2. The Zapotec Writing System

GORDON WHITTAKER

Introduction

On present knowledge, writing in the Americas first began to develop at some point in the early first millennium B.C. From the middle of this millennium onward, sequences of two or more signs begin to appear on stone monuments in southern Mexico, providing us with the first indisputable evidence of writing. Since early monuments of this kind can be found in both the Valley of Oaxaca and the Isthmus of Tehuantepec regions, there has been some debate as to whether the ultimate invention of writing in Mesoamerica should be attributed to Zapotec-speaking Oaxacans or to Mixe-Zoque-speaking Olmecs (see the recent discussions in Whittaker 1983:101–105; 1990: 147–249; Justeson et al. 1985:31–37; Justeson 1986). No sufficiently cogent evidence has been advanced to date which would resolve the issue decisively, and it may well be that the development of writing came about less as the result of internal factors in a Oaxacan or Olmec polity than as the outcome of the dynamic interaction of the graphic and symbolic systems of both cultures in response to the growing demands of incipient and competing statehood.

Writing, the use of graphic elements to represent words in language, may occur in the absence of a full-fledged system of writing. Signs, graphic units that may take the form of simple or composite graphic elements, often occur in cultures in which a system of writing is lacking, such as those of the tribes on the North American plains. In such cultures, signs are used to render, for example, names and ritual terms, but have not been further developed for the purpose of recording the varied constituents of actual sentences. Graphic information in such societies is predominantly iconographic in nature, with writing serving as a mere adjunct to names and numbers.

Southern Mesoamerica began to turn from reliance on a single graphic system, in which writing played a subordinate role, to the adoption of dual systems, in which iconography and writing might occur independent of each other or in varying proportions of combination, at the latest by the end of the Middle

Preclassic period (that is, by the sixth century B.C. in round terms). By way of contrast, Mesoamerica north and west of Central Oaxaca probably did not begin to pursue a line of development toward separate iconographic and writing systems until the eve of the Spanish Conquest.

With Period I (c. 500–200 B.C.) at the Valley of Oaxaca site of Monte Alban—the beginning of the Late Preclassic—comes the first compelling evidence that a system of writing had come into being in Mesoamerica. During this period, which coincides with Monte Alban's rise to power in the valley, a number of massive stelae were erected in the center's main plaza, all boasting orderly columns of gracefully executed signs and all free of accompanying iconography (Caso 1946). Beside the repeated occurrence of signs followed by bar-and-dot or finger numerals, suggesting the notation of calendrical data, there appear other signs, both compound and simple, which can be suspected on formal and comparative grounds of having a nominal or verbal function (Whittaker 1980; 1981).

Short sequences of writing were also added to a number of prominently placed iconographic monuments belonging to the extensive series of *danzantes* (Scott 1978), so named because of their sculpted reliefs of sprawling individuals. The majority of monuments bearing inscriptions, whether stelae or *danzantes*, appear to have made up groups sharing related texts, a pattern that continues into the Classic (Marcus 1976b; 1983c; Whittaker 1977; 1983).

Period II (c. 200 B.C.–A.D. 250), marking the close of the Late Preclassic, saw a vigorous expansion of the might and influence of Monte Alban both within and beyond the Valley of Oaxaca. This is reflected not only in the archaeology of the region but also in an impressive series of stone tablets adorning the walls of Mound J in the main plaza at Monte Alban itself. These tablets have been interpreted on formal grounds as records of Monte Alban's conquest of Oaxacan towns (Caso 1946:137). With few exceptions, the glyphic sequences are limited to a three-glyph column with signs of varying size, all of which appear to be toponymic in nature. Nevertheless, a handful of tablets, perhaps the earliest, include dates and, rarely, additional calendrical or ritual data.

The writing system of Monte Alban, which had shown great vitality in Period I, flourished still and may even have increased its repertory of hieroglyphs, but by the end of Period II it had leveled off and, it seems, already entered on a decline in its usage. The elite medium that had documented the growth and military prowess of the Zapotec state now gave way increasingly to iconography in importance and versatility, gradually resuming its prior role as an adjunct to the latter. Monte Alban was now at the height of its power, yet, with rare but notable exceptions, the writing of Period IIIA (c. A.D. 250–450), the Early Classic, had become limited to calendrical sequences and probable names of people and places, all other functions having been taken over again by iconography.

By the Middle Classic, the Zapotec writing system had come full circle. The former flexibility and artistic elegance of this graphic medium was now replaced by an increasingly crudely executed iconographic system. Monte Alban was on the decline. The late monuments of Period IIIB (c. A.D. 450–700) exhibit a devastating collapse of the stylistic conventions and structural organization so evident in the works of earlier periods. As in the following, politically post–Monte Alban, Period IV (c. A.D. 700–950), calendrically oriented information alone, including names of individuals, is as abundant and important in Central Oaxaca as at any point in the development of Zapotec writing, though now lacking the ordered and complementary date sequences of the Preclassic.

We are confronted with the unparalleled instance of a writing system that began to decline even as the state that developed it was reaching its height of power and prestige (Whittaker 1977). This devolution, as it were, is perhaps to be attributed to the growing internationalism of the Zapotec elite at a time when the iconography of Teotihuacan, which

lacked a writing system, was gaining currency in Mesoamerica. The perception of iconography as a universally interpretable medium may well have led to a negative assessment of the propaganda value of a language-specific system of writing, one whose message was accessible only to a local Oaxacan elite.

The Language of the Inscriptions

It has been widely assumed since the time of the first scientific excavations early in this century that the material culture brought to light at Monte Alban was the product of a Zapotec population. Alfonso Caso, whose excavations and hieroglyphic studies laid the basis for our understanding of early Oaxaca, noted the cultural continuity that flows from Monte Alban to Postconquest Zapotec society and consequently identified the writing system he found at the site as Zapotec (Caso 1928:9–13). In later years, however, Caso drew a distinction between what he regarded as the full-blown Zapotec culture of the Classic and the, for him essentially non-Zapotec, developments leading up to it. He tended to view the matter of Preclassic Monte Alban's ethnic affiliation as an unsolved problem. Although little has been done to test the validity of the assumption, students of early Oaxacan writing today accept the likelihood that, given the geographical distribution of the Zapotec language (or languages) at the time of the Conquest, the language behind the inscriptions of Monte Alban, located near the center of the Zapotec linguistic area, was Zapotec from the very beginning.

The very limited number of hieroglyphs, often three or fewer, occurring between identifiable calendrical sequences on the Period I stelae and Period II tablets, or without calendrical data on the *danzantes* of both periods, suggests that the script was not syllabic. This is in accord with what one would expect at such an early point of development. The noncalendrical glyphs frequently take the form of (1) heads—*pars pro toto* representations of humans, supernaturals, and animals; (2) hands—fingers as numeral digits; thumbs; open hands compounded with other elements; or (3) feet—singly, in pairs, or as footprints pointed up, down, or to the side. Most other glyphs appear to depict physical objects, some of which are clearly recognizable, such as rattles, arrows, and axes.

It is probable that Zapotec signs are logographic. In other words, they represent lexemes, or word-bases minus affixes. Except in the area of verbal morphology, Zapotec has many of the characteristics of an isolating language, in which affixation plays no major role. Because of the low frequency with which graphic elements repeat from compound to compound, elements in such compounds are probably also lexemic, the affixes occasionally required to complete words being supplied by the reader rather than by the script itself. This is a typical feature in the early development of a predominantly logographic writing system, such as the Sumerian, the Japanese, or the Maya. The telegraphic, and often phonetically opaque, nature of this kind of incipient script makes decipherment an extremely difficult task. Since a syllabic system or subsystem did not grow out of Preclassic Oaxacan writing, retrieving exact details of grammar and precise readings will be slow, limited, and dependent on the discovery of phonetically employed logographs.

To date, few instances of rebus phonetics (the use of logographs for their sound value only) have been thought to be discernible in Zapotec inscriptions, and these remain highly tentative at best (Whittaker 1980:42–55; cf. Justeson et al. 1985:46–48). A reasonable case can, nonetheless, be made for a flower-and-stem element (Fig. 2-1) assuming what is probably a phonetic role from Period II on. In its more elaborate form, the latter is part of a three-stem plant glyph classified as W446. The reduced element, a variant of W291, turns up in (1) the hill sign used with place names, (2) an elaborate version of the sign for the numeral 1 when it is a coefficient of day names, (3) an iconographic symbol for rain, often downturned, that adorns representations of the numen of rain and thunder, Cocijo, and (4) the glyph (W291, W297) for the

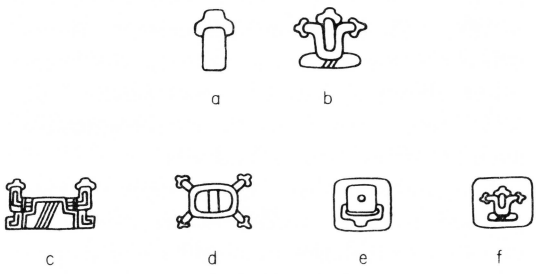


FIGURE 2-1. The flower-and-stem phonetic element: *a*, the base form, a single-stem element; *b*, W446, a three-stem variant element. The base form is probably phonetic in: *c*, W593, the so-called hill sign; *d*, WIb variant, the calendrical prefix for the numeral 1; *e*, W291, the day name Rain; *f*, W297, the three-stem variant for the day Rain.

day name that is equivalent to Rain or Lightning in most Mesoamerican calendars.

The word for 'flower' in the sixteenth-century Valley (of Oaxaca) Zapotec recorded by Fray Juan de Córdova (1942) is *qui(j)e*, related to modern Isthmus Zapotec *guie'* (Pickett 1971). 'Rock' and 'rain' are Córdova's *quie* and *qui(j)e*, respectively (Isthmus *quie* in both cases). *Quie* and *qui(j)e* are homophones in Valley and Isthmus Zapotec, even with regard to tone, the sole distinction being that the term for 'rain' occurs always in conjunction with an additional noun or adjective. Similarly, the day-name prefix associated with the number 1 in the Zapotec calendar is recorded in sixteenth-century orthography as *quie* or *quia* (see, e.g., Córdova 1886:204–212). The only published reconstruction of Proto-Zapotec forms for these words are Morris Swadesh's (1947:223) **kkĕ'ya* 'flower' and **kkéya* 'stone', which, although in need of revision, clearly demonstrate the antiquity of the resemblances.

In addition to Córdova's grammar and dictionary, reliable linguistic data describing the modern dialects of Zapotec and their lexicon and a thorough reconstructive analysis of Proto-Zapotec based on information derived from the latter are indispensable for studying the language of the inscriptions and for recognizing phoneticism. Although some important vocabularies have been produced in recent years by the Summer Institute of Linguistics, extremely little work in Zapotec historical and comparative linguistics, so vital to hieroglyphic studies, has reached print. Beside Swadesh (1947), only one other short contribution (Suárez 1973) has appeared on the subject of Proto-Zapotec, and this is based largely on a still-unpublished, extensive dialect survey prepared in 1961 by the late María T. Fernández de Miranda, whose manuscript and data are not generally accessible to scholars. The only published study both touching on Proto-Zapotec and including a partial reconstruction of its ancestors, Proto-Zapotecan and Proto-Otomanguean, is the pathbreaking but problematical monograph by Calvin R. Rensch (1976). For valuable introductions to the Valley Zapotec reflected in Colonial manuscripts and in the works of Juan de Córdova, see Joseph W. Whitecotton (1982) and Roger Reeck (1982).

The Corpus of Texts and Primary Reference Tools

Progress in deciphering, or at least interpreting, the Zapotec script is also largely dependent on the size of the corpus available to us. At the present time, this corpus consists of only a few dozen, for the most part very short, texts in stone from Preclassic and Early Classic Monte Alban, plus several hundred usually very brief sequences of dates and calendrical names, with the occasional noncalendrical glyph, incised in stone and ceramics hailing from Monte Alban and sites scattered throughout the Valley of Oaxaca and beyond. Many sites in Central Oaxaca have yet to be excavated, and so it is as yet unknown whether the writing system of Monte Alban, in its full form, took hold elsewhere or even whether monuments were set up in outlying regions by the central power. Those

sites that have been partially excavated, such as Dainzu, Yagul, and Lambityeco in the Tlacolula, or eastern arm of the Valley of Oaxaca, have so far yielded very few monuments with hieroglyphic information; what we have is almost entirely calendrical in nature (e.g., Bernal and Seuffert 1973; 1979). Even the Postclassic Zapotec capital of Zaachila, a few kilometers to the south of Monte Alban, has not been extensively excavated, although a small number of well-worn monuments from the Late Classic, some of them lying underfoot in the town's square and streets, have been reproduced by Caso (1928), partly in the form of photographs and partly as line drawings. Unfortunately, the quality of these illustrations is inadequate for exact hieroglyphic analysis.

North of the Valley of Oaxaca, the Zapotec sierra is virtually terra incognita with regard to Prehispanic monuments. A large and skillfully carved stela lying in the town of Yaguila has been published in part (Caso 1965a: 858–860), but beyond that, little more has reached print concerning this region. Far to the northwest, however, Zapotec writing appears on a tomb stela found in the Zapotec quarter of Teotihuacan, although the sequence is limited to a single date or calendrical name. The influence of Monte Alban is, moreover, traceable in the Mixtec graphic system and its Aztec descendant (Whittaker 1977).

Zapotec writing is, therefore, at the present time a field of study largely concerned with the analysis of hieroglyphic evidence from Monte Alban itself, complemented by a scattering of calendrical data from other Central Oaxacan sites. Perhaps because of the extreme paucity of the available material and the high degree of glyphic variability, relatively few works have appeared that are devoted exclusively to the script of Monte Alban: these include monographs and papers by Alfonso Caso (1928; 1946; 1965b), Gordon Whittaker (1976; 1980; 1981; 1982), and Joyce Marcus (1980; 1983a). In addition to these, a small number of publications by these authors and other scholars discuss Zapotec writing incidentally or in relation to a variety of special themes. These contributions will be referred to in the course of this chapter.

The Preclassic hieroglyphs of Monte Alban have been classified and catalogued in Whittaker 1980: 198–227, which supplies the context of every sign, details on compounding, and preliminary interpretations. For the corpus of monuments at Monte Alban with hieroglyphs, a two-volume work by John Scott (1978) on the *danzantes* and an inventory of virtually all sculpted monuments from the site (García Moll et al. 1986), containing photographs and drawings of most pieces listed, are essential reference tools. With regard to drawings and technical descriptions of monuments, the publications of Caso (1928; 1946) and Scott (1978) are preferred because of their markedly greater accuracy. The early stipple and line drawings executed by Agustín Villagra for Caso, and reproduced by Caso (1946) and Scott (1978), remain unsurpassed in quality and exactness, and an even earlier study by Leopoldo Batres (1902) provides photographs and illustrations of sculpted monuments that reveal details not found in later works. Further sources of data are the calendrical glyphs that turn up frequently in Zapotec ceramic sculpture, often as ornaments or insignia on urn figurines. Many such vessels and sculptures are documented by Caso and Ignacio Bernal (1952) and Frank H. Boos (1966).

Personal and Place Names in the Inscriptions

The two most frequent identifiable components of Zapotec inscriptions are names and calendrical data. Names of individuals may be descriptive or calendrical. Calendrical names are often indistinguishable from dates but may be recognized as names if they occur alone beside an individual at chest or, more often, head level. Descriptive personal names are common on *danzantes*, where they are usually located beside the head. Frequently,

the final glyph in a name clause is a quincunx staff (or rattle) sign or a glyph that Caso (1928: 65) identified as a tied bag (Fig. 2-2). These are almost certainly verbal or adjectival elements with the approximate meanings 'killed, died' and 'captured', respectively (Whittaker 1980: 41–45). Sacrificial clauses, probably indicative of heart sacrifice, are found on the chests of *danzantes* (Fig. 2-3).

Place names are recognizable by virtue of their association with the so-called hill glyph identified by Batres (1902: Pl. II). On Stelae 2–8 of Period IIIA, variable elements infixed to the hill glyph serve to name, as Caso (1928: 82) first theorized, towns subjugated by Monte Alban in the Early Classic. This is indicated not only by the bound human and animal figures, probably vanquished supernatural patrons or defeated rulers dressed as such, standing on top of the place glyphs, but also by the freestanding individual, presumably a Zapotec ruler, spearing the place sign on Stela 4. For this the Aztec Stones of Tizoc and Motecuhzoma I provide a good analogy.

In the Preclassic, place glyphs, many of them glyphic compounds, were composed in essentially the same manner as in the Classic, but the pattern is somewhat obscured by a format convention of Period II which dictates that, if two place signs occur in succession, the first dispenses with its hill sign for aesthetic reasons. In later texts and iconography a glyph that recurs is always altered to avoid unsightly repetition.

Let us now examine the incised tablets set in the walls at Monte Alban's central Mound J. Of all the inscriptions associated with this building, only two bear no more than a single hieroglyph, consisting of a hill glyph with varying infixed element. The first, Tablet 44, is located at the top of the stairway on the northeast side of Mound J (Fig. 2-4a). Its distinctive feature is a trilobate element similar to that breathed out by canines and felines in Teotihuacan iconography (see Miller 1973: Figs. 18, 289, 339), and is interpretable as 'vital essence, air, wind' (Whittaker 1980: 116, 127; cf. von Winning 1987: II: 8).

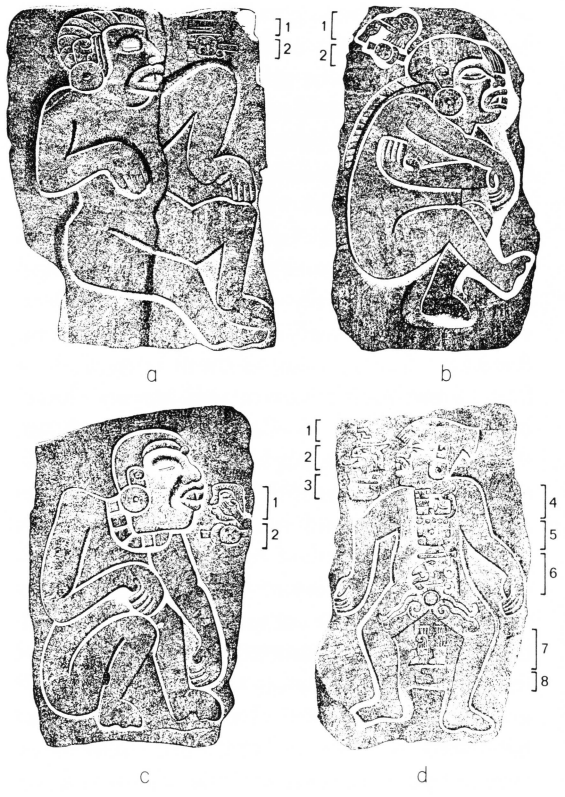


FIGURE 2-2. Death and capture clauses. *a*, Danzante 2 (from Caso 1946: Fig. 1): (1) Atlatl Wielder? (2) was slain. *b*, Danzante 6 (from Caso 1946: Fig. 3): (1) Kingfisher (2) was slain. *c*, Danzante 8 (from Caso 1946: Fig. 4): (1) Face Striker (2) was slain. *d*, Danzante 55 (from Caso 1946: Fig. 16): (1) Were- (2) Jaguar (3) was captured (and) (4) sacrificed (5) to (6) the Wind (or Cocijo?). (7) Leg vessels (8) were set down as offerings.

The place glyph, which may name Mound J as 'Place of the Wind', is also recorded in a side panel on Stela 8 of the nearby South Platform (Fig. 2-5). In the relief, the place glyph is being struck by a downward-snaking band on which the glyph for day name 17 is superimposed. The latter position corresponds to the name Xoo 'turbulent, raging' and, taken together, the depiction suggests Zapotec *quije pèexoò* 'storm wind, whirlwind'. The trilobate element occurs twice more on Stela 8:

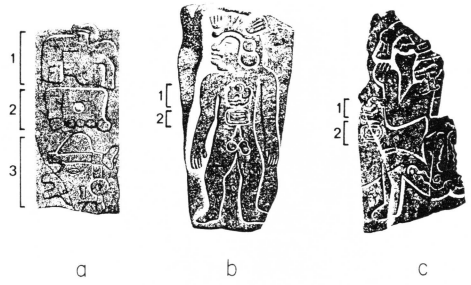


FIGURE 2-3. Sacrifice clauses. *a*, Stela 17, detail (from Caso 1946:Fig. 15): (1) Sacrificed (2) to (3) the Wind (or Cocijo?). *b*, Danzante 59 (from Scott 1978:Fig. D-59): (1) Sacrificed (2) (to) the Waters. *c*, Danzante 63 (from Scott 1978:Fig. D-63): (1) Sacrificed (2) (to) the Sun.

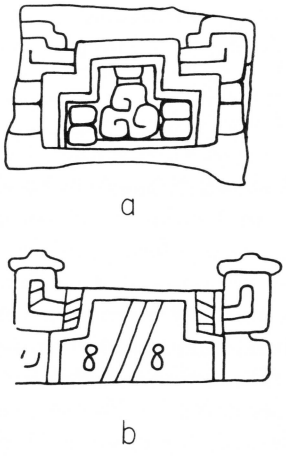


FIGURE 2-4. Monte Alban place names: *a*, Tablet 44 (drawing: G. Whittaker), glyph for Mound J; *b*, Tablet 42 (drawing: G. Whittaker), glyph for Monte Alban.

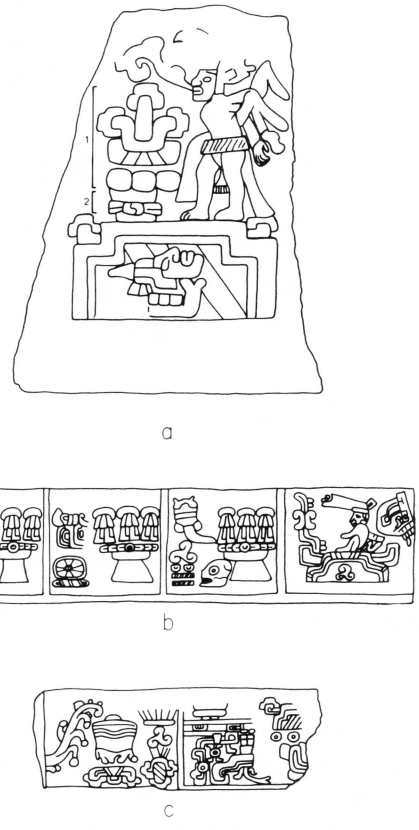


FIGURE 2-5. Stela 8. *a*, Front (drawing: G. Whittaker), with depiction of bound ruler atop place name of vanquished town and facing text: (1) (On?) Rain 3 (2) captured. *b*, Lower side (after Caso 1928:Fig. 47a), with personage in final panel atop place name of Mound J and facing whirlwind (or lightning?). *c*, Upper side (after Caso 1928: Fig. 47b), with rain wind at right in initial panel.

iconographically in the panel on its upper side, where it occurs between converging downward streaks from which the glyph for rain descends, and glyphically on its lower side, apparently as the day name that is equivalent to general Mesoamerican Wind, recorded beside a skull and a sacrificial brazier from which a heart rises.

There is a second inscription at Mound J, the sole glyph of which is a place name. This is found on a stone block, now split in two as Monuments 20 and 51, lying near the foot of the structure. The glyph it bears (Fig. 2-4b) is distinguished by an infix consisting of two or three diagonal bands and a neutral filler element, flanked by what has been described as jade ornaments or pendant jewels (Caso 1946:134; Whittaker 1980:53, 148) in the form of double circlets or a circlet with pendent trapezium or oval element. A more ex-

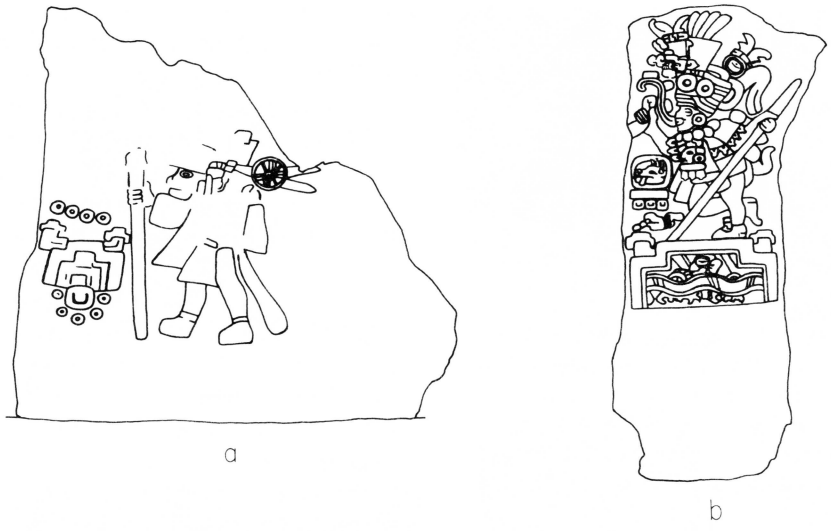


FIGURE 2-6. Inscribed monuments depicting Monte Alban rulers. *a*, J-45 (drawing: G. Whittaker); *b*, Stela 4 (drawing: G. Whittaker), depicting ruler named Deer 8 driving lance into place name of vanquished town.

plicit version of the place name can be seen on a much-eroded Protoclassic slab set into the upper level of Mound J, J-45 (Fig. 2-6), where a staff-bearing personage in elaborate dress (by analogy with Stelae 1 and 4, probably a ruler) faces a glyphic sequence to his left that consists of what was probably a day name (now eroded) with a coefficient of 4. Here, as on Stela 4, this is presumably the calendrical name of the ruler, and floats above a squat hill sign that is embellished only by internal filler lines. A numeral 1 with necklace element is attached to the base of the hill sign. Given the lack of militaristic iconography or additional hieroglyphs, and weighing the overall context, it is likely that this Terminal Period II carving names and depicts the personage as ruler of Monte Alban itself.

The traditional names for the Zapotec capital speak for this. The Mapa de Xoxocotlan (Smith 1973a: 202–210), which gives the Mixtec and Nahuatl names for the hills of Monte Alban that make up part of the Mixtec town's territorial boundaries, corroborates evidence from the later Zapotec capital, Zaachila, that the ancient city was originally known as the 'Hill of Precious Stones' (Whittaker 1980: 150–151). In Córdova's "classical" orthography, the Zaachila form would be Tàniquiecàche. It is this name that we find recorded on all the Mount J inscriptions proclaiming Monte Alban's conquests or victories. On J-45 the full rendition of the center's name is aided by rebus phoneticism. The glyphic numeral 1, the calendrical prefix for which is *quie*, functions here as a phonetic indicator for *quie* 'stone'.

Glyphic Format in the Period II Conquest Tablets

The place sign for Monte Alban occupies a central position on all the conquest tablets (Fig. 2-7). Its importance is highlighted by its size—it is twice as wide as its column—as well as by its position relative to the glyphs above and below it. Together they form a distinctive iconographic cross. Within the cross, three, sometimes four, signs appear, each belonging to a separate category:

(1) place sign of the subjugated town;

(2) verb;

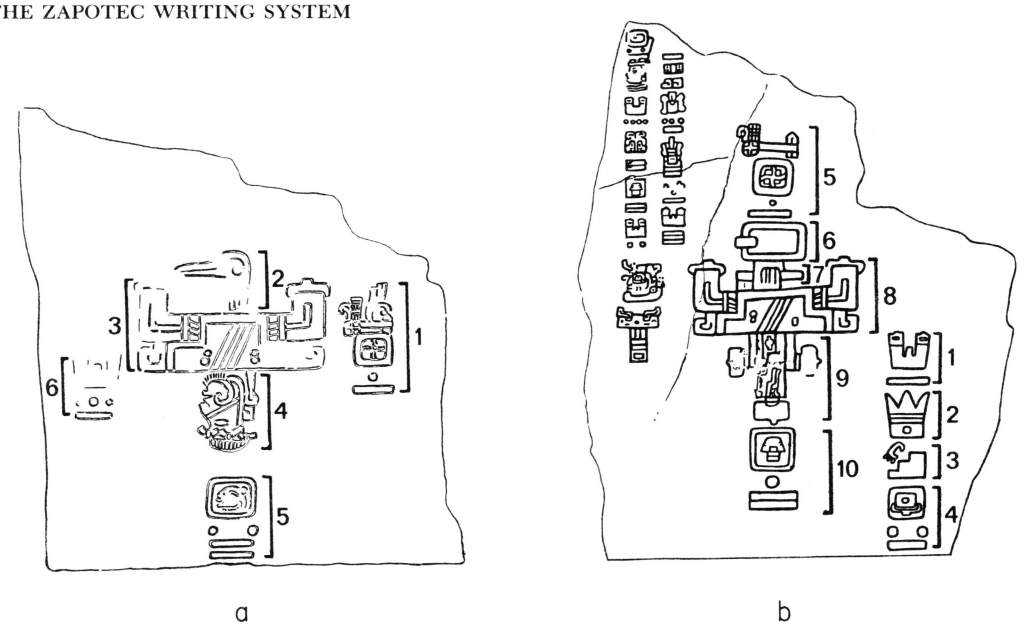


FIGURE 2-7. Conquest tablets. *a*, Table 10 (from Caso 1946:Fig. 42): (1) In the year Rabbit 6 (2) at Town X (3) Monte Alban (4) (struck down) District A (5) on the day House (feline variant) 12 (6) of Trecena 8. *b*, Tablet 14 (from Whittaker 1980:Fig. 9): (1) Trecena 5, (2) named Reed, (3) descended/elapsed to (4) Rain 4. (5) In the year Rabbit 6 (6) at the town of Yanhuitlan (8) Monte Alban (7) struck down (9) District H (10) on the day House 11 (7 days after Rain 4).

(3) glyph for Monte Alban;
(4) downturned head.

Category 2, which is often unfilled (glyphic ellipsis), consists of only two signs: arrows (usually clutched by a hand), and a quincunx staff that may be a rattle. On the basis of the analogy of Mixtec iconography, in which an arrow penetrating a place sign indicates the conquest of the town in question, the Zapotec arrow verb can be interpreted as a verb of conquest. The quincunx staff, found in tomb inscriptions and on *danzante* slabs, is apparently a verb of death or, in this case, destruction.

Zapotec word order is generally verb-subject-object (see, e.g., Marlett 1985). In the Period II inscriptions, this rule appears to hold. The verb is followed by the place sign for Monte Alban, its subject, from which its object, a downturned glyph usually in the form of an anthropomorphic head, is suspended. Caso (1946:137) has suggested that the heads depict the kings of the places conquered, perhaps dressed in the guise of the local patron deities. Since some downturned glyphs are not heads but, rather, abstract symbols, it is unlikely that rulers are intended. An alternative theory (Whittaker 1980:54, 110–144; 1982) proposes that Category 4 names the political and geographical units to which the subjugated towns named in Category 1 belong. This theory is based on the observation that the heads (probably supernatural patrons) and symbols fall into only ten discrete groups, each having diagnostic features that distinguish it from the next. The groups have been termed "emblem groups" by analogy with the Maya category of the same name.

Under verbs translating the Spanish *vencer*, Córdova (1942) differentiates in the military sense between verbs signifying 'to defeat causing (someone) to flee' and those meaning 'to defeat by casting (someone) down'. The latter sense is implied strongly by the downturned emblem glyphs. The ancestor of Cór-

dova's *tocàayòo(a),* literally '(I) strike (*càa*) to the ground (*yòo*)', is the verb that would best fit the arrow glyph. For the second verb on the conquest tablets a reading such as *toxiñe(a)* 'to destroy' or the related *tiquíñeyòo(a)* 'to thrash to the ground' is suggested. It should be noted that the first of the two (without the first-person suffix) is attested in Colonial-period Zapotec references to conquest (e.g., Whitecotton 1983:71n.17). Moreover, in Nahuatl enumerations of conquests, two verbs, as here, are usually employed: a verb 'to defeat, conquer' and a verb 'to destroy'.

If Categories 2–4 match typical Zapotec sentence structure, then what about Category 1? From the point of view of Zapotec linguistics, there is an obvious explanation for its initial position: one of the elements in the standard Zapotec sequence, verb-subject-object (-oblique reference), has been shifted into the so-called focus position at the beginning of the sentence. In the context of the inscriptions of Monte Alban, this would mean that either the direct object or the locative reference has been brought forward for reasons of emphasis. The whole sequence can be read: "At Town X Monte Alban struck down Polity Y" or "As for Town X, Monte Alban struck it down in Polity Y." It should be noted that, in Zapotec, as in Otomanguean languages in general, there is rarely a formal distinction between place names as objects and place names in a proper locative context.

The identification of the towns in Category 1 has been a primary concern of epigraphers. Caso (1946:136–137), followed by Marcus (1976b:128–131; 1980:52, 55), compared a small number of these glyphs with Aztec place signs for towns located, for the most part, in Oaxaca. A problem with this approach is that isolated place-sign comparisons are untestable and not automatically substantiated by the discovery of a Monte Alban presence at the sites in question, since a faulty comparison might still involve sites within Monte Alban's known or conjectured orbit (see the detailed discussions in Whittaker 1982; in press).

Of the comparisons just mentioned, one does seem convincing: a Zapotec place sign consisting of a human head with ornate speech scroll on Tablet 47 clearly resembles the Aztec sign for Cuicatlan 'Place of Song', a site to the northwest of Monte Alban. Names for this town match in several languages, and the area has been shown to have come under Monte Alban's control as a border region in Period II. Unfortunately, the emblem glyph for Tablet 47 is found on no other stone, and the new García Moll catalogue (see Monument 18) fails even to confirm the details of the distinctive place sign. John S. Justeson et al. (1985:47), like Marcus, take the quincunx staff (or rattle) glyph that follows it to be part of the place sign.

Set in two rows along the western and southern faces of Mound J's so-called arrowhead section, a sequence of conquest tablets, dubbed the Arrowhead Series, provides contextual evidence for the identification of places in relation to their polities or "districts" (Figs. 2-8 and 2-9). The sequence is especially valuable because the lower row is in situ and the upper row is restored on the basis of the position of the fallen stones. If Mount J parallels the chronological pattern of the Danzante Wall (Scott 1978:68–71), then the lower the row, the earlier the record. This would mean that the earlier towns subjugated occur in districts closer than the latest recorded on the upper row. Six of the tablets on the lower row share a single emblem glyph, and these are all located along the western face of the building, where they are interrupted by only one tablet with a differing emblem. The lower row's southern face, by way of contrast, displays six different emblem glyphs, each face of the upper row having four. The lower western face is probably the beginning of the sequence, which continues to the right and then in reverse direction on the upper row. Marcus (1980:51–52) has postulated that the places named in the inscriptions on Mound J are only those towns situated along Monte Alban's Period II borders. The alternative hypothesis (Whittaker 1982) sees the Arrowhead Series as a pro-

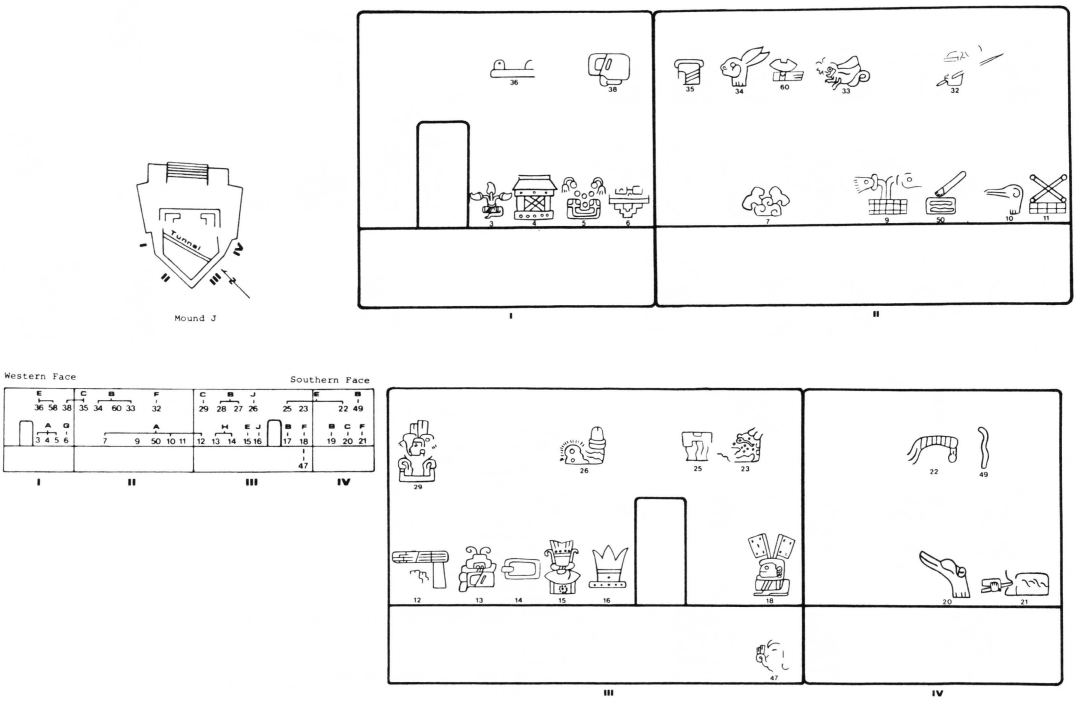


FIGURE 2-8. The Arrowhead Series (from Whittaker 1980: Fig. 66): *a*, orientation of the tablet series at Mound J; *b*, classification of tablets according to emblem glyph; *c*, western, and *d*, southern, faces of series, with schematic arrangement of place names alone.

pagandized record of Monte Alban's military victories in Periods I and II. Very tentative identifications of vanquished districts and towns are ventured in Table 2-1.

DATE FORMULAE AND READING ORDER

In view of the fact that the corpus of inscriptions known from Period I is very limited, few exact statements can be made about the extent of elaboration of its calendrical system. Clearly present, however, from this period onward are the following:

(1) a 260-day divinatory calendar composed of 20 day names and 13 numerals in constant rotation;

(2) a division of the divinatory calendar into 13-day *trecenas;*

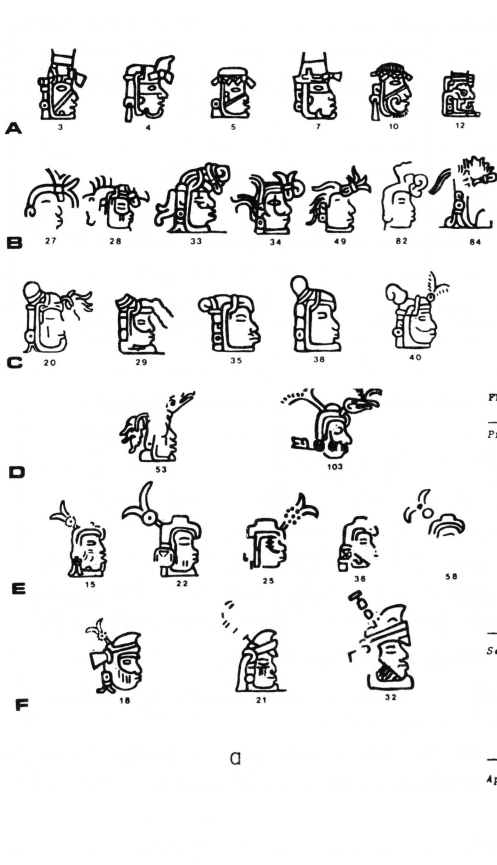
(3) a 365-day solar calendar, each sequence of which is named after its 360th day; and

(4) a division of the solar calendar into 18 months of 20 days plus a final set of 5 days (Whittaker 1983; 1990).

Day names and derivative calendrical names of individuals are recognizable by virtue of the fact that they are almost always enclosed in a rounded frame, or cartouche, and are followed by a numeral below 14.

Date formulae usually occur at the beginning of an inscription. When they are found both at the beginning and the end of a text, or text passage, the year date is almost always given first, while secondary data, such as the day and the *trecena*, are normally placed at the end. In the inscriptions of the Period II Arrowhead Series, such date formulae are often balanced iconographically at two or more opposing points of the central textual cross.

Numeral coefficients consist of small circles



a

FEATURE	NO. OF TABLETS WITH EACH FEATURE BY GROUP									
	A	B	C	D	E	F	G	H	I	J
Primary (Diagnostics)										
Bowtie	5									
Diagonal Stripe	3									
Horizontal Eye Band	3									
Roof Element	3									
Bound Thong		7								
Frontal Curl		4								
Bun			5							
Vulture-Head Projection				2						
Hill Element					5					
Peaked Cap						3				
Meshed Cover							3			
Quasi-Greek Cross								3		
Water/Rain Elements								3		
Uncertain									1	
Animal Head Projection										2
Secondary										
Chinstrap	6	5	5	1	3	2	1			1
Pompon		1	1	1						
Curving Line from Temple to Nose		4	2	1	1	1				
Plain Earplug	6	6	5	1		2	2		1	2
Earplug with St. Andrew's Cross				1	2					
Split Feather			1	1	4	1				1
Cheek Lines				2	2	3				
Diagonal Line from Ear to Chin					1	1				
Approx. Total No. of Tablets	6	9	5	2	5	3	3	5	1	2

b

FIGURE 2-9. Zapotec emblem glyphs (from Whittaker 1982: Figs. 63 and 64): *a*, emblem glyphs according to district; *b*, distinguishing features of the emblem glyphs.

or rounded squares for up to four single digits, with the rare substitution of fingers for the numerals 1 and 2, and of bars for units of five. Recorded numbers of twenty or above are not known, the only proposed instance (Justeson et al. 1985: 49) being a misidentified day name.

Numerals follow day names in accordance with the order of Zapotec calendrical naming known from the Conquest period. In the Preclassic the digits rest above the five-bars, but by the beginning of the Classic the pattern reverses to more closely match spoken Zapotec, in which the compound numerals 11 to 13 break down as "10-1," "10-2," "10-3."

Some of the day names can be identified either on the basis of a close tie-in between the glyphic representation and the known Conquest-period Zapotec name, or by analogy with other Mesoamerican calendars. Because a number of the sixteenth-century day names are semantically opaque, such equations require corroboration. Fortunately, the Preclassic writing system provides us with a means of confirming the identity of some day names and of ascertaining the calendrical position of others. The use of a numbered *trecena* glyph in a small number of inscriptions anchors the day name plus coefficient in a context that can be checked against a chart of the divinatory calendar. Year formulae also serve to anchor the four day names on which they are founded, since year names stand five

TABLE 2-1. Tentative Identification of Districts and Towns

	District	*Town*	*Tablet*
A	Central Section & N. Tlacolula Arm of Valley of Oaxaca	Chilateca	3
		Mitla	4
		Yatareni	7
		Zaachila	9*
		Caballito Blanco	11*
		Ixtlahuaca	12
		Tlacolula	50*
		Teotitlan	57
B	?		
C	Southern Arm of Valley of Oaxaca	Coyotepec	20
D	?		
E	Tehuantepec Valley	Taniquexopa (opposite Huilotepec)	15
		Tehuantepec	23*
F	S. Tlacolula Arm of Valley of Oaxaca	Lachigolo	18
		Teitipac	21
G	Etla Valley?		
H	Mixteca Alta (Ñudzavui)	Yanhuitlan	14
		Teita	43
I	Cuicatlan Cañada	Cuicatlan	46
J	Mixteca Baja	Acatepec	16
		Tequixtepec	26

Note: A detailed presentation of the reasoning behind each identification is to be found in Whittaker (1982).

*An asterisk following a number indicates that the emblem glyph is absent on the tablet in question. This occurs only when the flanking tablets bear emblem glyphs referring to one and the same district.

positions apart in the day-name sequence.

Six identifiable day signs appear on the stelae of Period I (Fig. 2-10), all but one of them in anchored positions. On Stela 13, a day, Face 1, is anchored in Trecena 4. In the general Mesoamerican calendar, the first day in the fourth *trecena* is 1 Flower, which in the sixteenth-century Zapotec calendar (Córdova 1886:204–212) is Quialao 1 'Face 1'. Similarly, on Stela 15 we find a day, Monkey 2, in Trecena 14. This too correlates exactly with the expected position for this day.

Three of the anchored signs on the Period I stelae represent year names. They are crowned by a graphic element identified by Caso (1928) as the year sign—a headband, usually with a cartouched cross at the front. This sign anchors the days naming the year at positions 3, 8, 13, and 18 of the day-name series (Fig. 2-11), and not 2, 7, 12, and 17, as Caso had thought. The day names that double as year names have glyphic forms in the latter capacity that are derived from symbols associated with the names rather than from direct representations of the names themselves. The day names for positions 3 and 13, equivalent to Zapotec and general Mesoamerican Night/House and Reed, respectively, are

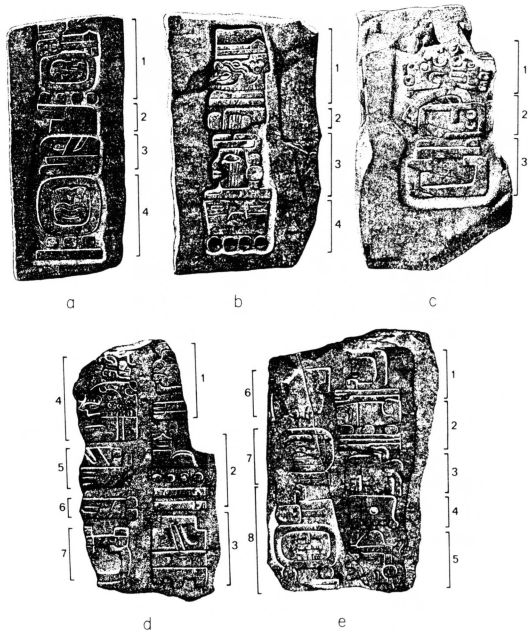


FIGURE 2-10. Period I stelae. *a*, Stela 12 (from Caso 1946: Fig. 10): (1) In the year Reed 4 (2) acceded? (3) Lord X (4) on the day Water 8. *b*, Stela 13 (from Caso 1946: Fig. 11): (1) In the year House 10 (2) he (Lord X) died/fell (3) on the day Face 1 (4) of Trecena 4. *c*, Stela 14 (from Caso 1946: Fig. 20): (1) Bat (2) Trapper? (3) was captured. *d*, Stela 15 (from Caso 1946: Fig. 14): (1) On the day Monkey 2 (2) of Trecena 14 (3) Monte Alban struck down (a town in?) District H, (4) Lord Bone? Jaguar (5) cast libations, and (6) its ruler? (7) was captured. *e*, Stela 17 (from Caso 1946: Fig. 15): (1) On the day Monkey 2 (2) of Solar Trecena 18 (3) human sacrifices were offered (4) to (5) the Wind (or Cocijo?). (6) The victims were dispatched? (7) on the day . . . 10 (or 2?) (8) of the year Flint 12.

represented both by the patron-related symbols (jaguar and dragon heads) and by forms corresponding directly to the names. With the exception of the dragon head for Reed, the symbolic glyphs are replaced in the Early Classic by the more familiar flint, house, and rabbit forms.

Month names are apparently not present in the date formulae. There is, however, a single attestation of an alternative system. On Stela 17, which begins with the same day as Stela 15, the anchoring is set not in a divinatory *trecena* but in Solar Trecena 18, that is, in the eighteenth *trecena* calculated from the beginning of the year named, which is Flint 12 (Whittaker 1983: 108–112). The sign in question is the depiction of the left half of the glyph for the divinatory *trecena*, which has been laid on its side.

Since the year name is usually located at the top of the rightmost column or, following a calendrical sequence in that column, at the top of the next column to the left, it appears probable that reading order was from top to bottom and in single columns from right to left. An alternative left-oriented, double-column hypothesis (Marcus 1976c), based on the view that Stelae 12 and 13 were intended to be read together Maya-style, that is, from Glyph 1 of Stela 12 to Glyph 1 of Stela 13 and so forth, is rendered unlikely by the facts that (1) the initial glyphs on the stelae in question are both year dates rather than calendrical units of descending order, (2) the glyphs in the two columns are not horizontally aligned but askew, and (3) the glyphs of Stela 12 are stylistically at variance with those of Stela 13, suggesting different sculptors or dates of carving.

In conclusion, there are still many gaps in our understanding of Zapotec inscriptions. Although the basic structure of the calendrical system is now clear, the hieroglyphs for much of the day-name series remain either unattested or insecurely identified, a problem that increases with the passage of the Classic. There is far more uncertainty with regard to inscriptional evidence for higher units of time below

the year. As for toponyms, place-name signs and the higher-level emblem glyphs are readily identifiable as such, but precision in reading them and pinpointing their geographical location is exceedingly difficult to achieve. Attempts at distinguishing calendrical names of individuals from dates in the divinatory calendar are largely a matter of enlightened conjecture at this stage. Finally, very little headway has been made in the area of verbs, owing to a scarcity of contextually identifiable event glyphs. A small number of these, however, occur frequently enough to be recognizable as verbs, but only two or three can actually be assigned a probable meaning. Examples of preliminary interpretations of whole inscriptions can be found in Figs. 2-2, 2-3, 2-7, and 2-10.

Progress in these areas is very much dependent on an expanded corpus with longer inscriptions, more rigorous internal analysis of texts, a better understanding of Zapotec languages, particularly Proto-Zapotec, and a thorough comparison of Zapotec writing with the early Isthmian and Maya scripts.

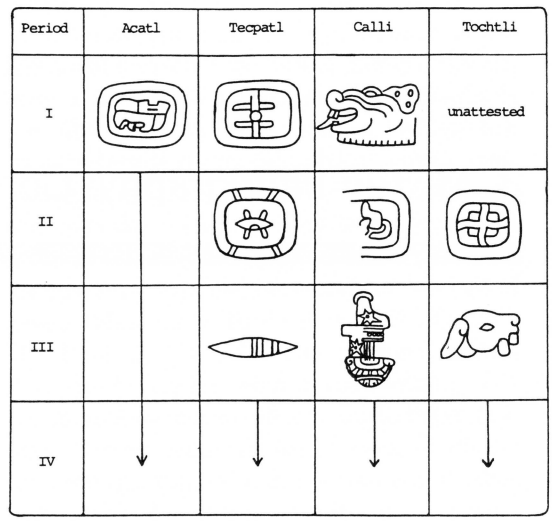


FIGURE 2-11. Year-naming signs (from Whittaker 1980: Fig. 2). Positions 3 (House), 8 (Rabbit), 13 (Reed), and 18 (Flint) correspond to Mexican Calli, Tochtli, Acatl, and Tecpatl. Sixteenth-century Zapotec terms are not employed here, since they are not recorded in a consistent manner and cannot occur without prefixes (see Whittaker 1983: 127–129).

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