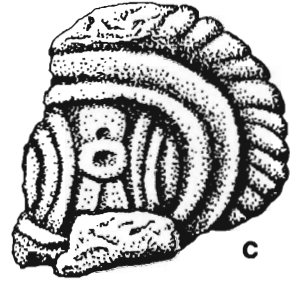
Fig. 23



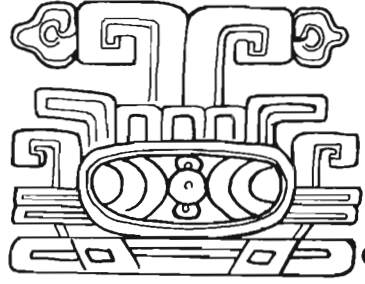
a



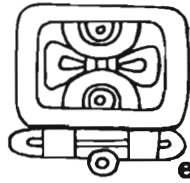
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c



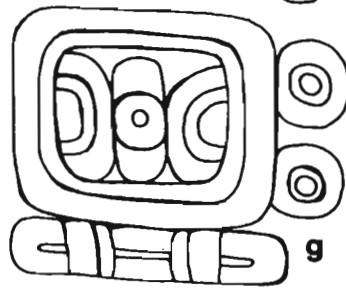
d



e



f



g

Fig. 24

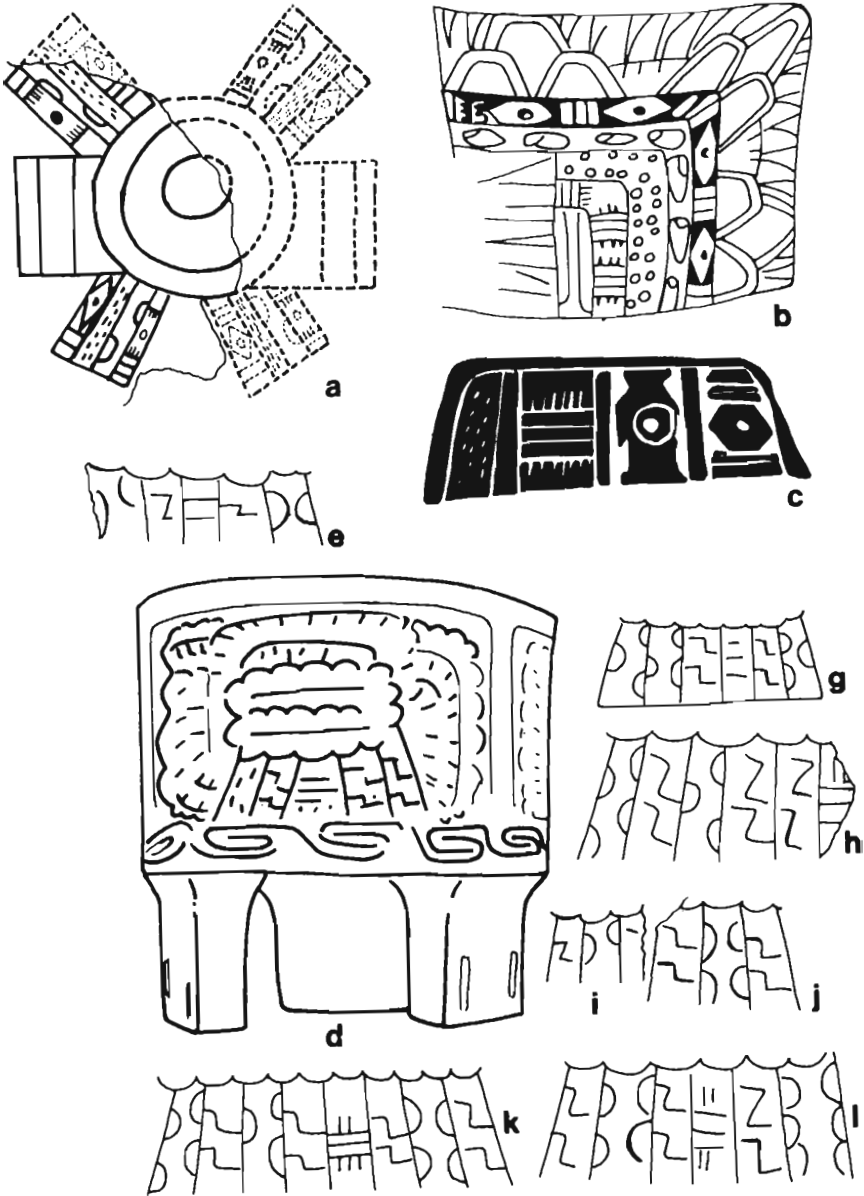


Fig. 25

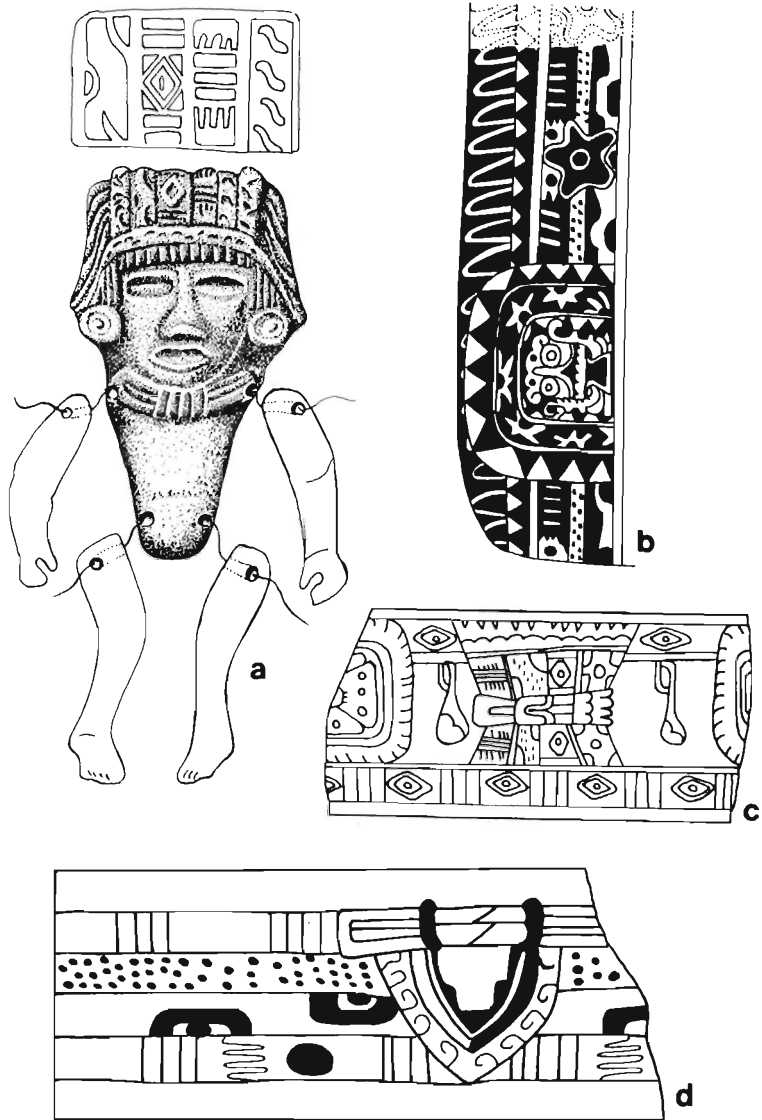


Fig. 26

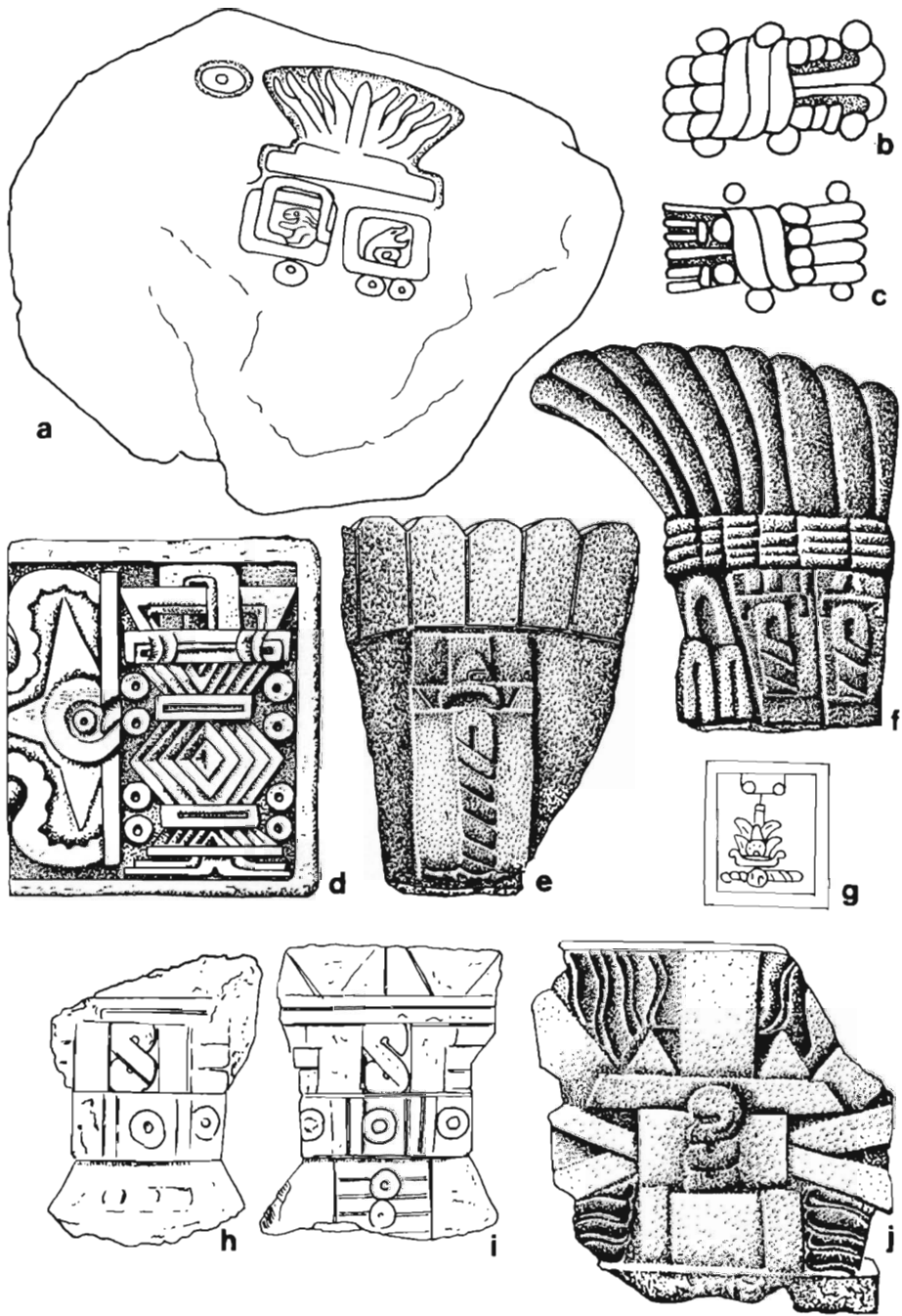
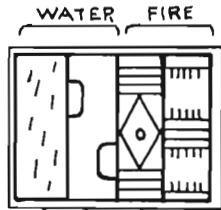


Fig. 27



Fig. 28

FOUR ELEMENT GROUP
(FOUR SYMBOL PATTERN)



IDENTIFICATION

RAIN

WATER

DIAMOND

COMB-AND-BAR

INTERPRETATION

FERTILITY
SUSTENANCE

POOL OF
WATER

BURNING
OF INCENSE

TIED FIREWOOD
BUNDLE

IMPLIED
MEANING

ABUNDANT
CROPS

SUFFICIENT
WATER

AN OFFERING

BINDING THE
YEARS
COMPLETION
OF TIME CYCLE

PARAPHRASED

AN OFFERING FOR SUFFICIENT RAIN (WATER) (TO INSURE)
ABUNDANT CROPS (IN THE FUTURE) YEAR CYCLE(S)

Fig.29

