Epigraphy and Empire: Reassessing Textual Evidence for Formative Zapotec Imperialism

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The walls of Structure J at the Zapotec centre of Monte Albán incorporate monuments, probably carved during the Pe ceramic phase (300–100 BC), bearing distinctively formatted hieroglyphic inscriptions. Alfonso Caso suggested that hieroglyphic compounds on those monuments name regions conquered by Monte Albán. Many scholars accept an elaboration by Joyce Marcus on this proposal—that some of those compounds denote identifiable places outside the Valley of Oaxaca—and see the inscriptions as evidence for the territorial extent of an expansionist, Monte Albán-centred empire in the Late to Terminal Formative periods (300 BC–AD 200). This paper argues that Marcus' proposed decipherments are implausible because they are structurally inconsistent with one another and with Zapotec scribal conventions for recording toponyms in other inscriptions. The Structure J texts remain undeciphered. Therefore they cannot now serve as evidence for the nature and reach of the Monte Albán polity, and generalizations about state formation that relied on Marcus' readings need to be reconsidered.

Proponents of a 'predatory expansion' or 'territorial-expansion' model for the evolution of political complexity in ancient Oaxaca, Mexico, argue that Late and Terminal Formative (*c.* 300 BC–AD 200) rulers of the Zapotec centre of Monte Albán mobilized their subjects to conquer territories stretching from the northern Cañada de Cuicatlan south to the Pacific coast (Fig. 1). In so doing, they transformed the Monte Albán polity into a bureaucratized, militaristic state. Key to that account are a set of Late Formative inscribed monuments from Structure J at Monte Albán. Joyce Marcus (1976; 1980; 1983; 1992b; Marcus & Flannery 1996) compared hieroglyphic compounds in those texts with Nahuatl hieroglyphic toponyms from the *Codex Mendoza*, a document composed in Mexico City after the Spanish conquest. According to Marcus, the Structure J compounds name places subjugated by Monte Albán, some of which are also named in the *Codex Mendoza*, revealing the extent of Monte Albán's Formative empire. This paper argues that her readings are implausible because of their internal inconsistencies and their inconsistency with better-understood Zapotec texts. The hieroglyphic compounds in question have not been deciphered and so do not constitute evidence about the nature or size of the early Monte Albán polity, depriving the predatory expansion model of an important piece of support.

The predatory expansion model is not universally accepted (e.g. Joyce 2014), but it is influential in Oaxacan archaeology, and Monte Albán's putative Formative empire is one of its most important type cases. In general terms, the model posits that, in a context of competing chiefdoms (societies with hereditary rank and centralized authority, but little administrative specialization), one chiefdom may become a state (with both centralized authority and a specialized, multi-level bureaucracy) by conquering and incorporating other chiefdoms, sometimes hundreds of miles from the capital (Fried 1967, 111; Spencer 1998; 2010; Wright 1986). The logistical problems of governing new territories force qualitative transformations in the conquering polity: rulers must delegate substantial authority to their subordinates while dividing that same authority among multiple, specialized officials in order to keep each one of them dependent.

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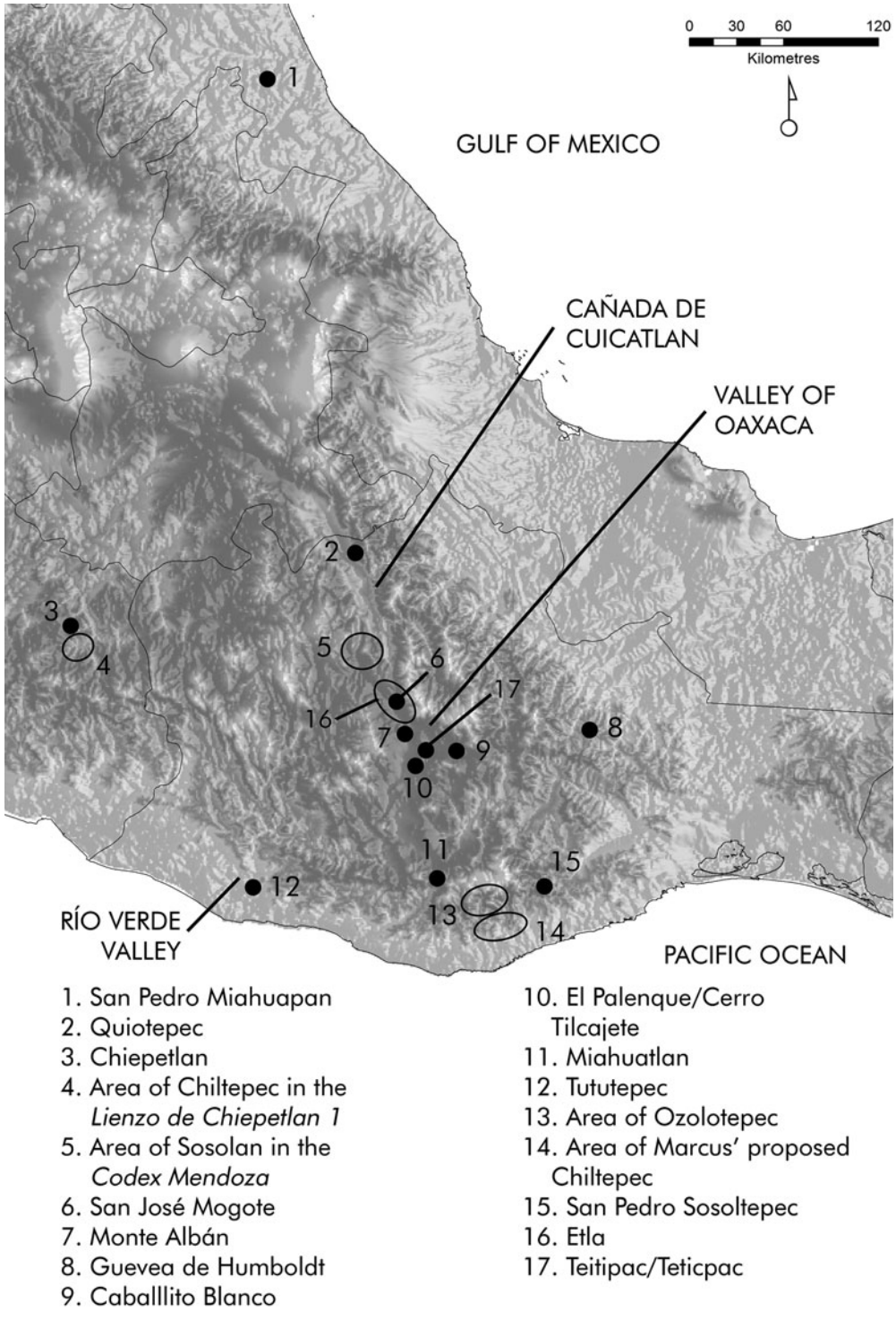


Figure 1. *Map of the sites and regions mentioned in this article. (Map: Bryce Davenport and Nicholas Carter.)*

For proponents of an expansionist Late Formative empire centred on Monte Albán, the epigraphic and archaeological data complement and confirm one another (e.g. Sherman *et al.* 2010, 282–3; Spencer & Redmond 2004, 182–4). Yet some authors have denied on archaeological grounds that Monte Albán conquered some of the areas in Marcus' account (e.g. Joyce 1991; 2003; Workinger 2002; Zeitlin & Joyce 1999). Others have offered alternative interpretations of the Structure J inscriptions, the most plausible

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being that they name multiple people and a single place, presumably Monte Albán or a sector thereof (e.g. Urcid & Joyce 2014, 157–62). Still other scholars have criticized Marcus' proposals as implausible *a priori* given the many centuries between the composition of the Structure J texts and the *Codex Mendoza* (e.g. Fähmel Beyer 2009, 83–5; Sanders & Nichols 1988, 50, 72; Urcid 1992, 61–2; 2001, 61–3; Workinger & Joyce 2009, 10–29). Marcus and colleagues have replied that archaeology confirms Monte Albán's conquests of some of the proposed provinces, proving her comparative method legitimate and her readings valid after all (e.g. Marcus 1988, 60–61; Spencer 1988, 65).

Readings and rules in epigraphic decipherment

As long as the epigraphic debate concerns whether the Structure J–*Codex Mendoza* comparisons ought to be considered at all, the two sides must remain at an impasse. But if that question be set aside for the sake of argument, Marcus' readings can be evaluated on structural grounds and according to the standards set by other, undoubtedly genuine decipherments. Michael Coe (1995) identified features shared by successfully deciphered scripts, including the Egyptian, Hittite and Maya hieroglyphic systems. In each case, there was an ample corpus of inscriptions; scholars had a good idea of the languages they recorded, including their grammatical and phonemic requirements; there was at least one bilingual inscription encoding the same information in the unknown script and a readable one; proposed readings made sense in light of what was understood about their cultural contexts; and, when the script relied heavily on signs for whole words, accompanying imagery provided contextual clues to the contents of texts. By contrast, still undeciphered scripts are deficient in one or more of those respects (Coe 1995; Houston & Coe 2003).

The Zapotec hieroglyphic script used in and around the Valley of Oaxaca from *c.* 500 BC into the tenth century AD meets none of Coe's criteria. There are only a few hundred known Zapotec inscriptions, mostly brief, ungrammatical captions that foreground calendrical dates, often used as anthroponyms, over other kinds of information. When Zapotec hieroglyphs accompany imagery, they rarely do more than to place a narrative pictographic tableau in time (within the 52-year cycle of the Calendar Round) and name its *dramatis personae*. Some continuities exist between the Formative Zapotec script and the Ñuiñe and Mixteca-Puebla scribal systems, and Javier Urcid's (1992; 2001) clarification of the Zapotec calendar owes much to real visual similarities with other Mesoamerican scripts. Yet no bilingual inscriptions are attested. Despite reconstructions of proto-Zapotecan grammar and phonology (e.g. Benton 1988; Fernández de Miranda 1995; Kaufman 1989; 2007; Swadesh 1947), the specific language of the inscriptions remains poorly understood.

Exemplary decipherments (see, e.g., Budge 1899, 18–27; Chadwick 1959, 35–107) suggest a sixth constraint in addition to Coe's criteria: a claim to have deciphered a script is a claim to have identified rules about how to produce meaningful texts in that script, so proposed readings for original texts should follow from the consistent application of those rules. Therefore, inconsistencies in the rules need to be proven, not assumed, and they must be plausibly explained, not asserted *ad hoc*. For example, if a single graphic sign is supposed to have one value in most contexts, but a different value in certain settings, one has to establish what those special contexts have in common and explain the variation in terms of a general principle modified under certain circumstances by a second rule. Such context-specific rules have been identified in Classic Maya writing: for instance, in some settings, signs ordinarily read as consonant-vowel syllables instead mark vowel-consonant suffixes (Houston *et al.* 2001, 14–17). Furthermore, it should be assumed that the presence of a sign in an inscription is motivated by some grammatical or other compositional principle. If the principle is supposed to be optional, that too needs to be demonstrated. Again, the Maya script provides examples, like the optional recording of numeral classifiers in settings where they were likely obligatory in spoken Classic Mayan (Macri 2000; but see Law 2006, 76–77, n. 12). In general, however, the more special exceptions that need to be made to the rules implicit in a claimed decipherment, the weaker that claim becomes.

It could be objected that an emphasis on consistent rules in decipherment is inappropriate when dealing with scripts in the earliest stages of their development, when conventions could have been in flux. Yet rules are unlikely to have fluctuated much within a single programme of inscriptions, otherwise their audience would have had trouble making sense of them. A writing system is a *system*, not a congeries of one-off relations between signs and their referents. Signs in a script, like words in a language (Saussure 1959, 120–22), are defined not just by what they mean, but also in opposition to other signs that mean other things. Aspiring decipherers start from a position of ignorance about what the specific rules of a script are, but the assumption that some such rules exist makes the difference between testable claims and arguments by assertion.

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The most basic rules epigraphers seek to identify are those linking visual signs to their intended meanings. As William Boltz (1994, 19; see Houston 2004, 228–9) noted, a literate community can assign two kinds of meaning to signs in a script: phonetic ('P' in Boltz' shorthand) and semantic ('S'). For any given sign, either type of meaning can be present or absent, although a mark with no accepted phonetic or semantic meanings (−P, −S) would be no symbol at all (see Peirce 1931, 143–4). Only signs representing the other three combinations of phonetic and semantic values are relevant to decipherment. Semasiograms ('meaning-signs') convey semantic but not phonetic information (−P, +S). They may be correctly or incorrectly interpreted, but their meanings have nothing to do with specific sounds or a specific language. The other two types of signs cue spoken sounds, and may be classed together as glottograms ('speech-signs'). They include logograms ('word-signs'), which encode both phonetic and semantic meaning (+P, +S), denoting whole morphemes in a specific language. Phonetic characters, or phonograms ('sound-signs'), refer to phonemes in a spoken language. As syllabic signs or letters in an alphabet, they are employed to write semantically meaningful morphemes, but they do not encode such meanings in themselves (+P, −S).

One class of semasiograms is particularly relevant to the epigraphic discussion below: semantic determinatives. Unlike other semasiograms, determinative signs do not simply encode information in themselves; they advise readers of the conceptual category into which another sign falls, thereby, in some scripts, pointing to the second sign's phonetic reading. Ancient Egyptian made extensive use of determinatives; so does Chinese writing (Bottéro 2004, 251–2). But determinatives are rare in deciphered Mesoamerican scripts (Stone & Zender 2011, 15–17; cf. Mora-Marín 2008, 201–7). The major exception is the use of cartouches in some scripts to enclose day-signs in the 260-day ritual calendar. The cartouche clarifies that a combination of a number and a day-name is meant, not a count of objects—e.g. the date '13 Serpent' rather than 'thirteen serpents'. In some cases the cartouche affects the pronunciation of the glyph inside it. It may turn out that semantic determinatives played a bigger role in still undeciphered Mesoamerican scripts, but if so, their function will have to be demonstrated using structural evidence.

The diversity of scribal practices in Mesoamerica suggests still a further conceptual distinction, applicable not to individual signs, but to inscriptions made up of multiple signs (David Stuart pers. comm., 2006). 'Syntactic' inscriptions are those in which signs are placed in a linear reading order corresponding to the order of sounds or words in a linguistically specific utterance. Excepting omissions, ligatures and special sign arrangements employed for reasons of economy or calligraphy, the relative positions of signs in a syntactic text map onto their spoken reading order. With an adequate sign set, the syntactic principle permits any sentence in a language to be recorded and read without much loss of linguistic meaning.

Contrasting with syntactic inscriptions are 'emblematic' ones, in which the spatial arrangement of signs does not reflect a grammatical or phonemic sequence. Postclassic and early Colonial Nahuatl and Mixtec manuscripts use emblematic arrangements of signs to record conquests, marriages, accessions and other conventional topics. Some of the signs in those texts encode sounds (+P, −S) and words (+P, +S) in specific languages, but most are semasiograms (−P, +S). The absence of a conventional relationship between the spatial layout of signs in an emblematic text and the temporal order of sounds in a spoken word or sentence means that those texts are limited to a smaller range of more specialized topics than is possible using syntactic writing (e.g. Lacadena 2008, 8, 13). Even so, the arrangement of signs in an emblematic text can be meaningful. For example, in some contexts, the relative placement and orientation of toponyms and conventionalized portraits in Mixtec screenfold books encode claims about the sequence and locations of events in historical narratives and about relationships among the participants.

The Monte Albán polity

These theoretical considerations find practical application in a re-examination of monuments from Structure J at Monte Albán. Monte Albán was founded around the sixth century BC on a hilltop at the junction of the three arms of the Valley of Oaxaca, in a process which remains the subject of controversy (O'Brien & Lewarch 1992; Winter 2011). In one influential model, elites from a polity centred on San José Mogote, in the northwestern Etla arm of the valley, organized the construction and settling of Monte Albán in a bid for hegemony within the valley system (Marcus & Flannery 1996, 139–54). Arthur Joyce and Sarah Barber emphasize the religious dimension of Monte Albán's foundation: the earliest structures in the main plaza were public or ritual in nature, and the earliest monuments at the site appear not to foreground individual rulers. They suggest that the new city, an intentional settlement, manifested religious and social innovations that emerged at San José Mogote in response to the burning of a central temple, like the institutionalization of hereditary elite status and the

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appropriation of religious space by those elites (Joyce 2000, 77–87; 2004, 196–204; Joyce & Barber 2015, 828–35). Other proposals are that Monte Albán was founded as a centre for economic exchange (Winter 1984) or as a neutral political centre for previously hostile polities, perhaps faced with military threats from outside the valley (Blanton 1978; Blanton *et al.* 1999, 64). One recent suggestion (Winter 2011, 398) is that people from villages in the centre of the valley relocated to the hilltop in order to monitor and defend the fertile agricultural land east of the hill.

The Monte Albán site area is divisible into five settlement clusters, of which Monte Albán proper occupies the highest space and includes the largest and most abundant monumental architecture (Blanton 1978, 3, 33–5). In its present version, the main plaza (Fig. 2) extends along a north–south axis, its buildings oriented roughly 3–6° west of north (Peeler & Winter 1992, 38), with massive elevated complexes at the north and south ends. Rows of smaller platforms and buildings delimit the east and west sides of the plaza. Another north–south row of buildings occupies the middle of the plaza: Structures G, H and I, forming a connected chain of buildings and, south of these, the free-standing Structure J. While early construction stages date to the Danibaan ceramic phase (*c.* 500–300 BC), the structures of the main plaza continued to be modified, overbuilt and dismantled over Monte Albán's Formative and Classic occupational history (Caso 1938, 5–40, 62–9; Urcid 2001, 279–405; Urcid & Joyce 2014, 150–52; Winter 2001, 284–6).

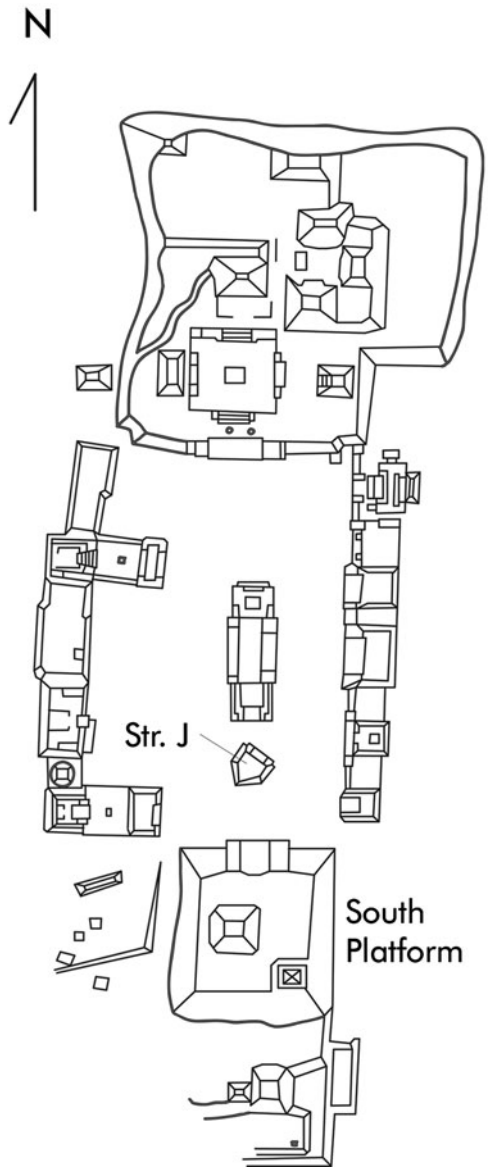


Figure 2. *Map of the Main Plaza at Monte Albán. (Drawing after Urcid 2001, fig. 4.26.)*

Structure J

Structure J is a pentagonal, arrowhead-shaped masonry platform with three stone terraces that once supported an adobe superstructure. It was built, partially demolished and rebuilt in a series of three construction phases beginning in the Tani ceramic phase (AD 200–350) and spanning the successive Pitao (AD 350–550) and early Xoo (AD 600–700) phases (Caso 1938, 10–11; Fähmel Beyer 1991, 94, 100; Urcid & Joyce 2014, 157). With its pentagonal footprint and northeast–southwest orientation, Structure J presents a rare exception to Formative architectural conventions, which—at Monte Albán and in most parts of Mesoamerica—favoured rectangular platforms and roughly north–south orientations. A structure of similar plan (albeit heavily reconstructed), Building O, is present at the small site of Caballito Blanco, about 35 km east of Monte Albán. The intentional, astronomically determined alignment between the two structures, the astronomical orientation of Structure J and the potential significance of some proportions of its final phase have been discussed by other scholars (Aveni 2001, 262–71; Peeler & Winter 1995, 365–6).

All three phases of Structure J include reused orthostatic slabs, whose eroded carvings were covered over with stucco (Caso 1938, 12; Fähmel Beyer 1991, 100). The later phases incorporated fragmentary orthostats carved around 400 BC and formerly set into the platform of Structure L-sub (Urcid & Joyce 2014, 151). Depicting nude men with blood streaming from their genitals and accompanied by nominal captions, these '*danzantes*' have been variously interpreted as sacrificed prisoners (Coe 1962, 95–6; Marcus 1974, 89–91) and people from Monte Albán engaged in

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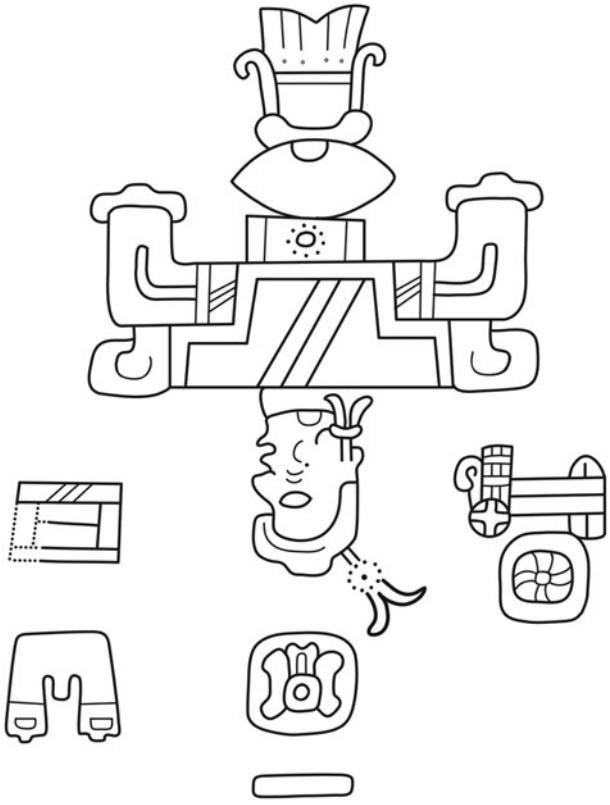


Figure 3. *'Emblem' inscription on monument MA-J-15, a relatively well preserved example of the genre. (Drawing: Nicholas Carter.)*

voluntary autosacrifice (Urcid 2011a; Urcid & Joyce 2014, 152–4).

The 'emblem' monuments

Most of the reused orthostats of Structure J do not depict *danzantes*, but belong to a second group of monuments inscribed with hieroglyphic and pictorial collocations conforming to a consistent, emblematic format (Fig. 3). A stepped sign depicting a hill or mountain with vegetation sprouting from either side, known from other Zapotec inscriptions, forms the visual focus of each text and is rendered at the largest scale. Bead-like elements, which Urcid and Arthur Joyce (2014, 158–9) identified as a distinct 'noseplug' glyph, are infixed into the 'hill' signs; they are absent from other instances of the 'hill.' Above the 'hill' glyphs are one or more smaller characters. These superfixed signs vary from one orthostat to the next. While some signs within multi-glyph superfixes do appear on multiple monuments, no one compound is ever repeated in full in any two of the texts. Many, but not all, of the monuments also have elements subfixed to the 'hill' sign as if hanging down below it (Fig. 4). Most of these subfixes depict inverted human heads with various facial markings and headgear. In a few cases, signs from Late Formative Zapotec iconography are present instead, including in one case the head of the Rain God Cociyo.

Sixty-eight stones of this type are known from Structure J. Two other fragments were incorporated into lower walls of the South Platform in the Early Classic period (García Moll *et al.* 1986). While the earliest phase of Structure J is probably not older than about AD 200, some of the 'emblem' slabs used in this first phase were already eroded and broken. They were taken from an existing monumental programme, which Urcid and Joyce date on stylistic grounds to the Pe ceramic phase (300–200 BC), and which was eventually completely dismantled and incorporated into Structure J and other projects (Caso 1947, 20; Urcid & Joyce 2014, 157–8).

On at least 13 of the monuments, other glyphs are arranged around the central compound. Accounting for erosion and breakage, more of them may once have had additional texts. These additional inscriptions follow a linear order, though one subordinated to the visual primacy of the 'hill' compound. Typically, a 365-day year in the 52-year Calendar Round is named with a Year Bearer glyph to the right of the central compound. This is the date in the 260-day ritual calendar—*piye*, 'cycle,' a coinage of academic convenience—which fell on the 360th day of the *previous* 365-day year, before an unlucky period of five days (Urcid 2001, 80, 82, 430). Below the central collocation, a second date in the 260-day calendar appears, this one naming a day within the present 365-day year. Additional chronological information appears to the left of the central sign group: compounds of numerals or other signs with Glyph W, a calendrical glyph whose specific function remains poorly understood. In one case (monument MA-J-14), this visual format was altered in order to accommodate extended supplementary inscriptions, which again consist mainly of *piye* and Glyph W dates.

Monuments in this programme are called 'conquest monuments' by scholars who see them as recording a series of victories by Monte Albán over other towns and territories (e.g. Caso 1947, 20–28). Yet their content has to be demonstrated, not assumed, and until then, a more neutral term is needed. '"Emblem" monument' will serve for now because it implies no claims about the texts' semantic import. The assessment that the inscriptions are in part emblematic, as opposed to wholly syntactic, is well warranted on structural grounds. The mixture of hieroglyphs and images in their central compounds is unlike apparently syntactic Formative inscriptions

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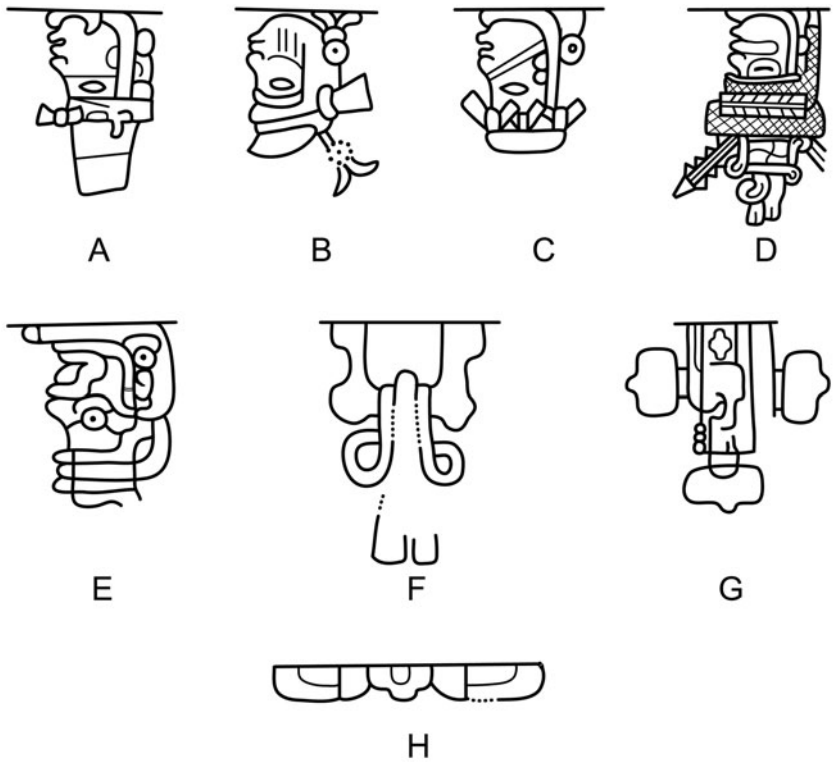


Figure 4. *Variation in heads and other elements subfixed to the 'hill' signs in the 'emblem' inscriptions of Structure J. Details of (A) MA-J-67; (B) MA-J-87; (C) MA-J-60; (D) MA-J-22; (E) MA-J-13, depicting the head of the Rain God; (F) MA-J-14; (G) MA-J-41; (H) MA-J-43. (Drawings: Nicholas Carter.)*

(e.g. MA-D-139, MA-D-140 and MA-M-21 at Monte Albán), even though their secondary, calendrical inscriptions are syntactic. Instead, the 'hill-noseplug' compounds, with smaller glyphs above and inverted heads below, structurally resemble emblematic arrangements of 'hill' signs, portraits and calendrical glyphs in Late Classic Oaxacan genealogical registers (Fig. 5).

Proposed decipherments and their implications for Monte Albán imperialism

Caso (1938; 1947) was the first scholar to report on the 'emblem' monuments and to divide their inscriptions into the conceptual structure—a date, the 'hill' sign with its superfixes, and the inverted heads or other elements below—that remains generally accepted (with some modifications: e.g. Marcus 1992a, 394–5; Whittaker 1980; 1982). He proposed that the 'hill' signs and the variable elements above them together named towns or districts conquered by Monte Albán; the inverted heads, with their blank eyes, he interpreted as the slain rulers of those places (Caso 1947, 27–8). The associated calendrical information, meanwhile, recorded the date of each conquest.



Figure 5. *Emblematic arrangement of calendrical names, 'hill' glyphs and human portraits in a Xoo-phase* (AD *600–800) Oaxacan genealogical register (Urcid 2005, 116–32). (Drawing after Urcid 2005, fig. 5.45.)*

Caso's framework served as a starting point for Marcus' readings (Marcus 1976; 1980; 1983; 1992b; Marcus & Flannery 1996), which she proposed in the context of survey and archaeological work in the

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Valley of Oaxaca. Aware that the Nahuatl place names given by the Mexica to towns in conquered provinces sometimes preserved the meanings of the native toponyms (see Whittaker 1993, 34–5, for examples), she turned to early Colonial Nahuatl hieroglyphic texts for the names of places that Monte Albán might have subjugated. In 1976, she proposed a list of 35 toponyms, taken from the *Codex Mendoza* and the work of Robert Barlow (1949, 118–19), to be compared with the Structure J compounds (Marcus 1976, 128–9). Perceiving resemblances between five of the 'emblem' compounds—on monuments MA-J-47, MA-J-43, MA-J-4, MA-J-15 and MA-J-57—and the glyphs recording the names of five towns in the *Codex Mendoza*, she tentatively identified those five putative Zapotec toponyms with the Nahuatl toponyms Cuicatlan, Miahuapan, Teticpac (Teitipac), Etlan and Tututepec, respectively.

Each of these names denotes a town or region in Oaxaca, except for Miahuapan ['The Water Surface of the Maize Tassels']. This last is the name of a small community—now San Pedro Miahuapan—located near the Gulf coast of northern Veracruz, northeast of the Basin of Mexico, and not a plausible subject town of Late Formative Monte Albán. There is, however, a Miahuatlan ['The Place of the Maize Tassels'] in Oaxaca, between the Valley of Oaxaca and the Pacific coast. In order to identify that town with the inscription on MA-J-43, one must posit that Miahuatlan was also known as Miahuapan at the time that the *Codex Mendoza* or its pre-Conquest source documents were compiled, and furthermore that 'Miahuapan' translates a Zapotecan toponym, dating to the Formative period, that also meant 'The Water Surface of the Maize Tassels' (Marcus 1976, 129).

Subsequently, Marcus (1983, 107–8) published a revised list, again equating 'emblem' collocations from Structure J with toponyms from the *Codex Mendoza*. The new list marked a shift in Marcus' thinking about the inscriptions: having previously believed that they named places throughout the burgeoning Zapotec empire, she now thought that they named sites specifically on its frontiers (Marcus 1980, 56). 'Etlan' and 'Teticpac,' in the Valley of Oaxaca, were therefore dropped from the new list (see Urcid 1992, 61–2), but the more distant 'Cuicatlan', 'Miahuapan' and 'Tututepec' were included. So was a new identification between the compound on MA-J-23 and the *Codex Mendoza* toponym for Ocelotepec. Here again, the codical reference actually denotes a place in northern Veracruz, but there are several towns with that Nahuatl name (now rendered 'Ozolotepec') in southern Oaxaca. This same list of four equivalences recurred in a subsequent volume (Marcus 1992b, 176), accompanied by another list of 12 other 'identified' toponyms from Structure J. These 12 additional compounds were not connected to known sites; their 'identifications' were simply English readings of iconic hieroglyphs: 'Hill of the [unidentified] Insect,' 'Place of the Virile Member', and so on (Marcus 1992b, 397–8). Most readings from this longer list were left out of the later, synthetic volume *Zapotec Civilization*. The revised list of four toponyms from 1983 was included, along with two more collocations equated with Sosola and Chiltepec, from MA-J-32 and MA-J-3 (Marcus & Flannery 1996, 198). The six monuments discussed in *Zapotec Civilization*—MA-J-3 ('Chiltepec'), MA-J-23 ('Ocelotepec'), MA-J-32 ('Sosola'), MA-J-43 ('Miahuapan'), MA-J-47 ('Cuicatlan') and MA-J-57 ('Tututepec')—thus form the core of Marcus' proposals about the 'emblem' monuments.

Nahuatl hieroglyphic spellings of Cuicatlan, Miahuapan, Ocelotepec and Tututepec come from the conquest and tribute records of the *Codex Mendoza*. A place called Çoçolan is named in the same document (on p. 15v) among the conquests of Moteuczoma Xocoyotzin; this likely corresponds to the area of three modern towns—San Jerónimo Sosola, San Juan Sosola and San Mateo Sosola—in the mountains east of Asunción Nochixtlan, Oaxaca. No town called Chiltepec is mentioned in the *Codex Mendoza*. Marcus' proposal that MA-J-3 refers to a town named something like 'At the Hill of the Chili Plant' derived not from a hieroglyphic comparison, but from the contemporary name of a town (San José Chiltepec) in the Chontal-speaking region of highland Oaxaca (Marcus 1992a, 400–401). However, a Nahuatl hieroglyphic toponym for a place called Chiltepec features in the central scene of the *Lienzo de Chiepetlan 1* (Gutiérrez 2014, fig. 6.5, 157). Visual and structural comparisons between the Structure J 'emblem' compounds and Nahuatl spellings are thus possible for each of Marcus' core proposals.

Those proposals are regularly cited as decipherments of non-calendrical parts of the Zapotec script (e.g. Joyce & Winter 1996, 38; Romero Frizzi 2003, 25; Spencer & Redmond 2001, 182). More importantly, Marcus, Kent Flannery and other scholars—many of whom have made substantial and pioneering contributes to Oaxacan archaeology—interpret them as evidence for the spatial extent, between *c.* 100 BC and AD 200, of the Monte Albán polity (e.g. Marcus & Flannery 1996, 195–9; Spencer 2010, 7121; Wright 1977, 389–90). In turn, their picture of a large, bureaucratized empire, qualitatively unlike the fragmented *señorios* attested for Postclassic Oaxaca and Guerrero (e.g. Byland & Pohl 1994; Oudijk 2008; Spores 1967;

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Whitecotton 1990), serves as a widely accepted case study in the predatory expansion model.

Researchers who favour that model understand the combination of conquest records with other archaeological data as analogous to evidence from pre-dynastic Egypt, Mesopotamia in the fourth millennium BC and other regions where state systems emerged in the absence of contact with other states (e.g., Marcus 2008, 259–61; Spencer 2010). As Marcus and Flannery (1996, 181) pointed out, the case for a Zapotec empire of the extent they propose requires '*multiple lines of evidence*', including evidence for the 'permanent occupation of conquered territories' (Marcus & Flannery 1996, 181, original emphasis). The catch is that Marcus' readings of the Structure J texts are crucial to the identification of those territories—in fact, in some instances, they are understood as the only strong evidence that Monte Albán ever controlled a given region (Marcus & Flannery 1996, 198–206). In other cases it may be doubted whether, without those texts, archaeologists would interpret ceramic and osteological data as evidence of conquest. If Marcus' readings are invalid, archaeological data alone might point to a much smaller territorial reach for Monte Albán's Terminal Formative rulers. That, in turn, would challenge the relative uniformity of pristine states and raise questions about the global applicability of the predatory expansion model.

Archaeology and Monte Albán imperialism

Archaeological evidence does suggest that relations between the Monte Albán polity and neighbouring centres were sometimes hostile during the Late (*c.* 300–100 BC) and Terminal (*c.* 100 BC–AD 200) Formative periods. By the Terminal Formative, defensive walls restricted access to the site centre (Blanton 1978, 52–6). Conflict between Monte Albán and another polity based at the site of El Palenque, near modern-day San Martín Tilcajete, culminated in the rival site's destruction around 100 BC and the construction nearby of a new centre, Cerro Tilcajete, interpreted by Christina Elson (2003, 77–87) as an administrative centre controlled by the Monte Albán state. No sites potentially connected with this conquest are included in Marcus' core list of decipherments from Structure J.

Marcus' reading of the 'emblem' collocation on MA-J-47 as 'Cuicatlan' both prompted excavations in the Cañada de Cuicatlan intended to test her proposal (Spencer & Redmond 1997) and shaped interpretations of the data from those excavations. Around 300 BC, settlements on the valley floor were abandoned in favour of piedmont zones, in a process accompanied by the burning of structures, leaving the bottomlands free for intensified agriculture. The site of Quiotepec, near the northern end of the Cañada, marked a discontinuity in the distribution of ceramic types between the Cuicatlan region and areas to the north. Elsa Redmond and Charles Spencer interpreted these changes as evidence that Monte Albán conquered the Cañada, governed it from a garrison at Quiotepec and extracted agricultural tribute (Redmond & Spencer 1983; Spencer & Redmond 2004, 183). An abundance of cream-ware ceramics of a kind produced near Monte Albán were taken to indicate Zapotec economic domination, while human crania excavated at La Coyotera in the Cañada were interpreted as the remains of a skull rack erected to terrify the locals (Spencer 1982, 234–42; Spencer & Redmond 1997, 14–15). Other scholars are unconvinced. Jeffrey Blomster (2011, 127–8) identified inconsistencies between the condition of the skulls and what would be expected from crania mounted on a Postclassic-style skull rack. Joyce (2014, 124) pointed out that cream wares were also exported to the Mixteca Alta, which no one thinks was part of Monte Albán's empire.

A related controversy surrounds data from the lower Río Verde valley, near the Pacific coast of Oaxaca. The Nahuatl toponym Tututepec corresponds to a town near the valley, about 20 km inland, formerly called San Pedro Tututepec and now known as Villa de Tututepec de Melchor Ocampo. During the Late Postclassic period, Tututepec was the capital of a powerful Mixtec kingdom. If this same Tututepec, or a place in its vicinity, is named on monument MA-J-57, and if Marcus is correct about the meaning of that inscription, then the Monte Albán state would seem to have incorporated part of Oaxaca's Pacific coast, or at least part of the upland area overlooking the coastal plain. Such control would have facilitated access by Monte Albán's elite to valuable imports from coastal Oaxaca itself and from Chiapas and Guatemala to the southeast, including stingray spines, marine shell, cacao, cotton, finished textiles, feathers, pelts and dyes (Joyce 1991, 138; Sherman *et al*. 2010, 283–4; Winter 1984, 204–7).

Archaeologists differ in their interpretations of evidence from the lower Río Verde region. One debate centres on 49 human skeletons excavated from a patio group at Cerro de la Cruz, west of the Río Verde, which have sometimes been interpreted as victims of one (Balkansky 2001, 559–60) or several (Sherman *et al*. 2010, 294) massacres, perhaps by Zapotec invaders. Yet an initial assessment of the bones reportedly failed to find evidence of violence, and the stratigraphic and osteological data are more consistent with the patio's long-term use as a cemetery (Joyce 1991, 732–9; 2014, 125–7). Meanwhile, dental and cranial morphological

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studies of Late and Terminal Formative individuals from the region suggested little gene flow between populations in the Valley of Oaxaca and the lower Río Verde (Christensen 1998).

Ceramic evidence for a Zapotec conquest of the lower Río Verde is likewise in doubt. For instance, although grey ware ceramics produced at Monte Albán were previously exported to the lower Río Verde, that traffic largely ceased during the second century BC—not long before Monte Albán is supposed to have annexed the region—in favour of the local production of grey wares displaying some stylistic similarities to the Monte Albán vessels, but also marked regional variability (Levine *et al.* 2013, 233–52; Workinger 2002, 390; Zeitlin & Joyce 1999, 387). Since grey wares were in fact widely produced throughout Oaxaca in the Terminal Formative (Workinger & Joyce 2009, 21), cream-ware ceramics have recently taken on new importance in the debate about a Zapotec presence on the Pacific coast. In contemporary usage, cream wares come from a single source at Atzompa, in the central Valley of Oaxaca (Joyce *et al.* 2006, 582; Shepard 1967, 478). Four sherds collected in the 1950s from surface contexts at San Francisco de Arriba, near San Pedro Tututepec, were described in the survey report (DeCicco & Brockington 1956, 56) as 'cream ware', but according to Andrew Workinger and Arthur Joyce (2009, 21–2), these sherds are unlike the Atzompa cream ware. They suggest the ceramics are instead a locally produced fine brown ware (see Levine 2007, 257–68). Workinger (2002, 355) found a single cream-ware sherd in six months of work at San Francisco de Arriba, while only three Oaxacan cream-ware rims (0.039 percent of all rims) were recovered from unmixed contexts at Cerro de la Cruz and Río Viejo, another site in the Río Verde floodplain (Workinger & Joyce 2009, 21). An archaeological survey of the lower Río Verde failed to find any cream-ware sherds in surface collections (Joyce 2003).

Reconnaissance also yielded no evidence that settlement patterns were disrupted during the period of putative control from Monte Albán; no signs of burning or new fortifications; and no evidence of imperial outposts such as Monte Albán-style temples, fortresses, or administrative centres (Workinger 2002, 391–3; 2013, 203–7). Río Viejo grew to at least 225 ha by the Terminal Formative period (Zeitlin & Joyce 1999, 388), while an increase from three to five settlement size tiers in the region suggests the emergence of a more complicated local political system rather than conquest from outside the area (Workinger & Joyce 2009, 20–21). Without compelling evidence for invasion, replacement of local ceramic industries, or imposed transformations of the built landscape, only Marcus' identification of the inscription on MA-J-57 with the 'Tututepec' toponym from the *Codex Mendoza* remains as widely accepted evidence for Monte Albán imperialism in the Río Verde region (Joyce 2003, 58–62).

Re-evaluating the 'emblem' inscriptions

With the archaeological evidence for an expansive Zapotec empire often equivocal, the textual evidence for it requires reassessment. Marcus' comparative approach relies on a suspect assumption: that the Nahuatl toponyms imposed on places in Oaxaca and Guerrero are straightforward translations of local names for the same places dating back to the Late Formative period (Urcid 2001, 62). For instance, Nahuatl *Cuicatlan* means 'The Place of Song', but the present Cuicatec name translates as 'Hill of the River of Houses' or 'The Houses Above the River' (Fähmel Beyer 2009, 83–5; Urcid 1994, cited in Joyce 2014, 123). But Marcus' readings are sufficiently influential that they need to be considered critically. The six 'emblem' compounds in question are presented in Figure 6, along with their proposed equivalents in the *Codex Mendoza* or *Lienzo de Chiepetlan 1*, Latin transcriptions of the Nahuatl glyphs and English translations of the Nahuatl names.

Three distinct but related problems make five of Marcus' six readings implausible. First, in four cases, those readings account poorly or not at all for signs in the superfixed clusters. Second, Marcus interprets the central 'hill' sign inconsistently as a logogram or a semasiogram from one reading to the next. Finally, if the 'hill' glyph were treated consistently as one or the other type of sign, either possibility would render the whole 'emblem' program inconsistent with what other—admittedly later—texts reveal about Zapotec toponymic practices.

Superfluous glyphs

To begin with, four of the superfixed compounds on the monuments under consideration include signs whose presence Marcus' readings do not explain. These are a glyph depicting two arrows, on MA-J-57 (Marcus' 'Tututepec'); a sign resembling folded cloth, on MA-J-3 ('Chiltepec'); and another sign depicting a rattle, on MA-J-32 and MA-J-47 ('Sosola' and 'Cuicatlan'). Caso (1947, 14, 54) identified this last glyph as an atlatl, but Gordon Whittaker (1980, 41–2) saw it as a rattle, and comparisons by Urcid (2011b, 212, 215) demonstrated that Whittaker was correct. The 'rattle' and possible 'cloth' signs both appear in the names of *danzantes* on the Structure L orthostats, the 'cloth' sign once and the 'rattle' five times. Nothing in Marcus' decipherments seems to require these signs—for instance, 'Tututepec' is 'At the Hill of the Bird', not

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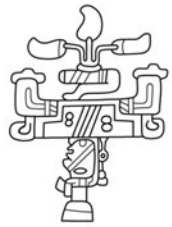
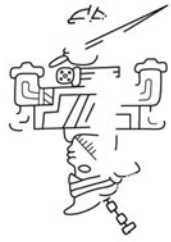
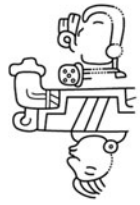
Nahuatl hieroglyphic spelling	Nahuatl toponym	Translation of Nahuatl toponym	Structure J compound
 *Lienzo de Chiepetlan 1*	Chiltepec	At the Hill of the Chili Peppers	 MA-J-3
 *Codex Mendoza* 52r	Ocelotepec	At the Hill of the Ocelot	 MA-J-23
 *Codex Mendoza* 15v	Sosolan	The Place of Ruins?	 MA-J-32
 *Codex Mendoza* 52r	Miahuapan	The Water Surface of the Maize Tassels	 MA-J-43
 *Codex Mendoza* 43r	Cuicatlan	The Place of Song	 MA-J-47
 *Codex Mendoza* 46r	Tututepec	At the Hill of the Bird	 MA-J-57

Figure 6. *Marcus' proposed equivalences between Colonial Nahuatl hieroglyphic toponyms and 'emblem' compounds on orthostats from Monte Albán Structure J. (Drawings: Nicholas Carter.)*

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'At the Hill of the Bird and Arrows'—and none of the putatively corresponding Nahuatl spellings contain analogous elements.

Marcus did follow up her original proposals with a suggestion about the 'rattle' sign. Interpreting it as an atlatl, and noting its presence on some *danzante* monuments, she proposed that it signifies (whether logographically or semasiographically is unclear) being 'killed or defeated in battle', and that it was applied first to individual captives and later to place-names (Marcus 1992b, 394–6). But that hypothesis does not account for the 'rattle' sign's inconsistent use on the 'emblem' and *danzante* monuments. If all the individuals in the latter programme are mutilated captives, why do 'rattle' glyphs survive on only five out of around 320 *danzante* carvings? Among the 'emblem' monuments, 36 are well enough preserved that inverted elements below the 'hill' and reasonably complete glyphic compounds above it can both be seen, excluding monuments on which other elements replace the human heads. Of these 36 carvings, 25 have inverted heads but no 'rattle' signs; only 11 have both heads and 'rattles'. If, as the original version of Marcus' model proposes, the presence of inverted heads on 'emblem' monuments indicates that the towns they name were conquered, while their absence means the towns submitted peacefully, why is there such a poor correspondence between the set of 'emblem' monuments with inverted heads and the set of 'emblem' monuments with 'rattle' signs? No explanation has been advanced to account for these inconsistencies, nor does the extant corpus suggest one. As a result, the suggestion that the 'rattle' indicates defeat does not adequately address the problem of extraneous signs in Marcus' readings.

Internal inconsistency

It is notable that every one of the 'emblem' inscriptions of Structure J includes a 'hill' glyph, even though three of Marcus' proposed readings contain no terms for elevated landforms. In order to arrive at those readings, the 'hill' sign thus has to be assigned a different value from one monument to the next. On MA-J-3 ('Chiltepec', 'At the Hill of the Chili Plant'), MA-J-23 ('Ocelotepec', 'At the Hill of the Ocelot'), and MA-J-57 ('Tututepec', 'At the Hill of the Bird'), the sign would need to function as a logogram (+P, +S) recording a word for 'hill'. But Marcus' readings for MA-J-32 ('Sosola', perhaps 'The Place of Ruins'), MA-J-43 ('Miahuapan', 'The Water Surface of the Maize Tassels') and MA-J-47 ('Cuicatlan', 'The Place of Song') require the same glyph to serve as a semasiogram (−P, +S), a determinative sign connoting the idea of location without standing for a spoken word.

This inconsistency constitutes a serious objection to Marcus' readings. As with the sporadic use of the 'rattle' sign, no rule of context or composition has been proposed for distinguishing logographic and semasiographic instances of the 'hill' glyph. Epigraphers are instead supposed to rely on Colonial Nahuatl documents as keys to the presence or absence of phonetic values in instances of the Formative Zapotec 'hill' sign. But in the *Codex Mendoza*, the toponyms 'Cuicatlan' and 'Miahuapan' are written hieroglyphically without the logogram **TEPE**, 'hill', while 'Ocelotepec' and 'Tututepec' do include **TEPE**; so does 'Chiltepec' in the *Lienzo de Chiepetlan 1*. 'Sosola' is written in the *Mendoza* once with the logogram **ZOZO**, 'pierce' (perhaps with the sense here of *zozolihui*, 'to wear out', or *zozoltic*, 'a worn-out thing'), and once with **ZOZO** plus **TEPE**. This latter spelling would be expected to cue something like 'Zozoltepec', but 'Sosoltepec' and 'Sosola' are elsewhere said to be alternate names for the same place (Peñafiel 1897, 229).

It might be responded that all the 'emblem' inscriptions include 'hill' signs because they all really do record toponyms involving a word for 'hill'. Accepting that proposition would allow the central compound on MA-J-23 to be read 'Hill of the Ocelot', but only by sacrificing the identifications of 'Cuicatlan', 'Miahuapan' and 'Sosola'. It would do nothing to overcome the problem of superfluous signs in the supposed 'Chiltepec' and 'Tututepec' toponyms. Furthermore, the exclusive selection of toponyms describing one kind of geographic feature would be inconsistent with later Zapotec ways of depicting and describing political landscapes in both monumental and perishable media.

Inconsistency with Zapotec toponymic conventions

The 'emblem' monuments represent the only unambiguously toponymic use of the 'hill' sign in Preclassic Zapotec epigraphy. Another instance of the 'hill', on monument MA-O-147 from Building O at Monte Albán, has two other signs subfixed to it; but since it appears in a syntactic text, and since the non-calendrical portion of that text is not deciphered, its function is not absolutely clear. Another 'hill' sign, with the head of a spotted feline superfixed to it, appears in a Late Formative wall painting in the Cueva Rey Condoy, in a historically Mixe-speaking region of Oaxaca (Ballensky 2012, 8). But there are clearly toponymic instances of the 'hill' sign in the Early Classic corpus, and these comparanda cast further doubt on whether the 'emblem' monuments record multiple place-names in the way proposed by Caso and Marcus.

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By the Early Classic period, a convention had emerged for writing place-names in which the 'hill' sign or a second graph ('Glyph E', perhaps encoding a word for areas of land: Urcid 2001, 383, 387) was modified by the addition of other signs. Given adequate space, Early Classic Zapotec sculptors generally preferred to infix the modifying glyphs into the sign denoting a geographical feature. The toponymic role of such compounds is confirmed by their use in narrative tableaux, in which persons sit or stand atop 'hill' signs, each enclosing different additional characters (Fig. 7; see Urcid 2001, 387–405). This convention contrasts with the Structure J compounds, in which the variable signs are always placed on top of the 'hill', occupying the same place in the composition as do portraits of individuals in the Early Classic tableaux.

If those Early Classic conventions are any guide, the Structure J inscriptions are less consistent with the names of multiple places than with records of multiple individuals (named by the glyphs above the 'hill' signs) present or commemorated on different dates at the same location (named by the 'hill' sign and its infix; see below), a possibility suggested independently by the author (Carter 2008, 96–8) and by Urcid and Joyce (2014, 157–9). That possibility is strengthened by the appearance of the 'rattle' in *danzante* nominal captions and in particular by the repetition of one sequence of signs (Glyph D followed by a horizontal bar) in the name of a *danzante* and in the superfixed compound on 'emblem' monument MA-J-16 (Urcid & Joyce 2014, fig. 9.9). Furthermore, if Urcid and Joyce (2014, 158–9) are right in identifying a 'noseplug' logogram infixed in each of the 'hill' signs on the 'emblem' monuments, then that 'hill-noseplug' compound should in each case play a toponymic role, meaning that the superfixed signs would have some non-toponymic function.

Other discrepancies appear between Marcus' readings and another set of toponyms from a Colonial pictographic document, the *Lienzo de Guevea*. Produced in AD 1540 in the town of Santiago Guevea (now Guevea de Humboldt), north of Tehuantepec, this manuscript is now lost, but its contents are preserved in photographs of the original and in copies made between the seventeenth and nineteenth centuries (Oudijk & Jansen 2000, 283–5). The *Lienzo* was a sheet of cotton cloth painted with two registers: a lower panel recording genealogical and historical information about the Postclassic lords of Guevea and their suzerains, the rulers of Zaachila and Tehuantepec, and an upper panel showing the territorial extent of the Guevea *señorio*, with a schematic map of toponyms written in the indigenous and Spanish systems. In contrast to Early Classic practice in the Valley of Oaxaca, signs modifying glyphs for landforms are appended to those glyphs, not placed within them. The orientation of the document, with north at the top of the cloth, may reflect Spanish influence (Smith 1973, 169). Yet the *Lienzo* presents an instructive comparison to the Structure J compounds, since it records the same kind of information as the 'emblem' texts are supposed to do in Marcus' model: a list of place-names relevant to the claimed extent of a Zapotec polity.

Of the 18 glyphic toponyms in the map whose names are also given in alphabetic captions, 13 (about 72 per cent) include the morpheme *tani*, 'hill', 'mountain.' The remaining five incorporate words for 'river' (*queco*) or 'water' (*nisa*). The hieroglyphic spellings reflect those differences: the toponyms incorporating *tani* are written with 'hill' logograms, but the other five are written with signs depicting watery features instead of hills (Oudijk & Jansen 2000, 319–20; Figs. 2, 3, 4, 5, 7). Assuming that a random sample of Late Formative Zapotec toponyms would include roughly similar proportions of references to hills and to non-hill geographical features, and assuming that the 'emblem' monuments represent such a sample, then about 50 of the 70 known 'emblem' slabs might be expected to depict hills, with the remaining 20 showing other features of the landscape. Instead, *every one* of the 'emblem' monuments uses the same 'hill' sign. Such uniformity constitutes a further weakness in the 'conquest' interpretation of the monuments proposed by Caso and Marcus.

Discussion

Archaeologists working in Oaxaca have pointed out an evident mismatch between the epigraphic evidence from Structure J—widely held to support a territorially extensive Zapotec empire in the Terminal Classic period, which was in turn typical of pristine states in the 'predatory expansion' model of state formation—and the archaeological evidence from that empire's proposed provinces, which did not always support those textual claims. That apparent contradiction can now be laid to rest: there is no strong reason to think that the Structure J compounds name the locations identified by Marcus (1976; 1980; 1983; 1992b; Marcus & Flannery 1996), while there are several good reasons to think those identifications are spurious. Not only does the non-calendrical portion of the Late and Terminal Formative Zapotec script satisfy none of Coe's (1995) criteria for a decipherable writing system, but Marcus' proposed decipherments have serious internal contradictions; do not account

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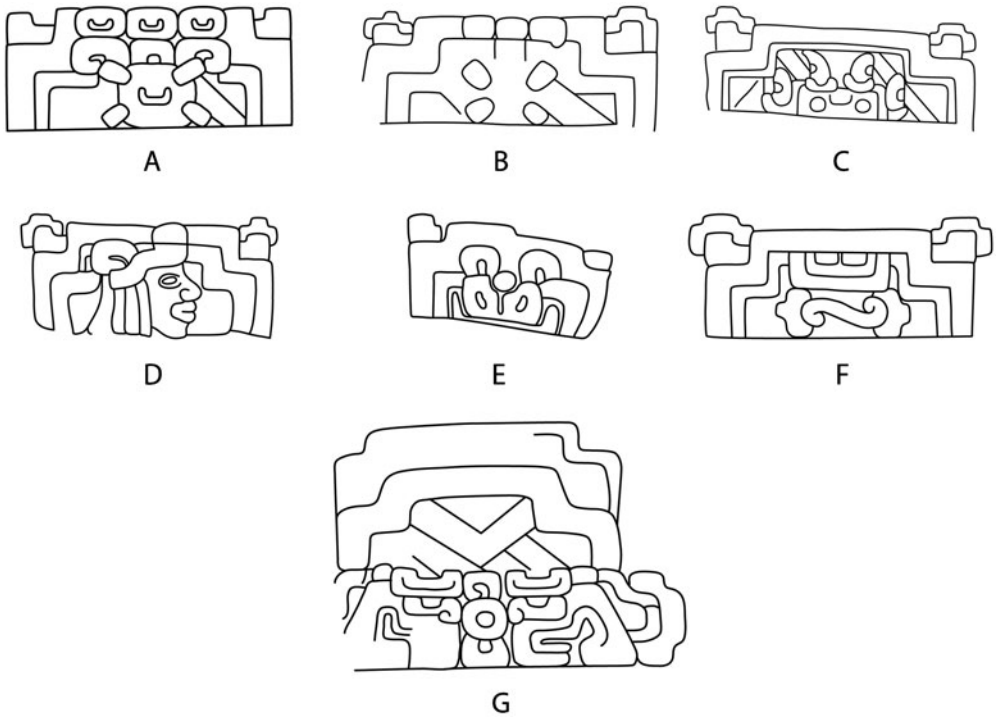


Figure 7. *'Hill' toponyms from tableaux on monuments from Monte Albán's South Platform recording the conquest of other centres and the capture of local notables by a king of Monte Albán: (A, B) MA-SP-2; (C) MA-SP-3; (D) MA-SP-5; (E) MA-SP-6; (F) MA-SP-7; (G) MA-SP-1. (Drawings after Urcid 2001, fig. 5.30, 5.31, 5.32, 5.33, 5.35, 5.36, 5.37.)*

for some signs; and are inconsistent with later, better understood conventions in the same script tradition. The Structure J texts *may* describe the presence or commemoration of individuals at a single location, but confirmation or refutation of that possibility awaits a fuller decipherment of the script. The problem of the 'emblem' texts presents an instructive case study in epigraphic methodology, illustrating the importance of internal consistency in proposed decipherments. More importantly, an illusory contradiction between archaeological and epigraphic evidence has been resolved.

By themselves, the current archaeological data appear most consistent with a Terminal Formative Monte Albán polity that lacked both the geographical reach and the administrative efficacy of the centrally controlled, expansion-oriented state inferred from Marcus' readings of the Structure J texts. But excluding the 'emblem' texts from what counts as evidence for Monte Albán's Terminal Formative conquests does not mean that such conquests never occurred, nor that they cannot be detected archaeologically, nor even that some of the places whose names Marcus claimed to identify in the Structure J texts were not subjugated by Monte Albán's warrior elite. Nor need it entail rejecting predatory expansion as a general model of political transformation in early complex polities. It does mean that claims about historical events in Formative Oaxaca must stand or fall on the basis of other archaeological evidence, not on that of the 'emblem' inscriptions.

Further survey and excavation, especially between the valley and the Pacific coast, will be vital to clarifying exactly what, and how extensive, any Terminal Formative Zapotec empire really was. Since the predatory expansion model posits that the need to govern regions up to a week's walk from Monte Albán drove the transition to a specialized bureaucratic state (Marcus & Flannery 1996; Redmond & Spencer 2006, 383; Spencer 2010, 7121–2; Spencer & Redmond 2004, 175–84), material evidence for territorial conquest would strengthen that model. If such evidence is not forthcoming, the predatory expansion model might be weakened—or, alternatively, it might be preserved by dropping Late/Terminal Formative Monte Albán from the list of pristine states. Further excavations may also advance Zapotec epigraphy by uncovering additional inscriptions, even though the odds of decipherment remain low in the absence of a biscript. Pending that decipherment, the inscriptions of Structure J can reveal but little about the origins and evolution of political complexity in Mesoamerica.

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