

The Prehistory of the Southeastern Maya Periphery¹

by Robert J. Sharer

THE VERITABLE EXPLOSION of archaeological research activity in the Maya area during the past 15 years has affected primarily the core areas of prehistoric Maya cultural development: the highlands of Chiapas and Guatemala and the lowlands of Guatemala and Yucatan (Adams 1969). Contrary to this trend, the investigations of the Chalchuapa Archaeological Project have focused upon an important population and ceremonial center on the periphery of the Maya area in the southeastern highlands of El Salvador. Despite its long characterization as a frontier between Maya and non-Maya peoples (Lothrop 1939, Longyear 1947), this area has never been subjected to the systematic problem-oriented archaeological investigation necessary to the discovery of the actual nature of this region in pre-Columbian times. The investigations of the Chalchuapa Archaeological Project provide for the first time data bearing upon the entire prehistoric time-span of a major site in this Maya frontier region (fig. 1). The research coincided with the important excavations by Andrews (1970) at

Quelepa, in the so-called non-Maya portion of the same area (east of the Rio Lempa, the traditional boundary between Maya and non-Maya culture areas).

This paper summarizes some of the more important results of this research program and makes an initial attempt at a synthesis of the available data. It discusses some conclusions drawn as a result of the original research objectives of the project. These primary objectives were to establish a basic cultural chronology for occupation at the site and to define the nature and sources of external influences. The results presented here are felt to have a bearing upon our ultimate understanding of the process of cultural development in the Maya area and in all of Mesoamerica.

THE SITE

Chalchuapa is one of the largest archaeological sites in the southeastern Maya highlands and dominates one of the major agricultural valleys of the region, that of the Rio Paz and its tributaries. Chalchuapa is at an average elevation of 700 m. above sea level and is both ecologically and geographically transitional between the Pacific coastal plain and the highlands. It is located some 120 km. southeast of the massive Highland Maya ceremonial center of Kaminaljuyu and about the same distance southwest of the major Lowland Maya center of Copan (fig. 2).

A total of 58 large "ceremonial" structures and 87 smaller house mounds have been discovered in the 3-sq.-km. core area that has been mapped. Most of the larger structures are associated with extensive open plaza areas (paved or unpaved). In addition, there are several low platforms and terraces, monumental stone sculpture, and surface concentrations of cultural debris. An undetermined portion of the site has been destroyed by the adjacent and expanding town of Chalchuapa to the west (fig. 3). The archaeological site-zone has been divided into a series of separate named "sites" by prior investigators (Larde 1926, Longyear 1944): Tazumal, Casa Blanca, El Trapiche, Pampe, and Almullunga. Although I prefer to treat these "sites" as simply groups within a single site-zone, the use of these old but convenient names persists. Apart from these structural groups, there are at least three other areas of significant cultural activity within the site-zone: Laguna Cuzcachapa (extensive cultural deposits and a focus of ceremonial activity), Laguna Seca (cultural deposits and probable ceremonial activity), and Las Victorias (Olmec boulder sculptures in low relief).

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The present paper, submitted in final form 30 x 72, was sent for comment to 50 scholars, of whom the following responded: Horacio Corona Olea, U. M. Cowgill, Thomas E. Durbin, Ernestene Green, David C. Grove, Norman Hammond, William A. Haviland, Nicholas Hellmuth, David H. Kelley, Evelyn S. Kessler, Lech Krzyzaniak, John M. Longyear, III, John Paddock, Marc D. Rucker, James Schoenwetter, Jaroslav Suchý and Milena Hübschmannová, Ronald K. Wetherington, and Gordon R. Willey. Their comments are printed after the text and are followed by a reply from the author.

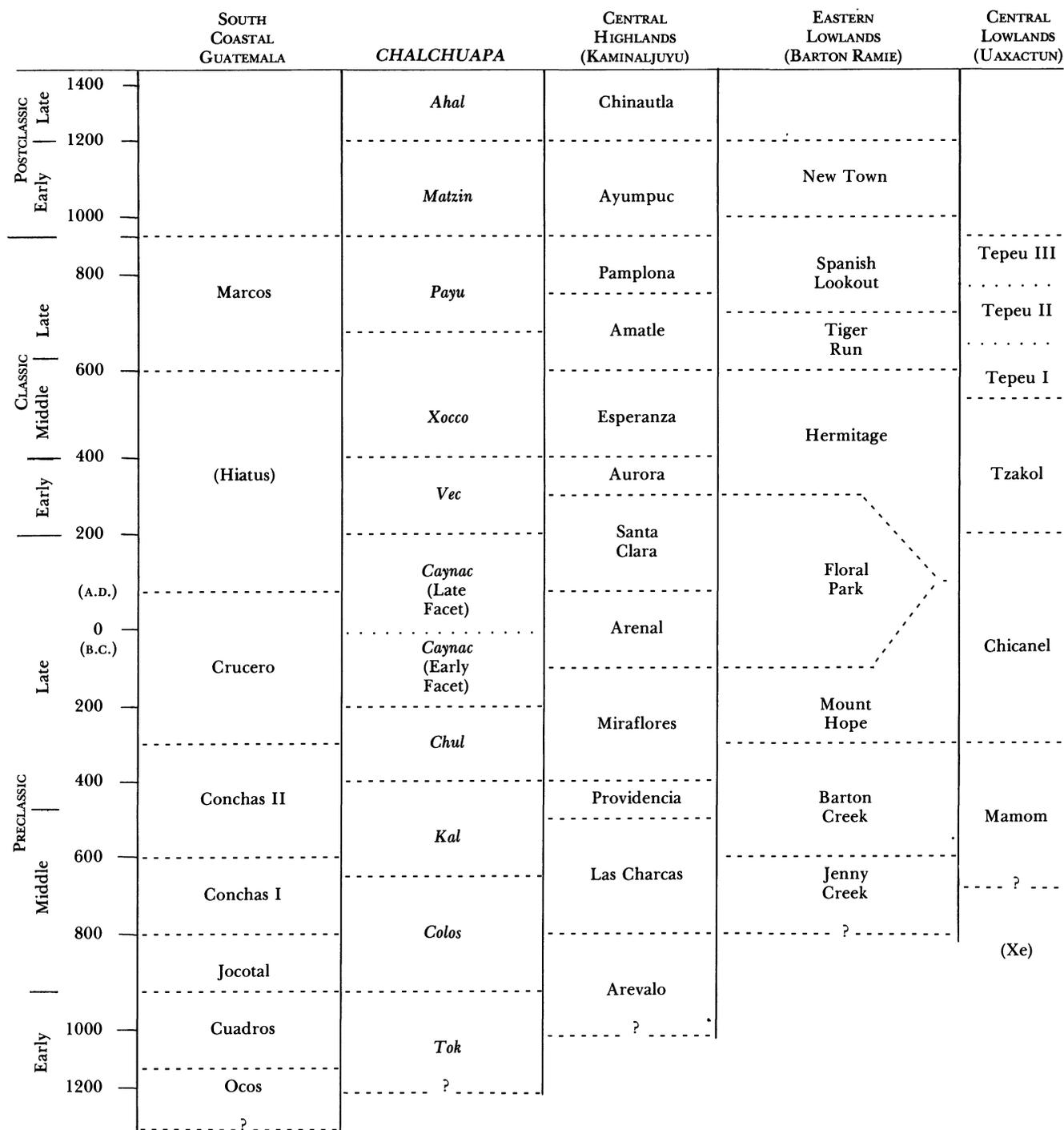


FIG. 1. Ceramic chronology for Chalchuapa and selected adjacent areas.

Prior to the investigations of the Chalchuapa Archaeological Project, Stanley H. Boggs conducted extensive excavations and restoration work at the Tazumal group. Knowledge of these excavations comes from preliminary reports (Boggs 1950a) and numerous conversations with Boggs in the field.

THE EXCAVATIONS

The origins of the current project lie in a brief survey made by Alfred V. Kidder at the El Trapiche and Casa

Blanca groups in 1953. This reconnaissance was part of Kidder's attempt to discover and encourage the excavation of new sites in order to establish a chain of archaeological connectives from the Maya area through the southeastern "frontier" into the non-Maya areas of lower Central America. As a result of his survey, Kidder informally reported a substantial Preclassic occupation at Chalchuapa, seemingly closely related to the Middle and Late Preclassic phases already established at Kaminaljuyu.

Acting on Kidder's advice, William R. Coe of the University Museum undertook in 1954 the first Preclassic investigations in this area. Coe excavated two structures in the

El Trapiche group (E3-3 and E3-6) extensively and dug a series of stratigraphic test pits at El Trapiche and on the shore of Laguna Cuzcachapa (Coe 1955). These excavations demonstrated that the bulk of El Trapiche, with strong Central Highland Maya ties, was constructed in Late Preclassic times. Unfortunately, the finds from all these excavations were confiscated by the Government of El Salvador and thus remained unanalyzed until 1966. In that year, I recovered and studied what remained of the 1954 collections stored in the Museo Nacional in San Salvador.

Two stone monuments (two sculptured, two plain) were also recovered from the axial line of E3-1. A layer of volcanic ash was discovered overlying both monuments and construction (fig. 4). The more detailed results of the 1954 and 1966-67 seasons are presented elsewhere (Sharer 1968, 1969a).

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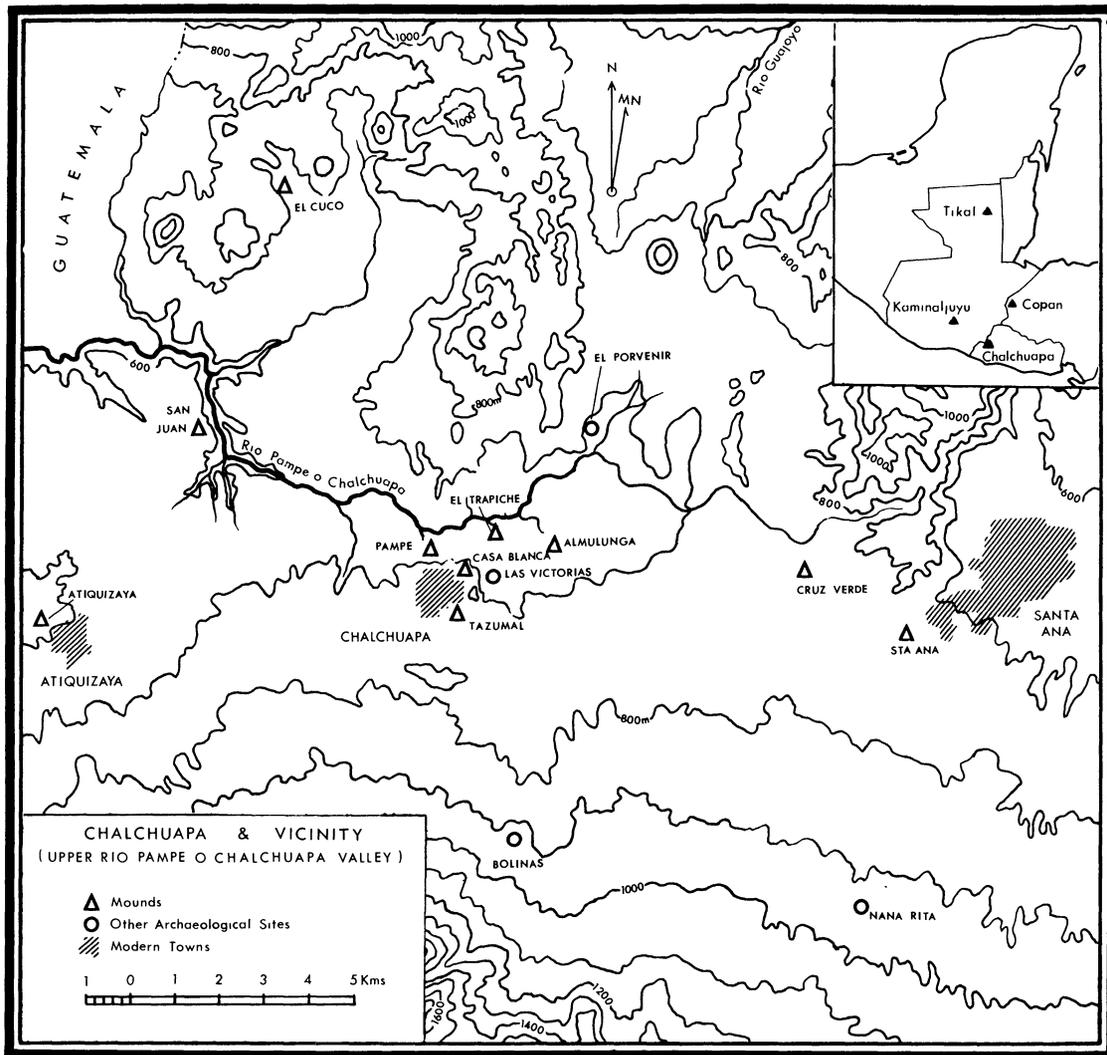


FIG. 2. The upper Chalchuapa Valley, showing principal archaeological sites, including the groups of the Chalchuapa site-zone, and (inset) the location of Chalchuapa in relation to other Maya centers.

Upon the completion of this laboratory work, further excavations at the El Trapiche group were conducted in 1967. These excavations included the axial trenching of the lower portion of the south face of the largest mound at Chalchuapa, Structure E3-1 (23 m. high). In addition, further test pits were excavated at El Trapiche and Laguna Cuzcachapa. A primary deposit of sherds and other debris discovered at the base of E3-1 has provided evidence of Early Preclassic occupation for the first time in El Salvador (Tok Ceramic Complex: ca. 1200-900 B.C.). The excavations within E3-1 itself revealed a series of pottery caches that date the latest construction as Late Preclassic (Caynac Ceramic Complex: ca. 200 B.C.-A.D. 200). Four Late Preclas-

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FIG. 3. The central area of the Chalchuapa site-zone, showing the location of excavation sites and some of their structures. Scale 1:30,000.

At Casa Blanca, two major structures (C1-1 and C3-6) were excavated. Each consists of two well-defined and independent superimposed platforms constructed of a durable adobe plaster over an earth and rubble core, dating from the Early or Middle Classic period (ca. A.D. 200-650).

Deep probing of the extensive stratified deposits of cultural debris along the north shore of Laguna Cuzcachapa (fig. 5) produced tens of thousands of items, including sherds, whole vessels, clay figurines, obsidian artifacts, articles of adornment, bone, and other objects, in a stratified sequence covering some 1,500 years from the end of the Early Preclassic to well into the Classic period. Most of the material is obviously domestic trash and is probably the result of the throwing of refuse into the lake from ancient settlements on the bluffs above. The presence of such items as clusters of jade beads, intact articles of personal adornment, and whole and partial figurines and pottery vessels indicates that ceremonial offerings were also thrown into the lake upon occasion. The importance of this stratified cultural deposit can hardly be overemphasized. It has yielded nearly 15,000 typed (identified) sherds and 46 complete vessels that together have provided a complete and continuous ceramic sequence spanning most of the Preclassic and Classic occupation at Chalchuapa. Similar continuous sequences have been defined for figurines and other artifacts.

A surface survey covered the areas within and surrounding the major groups of the site-zone. Test excavations followed in the most promising areas thus discovered.

The final field season at Chalchuapa was conducted throughout the calendar year 1970. Despite spending much of this time to complete the laboratory analysis of sherds and artifacts recovered during the preceding season, new excavations were carried out along the south shore of Laguna Cuzcachapa and in the nearby and previously untested Laguna Seca. These investigations provide valuable new chronological and occupational evidence for the

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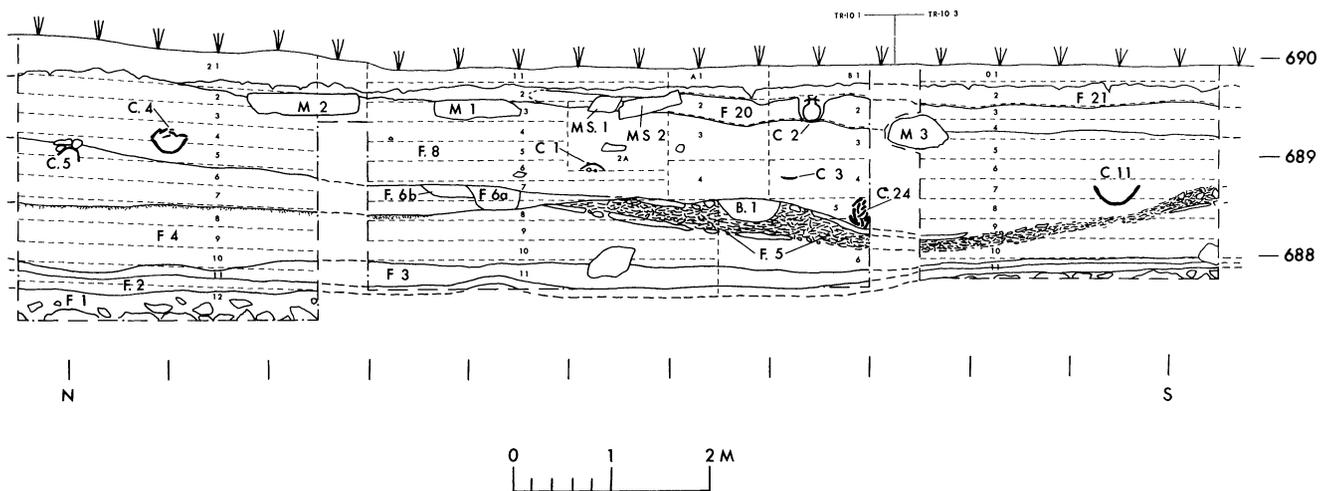


FIG. 4. Stratigraphic section of the lower portion of the El Trapiche Structure E3-1 axial trench, showing the volcanic ash layer (F.20, 21) overlying the Late Preclassic monuments (M.1, 2, 3, M.S.1, 2), construction fill (F.6, 6a, 6b), and associated caches (C.1, 3, 4, 5, 11, 24) and burial (B.1). Other features include the original (preconstruction) ground surface and humus layer (F.4), Early Preclassic (Tok Ceramic Complex) debris (F.5), an Early Classic cache intruded into the ash layer (C.2), and the sterile basal layers (F.1, 2, 3).

a tunnel probing the center of the structure indicates the existence of a much earlier underlying construction dating from Colos times (ca. 900-650 B.C.).

Classic and Postclassic periods. Additional surface collections were made and several Classic burials and pottery caches excavated within the confines of the modern town.

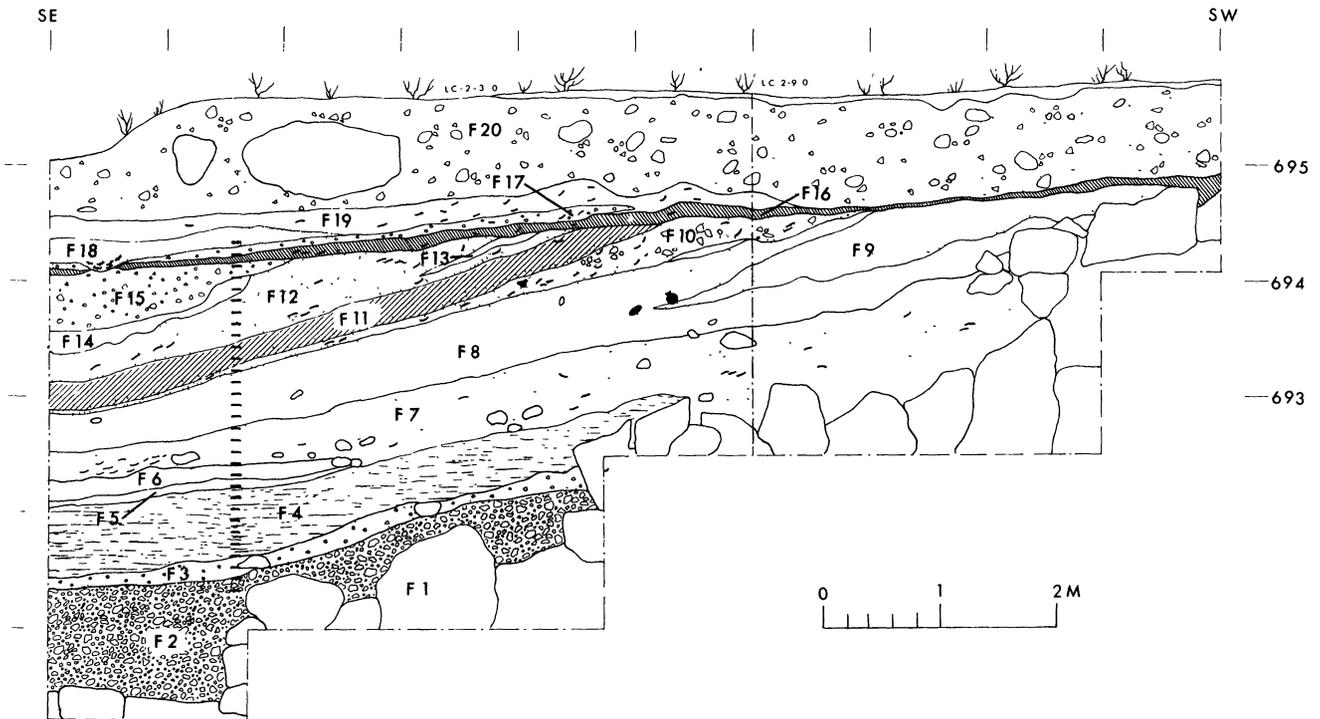


FIG. 5. Stratigraphic section of the midden deposit along the north shore of Laguna Cuzcachapa, showing modern road fill and present ground surface (F.20), Classic levels corresponding to the Vec, Xocco, and Payu Ceramic Complexes (F.17, 18, 19), volcanic ash layer (F.16), Late Preclassic levels corresponding to the Caynac and Chul Ceramic Complexes (F.11–15), Middle Preclassic levels corresponding to the Kal and Colos Ceramic Complexes (F.3–10), terminal Early Preclassic level corresponding to the transitional Tok/Colos Ceramic Complexes (F.2), and the sterile basal rock layer (F.1). (After drawing by B. Anderson.)

SUMMARY OF RESULTS

The archaeological research outlined above was a balanced excavation program conducted within a variety of contexts, including ceremonial structures, domestic structures, and stratified debris. It provides a basis for a continuous cultural sequence at the site.

THE EARLY PRECLASSIC AND THE OLMEC

Chalchuapa has been the site of human occupation since the terminal Early Preclassic (ca. 1200–900 B.C.). The evidence for the earliest settlement comes from two deposits of early ceramic debris: one from the vicinity of the El Trapiche springs and another along the north shore of Laguna Cuzcachapa. It would seem that these areas were chosen for settlement primarily because of their access to stable sources of water. Because the question of the origins and nature of this early settlement directly involves one of the central problems of contemporary Mesoamerican archaeological research, the nature of Olmec culture and its apparent spread during the terminal Early Preclassic and Middle Preclassic periods (ca. 1200–500 B.C.), I shall consider this evidence in some detail.

At present the earliest occupation is known primarily from ceramic materials (Tok Ceramic Complex: ca. 1200–900 B.C.). These materials indicate close affinities with the ceramic tradition of the terminal Early Preclassic of the Pacific coast of Guatemala and Chiapas (Cuadros Ceramic Complex; cf. Coe and Flannery 1967). From this evidence and the lack of any earlier materials either at Chalchuapa or in the surrounding region (cf. Haberland 1958, 1960),

it seems that the earliest settlers were a part of an expanding lowland maize-cultivating cultural tradition. As Lowe suggests (in Green and Lowe 1967:53–79), these early maize-farmers may have migrated slowly southeastward along the natural corridor of the Pacific coastal plain. The decision to move and settle inland in the Chalchuapa region may have been due in large part to the physiographic features of the area. The Pacific coastal plain is continuous from Chiapas to western El Salvador. However, just east of Punta Remedios, this corridor is narrowed and closed by the Sierra La Libertad. One obvious route inland to avoid this barrier is via the Rio Paz and its major tributary, the Rio Chalchuapa.

During the Middle Preclassic (ca. 900–500 B.C.) there is increasing evidence of Olmec cultural influence. Pottery of the Colos Ceramic Complex (ca. 900–650 B.C.) is characterized by types and modes that may be Olmec in origin. These include white-rimmed black bowls, polished black, streaky grey, and white to buff pottery, bowls with everted rims with incised double-line-break designs, and specific Olmec motifs. In addition, clay figurines from this period demonstrate apparent Olmec stylistic features. The Olmec boulder sculptures at Las Victorias (Boggs 1950*b*) remain undated despite excavations in this area (fig. 6). Stylistically, they seem related to those at Chalcatzingo, Morelos, Mexico (especially Relief II; see Grove 1968*a*) and possibly San Miguel Amuco, Guerrero, Mexico (Grove and Paradis 1971). It seems reasonable to conclude that they date from this same general Middle Preclassic period of apparent Olmec expansion (Coe 1965:770–71). Also perhaps due to Olmec influence is the large, but little-known, early pyramidal structure (E3-1) dated by the ceramic content

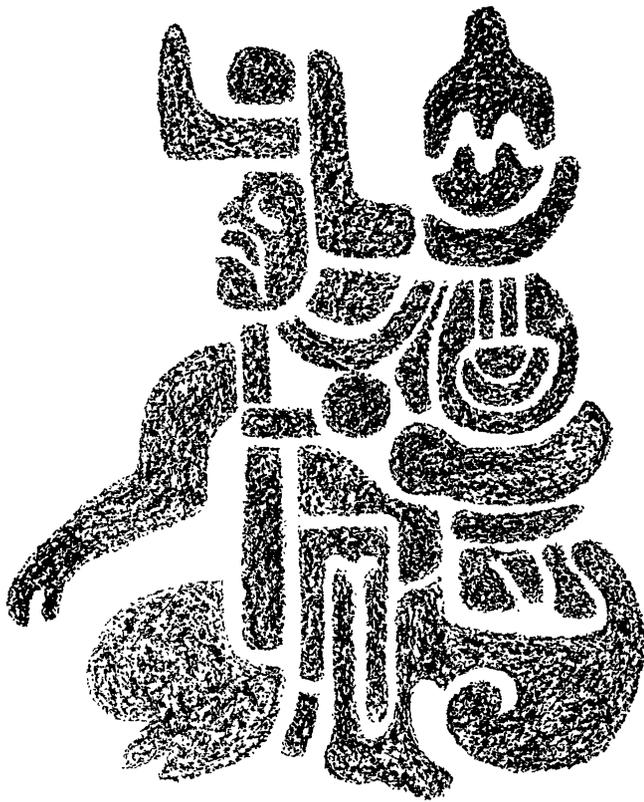


FIG. 6. Rubbing of one of the Olmec boulder sculptures from the Las Victorias group; this particular figure corresponds to Bogg's "Figure C" (1950:fig. 1). Ca. Middle Preclassic. Scale 1:6.2. (Rubbing by L. Knowles and R. Ibarra.)

of its fill (Colos Ceramic Complex) to this same time-span. Incidentally, this phase of Structure E3-1, with an estimated height of 20 m., ranks as one of the largest structures for its time in Mesoamerica and may predate the major "pyramid" at La Venta.

The exact nature of Olmec influence has been the subject of a variety of interpretations. Most, if not all, of these interpretations are either based upon, or can at least be combined with, an explanation of Olmec expansion due to attempts to control the trade of a variety of raw materials and products. Thus the archaeological evidence of Olmec presence in many areas of Mesoamerica is seen as diffusion via an established trade network controlled and maintained by the Gulf Coast Olmec (Parsons and Price 1970). Differences in interpretation are usually a matter of degree; some see the Olmec as "imperialists" exerting a rather firm political control over such areas, possibly supported by military force (Coe 1962:94; 1965:771), while others propose the establishment of trade-control stations among relatively autonomous local populations (Grove 1968*b*) and still others offer models based upon contact between the elite ruling classes for the exchange of prestige goods (Flannery 1968).

In considering the question of Olmec influence at Chalchuapa, we need to determine which, if any, of these interpretations is in best accord with the evidence on hand. The present data do not reflect the level of cultural sophistication that would be necessary to support a model of Olmec-emulating local elites, as seems to be the case for the Valley of Oaxaca (Flannery 1968). However, the presence of Structure E3-1, dating from this period, seems to indicate the beginnings of the development of large-scale ceremonialism and, implicitly, the social stratification typical

of later Mesoamerican societies. Evidence is also lacking for the massive and intensive Olmec presence that one might expect had the site been militarily subjugated or occupied. At present, it seems more reasonable to conclude that the Olmec influences seen are the result of the establishment of a station or settlement at or near Chalchuapa to control the supply of local materials in demand in the Olmec homeland, among them perhaps cacao, hematite, and obsidian (from Ixtepeque). (An examination of the distribution of sites with Olmec influence along the Pacific coast of southeastern Mesoamerica indicates that Chalchuapa may have been near the end of the line in a network of such trading centers.) Olmec modes and styles might well have been adopted by local populations in contact with such a trading outpost but remaining relatively independent of Olmec control. Seen in this light, the Olmec sculpture at Las Victorias might be interpreted as commemorating the founding of such an outpost, although other interpretations are possible (Grove and Paradis 1971:99). Though the nature and consequences of such a situation remain speculative, it is possible that it fostered changes in the sociopolitical organization of the local population that were of consequence for later cultural developments (cf. Sanders and Price 1968:132).

There are some indications that Chalchuapa may not have been the only Olmec outpost in this region. In discussing such apparent trading sites in central Mexico, Grove (1968*b*:180-82) notes their usual occurrence near strategic features such as mountain passes. Chalchuapa is an open valley site. Some 25 km. west of Chalchuapa, however, near Ahuachapan, the valley is closed by the flanks of the Sierra Lamatepeque, and the entry from the Pacific coast could have been easily controlled. It is probably significant that the most frequent reports of finds of "Olmec" artifacts (especially serpentine and jade figurines) by local collectors come from the Ahuachapan area. If a major Olmec trade site exists in this region, it probably will be found in the Ahuachapan area.

THE LATER PRECLASSIC

The cultural development initiated by this early settlement, and perhaps stimulated by Olmec influences, was to continue until the Spanish conquest some 2,600 years later. The stratified sequence from Laguna Cuzcachapa reveals no break or sharp shift in the preserved cultural inventory of the Preclassic era. In the ceramic as well as the other artifactual sequences, there is a continuous and gradual development from the Olmec-influenced early phases (terminal Tok and Colos) to the later phases (Kal, Chul, and Caynac), so closely related to the Providencia, Miraflores, and Arenal phases at Kaminaljuyu. Certain connections between Chalchuapa ceramics and the earliest pottery of the Maya lowlands (Xe and Mamon Ceramic Spheres) raise the possibility that the southeastern highland region, including Chalchuapa, was an origin area for migrations into the lowlands during the early Middle Preclassic (Sharer and Gifford 1970).

Despite the stratigraphic record of unbroken occupation throughout the remainder of the Preclassic, there is no positive evidence of further ceremonial construction until the Late Preclassic. During this latter period (ca. 400 B.C.-A.D. 200), the ancient pyramid (E3-1) at El Trapiche was rebuilt by constructing a series of new summit platforms and adobe access ramps. Furthermore, by a massive earth-moving and filling operation, an extensive artificial plaza surface was created and surmounted by a complex of ceremonial platforms covering an area of approximately 1.0 by 0.5 km. The overall distribution and composition of the struc-

tures in this area is similar to the Late and Terminal Preclassic architectural pattern at Kaminaljuyu (Sanders and Michels 1969:164-65) and other Highland Maya sites (Shook and Proskouriakoff 1956: fig. 1). This Late Preclassic florescence at Chalchuapa included monumental stone sculpture and an early involvement in the developing Maya calendrical and writing systems. Monument 1 of the El Trapiche group, from a sealed Late Preclassic context, contains a lengthy, although badly battered, hieroglyphic text, including at least one apparent calendrical glyph (fig.

of the social and political systems. One factor apparently contributing to the dynamic and prosperous quality of the Chalchuapa population at this time is trade in Usulután pottery, one of the most widespread and distinctive wares of the Maya Late Preclassic. Indeed, the presence of great quantities of Usulután sherds and vessels and the long development and persistence of this pottery at the site make it highly probable that Chalchuapa was one of its

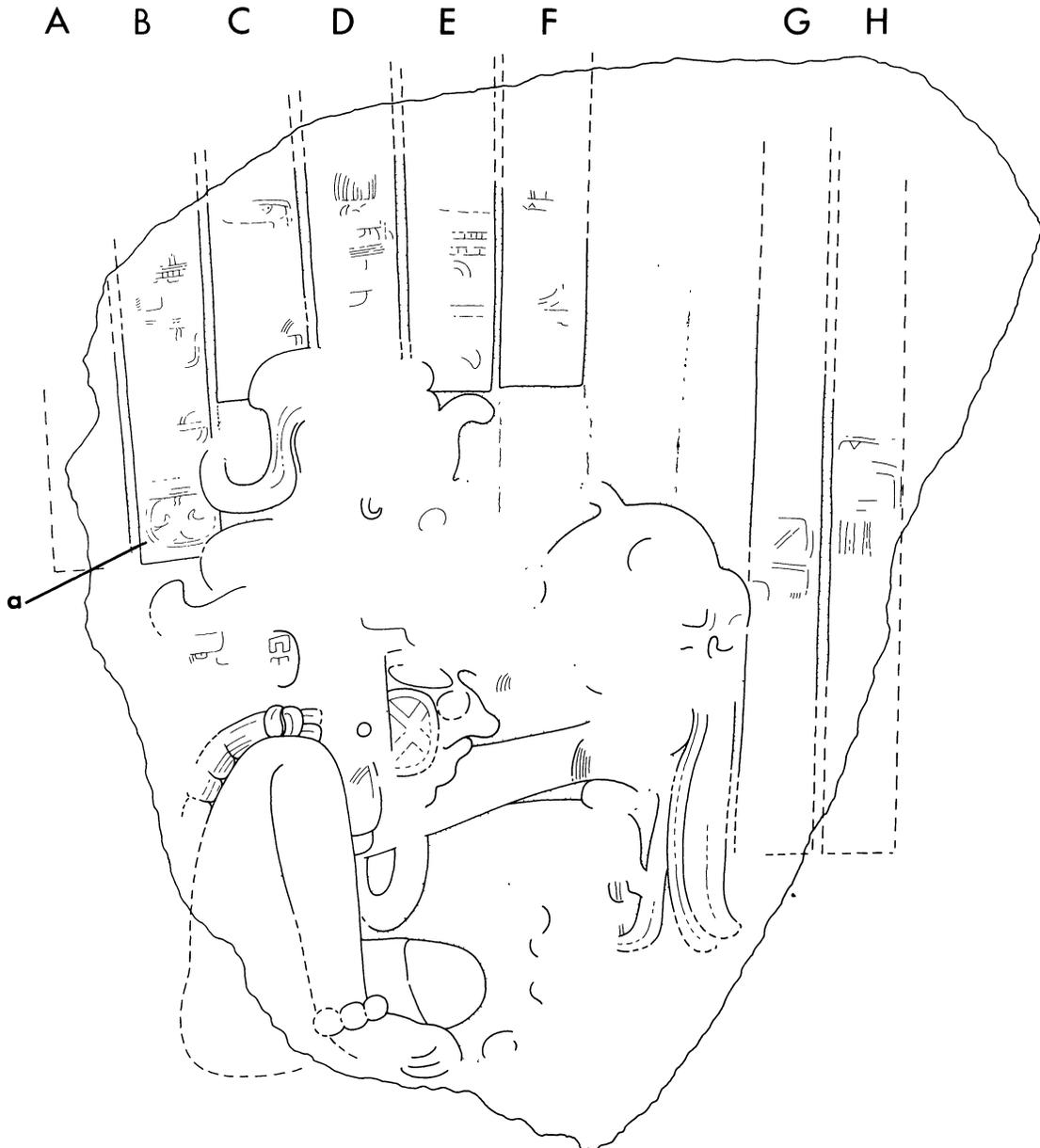


FIG. 7. Preliminary drawing of Monument 1, El Trapiche group (cf. fig. 4). Note the badly damaged glyph columns and the apparent Uinal glyph (a). Late Preclassic. Scale 1:10. (Drawing by W. R. Coe from photos and a cast of the original.)

7). As Graham (1971:135) has noted, this provides evidence for the postulated origin of advanced hieroglyphic writing in the southeastern Maya area.

From this great expansion of building and intellectual activity, one can infer a significant increase in population in the Chalchuapa area during the Late Preclassic, with a corresponding increase in the complexity and efficiency

major production centers. The Late Preclassic at Chalchuapa represents a familiar pattern of a complex society that in time would have taken on all the trappings of Classicism. Chalchuapa was a sophisticated and integral part of the Late Preclassic Highland Maya florescence first recognized by Shook and Kidder (1952:213-14) in the Miraflores phase of Kaminaljuyu. However, there is good

evidence that development was cut short at Chalchuapa by natural events.

THE PROTOCLASSIC AND VULCANISM

At the close of the Late Preclassic, or sometime during the subsequent Protoclassic period (ca. A.D. 0–200), the record of cultural development at Chalchuapa is interrupted by a massive natural disaster brought about by a volcanic eruption (Sharer 1969a:37). The source of this eruption has now been identified as Ilopango, a volcano located some 75 km. to the east (Sheets 1971:25). This eruption, or a series of eruptions, blanketed all of Chalchuapa and its sustaining valley, as well as a large portion of the southeastern highlands, with a thick layer of volcanic ash. The event is dramatically revealed in the archaeological record at Casa Blanca and Tazumal, by interrupted construction buried beneath a layer of volcanic ash, and at the base of El Trapiche Structure E3-1, where Late Preclassic monuments were found lying broken and mutilated directly beneath this same ash layer (fig. 4). It is reasonable to infer large-scale agricultural collapse and demographic shifts as a consequence of this ash fall. The archaeological evidence does reveal a dramatic decrease in material culture immediately after the deposition of the ash. The record also demonstrates that wide areas of the valley floor remained under an infertile ash blanket for a number of years (Sheets 1971:28), though sloping areas were soon freed of the ash layer, presumably by both water and wind erosion. Thus, while some continuity of occupation and even agricultural production could have been maintained along the upland slopes and foothills of Sierra Lamatepeque, the valley floor itself may well have been drastically depopulated. Disruption and movement of highland populations due to this volcanic event may have contributed to the intrusion of peoples or influences from the devastated region into the eastern Maya lowlands (the Floral Park Ceramic Sphere), as previously hypothesized (Sharer and Gifford 1970).

The fate of the vigorous Preclassic Highland Maya cultures is one of the long-standing questions confronting Mayanists. The southern Maya area, including the highlands, is often acknowledged as the source of many of the traits that were to characterize Classic Maya civilization in the lowlands, including the calendrical and writing systems (Graham 1971:135). However, after the Preclassic period, the Highland Maya went into an apparent decline, as highland and Pacific coast settlement patterns dramatically shifted and previously occupied areas were abandoned (Shook and Proskouriaoff 1956:97; Shook 1965:186). At the same time, the cultural initiative passed to the lowlands. At Chalchuapa we may have a glimpse of the cause of the decline of the Highland Maya in the eruption of Ilopango and its consequences. The southern highlands are, of course, characterized by active vulcanism, and Ilopango may be only a single instance of what may have been widespread volcanic activity that depopulated vast areas and tore apart the fabric of highland Maya society at the close of the Preclassic. Centers of population that may have survived relatively unscathed, such as Kaminaljuyu, would nevertheless have been weakened by the burden of displaced populations and interrupted trade networks. These events may have paved the way for adventurous outsiders such as the Teotihuacanos who apparently occupied at least a portion of Kaminaljuyu in Esperanza times. Thus, the Teotihuacan "invasion" may be viewed as a mere by-product of the breakdown of highland society rather than as its cause as proposed by Kidder (1945:74). In any case, the decline of highland society may have had

consequences for the development of the Maya to the north, for they probably profited from the misfortune of their neighbors and competitors.

THE CLASSIC AND POSTCLASSIC

Our understanding of the Classic and Postclassic periods at Chalchuapa is less secure than that of the Preclassic because we have fewer excavations from these later contexts and because much of the data from the principal ceremonial center, the Tazumal group, remains unavailable. My remarks are based upon somewhat limited excavations in midden deposits, surface collections and test excavations from occupation areas, and the published reports from Tazumal.

After a hiatus in building activity due to the volcanic disaster that may have lasted several generations, ceremonial activity and construction efforts began again during the Early and Middle Classic periods (ca. A.D. 200–650) at both the Casa Blanca and Tazumal groups. The El Trapiche group saw no further construction, and although some ceremonial activity (caching) continued to take place there the plaza was never cleared of its ash shroud. By the beginning of Late Classic times (ca. A.D. 650–900), construction seems to have ceased also at the Casa Blanca group. The Tazumal group, dominated by a single large structure (B1-1), was apparently rebuilt and enlarged many times throughout the Classic and early Postclassic (Boggs 1950a). Ceramic evidence demonstrates Late Classic involvement with the southeastern Lowland Maya site of Copan (Copador pottery) as well as some central lowland sites (Sharer and Sedat 1971). Influences from Central America and beyond are evident in, for instance, Nicoya polychrome pottery and some of the earliest metalwork in the Maya area (Boggs 1950a:270).

It is apparent, however, that Chalchuapa never recovered from the volcanic disruption at the end of the Preclassic. It may be that populations in the valley or in the surrounding area never regained their former size, or that the political elite never regained control over as large a sustaining population. Only the Late Classic and Early Postclassic construction at Tazumal approaches the titanic building efforts of the Late Preclassic. Vitality in sculpture and intellectual achievement seems lacking. It is obvious that the focus of Maya cultural development was elsewhere during the Classic. In short, Chalchuapa became peripheral, both culturally and geographically, after the eruption of Ilopango.

The transition between the Classic and Postclassic periods (ca. A.D. 900), while a time of fundamental and even violent change elsewhere in the Maya area (e.g., Sabloff and Willey 1967), appears to have occurred without incident at Chalchuapa. The significant horizon marker of the Early Postclassic, Tohil plumbate pottery, makes its appearance, apparently via trade. The somewhat limited stratigraphic record of this period from the midden deposits at Laguna Seca indicates no sudden or profound changes in the population. Survey of the Late Classic domestic occupation area along a low ridge adjacent to Laguna Seca indicates that occupation was uninterrupted throughout the Early Postclassic.

A widespread occurrence of traits often equated with the arrival of Pipil (Nahua-speaking) peoples in southeastern Mesoamerica is seen at Chalchuapa in the Early Postclassic. Traits probably originating in Mexico first appear during the Classic, but are not so frequent as to suggest an occupation like that seen at Bilbao in Guatemala (Parsons 1967). The Postclassic includes architectural features in the Tazumal group that are closely related to

Central Mexican ("Tula-Toltec") traditions, such as the "Palace" of Structure B1-1, the *talud-and-tablero* style of Structure B1-2 (fig. 8), and the round platform Structure B1-8. In addition, there are the life-size ceramic Xipe statue found near Laguna Seca (Boggs 1944) and two rather crude stone "chac mools" reportedly from the Tazumal group (one in the National Museum, the other in a private collection). The uninterrupted pattern of occupation and continuity of domestic ceramic traditions argue against an invasion or settlement of a new population at the site. However, the presence of Pipil populations in the southeastern highlands and coastal area does conveniently explain

connected with Pokomam-speaking peoples of central highland Guatemala. Since there is good historical verification that Chalchuapa was occupied by Pokomam-speaking peoples at the time of the Conquest (Ximenez 1929), it is possible that the demographic shifts seen in the Late Postclassic archaeological record were due to the arrival of these new peoples (cf. Miles 1957:754). On the basis of linguistic and population distribution studies, Lawrence Feldman (personal communication, 1971) feels that the

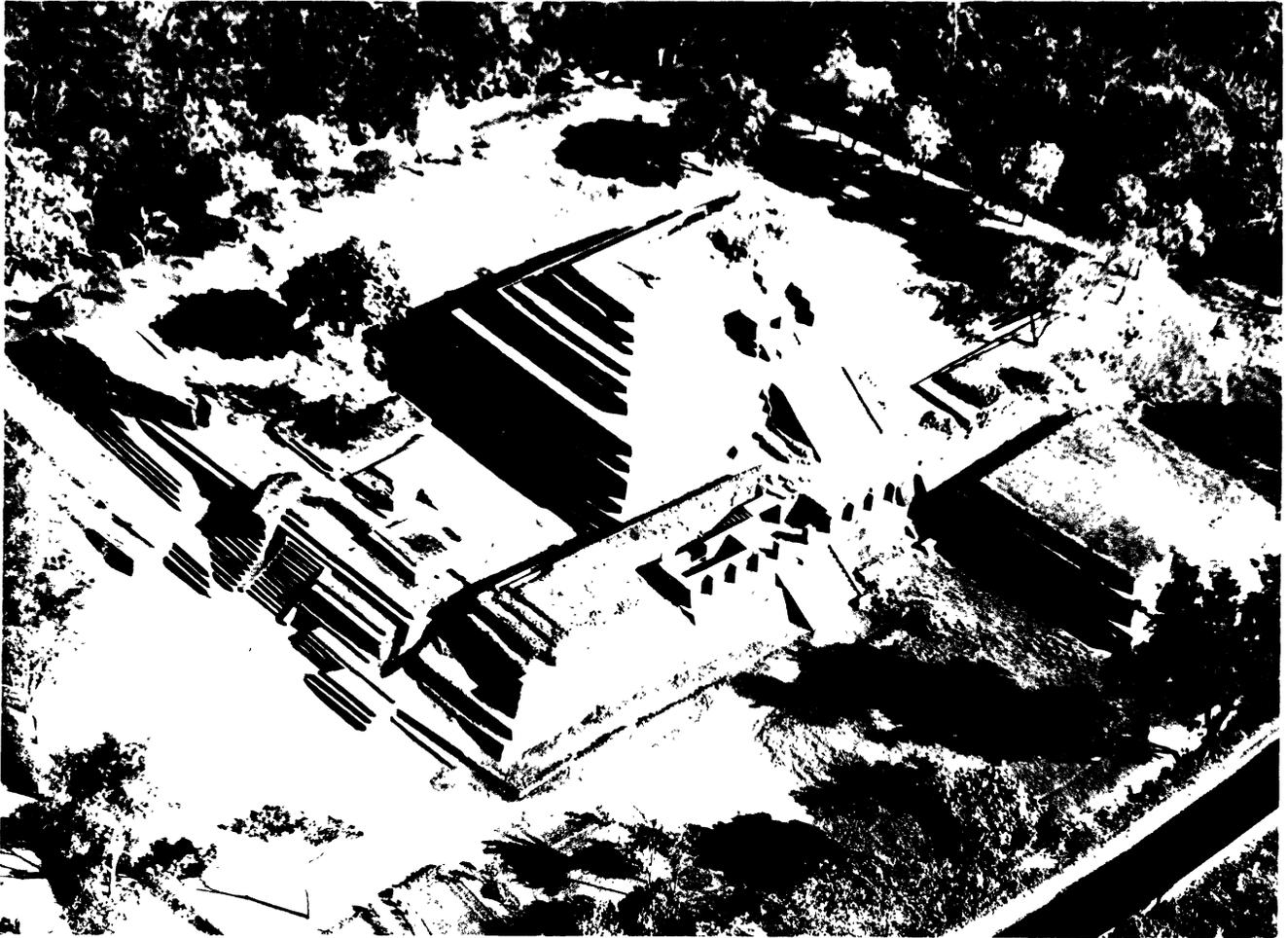


FIG. 8. Air view of the principal structures of the Tazumal group as restored: B1-1 (center) and B1-2 (lower right). Late Classic and Early Postclassic. (Photo by P. Sheets.)

the presence of undeniable Mexican influences during the Postclassic period.

There is stronger evidence of significant cultural change in the Late Postclassic. Although the dating evidence remains scant, these changes occur in the post-plumbate horizon and therefore date probably not earlier than ca. A.D. 1200. This period is marked by the abandonment of not only the Laguna Seca domestic occupation area, but much of the central ceremonial area, including Tazumal. The little available evidence suggests that in the Late Postclassic domestic occupation shifted westward into the area of the modern town. This period is marked by the appearance of two ceramic types: Marihua Red-on-buff, which Haberland (1964) equates with the Pipil, and Chinautla polychrome and related ceramics, which may be

Pokomam populations settled Chalchuapa and western El Salvador in the latter portion of the Late Postclassic. This evidence for a late arrival of Pokomam at Chalchuapa refutes Lothrop's (1939) argument for an ancient widespread occupation of the southeastern highlands by these people and tends to support Thompson's more recent arguments (1970:95-102). It is possible that the Pipil penetrated the Chalchuapa area in the Postclassic, only to be replaced by the Pokomam. Perhaps more likely, given the somewhat diffuse quality of their apparent influences (beginning in the Classic and continuing into the Late Postclassic), the Pipil "presence" at Chalchuapa was due to long-term trade and diffusion from adjacent occupied areas. Unfortunately, the available evidence does not permit a certain answer to this problem at present.

CHALCHUAPA AND THE SOUTHEASTERN MAYA PERIPHERY

The 2,600 years of prehistory revealed by archaeology at Chalchuapa are characterized by a vivid contrast between occupational stability (except for the disruption caused by the eruption of Ilopango) and a swirl of outside events and influences. The demographic continuity at Chalchuapa was undoubtedly due to its prime setting, one that included stable sources of water, rich agricultural soils, and a position astride a natural communication route. An explanation of the array of external influences is more complex.

The following discussion will review the evidence for external connections in a chronological perspective. An attempt will be made to incorporate ethnohistoric and linguistic data, following the lead of Thompson's excellent treatment of the eastern boundary of the Maya, based primarily upon ethnohistorical sources (1970:84–102). Thompson's synthesis culminates a series of discussions (e.g., Lothrop 1939, Longyear 1947, Miles 1957) concerning the nature of this area in the Protohistoric and early Historic periods. We are now in a position to integrate the archaeological record from Chalchuapa with some of the conclusions of this previous research. As Thompson (1970:86) recommends, I will not shy from speculation when this may stimulate further insights.

Before proceeding, it is necessary to say a few words concerning the concepts employed here. The traditional anthropological terms of acculturation, diffusion, migration, conquest, trade and exchange are useful in accounting for many of the external influences seen at Chalchuapa. Since their meanings are well known, they will not be defined (cf. Kroeber 1948). In the characterization of Chalchuapa as being on the frontier of the Maya area (Lothrop 1939, Longyear 1947), the term frontier is used in the context of a culture-area boundary. This concept needs refining in light of the complexities of the ebb and flow of external influences revealed by archaeology at Chalchuapa. For this reason, the term *frontier* will be limited here to denoting the confrontation of an expanding society with a relatively open, unpopulated area (cf. Turner 1932). It will be useful to retain the *culture area* concept in order to contrast cultural systems centrally located at or near the *core* of such areas with those on their *peripheries*. This contrast is recognizable from at least two viewpoints: relative geographical position and relative participation in a total cultural pattern (Kroeber 1939:4–6). This distinction may be further developed by use of the concepts of *open* versus *closed* social systems (after Wolf [1955], but without the connotation of community typology). An open society "emphasizes continuous interaction with the outside world and ties its fortunes to outside demands," while a closed society tends to perpetuate an independent and isolated internal system that "emphasizes resistance to influences from without which might threaten its integrity" (Wolf 1955:462).

These concepts can be used to describe the shifting pattern of Chalchuapa's participation in what is recognized as the Maya (or, in the case of its formative development, the Olmec) culture area. Thus, at times Chalchuapa can be viewed as a peripheral site, at other times as a frontier site, and at least once as a core site. It can be characterized as an open society during periods of either frontier or peripheral involvement and as a closed society during its participation as part of the core of Preclassic Highland Maya development.

The concept of *community* (or community structure) has been found useful in contemporary Maya studies (cf. Wolf 1955), and there is reason to believe that this basic unit was operative prior to the Conquest at such sites as Chal-

chuapa. The application of a community model does not imply the absence among the prehistoric Maya of lineal descent systems such as those suggested by Miles for the Pokomam (1957:758–65). Rather, the model is appropriate in terms of Reina's (1965) distinction between the traditional homogeneous community and the *multicommunity*, the latter referring to social organization and interaction on the intercommunity level in multiethnic situations. Such networks may be viewed as an adaptive mechanism allowing for the effective functioning of interdependent communities in situations of diverse languages, cultural traditions, and subsistence patterns. It is postulated that multicommunities are associated with open (receptive) cultural situations such as frontiers and peripheries. Thus, the contrast between these two types of communities may well be applicable to prehistoric Chalchuapa.

Figure 9 correlates a summary of the archaeological and linguistic data with the principal outside influences, their probable mechanisms, and the concepts just discussed. It also includes the inferred levels of sociopolitical organization for Chalchuapa for comparison with evolutionary studies of civilization such as that of Sanders and Price (1968). The following discussion integrates these factors chronologically.

The available archaeological evidence indicates that occupation in the Chalchuapa Valley began during the Early Preclassic and that the initial settlers originated from the early lowland sedentary areas of the Pacific coast. Occupation at Chalchuapa, therefore, appears to have begun as part of the frontier of expanding Mesoamerican agricultural sedentarism. There appears to be a relationship between the time of this initial spread (ca. 2000–1200 B.C.) and the glottochronological evidence for the origins and dispersal of the Proto-Maya (Macro-Mayan) languages (for a recent review of this question, see Joesink-Mandeville 1972). If this is the case, then the initial settlement of Chalchuapa was undertaken by Proto-Maya-speakers. These peoples, as indicated previously, were apparently moving from the coastal plain into the highlands by one of the prime natural routes, the valley of the Rio Paz. Settlement at Chalchuapa was apparently in the form of small, simple agricultural communities fully within a frontier context. At least two of these early settlements are known from their midden deposits, one centered along the north shore of Laguna Cuzcachapa, the other at El Trapiche. These communities can be characterized as open societies, and this is fully in accord with their frontier situation.

The Olmec, perhaps the first of these lowland Proto-Maya-speaking groups to achieve what is conveniently called "civilization," exerted their influence over the Chalchuapa area soon thereafter. The reasons for Olmec interest in the area may lie in Chalchuapa's location astride a natural route from the coast to the highlands and the availability of desirable natural resources. The Olmec influences seen at Chalchuapa would seem to represent acculturation from hypothetical trade outposts in the valley. Thus Chalchuapa became, in a geographical and presumably cultural sense, a part of the periphery of the Olmec sphere during the Middle Preclassic. This society was characteristically open; the presence of a variety of Olmec traits supports this. There are indications that the two known settlements at Chalchuapa continued during this period, perhaps as separate communities in a reciprocal exchange system.

During the Middle and Late Preclassic periods, Chalchuapa, still exploiting the resources and trade networks apparently fostered by the Olmec, underwent a steady transition in its material culture from Olmec-influenced to what is recognized as typically Highland Maya. This gradual process of cultural change may well be illustrative

of the general transition from a cultural pattern we generally term Olmec to one we call Maya.

By Late Preclassic times, Chalchuapa had emerged as a vigorous center of the general Highland Maya florescence. The degree of commonality in the material culture of Kaminaljuyu and Chalchuapa by the Late Preclassic is sufficient to indicate that the two populations were speakers of the same language. Indeed, Lawrence Feldman (personal

as Laguna Cuzcachapa. By this time, Chalchuapa can be characterized as a closed society on the basis of the relative lack of external influences, the well-integrated development of local traditions (such as ceramics and figurines), and its full participation in the central Highland Maya cultural sphere.

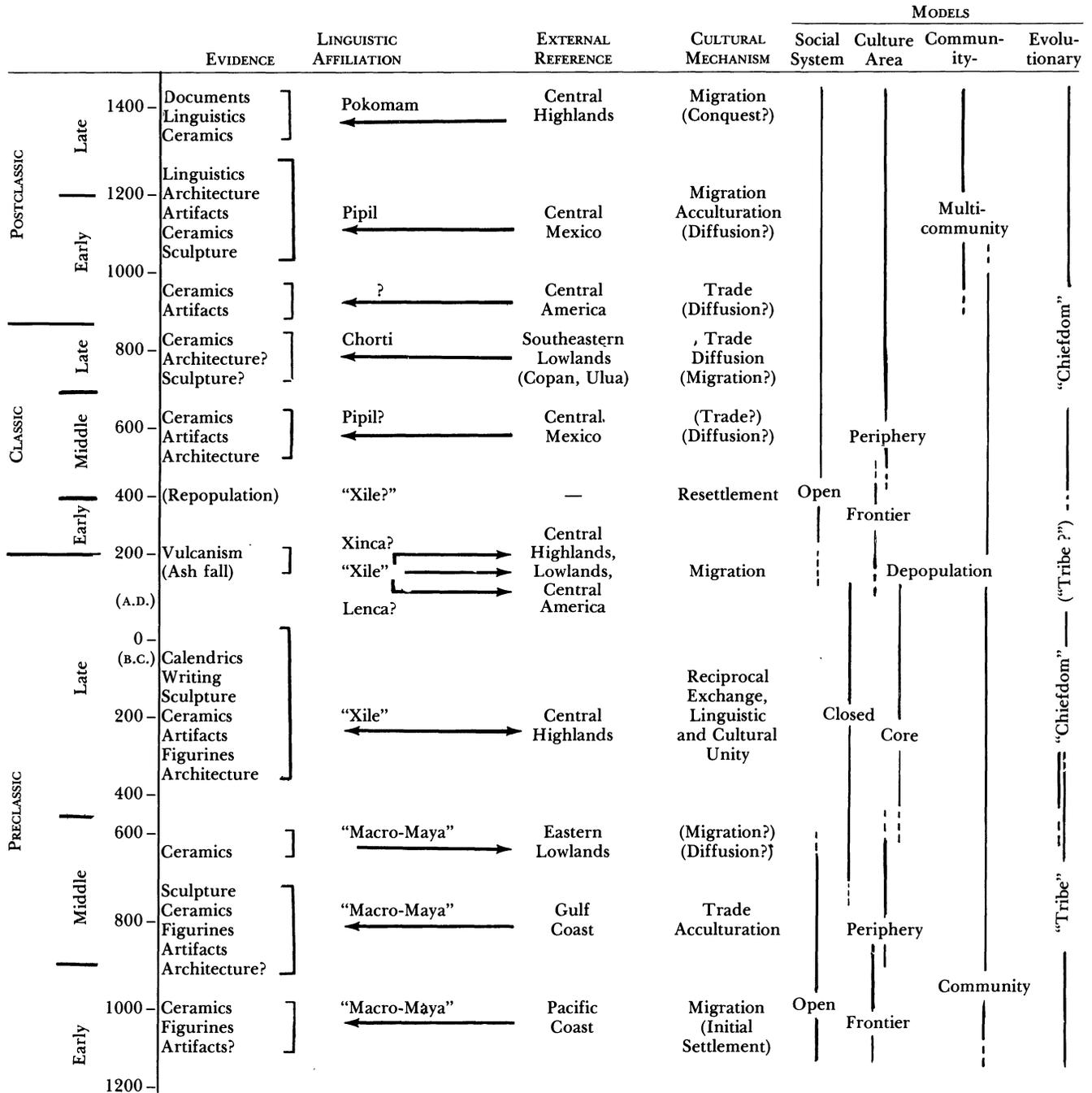


Fig. 9. Chronological summary of the evidence for external influence at Chalchuapa, with probable sources (arrows indicate direction of influence), together with cultural mechanisms and associated models.

communication 1971) suggests that much of the central and southeastern highlands was a linguistic unit in this period, speaking "Xile," an ancestral Xinca-Lenca language of the Macro-Mayan stock. A settlement at Chalchuapa extended from the El Trapiche group at least as far south

As we have seen, catastrophic natural events apparently brought an end to this regional linguistic unity and cultural florescence. It is hypothesized that volcanism, of which the eruption of Ilopango may have been only one instance, initiated a decline in Highland Maya civilization at the close

of the Preclassic and spawned a series of migrations that in turn influenced events throughout the Maya area and beyond. These events may have fostered the breakup of the "Xile" population into Xinca and Lenca. The Lenca, who seem to have moved eastward, were probably the builders of Classic Quelepa (Andrews 1970:30-31). Some of these peoples probably moved as far as the eastern Maya lowlands, where their influences have been detected in the Floral Park Complex at Barton Ramie. It is even possible that the expansive Mexicans were able to take advantage of the situation to penetrate the southern Maya area.

With severe depopulation, Chalchuapa, in effect, returned to a frontier situation. The valley again became an open environment, gradually resettled from the surrounding mountain slopes as the fertility of the valley floor was naturally restored. Although the archaeological record is sparse for this period, there are indications of resettlement characterized by the small, open agricultural communities typical of frontier situations. The continuous, although drastically attenuated, archaeological record indicates that a residual group of the same population continued to dwell at Chalchuapa. As the region was gradually repopulated, Chalchuapa once again began to emerge as an important population and ceremonial center. However, from this time onwards it remained on the periphery of the Maya area. The variety of outside peoples and influences apparent in the archaeological record is indicative of the cultural receptivity characteristic of a peripheral site.

Beginning with the first indications of Pipil (or "Mexican") diffusion during the Classic period, these influences continued with traits from Central America and the Uluá region of Honduras as well as the southeastern lowlands (Copan). These latter influences may correspond to what Thompson (1970:100-102) sees as a southward expansion by Chortispeakers from the lowlands. This expansion may also have been triggered or facilitated by the earlier depopulation of the southeastern highlands due to the eruption of Ilopango. Although Thompson sees this expansion as stopping short of the Chalchuapa area, the appearance of heavy influences from the Chorti area at Chalchuapa may be indicative of actual Chorti or Chorti-allied peoples occupying the Chalchuapa Valley.

Pipil groups were well established in the southeastern highlands as early as Classic times (Thompson 1970:101). The original inhabitants of Chalchuapa, including the postulated residual populations as well as other possibilities such as Chorti or Chorti-influenced groups, undoubtedly continued to inhabit the area, but may have been overwhelmed by the Pipil by the Early Postclassic. The historical continuity and distinctiveness of the Pipil, Xinca (or derived "Xile"), and Chorti communities of the southeastern highlands were maintained until long after the Conquest (Miles 1957:737-38; Thompson 1970:95). This regional, ethnic diversity is represented in the archaeological record by the admixture of cultural traditions in the ceramic, artifactual, and architectural assemblages at Chalchuapa.

It is during this time that an open social organization such as the multicommunity (Reina 1965) is postulated to accommodate interaction between the diverse linguistic and cultural groups settled in the Chalchuapa region. The final ingredient in this hypothetical multicommunity system was the arrival of the historically known Pokomam at Chalchuapa (Miles 1957:752), an event now dated archaeologically and linguistically as Late Postclassic. It is reasonable to conclude that given a probable preexisting social mechanism such as the multicommunity in an open, peripheral cultural setting, the arrival of Pokomam populations may have occurred with relatively little conflict. Of course, warfare and conquest remain a possibility. In any case, when the Spanish arrived in the Chalchuapa Valley,

they found Pokomam populations established at Chalchuapa and a few other centers, surrounded by a sea of Pipil peoples (Miles 1957:742).

CONCLUSION

Archaeological research at Chalchuapa has provided a firm cultural chronology and an outline of the principal events and influences in this prehistoric area. These data have been briefly considered in light of other lines of inquiry (ethnohistory and linguistics) and a selection of anthropological concepts. The results provide a firm foundation for further research in this area. This is consistent with what I hold to be the most fruitful strategy of archaeological inquiry, a combination of the so-called historical (inductive or hypothesis-formulating) and processual (deductive or hypothesis-testing) approaches.

Thus, the data and interpretations summarized in this paper provide the basis for the testing of a variety of hypotheses dealing with cultural processes in the southeastern Maya periphery and in peripheral areas in general. A few of the more important of these hypotheses are the following: (1) that the initial settlement of the central and southeastern Maya highlands was originated by Pacific coastal peoples at the end of the Early Preclassic (the Cuadros ceramic horizon); (2) that the complex of Olmec traits seen at Chalchuapa is the result of acculturation from a center (or centers) of Olmec trading activity in the Chalchuapa Valley; (3) that such Olmec activity stimulated sociopolitical and economic development on the peripheries of the Maya area; (4) that calendrical and/or writing systems, or components of such systems, originated in the southeastern Maya area; (5) that volcanic events initiated a cultural decline in the highlands at the end of the Preclassic period that had significant cultural effects even beyond the highlands; and (6) that the open society and multicommunity models are applicable to archaeological contexts and can be correlated with peripheries of culture areas. The testing of these and related hypotheses through additional field research should further our understanding of Maya prehistory. In the meantime, the completed investigations at Chalchuapa have laid the foundations for future archaeological studies of the southeastern Maya periphery.

Comments

by HORACIO CORONA OLEA

México, D.F., Mexico. 26 x 73

When various studies of a given prequest culture have already been published and a site has been located that will certainly provide fuller information on a certain cultural period, it is most responsible to carry out the archeological work on which to base the study that will clarify, substantiate, and demonstrate in what epoch a group or groups inhabited that site. This is not risky when the data provided by the archeological remains of the region are well known. This problem is solved in all respects in the development of the work under review.

In this praiseworthy work, the author, who has for some years been carrying out systematic explorations at various sites in the southeastern region, sets out to study the site of Chalchuapa, El Salvador, in an effort to discover how long it was occupied, and concludes that it dates to the early Preclassic. He determines this on the basis of a well-grounded and fruitfully realized investigation that provides important data documenting the Olmec culture

and its expansion and other data, also important, that fit readily into the Maya chronology.

In substantiating and placing the prehistory of the region through the application of his archeological experience, Sharer reveals himself as an expert on the ceramic materials of both the Olmec and the various Maya periods. His research on the prehistory of the southeastern Maya periphery, ably summarized here, must surely be taken into account for a full understanding of Maya culture.

by U. M. COWGILL

Pittsburgh, Pa., U.S.A. 3 x 73

My comments will be largely confined to suggestions that may be useful in solving some of the problems posed in this paper. Sharer states that "pottery of the Colos Ceramic Complex (ca. 900-650 B.C.) is characterized by types and modes that may be Olmec in origin." A chemical and mineralogical comparative analysis of this pottery and that known to be Olmec might be useful in distinguishing Olmec-type from true Olmec. A study of the sort made with the ceramic sequence from Tikal (Cowgill and Hutchinson 1969) might be very illuminating. Furthermore, it might be useful to know whether Olmec-type or true Olmec pottery was manufactured locally and whether the material from which the pottery was made was transported from afar. Chemical and mineralogical study of the pottery in question might clarify these points.

Sharer comments that "at present, it seems more reasonable to conclude that the Olmec influences seen are the result of the establishment of a station or settlement at or near Chalchuapa to control the supply of local materials in demand in the Olmec homeland, among them perhaps cacao, hematite, and obsidian (from Ixtepeque)." Both hematite and obsidian, on the basis of modern observation, can be located much nearer to the Olmec homeland than the southeastern Maya highlands. Cacao may possibly be more important, but its ancient distribution in Central America is not well known. It might be useful to take cores of Laguna Cuzcachapa and Laguna Seca, though the latter would have pollen and microfossils poorly preserved if at all. Evidence for planting sequences, agricultural collapse, and demographic shifts in population could well be found preserved in the mud of Laguna Cuzcachapa, though the earthquake that is thought to have occurred ca. A.D. 0-200 may have brought about some stratigraphic changes in the mud (cf. Cowgill and Hutchinson 1966). Data of the type suggested here may prove useful in changing some of the hypotheses proposed by Sharer into fact.

by THOMAS E. DURBIN

Turlock, Calif., U.S.A. 5 x 73

The prehistory of El Salvador, particularly that of the "southeastern Maya periphery," has been a most difficult one to reconstruct. The early explorations of Squier in 1855-58, Montessus de Ballore in 1890-91, Sapper in 1896, Gonzalez and Rodriguez in 1895-1906, Peccorini in 1913, and Barbarena in 1914 and the first summary work of Spinden (1915) only served to illustrate the confusing multiethnic and archaeologically problematic nature of the area.

The edict of the Salvadorean government in 1903, which essentially discouraged archaeological explorations, left investigators seriously disadvantaged. Hence the works of Larde and Lothrop, Longyear, Boggs and Haberland, Kidder, and Coe were all brief or hampered by external considerations. But importantly, they did serve to identify the archaeological zones which held the keys to an under-

standing of the prehistory of the area and its place in the culture history of Mesoamerica.

The Chalchuapa Project of 1967-69, reported by Sharer, and the evident cooperation of the Salvadorean government at this time have allowed for a contribution of enormous proportions to an understanding of that prehistory. The archaeological-ethnohistorical-linguistic analysis of the prehistory of the Chalchuapa Valley, in terms of frontier and peripheral open societies and core closed societies, is a very useful approach.

A similar example of frontier and peripheral conditions in Preclassic times may be noted for the corridor area of the Valley of Toluca, west of Mexico City. There, probable Proto-Otomanguan speakers introduced "Mesoamerican agricultural sedentarism" and were followed by Olmecoid trade movements as far northwest as Michoacán. Thereafter, an unexplained hiatus in the archaeological record and later minor Classic Teotihuacano influences are followed by the development of a Matlatzincan-Coyotlatelco core society, which remained closed within the heart of the valley. During the later Postclassic, Matlatzincan communities in the western valley area became peripheral to the Tarascan influence of the times and communities in the eastern valley area became peripheral to the Chichimec-Tepanec and later Aztec Nahua-speakers of the Valley of Mexico. Immediately prior to the Spanish conquest, the entire Toluca area was brought into the core of Aztec society through conquest and colonization. Much of the Valley of Toluca during the Postclassic Period was inhabited by multiethnic communities constantly receiving substantial cultural influences from both central and western Mexico. Further research in the Toluca corridor will doubtless reveal details of a flow of cultural events similar to that observed by Sharer in the Chalchuapa Valley.

by ERNESTENE GREEN

Kalamazoo, Mich., U.S.A. 29 x 73

This article is a valuable summary of the prehistory of one part of the "southern Maya periphery," western El Salvador, and the cultural relation of that region to the Maya area to the north. Since western El Salvador has not in the past been the focus of intensive archaeological investigation, Sharer's work at Chalchuapa is a highly significant contribution to our knowledge of the archaeology of this part of the "southern Maya frontier."

Of special interest is the information on Olmec influence at Chalchuapa and the author's view that it is associated with trade for local materials in demand in the Olmec homeland. This interpretation, at times in combination with other models (Grove 1968b, Flannery 1968), has been put forth for other areas under Olmec influence. Since, by now, a number of probable or possible trading stations in an Olmec trade network have been identified (see references in Sharer's article), it would be interesting to explore the applicability of a trade model such as that set forth by Fry (1970) for the Classic Period Maya. Furthermore, if similarity could be demonstrated in the systems of commerce of cultures so widely separated in time, this similarity could have far-reaching implications for the significance of environmental-ecological factors in the area.

Sharer proposes that the dislocation of populations in the region by vulcanism contributed to the previously noted (Sharer and Gifford 1970) intrusion of peoples or influences into central British Honduras (recognized as the Floral Park Ceramic Complex). The reason for this intrusion was, until now, quite puzzling. Thus Sharer's explanation, al-

though it awaits further documentation, is welcome.

The author hypothesizes that the location of sites during the initial occupation of the Chalchuapa site zone was guided by the proximity of stable water sources. The implication is that the water was for domestic purposes. While this proposition may be correct, information about other environmental characteristics, e.g., soils, terrain, and landscape, might reveal additional insights into the determinants of settlement location. Moreover, as investigation of prehistoric western El Salvador progresses, the question of which features of the natural and social landscape guided settlement location in later time periods should be asked.

I am critical of only one part of this paper. To categorize the Chalchuapa social system as "open" or "closed" is, by itself, only descriptive. Though a crucial first step, but it should be followed by explanation—albeit tentative—of why the population was or was not receptive to "foreign" influence. At the same time, the mechanisms of contact-influence could be brought in. Knowledge of the mechanisms would probably go far towards explaining why the social system alternated between an open and a closed type. Sharer's review of the archaeological record suggests that the data for explanation is present.

Finally, Sharer is to be congratulated for the use of linguistic and ethnographic data in his review of the late prehistoric sequence in western El Salvador. These are additional resources for interpretation of the past that can supplement and expand the archaeological record.

by DAVID C. GROVE

Urbana, Ill., U.S.A. 23 x 73

This paper raises many points of interest, but for brevity I will confine my comments to Sharer's discussion of the Preclassic and in particular to Olmec cultural influences. At times I will draw comparisons between the Chalchuapa data and data gathered during my ongoing excavations at Chalcatzingo, a central Mexican site which shares several important features with Chalchuapa, including Olmec-style rock carvings.

Sharer sees cultural affiliations during the Early Preclassic with the Pacific coastal cultures of Chiapas and Guatemala, and makes no mention of Olmec influences. During the same period in central Mexico, Olmec influences appear quite strongly in ceramics. The absence of such influences at Chalchuapa suggests that Early Preclassic Olmec influences diffused primarily westward rather than to the south. Gulf Coast obsidian exploitation favored central Mexican sources at this time too. In discussing increasing Olmec cultural influences at Chalchuapa during the Middle Preclassic, Sharer mentions several ceramic wares, including those decorated with incised double-line-breaks, as possibly of Olmec origin. However, such wares are present from Pacific coastal Guatemala to central Mexico during the Middle Preclassic, and I find it difficult to distinguish anything particularly "Olmec" in any Middle Preclassic ceramics outside of the Gulf Coast. Olmec-influenced ceramics seem to be a phenomenon of the Early Preclassic. Thus, I am surprised that Sharer finds "specific Olmec motifs" on some of his vessels and "apparent Olmec stylistic features" in his figurines during the Middle Preclassic. Unfortunately, these are not specifically illustrated in any of his publications to date; perhaps they will be in the future.

There are two important similarities between Chalchuapa and Chalcatzingo. The first, obviously, is the presence of Olmec-style rock art. However, Chalchuapa's Olmec-style art appears to differ thematically from Chalcatzingo's. At least three of Chalchuapa's carvings depict humans carrying staffs or bundles in their arms, a motif also found on

the Olmec stela at San Miguel Amuco, Guerrero, and the carving at Xoc, Chiapas. Chalcatzingo's carvings seem more closely related to iconographic motifs found at La Venta, and many contain an agricultural fertility theme.

The second important similarity is in monumental architecture. Sharer suggests that the construction of structure E3-1, which he dates as Middle Preclassic, may be related to Olmec influence. Chalcatzingo also has ceremonial architecture, including a 70-m.-long platform mound which is at least Middle Preclassic. Both Chalchuapa and Chalcatzingo contain the earliest known examples of truly monumental ceremonial architecture in their respective areas and in addition have Olmec-style rock art. I would doubt that this is coincidental, and accept Sharer's view that this architecture is related to Olmec influence.

The nature of Olmec influences apparently varies during the Early and Middle Preclassic. I agree with Sharer that there is no archaeological evidence suggesting "massive or intensive" Olmec presence at Chalchuapa, Chalcatzingo, or in fact at any non-Gulf-Coast site. Sharer leans towards a "trade center" model of the type I once proposed (Grove 1968*b*). While I no longer believe that such a model serves for Early Preclassic sites in central Mexico, it still appears viable as an explanation for the restricted distribution of Middle Preclassic carved art and ceremonial architecture outside of the Gulf Coast and in particular for Chalchuapa and Chalcatzingo. We are testing this model and several others at Chalcatzingo.

by NORMAN HAMMOND

Cambridge, England. 28 x 73

Sharer is to be congratulated on a good piece of field investigation which has resulted in the elucidation of a most important cultural sequence. My comments are more in amplification of than dispute with his thesis. He notes that the earliest settlement at Chalchuapa occurs near springs and a lake, and ascribes this to the presence of "stable sources of water," but such a source brings into being an entire new range of ecological and economic possibilities: the lake, in particular, could be a source of protein in the form of fish, mollusks, wading birds, lacustrine animals, and terrestrial creatures coming to drink, of water plants and lakeside reeds and grasses. Such a range would be familiar and welcome to settlers from the Pacific coast region of Guatemala.

The presence of an Olmec station in the region to control the Ixtepeque obsidian source seems probable; certainly control of this resource was held to be important in Classic times, as Thompson's (1970:100-102 and Map 3) delineation of the Chorti expansion into the highlands suggests, with a salient of Chorti territory extending out to encompass the obsidian deposit. Sharer sees this expansion as a move back into the highland area left depopulated by the eruption of Ilopango, but recent data from southern Belize suggests that it may be one aspect of a general expansion of Chol-Chorti population: the sites of Pusilhá and Lubaantún seem to have been founded in late Middle Classic and early Late Classic times respectively, and the absence of any earlier occupation of the Río Grande basin indicates population movement to the northeast along the flanks of the Maya Mountains.

The uneventful transition from Classic to Postclassic seems to be paralleled in northern Belize, where recent work has shown an apparent superimposition of a large Postclassic house directly upon a modified and even larger residence of characteristic Classic form. Earlier similarities occur between the two areas in the élite ceramic subcomplex of the "Protoclassic" facet of the terminal Preclassic, marked

by striking mammiform-footed tetrapodal vessels; these are in the lowlands, however, of characteristic lowland ethos, and I would see these plain connections with the Salvadorean highlands as evidence of an emergent polity beginning to draw in ideas and artistic innovations rather than of a volcanically impelled injection of people from the highlands. In either case, the importance of the coastal canoe route from the lower Motagua to Yucatan and its feeders up the major rivers into the eastern part of the Central Area is apparent: all the major "Protoclassic" sites lie on or near the coast or the Belize and Río Hondo networks except perhaps Altar de Sacrificios on the Pasión, and this pattern may have been established during the Middle Preclassic, as suggested by Sharer and Gifford (1970).

by WILLIAM A. HAVILAND

Burlington, Vt., U.S.A. 3 x 73

Sharer's article appears to be a good piece of work. Obviously, one cannot critically assess his interpretations until all the detailed evidence has been presented, but at this point they seem eminently reasonable.

Two things about the article strike me most favorably. The first is the clear indication of the interdependence of inductive and deductive archaeology. The second is the attempt to make use of concepts from cultural anthropology. Sharer is not alone in this, of course, but what is particularly refreshing is his avoidance of purely typological considerations—whether archaeological remains suggest a society which should be classified as a tribe, chiefdom, or whatnot. Such exercises have always struck me as similar to the now long discredited attempts of past physical anthropologists to fit every skull studied into their supposedly neat categories of nordic, mediterranean, etc. (cf. Washburn 1953). Sharer, unlike many archaeologists, has instead examined concepts such as migration, diffusion, and open and closed communities to see what they may have to offer for an understanding of culture processes. The understanding may not yet be there, but it should come with further work.

Having expressed my positive feelings, I would like to quibble with a few things. First, I am always suspicious of migration theories. Why should early maize farmers have migrated to Chalchuapa? Might not the region have first been settled as the result of a slow but steady population growth, which produced an equally slow and steady outward expansion? Such growth may well have been a correlate of a highly successful adaptation, maize farming itself. Hence, there may have been no real "decision" as such to "move" inland. This is not to say that migrations don't happen. Western man has been migrating around the world for several centuries now. As a by-product of this, we are prone to think of all peoples as being as footloose as he. Perhaps the early Preclassic Chalchuapans did migrate; it remains to be proven and, if so, explained.

I am bothered by the statement, "One factor apparently contributing to the dynamic and prosperous quality of the Chalchuapa population at this time is trade in Usulután pottery . . ." Why? Might not the trade be a reflection of this prosperity, rather than a cause? Too often in Maya studies, it seems to me, we project the technoeconomic causation ideology so characteristic of Western culture, invoking control of trade as a factor leading to cultural success or collapse of trade monopolies as a factor leading to cultural decline. Maybe this is so, but we surely won't know until careful consideration is given to potential non-economic and nontechnological causes of sociocultural growth and decay.

by NICHOLAS HELLMUTH

Guatemala City, Guatemala, C.A. 22 x 73

Sharer has provided Maya specialists with a useful perspective of prehistoric happenings on the far limits of the Maya lands. Let us hope that the full ceramic and excavation reports of Chalchuapa will appear shortly, and that Andrews's full report on Quelepa will be made available also.

The settlement density, 58 plus 87 structures within 3 sq. km., seems sparse. I would have welcomed a comparison of this figure with those for Kaminaljuyu and other Formative Period sites.

The use of the term "Olmec" gives me the impression that there was fairly direct contact between La Venta or San Lorenzo and Chalchuapa. In his conclusions, Sharer clarifies this by saying he sees the Olmec influences as coming from an Olmec trading center (as yet undefined, and in this instance not located archaeologically). Elsewhere he calls Chalchuapa an "Olmec outpost." Might not the term "Olmec-like" be more appropriate until somewhat more convincing evidence of Olmec occupation is available? The "types and modes that may be Olmec in origin" are understandably convincing to the excavator, but ought to be illustrated so the reader can judge for himself. For example, what are the "specific Olmec motifs"? A reference to Joralemon's (1971) catalog of Olmec art designs would have been appropriate. Sharer's assessment of the Las Victorias monument is more convincing, for here he shows the monument and provides three specific comparative references. Since the proper presentation of archaeological material depends so heavily on visual documentation and especially cross-references to artifacts from other sites, perhaps CA should wholeheartedly encourage fully illustrated articles on archaeological topics.

The author sees the "decline of the Highland Maya in the eruption of Ilopango" and evidently the rest of the volcanos in the chain. Unexplained is the salvation of Kaminaljuyu, a site within lethal proximity to active volcanos. The author's other evidence for this "apparent decline" is an ancient paper by Shook and Proskouriakoff which has long since been updated by the extensive highland settlement-pattern mapping and test-pitting of Pennsylvania State University. Sharer makes no reference to this latter work.

Is not the eruption of Ilopango an overly simplistic explanation for the appearance of "adventurous outsiders such as Teotihuacanos"? The Teotihuacan "invasion" is hardly a "mere by-product of the breakdown of highland society," especially since the Teotihuacanos were evidently interested mostly in the rich cacao-growing coastal lowlands. The focus of all Mesoamericanists' studies of Teotihuacan influence on the excavations at Kaminaljuyu two decades ago is understandable. Findings not available to Sharer when he wrote his paper show that the Tiquisate region of the Escuintla Pacific coastal plain of Guatemala was evidently the focus of Teotihuacan activity during Esperanza and later times. More pure Teotihuacan pottery and provincial variations of it are now registered from this region than for any other site yet excavated in all Mesoamerica outside of the Valley of Mexico and Teotihuacan itself (Hellmuth 1973a, b).

In his discussion of the Postclassic situation, Sharer makes good use of Lawrence Feldman's linguistic and historical ethnographic data. Feldman has available a considerable quantity of unpublished Spanish documents from the archives of Sevilla and Guatemala City. This fresh 16th- and 17th-century documentation enables Feldman to contribute in a field of anthropological linguistics and historical eth-

nography previously dominated by the same old rehashed outdated information.

In his conclusions, the author states that "calendrical and/or writing systems . . . originated in the southeastern Maya area." I would welcome convincing illustrations of the monuments which document this surprising statement. Every excavator seems to want to find the "origin" of some major aspect of Classic Maya civilization in his dig area. The inclusion of such a claim is not in keeping with the useful hypotheses presented elsewhere in the paper.

Overall, Sharer's paper successfully fulfills his stated goal of providing for other Mesoamericanists a description of the archaeological sequence of events in a previously little known portion of the Maya region.

by DAVID H. KELLEY

Calgary, Canada. 4 x 73

I find this an extremely useful summary of a great deal of new information. The attempt to integrate various kinds of evidence is very worthwhile, but could not be effectively criticized except in an equally lengthy article. I will, therefore, confine myself to two points.

The chronology is presented with undue precision (save for the warning implicit in straight lines crossing two or three columns of cultural sequences). Central dates are, generally, both more reliable and better indicative of cultural continuities. The neat little boxes of figure 1, conventional as they are, are psychologically inimical to acceptance of what Sharer says is happening.

A more important objection is that I believe most archaeologists, including Sharer, are expecting the wrong kind of indicators of political-military intrusion. Aztec III pottery was widely spread in Mexico by the Aztecs, but there are sites conquered by the Aztecs which do not show this pottery. Moreover, Aztec III pottery derives in all essential features from Aztec II pottery, which was being made in the Valley of Mexico before the Aztecs arrived there. At the other end of the scale, one piece of perfectly good Aztec pottery has as decoration the Hapsburg eagle and must have been produced after the most drastic invasion Mexico is known to have suffered. Invasion and conquest imply surviving local populations, and many archaeologically recovered artifacts simply show continuities of such populations, usually with a few external artifacts, which may be dismissed as simply trade objects. I am impressed by the archaeological continuity at Chalchuapa, but think it may be accompanied by substantially more intrusions of alien groups than Sharer seems to think.

by EVELYN S. KESSLER

Tampa, Fla., U.S.A. 1 x 73

In recent times, anthropology has moved in the direction of describing culture as a process, seeking cultural regularities within that process (cf. Harris 1968:2). The role of archaeology in such a search is crucial. Only archaeology can provide insight into the processes of cultures which have not survived. Only archaeology can provide insight into the roots and foundations of our own culture.

Flannery (1972:24) quotes a model proposed by Clarke to describe culture:

Culture is regarded as a system which passes with time through a succession of states; the sequence of states exhibited, called the trajectory, depending upon the history of the system and on the influence of the environment, both physical and cultural, with which it interacts.

If culture is a system which adapts to both its history and its physical and cultural environment, it is imperative that

we discern not only the history of a given culture, but also the various states of its trajectory, seen as dynamic processual stages in its adaptation. Throughout the groping of archaeologists and anthropologists toward a suitable methodology for the "new" archaeology (Fritz and Plig 1970, Justeson 1973), despite disagreements as to the weighting of information (Binford 1968:267), the basic goal of anthropological archaeology is describing the process of culture through time.

Sharer accomplishes this goal admirably. He has taken an area regarded as peripheral to Maya Classic developments and, with sophisticated application of anthropological and ethnological terminology to archaeological data, rendered a meaningful analysis of the dynamics of culture area placement. Chalchuapa, according to Sharer's analysis, moved through time from a frontier of the Olmec civilization to a core area during the late Preclassic and finally, after a natural disaster, to a peripheral site of the Maya Classic. This trajectory was marked by changes in the internal dynamics of the society.

The "frontier" state is marked by what Sharer has called an "open" society, one in which traits from the Olmec were adopted as the material base and structure of the society permitted. This corresponds nicely with the stages Spicer (1961:8) designated as Fusion and Synthesis in his discussion of culture change.

The "core" state is marked by a change to a "closed" society, one in which traits were no longer freely adopted and in which, it may be assumed, rather rigid social stratification existed. Sahlins and Service (1960:53), in discussing cultural stability, state:

The process of adjustment or adaptation . . . inevitably involves specialization, a one-sided development that tends to preclude the possibility of change in other directions, to impede adaptive response to changed environmental conditions . . . thus, whereas a given technological development may generate a new organization of society, the latter in turn operates to preserve the technology that gave rise to it.

A "core" society must be a successful adaptation. Success implies specialization and stratification. Is there a correlation between successful adaptation and rigidity of structure? Is this rigidity implicit in the "closed" society?

The "peripheral" state was brought on by a volcanic eruption. A secondary cause doubtless was the low level of technology which impeded recovery from this disaster. May a third cause be sought in the "closed" nature of the core society? Volcanic eruptions occurred in other parts of Mesoamerica in the Preclassic, particularly in the Valley of Mexico (Coe 1962:81), which subsequently become a core area of the Classic.

Sharer's analysis gives insight into the nature of a peripheral society. The term "peripheral" loses much of its stigma when the society so described is seen as part of a multicomunity with easy access to a variety of languages and cultures. Moreover, Chalchuapa seems to have been untouched by the collapse or decline of the Classic Maya, and remained intact until conquest.

In sum, Sharer's article is a fine example of the fertility of processual archaeology. The inner dynamics of a society can be described by archaeologists. In the process, new questions which instigate further research are generated. To paraphrase Willey and Phillips (1958:2), "Good archaeology is anthropology or it is not good."

by LECH KRZYŻANIAK

Poznań, Poland. 13 x 73

The Chalchuapa Archaeological Project has certainly proved very fruitful and could serve as a good and impressive example of archaeological inquiry for many continental

scholars. The concept of "open" and "closed" society is surely quite important from the anthropological point of view, and the author has done a fine piece of work in explaining past events in the Chalchuapa area from this standpoint. To define the historical development of this area, however, it would also be interesting to explain the archaeological data in terms of the various stages of the development of society (e.g., "complex society" or "civilization") and their cultural consequences. When did the local maize farmers reach "complex society" cultural status? This is quite an interesting question, since Olmec cultural influences were probably oriented toward (economically) attractive communities. In defining the stages of cultural development in this area, the author uses terms ("Classic," etc.) that best fit the most developed, culturally advanced societies of ancient Mesoamerica. Is it premature to build an independent scheme, parallel to that proposed in this paper, to describe the historical and cultural development in the Chalchuapa area?

by JOHN M. LONGYEAR, III

Hamilton, N.Y., U.S.A. 25 x 73

Sharer's paper reinforces the idea that Olmec influence in southern Mesoamerica was much more extensive and significant than earlier studies had indicated. It is becoming increasingly obvious that virtually all the known archaeological cultures in a great semicircle reaching from southern Veracruz through Oaxaca and Chiapas and down the Pacific coast to western El Salvador had fallen under the influence of the Olmecs during the Middle Preclassic (ca. 1000-500 B.C.), and continuing research into the Preclassic of adjoining areas to the north of this semicircle may well enlarge the sphere of this influence.

Given the extent and completeness of this domination, one wonders whether it can be accounted for by any Olmec encroachment involving only a part of the social sphere—military occupation, trading outposts, or the like. It might be more reasonable to postulate an expansion of the Olmec State, resulting in domination of all aspects of the outlying populations: social, economic, political, and religious. Supposing such a complete takeover during the Middle Preclassic, the subsequent collapse of the Olmec State in the heartland would have cut these outliers adrift, permitting regional differentiation, but also providing a basic Olmec flavor and genesis to the emerging Teotihuacan, Zapotec, and Maya civilizations.

by JOHN PADDOCK

Mitla, Mexico. 25 x 73

Fashionable archeology today is fiercely anti-inductive. Sharer wisely and courageously plumps (in his "Conclusion") for combining induction and deduction, or what was formerly called the scientific method. Perhaps he will be bold enough to listen to other unfashionable ideas.

Over 20 times Sharer has used the term "influence." While he has scrupulously provided antecedents for labels of other concepts in cultural dynamics, this one is not accounted for. Depending on context, it may refer to dominion, style, contacts, trade, hegemony, empire, conquest, ideas, objects, derivation, acculturation, etc. At times he commendably qualifies it or substitutes a more specific word. If all archeologists eschewed the term influence entirely, our writing would be clearer. Influence implies hegemony (see dictionary), yet archeologists often claim to see it where there is evidence for no more than third- or fourth-hand contact through traded copies of traded objects (Paddock 1972:225, 229-33). ("Prehistoric" is also only dubiously appropriate for much of Sharer's material.)

Sharer has depended heavily (fig. 9) on migration as explanation. Obviously some peoples have migrated sometimes, and some Mesoamerican peoples (see the *Historia Tolteca-Chichimeca*) many times. Sharer has not been reckless here. But population movement is a radical explanation (I speak from 20 years of living with the question of Mixtec invasion in the Valley of Oaxaca) calling for especially careful and exhaustive justification. All of us ought in future to call on the Arizona symposium (Thompson 1958) in such situations—as a whole, for its application of all branches of anthropology, and especially the Thompson, Haury, and Rouse contributions. Also important is the statement of Willey et al. (1956).

On proposing an empire of the "Olmecs," one should cite Caso's (1965) paper, even if not to agree with it.

We have been too long shackled to the notion that ancient peoples always behaved as much as they could like 19th-century European military empire builders. Ideas often move faster and farther than do ethnic groups, armies, or traders (Paddock 1968a). The "Olmec" concept does more explaining if used to designate a horizon style rather than some single ethnic group; at one time the style was adopted by virtually all Mesoamericans (Paddock 1968b). Careful consideration of empires in Mesoamerica (Bosch Gimpera 1966, Paddock 1966) leads to the conclusion that, in the Old World sense, there were none. The evidence left by a single travelling potter is enough to make us posit armies and empires, however. (Space limitations forbid arguing these assertions; hence the embarrassing excess of self-citation.)

Explanation is aided for all of us by Sharer's persuasive reminder that natural catastrophe can overwhelm sociocultural forces, for most of Mesoamerica is volcanic and earthquake-prone.

Tohil Plumbate is a marker of middle, not early, Postclassic in northern Mesoamerica in view of recent dates for the end of Classic (Paddock 1973:1132).

Reference to the *talud-and-tablero* style at Chalchuapa is not confirmed by figure 8, which shows many *taludes* but no *tableros*.

And congratulations: a good job.

by MARC D. RUCKER

Mississippi State, Miss., U.S.A. 30 x 73

Sharer has done an admirable job of summarizing briefly the long and complex developmental sequence, based on a very extensive program of testing and excavation, of a most interesting archaeological locality. The tenor of his narrative is predominantly cultural-historical, focusing primarily on the "nature and sources of external influences" and less on questions of *internal* cultural dynamics. All significant sociocultural changes are interpreted as the result of external events and processes, both natural (volcanism) and cultural. Thus his interpretation of Chalchuapa culture history is rife with diffusionist and migration hypothesis. Indeed, the terms "influence(s)" and "influenced" appear no less than 26 times in this short paper, along with such similar phrases as "stimulated," "closely related to," "external connections," etc.

Consistent with his diffusionist-migration stance and his refusal to "shy from speculation," Sharer indulges in the all-too-typical Mayanist fascination with correlating archaeologically defined cultures with linguistic groupings. The most naive expression of this is the flat assertion that "the degree of commonality in the material culture of Kaminaljuyu and Chalchuapa by the Late Preclassic is sufficient to indicate that the two populations were speakers of the

same language." Such statements must certainly tax the patience of all readers who learned long ago that there exists no necessary relationship between culture (especially *material* culture) and language. How could such a proposition ever be verified, or even rationalized?

A much more constructive endeavor is Sharer's utilization of models and structural typologies in attempting to explain cultural-historical discontinuities and changes through time at Chalchuapa. But here, too, many perplexing questions are raised, and one questions the appropriateness and explanatory adequacy of the concepts employed. Upon introducing the concepts of "frontier" communities, "open" and "closed" social systems, "traditional homogeneous communities," and "multicommunities," it is postulated that "multicommunities are associated with open (receptive) cultural situations such as frontiers and peripheries." (Is it also implied that traditional homogeneous communities are associated with closed cultural systems and cultural "core" areas?). Such a generalized "explanatory" equation seems facile at best, and leads me to considerable confusion at some points.

Apart from the broader question whether *any* culture can legitimately be considered a "closed" system, one wonders why Sharer fails to explicate the chain of logic or theory which (supposedly) links cultural peripheries and frontiers with "open" multicommunity structures. Certainly the rationale behind such a functional linkage eludes me. For instance, Late Preclassic Chalchuapa is characterized as a "closed" sociocultural system, yet Sharer argues in the same paragraph that Chalchuapa enjoyed "full participation in the central Maya Highland cultural sphere." How can a "closed" society, one which "tends to perpetuate an independent and isolated internal system," be a "full participant" in such a geographically widespread cultural sphere? Additional imponderables of a like nature appear along the right margin of figure 9, where multicommunity structure is indicated for only the Postclassic period occupation while open, frontier, and peripheral situations are rather consistently linked with a *community* model.

These and a few additional perplexities seriously detract from what is otherwise a very informative and provocative summary of the course of Chalchuapa culture history.

by JAMES SCHOENWETTER

Tempe, Ariz., U.S.A. 5 x1 73

The descriptive portion of Sharer's article is trait-list-oriented, calling attention to features of Chalchuapa which may be compared with those which allow identification of phase sequences in other Mayan districts. This procedure permits classification of culture-historic units at the site. Sharer does not, however, content himself with classification; he also argues that this trait list, with the addition of a few uncontrolled conceptual frames (e.g., "influence," "migration"), is a sound basis for the establishment of hypotheses for purposes of processual analysis. He seems to adopt the verbiage of "contemporary archaeology" with little awareness of its methodology or intent.

Sharer's analysis rests upon the *presumption of significance* of certain artifact types and patterns of archaeological evidence. These are held significant either because they are similar to types and patterns identified at contemporary sites or because they are frequent at Chalchuapa but are *not* similar to types and patterns identified elsewhere. An example of the former test of significance is "Pottery of the Colos Complex (ca. 900-650 B.C.) is characterized by types and modes that may be Olmec in origin." An example of the latter is "The transition between the Classic and Postclassic periods (ca. A.D. 900), while a time of fundamental and even violent change elsewhere in the Maya area . . .

appears to have occurred without incident at Chalchuapa." Patterning of the archaeological record identified as significant allows the comparison of Chalchuapa with other sites in sequential terms. Thus Sharer adds the Chalchuapa column to the regional time-space grid of figure 1. This is a means of analysis archaeologists employ almost universally. Sharer does an excellent job of it, as such things go.

His behavioral reconstructions, however, may be contested on two grounds. First, one may contest the presumption that the traits and patterns which work for construction of time-space grids will also work for the reconstruction of behavioral events and that the traits considered to identify behavioral patterns such as "trade" or "diffusion" in fact do identify them. Second, some of the important reconstructions adopted—e.g., that Chalchuapa was, or was near, an Olmec trade outpost—are those for which Sharer finds least evidence to the contrary, not those for which most support may be adduced. Archaeologists have, of course, been doing this for a very long while; but how, using this method, does one judge the validity of the reconstruction? One may either judge the presumptions of significant similarity or explore the record for indications that the presumptions lead to a different conclusion. Unfortunately, there may be more than one "acceptable" reconstruction for the same body of data, and there is no way to judge which is "more acceptable." There cannot be objective standards, for the reconstruction ultimately rests on a presumption of the significance of certain forms of data.

Sharer's reconstructions of the "influence" of one culture on another thus are not deductions from the archaeological record, but opinions which we have no necessary reason to disbelieve. They may well be a close approximation of historical events, but there is no way to prove that they are closer approximations than alternatives unless one changes the whole approach to reconstruction. This is exactly what "contemporary archaeology" attempts to do.

Sharer states that his reconstruction provides "a firm foundation for future research in this area." In essence, this sentence challenges workers to identify situations in which his reconstructions are inconsistent with the archaeological record or to identify alternative reconstructions. I am in no position to rise to this challenge directly, but I can certainly offer my suspicion that more appropriate data might be selected to identify migration, conquest, trade, exchange, acculturation, diffusion, and linguistic affiliation than ceramic types, architectural attributes, and stylistic design.

I find Sharer's statement that the data and interpretations summarized in the paper "provide the basis for the testing of a variety of hypotheses dealing with cultural processes in the southeastern Maya periphery and in peripheral areas in general" very glib. There is excellent reason, in terms of both archaeological theory and scientific methodology, to doubt the appropriateness of the data format for deriving the interpretations Sharer has generated. Further, Sharer provides no reference frames for *testing* (as contrasted with judging the acceptability of) the hypotheses of process presented.

Thus, while I find no reason to disagree with Sharer's culture-historic reconstruction, I do not by any means consider it proven, or even especially well documented, and I feel that his "Conclusions" section illustrates a lack of awareness of the principles of processual analysis in archaeology.

by JAROSLAV SUCHÝ and MILENA HÜBSCHMANNOVÁ

Prague, Czechoslovakia. 14 x 73

Not being archeologists ourselves, we can understand and appreciate more the method of the research described than

its results. We were most impressed by the multidisciplinary approach to the subject, i.e., the combination of archeology, linguistics, and ethnology. In studying an ethnic group (the Roms or Gypsies), one of us as a physical anthropologist and the other as a sociolinguist, we gradually came to the conclusion that only through the integration of various branches of science can we grasp a subject so complex. Unlike intuitive knowledge, which is based on synthesis, analytical scientific knowledge starts with the description and inventory of the discrete components of the reality studied. The different characters of the existing parts of reality conditioned the rise of separate scientific branches. We can imagine the various sciences as the fingers of outstretched hands and the problems of the reality investigated as folded hands. Scientists have more or less now gone beyond the stage of description, and much more attention is being concentrated on the understanding of general relations among units of different systems of reality. An attempt at an integrative approach is, for instance, obvious in the dialectic method elaborated by Marx and Engels; it is also found in Bertalanffy's general-system theory and Wiener's cybernetics and information theory. Because the present institutionalisation of various scientific investigations is based on the previous particularisation of science, it will be some time before effective integrated approaches are elaborated and put into practise. Considering Sharer's article from this point of view, we hold it most interesting and progressive.

by RONALD K. WETHERINGTON

Dallas, Tex., U.S.A. 1 XI 73

Sharer's work in Chalchuapa is indeed a valuable contribution to our knowledge about the Maya of the southern highlands and the Pacific coast. Increasing evidence is demonstrating greater organizational and structural complexity in Preclassic times than had previously been estimated. Important unsolved problems, to which Sharer speaks, include the historical and cultural processes by which these Preclassic (Formative) societies achieved their complexity and the quality and extent of interregional participation in those processes. Another important set of problems is the events and processes involved in the transition to the more structurally consolidated and politically centralized Classic societies.

While Sharer's interpretations of these processes are worthwhile, I wish space had permitted a somewhat more detailed presentation of the comparative data on which they were made. The decline of the Highland Maya after Formative times, which he views as possibly caused by such natural disasters as the Ilopango eruption, is certainly not in evidence at Kaminaljuyu. The occupation at the site itself increases from Terminal Formative (Verbena-Arenal) through the Late Classic (Amatle 2), and the sustaining population evidenced from our valley survey program more than doubles. The Teotihuacan influences, whatever their cause, are unlikely to have been the result of the breakdown of the society. The lateness of these influences (Postclassic) at Chalchuapa needs further examination.

It is likewise important to know the precise nature of commonalities and relationships between Kaminaljuyu and Chalchuapa during the Formative. Ceramic data on the former (Wetherington 1969) are now analyzed and will be published in the near future. Apparently the earliest substantial occupation occurred during the Late Formative (Providencia-Sacatepequez, 500-100 B.C.), with only scattered representations from the Middle Formative (Las Charcas, 800?-500 B.C.). It is therefore reasonable that Chalchuapa has its most significant ties with the Pacific coast during its initial and early Formative occupation

(Sharer's Early and Middle Preclassic) and ties with the Kaminaljuyu area during the Terminal Formative (100 B.C.-A.D. 200?), but more precise comparisons are needed.

While Chalchuapa may have been a major production center for Usulután pottery, this pottery has a long occurrence at Kaminaljuyu representing two wares and several types. In the Middle Formative it comprises approximately 4% of the typed ceramics, increasing to almost 5% in the Late Formative and 15% in the Terminal Formative, declining to 5% in the Early Classic, and continuing at under 2% for the duration of the Classic. Its variety, ware relationships, and popularity strongly suggest local manufacture at Kaminaljuyu with distribution throughout the Guatemala Valley. Examination of about 40 Usulután sherds from Chalchuapa indicates similarities in stylistic treatment, form, slip, and paint, but differences in paste indicative of local manufacture there. Further comparisons of these and other ceramics should help to determine the nature of interregional relationship and contact.

by GORDON R. WILLEY

Cambridge, Mass., U.S.A. 10 x 73

Sharer's article takes its place alongside other important syntheses of the "southeastern Maya frontier" and in its up-to-date chronological information supersedes them. It is a skillful piece of work, much of it deriving from his own field researches, and we are in his debt for providing a framework for a number of interesting questions. In the short space allowed a commentator, I shall try to draw him out on some of these.

1. Does the Tok complex have to be derived from the north, from Chiapas-Guatemala? The "floor" date (1200 B.C.) assigned to it favors this, obviously, but how equivocal might this be? To be sure, we have nothing yet from Pacific Nicaragua and Costa Rica that would reverse the direction of a drift of a ceramic tradition—if not a migration of people—but, still, pottery-making seems to be older in northwestern South America than in Mesoamerica.

2. The eruption of Ilopango may have done in Chalchuapa, but did it really nip off the whole Late Preclassic cultural surge in southern highland and Pacific Mesoamerica? The extension of the argument to nonvulcanized Kaminaljuyu is tenuous. Cuicuilco was buried by lava flows at about the same time; but Teotihuacan, on the other side of the same Valley of Mexico, began a boom immediately afterwards that was to lead to its hegemony over much of Mesoamerica. When one looks at the culture history of Mesoamerica as a whole, one sees a chronological series of cultural climaxes or "supremacies." First, there is Early-to-Middle Preclassic Olmec, presumably generated out of its Gulf Coast centers. Next comes the Late Preclassic of the southern uplands and Pacific Coast: Izapa, Kaminaljuyu, and Chalchuapa. Monte Alban II may be a part of this. Thirdly, the center of "cultural gravity" shifts north to Teotihuacan. After this, as we know, there were at least a couple of others. Is the decline of each of these to be attributed to some peculiar catastrophic event? Or are we watching a larger, progressive process we don't yet understand?

3. I am much interested in the "closed society" and "open society" dichotomy, but also puzzled by it. Sharer sees Chalchuapa's Late Preclassic heyday as being the time of a "closed society," self-contained, registering little in the way of outside influences. Yet does one usually think of eras of cultural florescence as being associated with "closed societies"? Would the classification apply to San Lorenzo or La Venta at their peaks? To Classic Teotihuacan, with

its resident foreign "embassies" and its influences spread over most of Mesoamerica? I tend to associate cultural "zeniths" with an "open society"—open to both "input" and "output"; however, at the same time, I know that Maya Lowland Late Classic culture has many "closed" aspects. I think this dichotomous concept needs refinements, subdivisions, at least in its archaeological applications. "Open" and "closed" to what?

Reply

by R. J. SHARER

Philadelphia, Pa., U.S.A. 6 XII 73

I wish to thank my colleagues for their thoughtful and useful comments on my article. I was pleased that one purpose of the paper—to prompt further inquiry into the southeastern Maya area—has been answered with explicit suggestions as to how to refine and test some of the points I have raised. Since most of these comments refer to several major issues, I will follow a topical outline in my response rather than attempting to reply to each individual in turn.

I agree completely with Kelley on the question of the ceramic sequences summarized in figure 1. I assumed (naively, perhaps) that readers would interpret the ceramic complex boundaries in figure 1 as convenient and arbitrary abstractions. I should add that these represent a series of ceramic sequences only and not a cultural chronology ("phases").

In response to Krzyżaniak's comments, I would say that the general chronological terms ("Classic," etc.) used here are conventional referents for ease of comparison with other regions, and are not developmental stages.

Haviland is somewhat doubtful about postulating migration as the mechanism responsible for the initial settlement of agriculturalists at Chalchuapa. I agree that other explanations may be possible, including his suggestion of local population growth. However, migration remains the most plausible alternative given the available evidence, which is limited to artifactual ties to demonstrably earlier centers of sedentary occupation, the physiographic features of the region, and the lack of data for earlier (nonagricultural) populations at Chalchuapa. This explanation is offered, not because of any commitment to a "diffusionist-migration stance" (as Rucker mistakenly believes), but to point out a specific hypothesis that could be tested by future research. The lacustrine locus of early settlement at Chalchuapa also invites further investigation. Both Green and Hammond have offered specific and stimulating questions that could guide this kind of research. I should add that pollen samples already taken at the Laguna Cuzcachapa (as Cowgill recommends) may hold answers to some of these questions.

I would like to comment on the related issue of ultimate origins for pottery making (and sedentarism) raised by Willey. While I can see little evidence of the earlier Northwest South American ceramic tradition in the Tok pottery at Chalchuapa, I agree with Willey that such connections do exist on an earlier horizon (cf. Green and Lowe 1967). Interestingly enough, current research in the Salama Valley, Guatemala (Sedat and Sharer 1973), reveals Early Preclassic ceramics with affinities to both the Pacific Coast (Ocos and Cuadros Complexes) and South America.

The question of Olmec "presence" at Chalchuapa elicited a series of very useful comments. Grove's discussion, based upon his continuing research into this crucial area of Mesoamerican research, is especially welcome. I remain in general agreement with Grove as to the utility of the Olmec "trade-center model" in explaining the Middle

Preclassic sculpture and architecture at Chalchuapa. I also fully concur with Paddock on the lack of evidence for an Olmec "empire" and for the same reasons tend to disagree with Longyear's view of a "complete takeover" by the Olmec at Chalchuapa and in other regions. The differences in sculptural themes mentioned by Grove stand in contrast to the other similarities between Chalcatzingo and Chalchuapa. This distinction may be significant functionally; Chalchuapa can be treated as a trade outpost while Chalcatzingo could be viewed as a cult or occupation center. Obviously, the question of the function of Olmec "sites" outside the core area and of their variations in time and space needs further clarification.

As Kelley indicates, the use of pottery as a marker of cross-cultural ties, even in cases of political and military intrusion, is both complex and variable (cf. Tschopik 1950). I mentioned several general terminal Early Preclassic and Middle Preclassic ceramic attributes, as well as specific motifs (in both pottery and figurines) that may be Olmec in origin. The full significance of this ceramic evidence is that it is consistent with other data reflecting Olmec characteristics. It is unfortunate that space limitations prevent detailed illustrations of this evidence (as well as other data; cf. Wetherington's comments). I feel it would be unfair to criticize CURRENT ANTHROPOLOGY in this regard, since this journal has already expanded its format to accommodate an increasing number of archaeological reports and illustrations. I can assure both Grove and Hellmuth that these and other illustrative data will be presented in the forthcoming Chalchuapa site reports.

Cowgill's objection to the postulated Olmec-Chalchuapa trade in hematite and obsidian, based upon the existence of other sources nearer to the Olmec heartland, is not a convincing argument. I agree with Haviland that it may be invalid to project Western concepts of economic interaction into non-Western situations. Thus relative distance from basic resources may not be a significant variable in pre-Columbian trading systems. This is in fact indicated by the documentation of long-distance trade of Guatemalan obsidian into the Olmec area (Cobean et al. 1971). Also in response to Cowgill's disclaimer, Millon (1955) presents considerable evidence for ancient cultivation of cacao in the southeastern Maya area.

Wetherington's comments and data on the Kaminaljuyu ceramics are especially welcome. I have documented a series of typological and modal ceramic relationships between Kaminaljuyu and Chalchuapa that culminate during the Late Preclassic. My conclusions are based on comparative studies of Kaminaljuyu sherds from lots at present stored in the Guatemala National Museum. I hope Wetherington and I can exchange further specific data bearing upon this important issue. Both Wetherington and Haviland comment upon the example of trade in Usulután pottery at Chalchuapa. My interpretation does not exclude viewing this trade as a reflection of Late Preclassic prosperity at Chalchuapa (as Haviland suggests) as well as a "cause" of that prosperity. The fact that other centers, including Kaminaljuyu, produced Usulután pottery, as Wetherington mentions, does not negate my argument.

The statements in regard to vulcanism and the fate of Preclassic Highland Maya civilization have provoked interesting responses from Hellmuth, Wetherington, and Willey. Hellmuth alone seems to be uneasy about my citation of "an ancient paper by Shook and Proskouriakoff"; he fails to mention that I also cite Shook's more recent (1968) treatment of the same subject. The crucial point that escapes Hellmuth is that despite its "ancientness" the Shook-Proskouriakoff model of highland settlement-pattern shift remains valid. In fact, it has been supported by current work including the recent research at Kaminaljuyu (Michels

1969:12–13) and in the previously undocumented Salama Valley (Sedat and Sharer 1973). No direct connection between the eruption of Ilopango and events at Kaminaljuyu was made in the paper, so Hellmuth's statement that the "salvation of Kaminaljuyu" is "unexplained" appears irrelevant. That the Ilopango eruption might account for the cultural decline visible in the archaeological record at Chalchuapa is proposed as a testable hypothesis. As a corollary, I suggest that it might also, through resultant population disruption and movement, account for the long-recognized highland settlement-pattern shift in the interval of the Preclassic-Classical transition. This distinction may not have been made clear to Wetherington and Willey. It should be obvious that I do not attempt to "explain" Teotihuacan occupation of Kaminaljuyu as being due to the eruption of Ilopango, as Hellmuth indicates. I do suggest that the Teotihuacanos could have seized the opportunity to dominate Kaminaljuyu that was offered by the disruptions at this time. This possibility may be more likely in light of the recent work by Shook indicating the presence of a Teotihuacan base on the adjacent south coast. The proposal would be testable if one could document whether highland settlement disruption occurred before or after Teotihuacan occupation at Kaminaljuyu.

Hammond's additional data on the Protoclassic in the eastern Maya lowlands are extremely interesting. I am hopeful that further research can refine the circumstances of the Floral Park intrusion and its potential origin zones beyond those already postulated.

Hellmuth is in error in claiming that I view Maya calendrical and writing systems as originating in my "dig area." I do describe and illustrate (fig. 7) Monument 1, excavated from a secure Late Preclassic context and containing a glyphic inscription that one professional investigator has seen as evidence for "a southeastern origin for advanced hieroglyphic writing" (Graham 1971:135). I concur with Graham and others that various components of Maya calendrics and writing probably had separate origins and that Chalchuapa Monument 1 is evidence that the southeastern highlands comprise one area where certain components of this system developed.

The application of several interpretative models based upon ethnographic sources to the Chalchuapa data was endorsed by most commentators. I am intrigued by the parallel case of the Toluca Valley cited by Durbin. However, the open-closed social-system model was unclear to some (Green, Rucker, and Willey). Part of the confusion stems from an apparent failure to appreciate that Chalchuapa can be viewed as a "closed system" in the Late Preclassic while it maintained cultural unity with Kaminaljuyu. This position is not contradictory when one views both entities as a part of the same closed system. The relative qualities of this ethnographic model should also be made clear. No social system can be characterized as exclusively "open" or "closed." In many cases (including the archaeological situation at Chalchuapa), however, one can judge which aspect of the "open-closed" model predominates. Therefore I agree with Willey that Late Classic Maya Lowland culture (along with the other "cultural zeniths" he mentions) has both "open" and "closed" qualities. The question is which of these was dominant. This may be difficult to determine without additional testing of the applicability of this (and other) ethnographic models to archaeological contexts. This is one objective of research being conducted by Ruben Reina and myself in contemporary Highland Maya pottery-producing communities. It is expected that this research will eliminate some of the vague qualities in these concepts (such as those pointed out by Willey) and increase their usefulness for archaeological interpretation.

Both Rucker and Schoenwetter appear uncomfortable

with a "traditional" inductive archaeological approach, even when it is viewed as complementary to "contemporary archaeology." While I have attempted to make my theoretical position in this matter clear, I will elaborate further to help place these two comments in context. I feel a variety of methodological and theoretical approaches should and can be applied towards accomplishing the basic goals of archaeology (cf. Leone 1972 for a good review of these goals). In advocating such a position, I am not committed to either of the so-called schools within archaeology, the "traditional" (or culture-historical) or the "contemporary" (or culture-process) approach. A traditional inductive archaeological approach is valuable in researching previously undocumented regions such as the southeastern Maya periphery by providing an initial time-space framework. Furthermore, it may be the most feasible alternative in situations where most archaeological contexts are limited to undifferentiated construction fill. However, as I have tried to indicate, one should not be content with the results of a single approach, but rather, by proposing hypotheses based upon this work, provide the foundations for further research. Incidentally, I should point out to Schoenwetter that it was not the intent of this paper to proceed into the next stage of the research by proposing the means for either testing or judging the validity of the proposed hypotheses. Involvement in this stage is proceeding through the work of several of my former students, as well as my own investigations.

It is unfortunate that both Rucker and Schoenwetter fall into a pattern of rather doctrinaire rhetoric instead of documenting their positions. For instance, Rucker criticizes the paper as being "rife with diffusionist and migration hypothesis." Furthermore, he asserts that it "indulges in the all-too-typical Mayanist fascination with correlating archaeologically defined cultures with linguistic groupings." We are told that such procedures must "tax the patience of all readers who learned long ago that there exists no necessary relationship between culture . . . and language." Aside from the fact that we are given no evidence to support these assertions, Rucker appears to miss the point that the degree of unity in the archaeological evidence that is interpreted as indicating linguistic unity between Chalchuapa and Kaminaljuyu is supported by the independent linguistic and ethnohistorical evidence provided by Feldman. I think it is more productive to derive and test specific hypotheses such as this against further independent evidence than to dismiss or accept them out of hand.

Schoenwetter's critique seems to revolve around two related and important issues: how archaeologists judge the validity of or "prove" historical reconstructions, and whether data used to derive such reconstructions can also be applied to "processual analysis." I would agree that the question as to the derivation and validity of historical reconstructions is crucial. Schoenwetter's statement that I have failed to "prove" my assertions is rather surprising. It would seem obvious that both the subject matter and the nature of the evidence militate against scientific proof in archaeology. On the other hand, processual archaeology has no monopoly upon procedures for testing the adequacy of archaeological theories or models. The ethnographic models presented in the paper were tested for adequacy according to the usual anthropological criteria (cf. Zubrow 1973) and found to be the most suitable alternatives. There are, in fact, several approaches for developing more sophisticated models that can be applied to archaeological reconstructions. Promising studies seeking correlations between technology and cultural processes such as trade, migration, community organization, and the like within

ethnographic contexts are being pursued by several archaeologists. The study by Reina and myself mentioned previously is an attempt to test archaeological reconstructions. Although the study is incomplete at this writing, there are indications that several "traditional" archaeological constructs such as pottery types and form and style categories can be correlated with specific cultural variables and processes in the Maya area.

Schoenwetter's second point is embodied in phrases such as "there is excellent reason in terms of both archaeological theory and scientific methodology to doubt the appropriateness of the [Chalchuapa] data format for deriving the interpretations . . . generated." Despite the impressive weight mustered by this statement, we are given no specific documentation for it. Schoenwetter does present his "suspicion that more appropriate data might be selected," but he obviously does not appreciate the archaeological situation we are dealing with, and again he offers no concrete suggestions. Instead, he contests the application of the same data used for the construction of time-space grids to provide the basis for processual reconstruction and hypothesis. Once again, no justification is given for this position. One is left with the impression that processual hypotheses can only be derived from processual data using (presumably) the "principles of processual analysis" of which, according to Schoenwetter, I lack an awareness. This line of reasoning is spurious, since there is no discrete definition of "processual" in any of these contexts. The fact that the distinction between "processual" and "nonprocessual" archaeology rests in the mind and eye of the beholder is amply demonstrated by comparing Rucker's and Schoenwetter's perception of the paper with that of Kessler (as well as Suchý and Hübschmannová).

Perpetuating the view of "traditional archaeology" and "contemporary archaeology" as two mutually exclusive categories is nonproductive and may even be detrimental to the long-range development of archaeology. It is somewhat ironic that the two commentators most immersed in the rhetoric of "new archaeology" find it necessary to impose and justify such a simplistic typology upon the article. The goals of archaeology can best be realized by minimizing artificial categories and labels that divide archaeologists (cf. Flannery 1973) and by combining the approaches in both method and theory that are appropriate for each archaeological situation.

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