

PRE-CLASSIC CULTURES IN MESOAMERICA:
A COMPARATIVE SURVEY

Michael D. Coe

INTRODUCTION

The definition of an early stage of pottery-using, food-producing peoples prior to the great Classic civilizations of Mesoamerica is hardly new; in fact, it was 53 years ago that Zelia Nuttall recognized the antiquity of a certain figurine type collected underneath the Pedregal (Nuttall, 1926: 245-246; Vaillant, 1935a:289). Other investigations by Plancarte, Gamio and others in the Valley of Mexico produced similar material under similar conditions of antiquity. It was not until the stratigraphic work of Gamio, Boas, Hay and Tozzer in the years just before the First World War that these remains, to which Tozzer gave the name "archaic", were definitely proved to be earlier than Aztec and even earlier than Teotihuacan. It was not long afterwards that similar material was discovered in the great lava-covered pyramid of Cuicuilco (Vaillant, 1938:289-291).

What was the significance of these finds? Spinden's famous "Archaic" theory attempted to account for the resemblance between the Valley of Mexico figurines and small, hand-modeled figurines found in other areas of Mesoamerica in stratigraphically early contexts, and even in northern South America. The distribution of "Archaic" figurines, he postulated, represented a diffusion from the Valley of Mexico, the center of Nahuatl culture, where it was assumed maize cultivation had originated; in other words, maize-growing cultures from Northern Mexico to Brazil had a single point of origin.

Spinden's "Archaic" hypothesis, which certainly was conceived with faulty and incomplete data on hand, was attacked with vehemence by the generation of archaeologists appearing after the First World War. Lothrop and Vaillant were in the vanguard of the assault on the monolithic concept of cultural origins in Mesoamerica; their weapon was the equally celebrated "Q" complex. This latter was a formulation arising from their observation that the pre-Classic pottery of the Maya area and the lowlands of the Gulf Coast was essentially different from that of the Valley of Mexico "Archaic". In 1928 they dubbed these differing ceramic traits the "Q" complex and postulated this as an "influence" on the early stages of Maya culture with perhaps a southern origin. As Vaillant (1938:293) said, this "changed the status of the 'archaic culture' from a conclusion to a problem." In 1932 Vaillant stated, "...the idea of a homogeneous cultural background like the 'Archaic' culture which is supposed to have extended from Zacatecas to Peru is a gross misapprehension in the history of man anterior to the rise of the great New World civilizations." (Merwin and Vaillant, 1932:96). The archaeologists of this generation were particularists and sceptics rather than integrators, and were more interested in showing the differences between the pre-Classic groups.

The climate of the next decade was also unlikely to favor rash generalizations about the nature of these cultures in relation to the civilizations of Nuclear America.

With this particularism, however, went a determination to investigate the problem through actual field excavation, and the excavations carried out by Vaillant in the Valley of Mexico from 1928 to 1933 have provided the finest series of sequences which we have to date for this area or any other. Vaillant showed a long development from the earliest Zacatenco and Arbolillo materials through the late Cuicuilco-Ticomán culture, and likewise suggested the relationship of the latest pre-Classic material with the earliest Teotihuacán manifestations. However, Vaillant's attempt to date the pre-Classic suffered from his equating the Toltec with Classic Teotihuacán. This equation moved the pre-Classic up to a temporal position, that radiocarbon dating has demonstrated is much too late - in some cases by as much as a millenium. Other important excavations were carried out by the Ricketsons at Uaxactun, where the pre-Classic Maya sequence was first defined (Ricketson and Ricketson, 1937), by Lothrop at Atitlán in the Guatemalan highlands (Lothrop, 1933), by Popenoe at Playa de los Muertos on the Uluá, and so forth.

The important problem of the development of high civilization in Mesoamerica had still not been solved, however. The Mayanists tended to resist all attempts to locate the stealing of the Promethean fire in any but their own area. However, important excavations carried out by Caso and his associates at Monte Alban showed a late pre-Classic civilization with hieroglyphic writing, monuments with dates on them, and a developed architecture. A development of even more significance was the survey and excavation of sites in the so-called "Olmec" area by Stirling and others, which not only showed an evidently pre-Classic culture of a hitherto unknown development and complexity, but also produced a monument which, if read in the Maya Long Count, bore the earliest date yet known in Mesoamerica. The Mayanists, led by Thompson, not only rejected this date, but all others of the 7th cycle which would have preceded those of the Peten Maya, attempting to show the late Mexican associations of the accompanying art style (Thompson, 1941). However, many prominent Mexican archaeologists like Caso and Covarrubias leaned towards the acceptance of the priority of Olmec in relation to Maya civilization. Time has tended to bear the latter out.

A revival of interest in relations between the early cultures of Nuclear America followed the discovery of the site of Tlatilco in the Valley of Mexico, since striking resemblances being found between the material of that culture and others to the south, including the Chavin horizon of Peru (Porter, 1953). Something approaching Spinden's "Archaic Hypothesis" has recently been put forward by Willey, looking towards inter-areal historical diffusion on a pre-Classic level (Willey, 1955). Thus, a return to the historical integrational interests of the pre-World War I archaeologists seems to be under way.

Another and more acute problem has presented itself in recent years. With the excavation of the spectacular pre-Classic (Miraflores) mounds at Kaminaljuyu in the Guatemalan Highlands, one more piece of evidence has been added to support the already plausible view that the so-called "Archaic" or "Formative" in later times was misnamed, and that most, if not all, the traits considered peculiar to the Classic were found to have reached a high development in the pre-Classic. The evidence of Monte Alban, La Venta, Uaxactun, Cuicuilco, and Teotihuacan itself corroborates this view.

It must now be determined what kind of a developmental stage we are dealing with. Are we justified in lumping together the early and later parts of this so-called "pre-Classic" development? Wauchope's excellent 1950 paper was really the first to address itself to this problem. He postulated three stages for the pre-Classic: "Village Formative", "Urban Formative", and "Proto-Classic". These are functional-developmental terms which imply more than mere sequence - they mean that an early group of archaeological assemblages is significantly contrasted with a later group, and that these taken together are really something different from that which we call "Classic". If this is so, it tells us something very important about the development of the societies which these assemblages represent.

This paper will in large part be concerned with this problem, which is more than semantic, for the reasons touched upon above. Kidder, whose knowledge of the pre-Classic of the Guatemalan highlands is first-hand, has phrased the question thus:

The more I mull over the matter, the more strongly am I struck by what was evidently accomplished in Mesoamerica in the way of culture building by the people whom, somewhat condescendingly, we have been calling Archaic. We have been over-impressed, I think, by the better-preserved and more spectacular remains of their successors. It is possible, indeed, that we may have given credit to the latter for variously actually Archaic objects and structures merely because of their fine workmanship and their great size. For a long time I could not bring myself to believe that the largest of all the Kaminaljuyu mounds had been built during the Miraflores phase. When one comes to think of it one realizes that the Maya certainly, and other groups probably, had already taken most fundamental steps in pre-Classic times and that what came after was the rich blossoming of an already fully formed Archaic bud.

The foregoing suggests that our present nomenclature fails to reflect what actually happened in Mesoamerica.... (A.V. Kidder in Smith, 1950:7).

Many terms have been proposed for the "pre-Classic" cultures of the area: "Archaic", "Middle Cultures", "Formative", and "Developmental". "Pre-Classic" has recently obtained wide usage, and for the sake of convenience it will be used. This designation has the advantage of not implying a unitary stage, or even several stages, although as will be seen,

the term has little meaning when held up to the archaeological facts. The proposition we are testing is as follows: does this "Pre-Classic" or "Formative" have any meaning as a single stage, contrasted with preceding or subsequent stages? The clearest definition of this stage has been made by Willey and Phillips (1955:765) and will be the concept tested:

The New World Formative stage is defined by the presence of maize and/or manioc agriculture and by the successful socio-economic integration of such an agriculture into well-established sedentary village life.

We are going to contrast the cultures included in a stage so defined with those of the "Classic" stage of Willey and Phillips (1955:778-9).

The American Classic stage is characterized by superlative performance in many lines of cultural endeavor. It sees not only the mastery but the conjunction of technologies and arts in single cultures and societies. The various and scattered inventions and innovations of the Formative are now drawn together into rich, diverse, and yet unified patterns.

Among the criteria given by Willey and Phillips for the Classic are great artistic achievements, monumental architecture, specialized craft products in profusion, strong class distinctions, the "perfection of writing and astronomy", and active trade in ceremonial and luxury goods.

The concern of this paper, then, will be greater for traits with functional-developmental significance, such as architecture, economy, and religious-intellectual life, than for ceramics. However, in the problem of relative and absolute dating, potsherds are all-important and will be considered in a section on that subject. This will in large part rely on the papers of Wauchope (1950) and Sorenson (1955).

ABSOLUTE AND RELATIVE CHRONOLOGY

In the absence of dendrochronology, radiocarbon dating provides the only possibility of achieving an absolute chronological scale for the pre-Classic of Mesoamerica. Despite Sorenson's statement that C_{14} dates are of value only as "trend indicators" (Sorenson, 1955:59), most of those so far published, when weighted as to reliability of sampling, provide a picture that is both internally consistent and consistent with the archaeology. Dates that are stratigraphically impossible turn out to be the result, when re-examined, of faulty sampling; the converse is true of those which "fit". C_{14} dates express probability.

The earliest radiocarbon dates available for the pre-Classic are 1546 B.C. \pm 800 for Las Charcas, and 1359 B.C. \pm 250 for Early Zacatenco. These figures would indicate that by 1500 B.C. there were fully agricultural societies with developed pottery techniques in both the Guatemala Valley and the Valley of Mexico. The Providencia phase of the Guatemala Highland sequence is dated at 1196 B.C. \pm 300. Miraflores, the most

spectacular phase in the Kaminaljuyu sequence, with the E-III-3 burial temple as its best known representative, has two conflicting dates: 1188 B.C. \pm 240, and 536 B.C. \pm 300. Since Miraflores stratigraphically follows Providencia, something is wrong with the first date. Mr. Edwin Shook informs me that the charcoal sample for that date was taken from the fill of E-III-3, and actually may represent Providencia refuse scraped up when that structure was erected. Another late pre-Classic culture of some complexity falls around this sixth century date: Monte Alban I (Monte Negro), with a weighted average of 666 B.C. \pm 160. Two dates are available for the Cuicuilco-Ticomán phase in the Valley of Mexico: 614 B.C. \pm 200 for the Tepalcate "Late Archaic", and 471 B.C. \pm 250 for the Cuicuilco temple itself. (Kaminaljuyu dates from E.M. Shook; others from Johnson, 1950).

As an indication that the chronology determined by radiocarbon dating for the pre-Classic is not unrelated to stratigraphy, one might compare this dating with Vaillant's estimate (1938: 529) for the duration of the Valley of Mexico pre-Classic. By a comparison of rates of deposition of occupational refuse at Pecos with the depth of deposits in Valley sites, he arrived at a duration of 787 years for Early Zacatenco and Copilco-Zacatenco, and 286 years for Cuicuilco-Ticomán. This is extraordinarily close to the radiocarbon dates available for these periods (see chart 1); it would be remarked, however, that Vaillant thought this long span to be "excessive".

Where does the pre-Classic end? Monte Alban IIa, which appears to be contemporary with the fully polychrome, vault-using Holmul I, has a C₁₄ date of 273 B.C. \pm 145. Monte Alban IIIa, well into the Early Classic, is radio-carbon dated as 299 A.D. \pm 185. The upper limit fluctuates depending on one's definition of "pre-Classic". This problem will be treated later.

Cross-dating is a very complex subject, the nature of which depends in large measure on the traits used; certainly presence or absence of figurines will not do, for instance, because with several exceptions these are found throughout the pre-Classic. I have in general relied on the papers of Wauchope (1950) and Sorenson (1955) in the preparation of Chart 1. I differ from the latter's late placement of Mamom and Chicanel, because of my belief that both these two poorly described phases are much longer and more complex than reports have so far indicated. One considerable obstacle has been Drucker's insistence (1952:149) that Middle Tres Zapotes - La Venta is of Tzakol and therefore Early Classic date. In his reasoning, Upper Tres Zapotes looks like "Teotihuacan IV"; Early Tres Zapotes resembles both Mamom and Chicanel; therefore, Middle Tres Zapotes (which I have difficulty distinguishing from Early) equates with Tzakol, because there is nowhere else to place it. This shaky reasoning has been rejected by Sorenson (1955:52-3) on the grounds that all the ceramic ties of this phase are with sites like Tlatilco in the Valley of Mexico, which are clearly of Middle Zacatenco date. I think the evidence of Stela C at Tres Zapotes shows that the Olmec culture persisted until the Holmul I horizon, but certainly not much beyond that.

ARCHAEOLOGICAL AREAS OF THE PRE-CLASSIC

Our knowledge of the distribution and development of pre-Classic cultures varies sharply from area to area, depending on the amount and quality of the work done. There seems to be no region within the great area delimited as Mesoamerica in which pre-Classic remains have not been found, with the possible exception of the northeastern Yucatan peninsula (this latter, with more extensive surveying, will probably also reveal an early occupation). Solely on the basis of a subjective evaluation of pre-Classic material from Mesoamerica, I have divided the area for the purpose of exposition into six sub-areas, which seem to have some internal coherence: 1) Valley of Mexico, 2) Western Mexican Plateau, 3) Oaxaca, 4) Gulf Coast, 5) Lowland Maya, 6) Southeastern Highlands.

Valley of Mexico: The researches of Vaillant have revealed a long sequence in this area. The earliest materials known come from the bottom layers of village debris at the sites of Zacatenco and El Arbolillo I material is predominantly monochrome (about 90 per cent) and rather simple in shape, emphasizing ollas and "composite silhouette" bowls with basal angles. There is some elementary painted ware, consisting of a plain bay-red ware covered with white chevronned designs and another slipped-white, sometimes with rudimentary red designs on it. Associated with this were many small "Archaic" figurines, predominantly female, but not found in burials. Interments at El Arbolillo were at first flexed, but later extended in slab tombs; at Early Zacatenco burials were extended in shallow graves, the body evidently wrapped in bark or bast. The economy was based on maize agriculture and hunting. Troughed, quadrangular, footed metates with manos are known, and bones of birds and deer are abundant; the dog was kept by these people (Vaillant 1930: 38-9). Laurel-leaf projectile points of obsidian are typical for this early period, stemmed and then tanged points appearing later in the sequence (Vaillant, 1930:36-7; 1935: 240-244). The typical long, thin Mesoamerican obsidian blade is already common, but there is an absence of heavier cutting tools. Jade, probably obtained by trade, was being utilized to make earplugs (Vaillant, 1935a: 244-245).

The next period in the Valley is the Copilco-Zacatenco, with Middle Zacatenco as the type site. There was in general a continuation of earlier patterns, but with some striking divergences. The same village sites are occupied, but as the lake was rising, the people were forced to move back from the shore. Pottery types persist from the Early period, including the bay utility wares. However, red-on-white, died out toward the end of Copilco-Zacatenco. Figurine types in general change only slightly, and a new type (Hay-Vaillant "A") is introduced, probably from the south. Burials are either flexed or extended, but always with an east-west orientation (Vaillant, 1930:52). The extraordinary site of Tlatilco (Porter, 1953) dates from this period, but differs from the general Valley pattern in many ways. The site itself appears to be a burial ground, but some architecture was present, since steps and terraces can be seen in the profiles of fresh cuts, and much adobe plaster was found (Porter, 1953:34). Among the pottery types found in this site

are stirrup-spout vessels, long-necked gadrooned bottles, spouted trays, and tripod vessels with long, solid supports; decorative techniques include rocker stamping, red-zoning, and excising (Porter, 1953:24-43). Among the figurines, the most common are beautiful examples of Type D, but pure Olmec types appear in both clay and in stone. Some of these pottery traits have their closest parallels in Peru, as Porter (1953:74-79) shows, specifically with Chavin. However, another site in the area, Gualupita of Morelos, also shows many specific resemblances to both Tlatilco and La Venta. Tlatilco and Gualupita I represent an apparently intrusive tradition found on the Gulf Coast, in certain areas of Guatemala, and in the Ulua Valley, often in association with certain markedly Olmec traits. This is a complex period, and shows a profound change from the preceding "Village Formative" pattern.

The Cuicuilco-Ticomán period does not appear to be a local development from Copilco-Zacatenco, but an adaptation of an outside culture to Valley conditions. It is characterized by large ceremonial structures; the famous round temple at Cuicuilco has parallels in Puebla and in Morelos. Particularly characteristic of this period in the Valley and elsewhere is the great increase in the number of stone celts - possibly a reflection of the extension of agriculture into heavily forested areas. Manos and metates are still frequent. Metates now have three stubby quadrangular legs instead of conical feet (Vaillant, 1931:304-5). Ovens were also in use at Ticomán (Vaillant, 1931:311). The presence of "foreign" looking architecture, much jade (especially in celt form), many new figurine types, and a wider range of cultural contacts in the Mexican Highlands led Vaillant (1935a:119-120) to postulate two movements of people into the Valley at this time: one from the south westward toward the Cuicuilco area, and another from the east centering on Ticomán. The reason why these went into, instead of out of, the Valley he cannot explain. Recent research in pollen profiles (Sears, 1941) has shown a gradual drying up of the area in late "pre-Classic" times, raising the possibility that incursions of other Highland peoples into the Valley may have been the result of a desire to practice agriculture in a better watered area.

Western Mexican Plateau: Very little is known about this region, which should be one of the most important. Many of the specific trait complexes shared between early Peru and Mesoamerica are found in West Mexico as a strong tradition.

At El Opeño in Michoacán, 5 tombs of a type duplicating the Maya "chultuns" were excavated by Noguera in 1938 (Noguera, 1946) and yielded material closely related to Copilco-Zacatenco in the Valley of Mexico. Among the finds were figurines of the C and D types, and a small green stone figure showing a crude Olmec countenance.

Oaxaca: The researches of Caso and his associates at Monte Alban have never been fully published. However, it is apparent that several well-developed structures and the famous "Danzantes" belong in large part to the earliest part of the Monte Alban I sequence (Caso, 1938:5-14), and

that there was an early flowering of writing and the calendar. The presentation of the ceramic sequence has so far been very unsatisfactory, and it is difficult to form a true picture of what the types were. Among those assigned to this period are incensarios with snarling Olmec-style mouths, bottle forms, bowls with everted rims and hollow, pointed legs (these look very much like Cuicuilco-Ticomán), and bowls with basal projections (not flanges). As Sorenson (1955:44-47) shows, connections are closest with Lower and Middle Tres Zapotes and Miraflores, and extremely close with Tlatilco (22 shared traits). This would agree with the Valley of Mexico evidence that there were several sites of Copilco-Zacatenco date which contain a definite increment of "Olmec" and which relates more closely to the Gulf Coast and to the southern cultures rather than to the Valley cultures themselves.

Monte Alban I, however, probably had a long time persistence (which would explain the Cuicuilco-Ticomán resemblances); Monte Alban II, in fact, equates with Holmul I, and shares many so-called "Q Complex" features with the latter, including stands, spouts, and greatly swollen legs.

Gulf Coast: The archaeological sequence on the Panuco River near Tampico, Vera Cruz, has been well established by Ekholm (1944) and MacNeish (1954). The important problem of when the Maya-speaking Huastecs arrived in this area and of the archaeological evidence for a particular date is near solution. Ekholm defined two evidently "pre-Classic" periods, Periods I and II, below which MacNeish has placed three others: Pavon (the earliest), Ponce, and Aguilar. Ekholm's Period I he calls Chila, and Period II is now El Prisco-Tancol. The Pavon period is characterized by well-made but unsophisticated pottery: ollas with small mouths, some of which may have been amphora-shaped (MacNeish, 1954:612), (these may represent a parallel to the Early Formative of Yucatan); ollas with out-curved rims and fat, flat-bottomed bodies; and flat-bottomed bowls. Generally, this is a monochrome complex of types with no appendages such as spouts, and undecorated except for very curious occasional overlapping cylindrical punctations. There seem to be no connections with any other assemblages in Mesoamerica. Obsidian is absent while flint chips are common; this may be a function of the very early position of the complex. In the next phase, Ponce, connections appear to be close with the Mamom of the Peten, with certain of the Pavon types diminishing and a black monochrome appearing. Decorative techniques are of the Mamom type, emphasizing incision. Type A figurines, which also appear in the Peten, have been found. Obsidian is now in use, and metates appear to have been legless. As in Mamom, there is a heavy dependence on fresh-water mollusks (MacNeish, 1954:613). Aguilar ushers in new pottery types, some with tripod nubbin feet, and figurine types change; metates continue to be legless. Chila period pottery emphasizes the composite silhouette bowl and the footed bowl. Figurine types continue from Aguilar and have little resemblance to others from Mesoamerica. There is some use of paint on pottery, but this is not a common trait. The El Prisco period includes El Prisco itself; in some respects a continuation of Aguilar, but with more variety and clear relationships to the Chicanel of the Peten and the Tancol complex, which represents an alien ceramic tradition (MacNeish, 1954:616).

To the south and west, the spectacular discoveries of Olmec remains in the Gulf Coast area have spurred several excavations. The sequence of cultures depends on the excavations of Tres Zapotes, in Vera Cruz. This site has yielded a 7th Cycle monument in Olmec style. According to Drucker (1943a), there are three periods at the site; only the first two concern us, as the last, with its mold-made figurines and polychrome ware, is surely Classic. Lower Tres Zapotes material, as described by Drucker (1943a: 118-120), looks like an extension of Mamom and probably of early Chicanel: black and reddish brown monochrome wares, flaring-sided bowls with wide, everted rims, rarity of feet, unslipped "raked" ollas, Mamom-type figurines and whistles, unbridged spouts, and so forth. Middle Tres Zapotes is said to be a continuation of Lower (Drucker, 1943a:120), with the addition of "polychrome ware". In spite of Drucker's claim that Middle Tres Zapotes is coeval with Tzakol, a footnote by R.E. Smith (Drucker, 1943a:120) suggests that there are no resemblances between the two. The famous site of La Venta, on an island in a swamp in Tabasco, is supposed to be of Middle Tres Zapotes date and affiliation. The rich burials, the classic Olmec jade work, the giant heads, the jaguar mask pavements, and other achievements make this one of the most highly-developed early civilizations in the New World. Little wonder that many find it difficult to place in the "pre-Classic". The refuse deposit at La Venta averages about 1.3 meters in thickness (Drucker, 1952:20-23) and implies a fairly long occupation. There is evidence that the Olmec culture may have lasted into a period equating with Holmul I in the Peten. Stela C, at Tres Zapotes, according to radiocarbon dating and the Spinden correlation, would be coeval.

These early cultures of the Gulf Coast tie in ceramically with the Peten, in the Mamom and Chicanel periods. MacNeish (1954:625) feels that his evidence shows a relationship between Ponce of the Huasteca and Mamom of the Peten, making it likely that Maya was spoken on the Panuco in the time of the early cultures. In spite of MacNeish's statement to the contrary (1954), it seems probable that these relationships continued and extended across the whole Gulf Coast, as the Middle Tres Zapotes and the Chila material shows. There is some reason to believe that the whole lowland area from Yucatan to the Huasteca may have been Maya-speaking in pre-Classic times, including the "Olmec" of La Venta and Middle Tres Zapotes. I feel that this is not an untenable position; the development of writing and the calendar system may have been an achievement of Maya-speakers after all. The Maya hieroglyphic system seems to be adapted to the Lowland Maya language groups - perhaps the whole true hieroglyphic system of Mesoamerica, including that of Monte Alban Ia, was originally constructed on the basis of the Maya language. Later incursions of foreign peoples into the Gulf Coast region may have possibly obliterated the Maya-speaking "Olmecs" and separated the Huastec from their cousins to the east.

Lowland Maya Area: The sequence in the Peten, at the site of Uaxactun, has become the yard-stick for the chronological measurement of "pre-Classic" phases in many areas of Mesoamerica. This is in some respects unfortunate, because the two early phases here, Mamom and Chicanel, are too broad and need further breaking down. This applies especially to Chicanel. Mamom

is the earliest ceramic phase in the area. It may be one of the earliest in Mesoamerica; there are handmade figurines of the A type, monochrome pottery of the variety we have already described for the Ponce period in the Huasteca, absence of footed vessels, and small bird-shaped whistles. In adjacent British Honduras, Mamom levels have also been recognized; everywhere these are associated with an oily black refuse soil in which the discarded shells of fresh-water molluscs are plentiful. (Ricketson and Ricketson, 1937). The Chicanel period is stratigraphically well marked in the Peten, but as it now stands it appears to have an unusually long persistence without change. This impression is probably due to the lack of work done on this phase. However, Chicanel ceramics are characterized by well-made monochrome black and red wares with thick, glossy slips, everted, often grooved lips, and basal angles; feet are absent; a certain amount of resist-painting related to the Usulután of the Guatemala Highland-El Salvador area has been found. Characteristic of the period is the total absence of the handmade-figurine cult and the high development of architecture toward the end of Chicanel. Traits characteristic of the "Q complex" (swollen tetrapod legs, pot stands, high annular bases, bridged spouts, etc.) first appear in the Peten during the fully polychrome Holmul I (Merwin and Vaillant, 1932:65).

Yucatan itself, since 1940, has revealed a considerable "pre-Classic" occupation (Brainerd, 1951). Brainerd has divided the sequence into three periods: Early, Middle and Late Formative. The Early material consists of a number of stripe-burnished brown-ware water jars that can only be described as amphoras which were found in a level underlying Late Formative material at the Mani cenote. This brown-ware seems to be unrelated to any other Mesoamerican ware known (with the possible exception of that of the Pavon period of the Huasteca) (see above). Middle Formative is a phase presumably correlated with Mamom. The pottery is uniformly monochrome, usually red, with a variety of round-sided vessels and flare-sided, legless flat-bottom bowls with everted lips. Late Formative ceramics are in many ways Chicanel, there being few differences between the two.

At Playa de los Muertos, on the Ulua River of western Honduras, the excavations of Dorothy Popenoe have brought to light a considerable number of "pre-Classic" burials (1934). Excavations in the Ulua-Yojoa area were also undertaken by Strong, Kidder, and Paul (1938). The stratigraphic relations of these early cultures are still obscure. Ulua Bichrome pottery includes Usulután, so it presumably occurs in the later part of the pre-Classic. A so-called "Yojoa monochrome" pottery horizon consists of a collection of very worn sherds underlying a Classic polychrome horizon. The Playa de los Muertos material itself, represents a rich group of burial vessels, all monochrome, including stirrup-spouted forms, long-necked jars, vessels with unbridged spouts, flat-bottomed bowls with thickened, everted rims, and many fine figurines of a developed A type. Its closest relations, as Sorenson (1955:44-7) shows, are with Tlatilco (26 specific traits shared). Playa de los Muertos may be coeval with later Middle Zacatenco; the Ulua Bichrome horizon is surely later.

The nearby Maya site of Copan (Longyear, 1952) has a pre-Classic occupation, underlying the great Classic Acropolis. Shallow nubbin-footed Usulután vessels are emphasized, indicating that this is a late pre-Classic manifestation. Earlier material, duplicating bottle forms and decorative techniques found at Tlatilco and to a certain extent at Playa de los Muertos, comes from an interconnecting series of caves in the Copan area (Gordon, 1898).

The Lowland Maya area, then, seems to have two traditions, one centered in the Peten and Yucatan and closely related to the Gulf Coast cultures, the other centered in western Honduras, related in its earlier part to Tlatilco-like manifestations and in its later phase to the Guatemalan Highland-El Salvador area.

Southeastern Highlands: The site of Kaminaljuyu has provided a long and finely graded sequence of pre-Classic cultures supported by evidence as convincing as that of the Valley of Mexico. The material has been summarized by Shook (1951); I shall use the phase names given by him, except for "Verbena" which now is called "Miraflores". The earliest phase yet found, Las Charcas, is characterized by a beautiful ceramic art, including fine red on white bowls (one with a monkey design), shoe-shaped vessels, spouted vessels, and comales (these are absent in early levels in the Valley of Mexico); metates and manos are also present; and three-pronged incensarios, generalized Type A figurines, and the typical Highland pre-Classic "mushroom stones" testify to an early development of ceremonialism. Maize agriculture was pursued, as shown by the occurrence of corn husks and cobs. Sacatepequez has as its diagnostic ware a fine white pottery decorated with purple paint. The Providencia phase saw the beginning of large mound building. Usulután and coarse-incised black-brown wares were the major ceramic innovations; small nubbin-vessel feet appear, but are rare. The most spectacular period during the entire history of the site was Miraflores, during which the great E-III-3 mound with its rich log tomb was constructed. Pottery types include fine incised black-brown and fine red wares, everted grooved-rim bowls and shallow dishes with gutter spouts. Vessels were made from several types of stone, and "mushroom stones" were characteristic. The Arenal phase is a continuation in many respects of Miraflores. Usulután ware is found, as are a few bowls with hollow mammiform feet (but not the greatly swollen feet of the Early Classic of the Peten). The Santa Clara phase, which suggests degeneration of the preceding pattern (Shook, 1951:99), is the final pre-Classic manifestation.

Sites closely related to the Miraflores phase and perhaps to other points in the Kaminaljuyu sequence have been found in many other areas of the Guatemalan Highlands and Pacific slope of Guatemala and Chiapas. El Salvador seems to be tied closer to this area than to any other. The excavations by Lothrop at Cerro Zapote, El Salvador, revealed a pre-Classic culture underlying a great volcanic deposit (Lothrop, 1927). The published pre-Classic material from this area is generally later pre-Classic, and Usulután ware is almost diagnostic for these sites. Relations are evidently close with Miraflores and Arenal, but not with western Honduras.

The cultural separation of the important Southeastern Highland area from the Valley of Mexico is marked in all periods of the pre-Classic; only isolated traits seem to have been diffused between the two areas. In fact, it was not until the Early Classic that close relations were established between them, and this seems to have been the result of an invasion (Kidder et al, 1946). The closest resemblances between this area and the Valley are with sites like Tlatilco (Sorenson [1955:46] finds 22 shared traits) which really seem to represent intrusions from the lowland area. The Southeastern Highlands are connected to some extent with the Lowland Maya area and the pre-Classic cultures of the Gulf Coast. This implies that the Valley of Mexico was in large part isolated until the Early Classic, when Teotihuacan-connected peoples swept over most of Mesoamerica.

Our brief survey of pre-Classic cultures has indicated that certain broad cultural provinces can be defined. Even on the earliest level (Early Zacatenco-Pavon-Early Yucatan Formative-Mamom-Las Charcas), these areas are already highly evolved in material culture, yet divergent and seemingly isolated. Nevertheless there are certain specific resemblances among these cultures which are more than fortuitous. One of these is the chultun trait. Chultuns are underground pits or chambers having the shape of bottles, or else bell-shaped or half-bell form. Their use is unknown, but they seem to be widely distributed in Mesoamerica on a very early level. They are known for Las Charcas at Kaminaljuyu, where there are both rectangular and bottle-shaped varieties sunk through the surface layer of brown clay into the underlying volcanic ash (Shook, 1951:96). At Uaxactun there is reason to believe that chultuns are as early as Mamom (Ricketson, 1937:390). Although Ricketson presents evidence that by Chicanel times certain of them were used as sweat baths, A.L. Smith (1950:84-5) believes that their location away from large building complexes in domestic areas shows that they were originally excavations for marl with which to construct house platforms; later, large-scale masonry construction demanded quarrying. Peten chultuns and those of the Guatemalan Highlands were often used as burial chambers, and at El Opeño (Noguera, 1946) chultuns identical to those of the Peten, with stepped entrance passages, were tombs. This could have been a trait diffused both to the lowlands and to the Western Mexican Plateau from the Southeastern Highlands. The trait had a long persistence in the pre-Classic of these areas.

Another trait which can be used to test cultural areas delimited on the basis of ceramics is the widespread figurine cult. Figurines are found with burials only in Tlatilco, Gualapita, and in Playa de los Muertos (Porter, 1953:66), but are found throughout the refuse of all pre-Classic phases except the following, where they are rare or absent:

Yucatan Lower Formative
Sacatepequez
Balam (of Zacualpa)
Chicanel
San Jose I
Copan Formative
Chila (Period I, Huasteca)

Sejourne (1952), noting that they are usually found outside burials, believes that these female figurines represent magical personifications of the spirits of the crops. Only one out of ten figurines from Tlatilco is male. The Olmec area, for some reason, reveals many male figures.

The distribution of the figurine types set up under the Hay-Vaillant classification is rather difficult to determine as the typology outside the Valley of Mexico has not been standardized. A complete survey of such a distribution would be of the greatest interest; tentatively, one may summarize the available information as follows:

Type A:

Lower Tres Zapotes, Middle Tres Zapotes, Cerro de las Mesas Lower I, Cerro Zapote, Tlatilco, Miraflores, Monte Alban I, Mamom, Playa de los Muertos, Gualupita I, Middle Zacatenco, Las Charcas, Ponce.

Comment:

- (1) it has a Mesoamerica-wide distribution;
- (2) it is early in the Peten and Guatemala;
- (3) it perhaps spread later to other areas including the Valley of Mexico;
- (4) its use died out in the Peten, but persisted in the Valley, Gulf Coast, and Southeastern Highlands.

Type B:

Tlatilco, Monte Alban I, Middle Zacatenco.

Comment:

- (1) confined to Valley of Mexico and Oaxaca;
- (2) in a context of Olmec-related cultures;
- (3) its time horizon is late Middle pre-Classic, with little time depth.

Type C:

Huastec Period II (El Prisco), Lower Tres Zapotes, Tlatilco (C 3), Monte Alban I, Gualupita I (C 3), Early Zacatenco (minus C 5), Middle Zacatenco (C 5), Cholula I (C 1), El Opeño, El Arbolillo I, Atlihuayan II (C 5, C 9).

Comment:

- (1) distribution in Valley of Mexico, Western Mexican Plateau, Gulf Coast, Oaxaca, but not to south;

(2) type was early in Valley, spread from there to other parts;

(3) it had a very long time persistence.

Type D:

Lower and Middle Tres Zapotes (Drucker's type), El Trapiche (Vera Cruz), Tlatilco (D 1), Playa de los Muertos (D 1), Gualupita I (D 1), Early Zacatenco, Middle Zacatenco (D 3), Cerro de las Mesas Lower I, El Opeño, Atlhuayan II (D x, D 1, D 2), El Trapiche (Vera Cruz).

Comment:

(1) distribution in Valley of Mexico, Gulf Coast, West Highlands;

(2) type is early in Valley, later found in Olmec-affiliated cultures, perhaps spread in D 1 form to Ulua with Olmec.

Type E:

Cuicuilco-Ticomán (also E 2), Teotihuacán II (E 2), Gualupita II, Monte Alban II.

Comment:

(1) This type is very late, and confined to the Valley of Mexico, Oaxaca and Morelos.

Type F:

Tlatilco, Gualupita I, Middle Zacatenco.

Comment:

(1) confined to Valley of Mexico in Middle pre-Classic times.

Type G:

Cuicuilco-Ticomán, Gualupita II, Middle Tres Zapotes, Cerro de las Mesas Lower I.

Comment:

(1) distribution in Valley of Mexico and on Gulf Coast in middle to late pre-Classic.

Type H:

Cuicuilco-Ticomán, Gualupita II, Middle Tres Zapotes, Cerro de las Mesas Lower I.

Comment:

- (1) confined, like Type G, to Valley of Mexico and Gulf Coast on middle to late level.

Type I:

Cuicuilco-Ticomán, Gualupita II, Middle Tres Zapotes (Drucker), El Prisco (Drucker).

Comment:

- (1) same distribution as G and H.

Types J, K, L, M, N:

Comment:

- (1) confined to Valley of Mexico on Cuicuilco-Ticomán level.

Type O:

Tlatilco, Gualupita I, Atlihuayan II.

Comment:

- (1) Middle to late pre-Classic in the Valley of Mexico, with Olmec-affiliated cultures.

This resumé of the distribution of figurine types shows a slightly different picture from that based on other materials: 1) on the earliest level, one general figurine type (A) was widely shared over Mesoamerica; 2) there is generally a north-south division in figurine distribution in later times, with the Valley of Mexico evidently sharing many types with the Gulf Coast (this may have been the result of Olmec diffusion into the Valley). However, the development in the Valley of many figurine types not found in other areas shows the isolation of that area in the pre-Classic. This conclusion is supported by the distribution of other artifacts.

It would be premature at this date to attempt to determine the direction in which any trait diffused. Almost every time a new site is excavated, items are found at totally unexpected levels in contexts which could not have been predicted on the basis of former experience.

CLASSIC TRAITS IN THE PRE-CLASSIC

As stated in the Introduction, the type of evidence by which developmental stages can be defined is of a different order than that on which chronological ordering is based. The increase in size and complexity of socio-political groupings; the development and codification of writing, mathematics, and astronomy; the enrichment of ritual and ceremonialism;

the increase in trade relations and local specialization of products are the criteria on which we must base Mesoamerican developmental stages. That there was a considerable florescence along these lines in periods prior to what has been considered the Classic is a thesis which will be examined below.

The development of dated monuments and writing: The earliest dated Maya monument is Stela 9, at Uaxactun, which bears a date of 8.14.10.13.15 (Spinden 68 A.D; Thompson 328 A.D.). The earliest date which is definitely Maya is that on the Leyden Plate, 8.14.3.1.12 (Spinden 60 A.D; Thompson 320 A.D.). There is a considerable body of evidence that monuments were being dated in the Long Count at least 400 years before that, during what would be considered the pre-Classic, on the Gulf Coast and in Guatemala. Among the disputed, but evidently early Long Count dates are the following:

- Stela C, Tres Zapotes - 7.16.6.16.18 (Spinden 291 B.C; Thompson 31 B.C.)
- Stela 1, El Baul - 7.19.7.8.12 (Spinden 231 B.C; Thompson 29 A.D.)
- Stela 1, Piedra Labrada - 7th Cycle
- Stela 2, Colomba - 7th Cycle

All these dates have been rejected by Thompson (1941, 1943) on the following grounds:

- (1) None have accompanying glyphs for the cycles, but are recorded only in bar-and-dot numerals, unlike Classic Maya inscriptions.
- (2) All have been found outside the Classic Maya area.
- (3) The associated art style and iconography is late and often "Mexican"
- (4) Even if we accept the dates as contemporary, there is no assurance that the starting point for the Maya Long Count, 4 Ahau 8 Cumhu, was used.

Many new data have accumulated since Thompson's 1941 paper was published, and it appears that this more recent evidence tends to disprove his thesis. A discussion of the various monuments follows below.

Stela C, Tres Zapotes

This monument was discovered by Stirling during the explorations of 1938-39 at Tres Zapotes. It had unfortunately been re-used in broken form by late inhabitants of the site, therefore the archaeological context is poor. Stirling's reconstruction of the Initial Series date, in spite of the missing baktun coefficient, is now generally accepted (Stirling, 1940).

However, Thompson (1941:29-30) was inclined to believe that the mask on the reverse side, being of pure Olmec style, was much too late for such an early reading. However, since the excavations at Tres Zapotes, La Venta, and Tlatilco, where Olmec material has appeared in indisputably "pre-Classic" levels, there has seemed to be no reason to doubt the antiquity of the inscription.

Wauchope is surprised that the date of this monument is so late, as he feels it is of Lower Tres Zapotes manufacture. (Wauchope, 1954:29-30). For this reason, he feels that even the Spinden correlation, although nearer to the mark, would be on the tardy side. Actually, this placement was a piece of circular reasoning on the part of Drucker (1943a:118), who felt that if the data was contemporary, it could be read as 31 B.C. in the GMT correlation, so then it must be Lower Tres Zapotes! There is, in fact, an inscription of Lower Tres Zapotes date, Monument E, which consists of a bar-and-dot numeral carved into the living rock (Stirling, 1943:21-2), and which may be the earliest numerical inscription found in Mesoamerica. This numeral is in the form of a dot over a bar and another bar appears below this, but in the form of a wide, fat "T" (somewhat like the Maya "Ik" or wind element). I believe it does not read "2" but "6" with an unknown glyph below, and refers to the 6th Cycle of elapsed time since 4 Ahau 8 Cumhu; this would check nicely with the archaeology. The date on Stela C, however, is 7th Cycle and probably late Middle Tres Zapotes, since the Spinden correlation would place it on the radiocarbon-dated level of Monte Alban IIa, and therefore also on a Holmul I level. In its advanced style it appears to fall late in the Olmec development. There is really no adequate reason to fail to consider Stela C a contemporary inscription in the Long Count.

Stela 1, El Baul -

Transatlantic debates have been held about this stela from western Guatemala, which the discoverer himself considered a miserable Aztec copy of a Maya stela (Waterman, 1929). The figure and ornament accompanying the 7th Cycle inscription are definitely not Mexican, but relate to the very earliest Maya sculpture known at Tikal, Uaxactun, and in the Loltun Caves of Yucatan. Proskouriakoff (1950:174-5) is inclined, on stylistic grounds, to think that the monument is early and that therefore "the number series cannot represent a late corruption of the Maya count", as Thompson maintained. This stela is closely related in style to early monuments from Izapa and from Colomba in Quetzaltenango, Guatemala.

Stela 1, Piedra Labrada -

This stela was discovered by Blom and Lafarge (1926:40-41) in southern Vera Cruz, in the heart of the Olmec area. It is a most peculiar inscription: a bar with two dots under it, presumably to be read as a "seven", is placed underneath an undecipherable glyph. Below all these are three cartouches with geometric designs inside them. The stela is carved from hard, volcanic rock. At the same site is a somewhat Olmec-looking figure of the same material and not far away is the famous Olmec

figure on the top of San Martin Pajapan volcano. This is of course no confirmation of the early date, but the stela may well have been carved in the 7th Cycle.

Stela 2, Colomba (Thompson, 1943).

Several monuments have been found at this site in the Quetaltenango valley. Stela 2 on Santa Margarita farm starts with a glyph described by Thompson as "pretty nearly the Initial Series Introducing Glyph of Maya Inscriptions." Thompson reads the glyph below as "seven"; unfortunately the monument is broken below this number. The style of the fragmentary figure on the monument has close relations with that of Izapa (only 60 km. away), with El Baul, and in certain respects with the Leyden Plate. The nearby Stela 1 is also in Izapa and El Baul style. A relief on a boulder in the area (Thompson, 1943:111, photo a) depicts a figure running or kneeling on one leg with a tiger mouth, beard, and chin-strap headdress in a style related to both La Venta and the Monte Alban "danzantes". Stela 2, then, is related to other early monuments. More important, it has an Initial Series introducing glyph which, in every other context, means that one is to count from the starting point, 4 Ahau 8 Cumhu.

There is excellent evidence that the practice of erecting sculptured monuments was even earlier than these 7th Cycle inscriptions would imply. In the Majadas phase at Kaminaljuyu, which precedes the Providencia phase (radiocarbon-dated at 1196 B.C. \pm 300), was found an incredibly rich cache of pottery vessels, jade beads and pendants, and a stone stela (Carnegie Institute, 1951; E.M. Shook, personal communication). The latter is a 5-sided section of columnar basalt, without numerals or glyphs, showing a human figure reaching up with one hand, with a speech scroll coming from his mouth. There is a fantastic and unidentified design accompanying the figure. The style is very unlike subsequent Mesoamerican art, but seems in many ways connected with the early art of the Maya area and the 7th Cycle monuments previously described. Associated material included a jade pendant which is in an indubitably Olmec style (drooping mouth, cleft at top of head) and which Mr. Shook feels is prototypical for the development of the Classic Olmec style. Also found in this cache were jade pendants in the typical La Venta boat-shape, and one duck-billed carving of jade.

Many fragments of monuments have been found in pre-Classic contexts at Kaminaljuyu, but almost all have been accidentally discovered by non-archaeologists (E.M. Shook personal communication). These include many basalt columns that may once have been stelae. Among these finds was a plain stela exposed by an arroyo at the site; it was upright (in place) with the top about one foot below ground level. The surrounding fill contained many sherds of the Arenal (late pre-Classic) phase.

On this early level, Oaxaca, too, had a high development of glyphic writing and calendrical knowledge. To the earliest phase of Monte Alban, with a radiocarbon date of 666 B.C. \pm 160, belong several monuments with both bar-and-dot numerals and glyphs (Caso, 1938:7, fig. 86). Two of these are closely related to the "Danzantes" series of the same period and one

of them shows the number 14 in bar-and-dot fashion. Stela 14 of Mound J, which is covered with hieroglyphs, and probably Stelae 12 and 13 belong to this level. One monolith with inscriptions on Monticulo J, which appears to be in large part a construction of Monte Alban II times, bears the number 8 (8th Cycle?) in bar-and-dot style. At any rate, by the seventh century B.C., the people of Monte Alban were so far advanced in this respect, that Caso (1938:7) states, "...en este primitiva epoca de Monte Alban, se conocia el calendario ritual, tonolamatl o tonalpohualli, y se utilizaba el sistema grafico que desperes se conoce con el nombre de sistema Zapoteco".

All this material makes it clear that in what has been known as the "Archaic", "Formative", and "pre-Classic", not only did the Mesoamerican peoples of the Gulf Coast, Oaxaca, and Guatemala develop the characteristic calendrical and hieroglyphic system, but by the latter part of the stage this system had really become the focal point of these cultures in a manner directly comparable to that of the Early Classic. In other words, not only the initial development, but the full outlines of the form itself had already been achieved. What remained for the Early Classic cultures was further elaboration and refinement.

Architecture and the Development of Ceremonial Centers: Archaeological data on settlement patterns are rare for any period in any area, mainly because the archaeologist, whose time and funds are usually limited, is forced to excavate in the remains likely to produce the quickest results, namely, either the most spectacular construction at the site, or else a trench between or outside actual habitations. Consequently, the evidence for the development of settlement patterns in Mesoamerica is poor. One must be satisfied with the remains of individual architectural constructions, which give a picture of the development of a specific technology associated with certain socio-religious patterns, involved in the gradual elaboration of the Mesoamerican ceremonial center.

Architectural remains are scarce for the very earliest farming peoples yet known in Mesoamerica. No structures for this early level in the Valley of Mexico are known. However, several structures are known for the Mamom period in the Peten region. There are rows of stones at Uaxactun of Mamom date which Ricketson and Ricketson (1937:136) suggest are property or garden boundaries, or perhaps retaining walls for house mounds. According to A.L. Smith (1950:67) the Mamom people probably lived in brush houses without masonry foundations. At Nohoch Ek, near Benque Viejo in western British Honduras, people with a Mamom culture leveled off the top of a low hill and constructed a small ceremonial center, with low plaster-covered platforms grouped around a plaza (M.D. Coe, 1950). In Highland Guatemala, in the Las Charcas phase and in what used to be called Sacatepequez, no mounds were found, but the population "lived in settled communities and houses of pole and thatch with walls partially daubed with adobe" (Shook, 1951:97). These fragmentary remains, until some new and surprising culture is discovered (this is far from a remote possibility), group themselves easily within the term "Village Formative" proposed by Wauchope (1950:213). Although little is known of the settlement pattern, it seems that, in spite of the occurrence of ceremonial centers, these people inhabited small villages.

The ceremonial center, however, soon developed at a remarkable pace. In the Providencia phase at Kaminaljuyu, with its radiocarbon date of around 1200 B.C., there are a number of really enormous mounds (E.M. Shook, personal communication).

It is in the sites which group themselves in the period from 800-600 B.C. (according to radiocarbon-based estimates) that the beginnings and, in many respects, the culmination of monumental architecture in Mesoamerica are found. There is some reason to believe that the great Monticulo J of Monte Alban dates at least in part from this time. This is a large stone-faced platform mound of rubble; a stairway rises on the northeast, and the rear of the structure forms a right angle (Caso, 1938:10-11). There is an interior room, probably for "astronomical observations" (Caso, 1938:10), which appears to be rudimentarily corbelled. The second story is faced by enormous monoliths covered with glyphic inscriptions like those found on the "Danzantes". There is a South Platform of this period associated with "Danzante" figures, and the famous "Temple of the Danzante" itself may be at least in part coeval.

The Miraflores phase at Kaminaljuyu was the period of the greatest construction, both in number and size of structures, during the whole of its history. The principal Miraflores structure at the site was the great mound E-III-3 (Shook and Kidder, 1952); it consisted of a series of superimposed step-pyramids formed of puddled adobe fill faced with adobe plaster, each with at least one staircase. Low rectangular platforms with post-holes at each corner were found on one frontal platform. E-III-3 in its final form was 13.4 meters high. Structures sharing a Miraflores cultural tradition have been found at other places in Guatemala and El Salvador. Finca Arizona (Shook, 1945) on the Pacific Coast of Guatemala consisted of several groups of mounds. In the larger and more compact group there were at least four mounds. The largest of these was 40 meters square at the base and 10 meters high; like E-III-3, this mound was the result of several stages of rubble-filled, adobe-surfaced pyramid building, and was essentially the medium for elaborate burials. It was really a type of highly developed burial mound. Mound groups of Miraflores affiliation but of irregular pattern have been found at Asuncion Mita, in the Department of Jutiapa, Guatemala (Carnegie Institute, 1949:231-2).

Similar mound groups of this general Miraflores type are known from El Nuevo Dia on the Chiapas coast (Drucker, 1948:158-9) and El Trapiche, near Chalchucapa, El Salvador (W.R. Coe, 1955). The latter site is composed of eight featureless mounds, the largest about 80 feet high; these evidently were adobe-covered. The site of Yarumela, Honduras, consists mainly of Period III mounds covering an area 1.5 km. x 1 km. (Canby, 1951:79-85); the principal structure is a rubble mound 20 meters high, 165 meters long, and 100 meters wide associated with a steep-sided, truncated pyramid and ramp.

To the north, in Yucatan, two superimposed plaza floors (90 x 100 meters), were constructed at Santa Rosa Xtampak in the Middle Formative, according to Brainerd (1951:76), and are possibly associated with the

largest pyramid of the site. In the next phase of the Yucatan sequence, the Late Formative, the great high mound of Yaxuna, measuring 60 x 130 meters, was constructed. It "seems to have been a raised terrace with several buildings or substructures on it." (Brainerd, 1951).

In the Valley of Mexico, the second largest structure in aboriginal America, the Pyramid of the Sun at Teotihuacan, and also the associated Pyramid of the Moon, were constructed probably not long after 600 B.C. There is little doubt that they are "pre-Classic" (Kidder et al. 1946:252). Armillas assigns them to the Tzacualli phase of Teotihuacan I (Armillas, 1950:37-70). At the same time, there was an urbanized zone of 200 hectares in total area lying on both sides of the Avenue of the Dead at this great site.

Other sites in the Valley of Mexico show a high development of the ceremonial center. The Cerro del Tepalcate (Piña-Chan et al, 1952:12-13), of the Ticoman-Cuicuilco period, consists of a series of superposed stone-faced platforms. The site of Ticoman itself was probably a habitation site, as it is confined to long lines of low walls, and terracing banks of debris; these were possibly intended for level living surfaces, such as house foundations (Vaillant, 1931:310-312). The associated structure at Cuicuilco, however, is a terraced, round temple mound about 75 feet high and 387 feet in diameter, with two ramps which lie opposite each other. At one time a cone-like construction on top brought the total height to around 90 feet. The structure was faced with rocks, with a fill of sand and rubble (Cummings, 1933). The Cuicuilco structure is not unique for the period, since related temples have been found in Puebla and Morelos.

In the Olmec area, a different pattern is found, which emphasizes not bulk but organization. At the type site of La Venta (Drucker, 1952:8-10), of Middle Tres Zapotes date, Complex A consists of a group of mounds in a north-south arrangement. The Great Mound is 32 meters high. Approximately 100 meters to the north is a Ceremonial Court, partially surrounded by vertical basalt columns; this was entered by a fore-court which is flanked by deeply buried jaguar-mask pavements. On the north of the Ceremonial Court is a broad, low mound which covered an elaborate tomb formed of stone pillars (Drucker, 1952:8-10). The arrangement and compactness of the structures at this site certainly suggests a highly developed ceremonial organization. On the Gulf Coast to the northwest, in the evidently coeval Pañuco II near Tampico, there are only burned clay floors to attest the presence of temple mounds (Ekholm, 1944:499).

There seems to be agreement that the famous E-VII-sub pyramid of Uaxactun is to be placed in the latter part of the poorly described Chicanel phase (Smith, 1950:67). The whole complex of group E seems to have been quite developed at the time; there was a ceremonial plaza with platforms on the north, east, and south sides, with E-VII-sub on the west. E-VII-sub itself is a truncated pyramid which at times carried a perishable superstructure; the stairways flanked by the Olmec-related masks and the stucco surfacing have often been pictured. A lesser center of the same period was Group A, which may have been an assemblage of structures (i.e.

like Elements A and B of the A-1 complex, which are two superimposed truncated pyramids of the Chicanel period which bore perishable sub-structures) surrounding a plaza. We know something of the house types of the period: an apsidal platform of one level, built of walls of well-dressed stones retaining a fill of dirt and stones, supported thatch structures (Smith, 1950:71). A model of a similar structure is of the Aguilar period on the Gulf Coast (MacNeish, 1954:614), suggesting that this may be a lowland type of house.

It seems clear, then, that the ceremonial center was already known on the earliest level of agricultural, pottery-using societies of Mesoamerica yet known, but that the refinement and enlargement of the pattern was mainly a development of the "pre-Classic" cultures subsequent to 800 B.C. Of these, the cultures of the Guatemalan Highlands and related areas carried the possibilities of adobe architecture in a wet, relatively stoneless, climate to their ultimate limit. For sheer size, the "pre-Classic" structures of Kaminaljuyu, Yaxun and Teotihuacan surpass any later buildings. The elaboration and advancement of architectural techniques at the Peten site of Uaxactun and at Monte Alban emphasize that during this period the temple mound complex was carried to its farthest possibilities. In size and organization, the "pre-Classic" mound complexes equal and often surpass the ceremonial centers of the "Classic". In the "Classic", there was a technical refinement of the superstructure, that is of the above-floor rooms; this is foreshadowed at Monte Alban and in Holmul I. This elaboration of an already present model is well illustrated by Classic Maya sites: in almost every case investigated Classic temples rest on the remains of "pre-Classic" structures, and Classic plazas overlie those of the "pre-Classic". It might be said that the later ceremonial centers are copies, with embellishments, of their "pre-Classic" prototypes.

Religion and Ceremonialism: Other culture traits formerly thought to be limited to the Classic and post-Classic are now appearing in remarkably early contexts. The Mesoamerican ceremonial ball game, for instance, was thought to have been developed in the Early Classic. The discovery of figurines of ball players at Tlatilco (Sejourne, 1952:49-63) now makes it appear that this trait was as early as the Copilco-Zacatenco horizon. Probably in the not too distant future, ball courts themselves will be found in the pre-Classic. The early appearance of such a figure of the Mexican pantheon as the "Old Fire God" in the form of incensarios at Cuicuilco (Cummings, 1933:50) and at Ticoman (Vaillant, 1931:307-9) is well-known; a clay incensario cover from Ticoman may represent the rain god Tlaloc (Vaillant, *ibid.*). In the Guatemalan Highlands, ritual paraphernalia is early, with three-pronged pottery incensarios and the enigmatic effigy "mushroom stones" appearing in Las Charcas (Shook, 1951:97); the latter continue to be made or at least used right into Esperanza (Early Classic) times (Kidder et al:1948).

SUMMARY AND CONCLUSIONS

Even if radiocarbon dates are considered only as a "trend", it is fairly clear now that the pre-Classic extends over a period of at least 1500 years, which is almost as long as the Classic and post-Classic stages combined. It is also evident that within this great span, there are differences of developmental levels which are even sharper than those between Classic and post-Classic, making it necessary to set up more than one stage in the pre-Classic.

Wauchope's "Village Formative" is a stage that holds up very well. In all the sites of this period (Mamom, Las Charcas, Early Zacatenco, Early Yaramela, etc.) there is no evidence of extensive mound building, writing, the calendar, or even much cultural intercourse. There are true villages, with only occasional indications of ceremonial centers, and, although ceramics are hardly simple, the total cultural picture is less Mesoamerican than generalized, pan-Nuclear America, Formative. Socio-political groupings are small, intellectual life seems slightly developed.

However, as early as Providencia in the Guatemalan Highlands (ca. 1200 B.C.) and certainly on the Chicanel-Miraflores - Monte Alban I-Copilco-Zacatenco - La Venta horizon, new and important social changes had taken place, with the appearance of large, even enormous, ceremonial centers. It was this horizon that Wauchope labelled "Urban Formative" (Wauchope, 1950: 213) although, as MacNeish (1954:619) points out, "Temple Formative" would be a better term. It must now be determined to what degree this stage differs from Early Classic, and whether we can say that it is more like "Village Formative" than like Classic, thereby justifying our lumping it together with the former stage under the term "Formative". There is excellent reason to believe that writing and the calendar were not only developed, but codified, by this time. One of the great regional art styles, the Olmec, is in large part a product of the same period. We are forced to admit that by including these manifestations with the early "Village Formative" cultures of the area we are distorting the true picture.

It seems that the answer to the problem lies in what Wauchope (1950) has called the Proto-Classic (although MacNeish insists on attaching the term "Formative" even to this). The Proto-Classic would include such developments as "rudimentary corbelled arches, carved monuments, and dates inscribed in some kind of Long Count system" (Wauchope, 1950:220). The Ticoman-Cuicuilco culture and probably the great Pyramid of the Sun at Teotihuacan would also be included in such a stage.

I think the term Proto-Classic is excellent, but as it is defined it should be extended back to include the Miraflores-Monte Alban I-Middle Tres Zapotes level because the traits enumerated above were definitely present at that time. Certainly this whole latter part of the pre-Classic is a kind of rudimentary Classic, and in some areas, especially Olmec, equals or surpasses the Classic. Such a stage would include the whole Olmec development, which once seemed to lie across the dividing line between "Formative" and Classic. The upper limits would be the Holmul I, Monte

Alban IIa, and Teotihuacan II horizon, which contains so many of the famous "Q" elements, and which not only are direct developments out of earlier cultures, but foreshadow Early Classic achievements. This horizon seems to have been contemporary with the latest Olmec manifestations and with the 7th Cycle of the Long Count.

To re-align the stages is really not so revolutionary. The "Formative" or "Archaic" was first delimited as a stage by the presence of hand-modeled figurines. Surely this criterion can hardly be considered as important in cultural development. Since the Classic is an extension of the Initial Series period of the Maya sequence over other parts of Mesoamerica, it would be only logical to extend it back to include non-Classic Maya-dated monuments and hieroglyphic systems.

In conclusion, the thesis of this paper is that there are two broad developmental stages in Mesoamerica prior to the Maya Initial Series period: Village Formative and Proto-Classic. These have been defined not on the basis of changes in tool types - for, as Wauchope (1950:240) points out, these remain uniform throughout Mesoamerican history - but on the criteria of socio-political and intellectual development. Any monolithic definition of a "Formative" stage (Willey and Phillips, 1955:765) breaks down in the latter part of the stage in Mesoamerica, and in the early part in Peru (on the Chavin horizon). These two areas share many significant traits on an early level, as pointed out by Willey (1955), but this seems to be a cultural-historical rather than a cultural-developmental phenomenon, related more to Spinden's "Archaic" concept than to evolutionary stages. To split the so-called "Formative" into two developmental stages, and include the later stage as a part of the Classic development, would undoubtedly make interareal comparisons more difficult, but it would seem to describe better the Mesoamerican situation.

BIBLIOGRAPHY

Armillas, Pedro

- 1948 A sequence of cultural development in Mesoamerica. In A Reappraisal of Peruvian Archaeology, ed. Wendell C. Bennett, pp. 105-12. Society for American Archaeology Memoir 4. Menasha.
- 1950 Teotihuacan, Tula, y los Toltecas. Las culturas post-Arcaicas y pre-Aztecas del Centro de Mexico. Excavaciones y estudios 1922-1950. Runa 3:37-70. Buenos Aires.

Blom, F. and O. LaFarge

- 1926 Tribes and Temples. Middle American Research Series, Tulane University, Vol. 1. New Orleans.

Brainerd, George W.

- 1951 Early ceramic horizons in Yucatan. In The Civilizations of Ancient America, ed. Sol Tax, pp. 72-78. Selected Papers of the 29th International Congress of Americanists, Vol. 1. Chicago, University of Chicago Press.

Canby, Joel S.

- 1951 Possible chronological implications of the long ceramic sequence recovered at Yarmuela, Spanish Honduras. In The Civilizations of Ancient America, ed. Sol Tax, pp. 79-85. Selected Papers of the 29th International Congress of Americanists, Vol. 1. Chicago, University of Chicago Press.

Carnegie Institution of Washington

- 1949 Annual Report, Division of Historical Research, 1948-49. Washington, D.C.
- 1951 Annual Report, Division of Historical Research, 1950-51. Washington, D.C.

Caso, Alfonso

- 1938 Exploraciones en Oaxaca, quinta y sexta temporadas, 1936-37. Instituto Panamericano de Geografia e Historia, Publ. 34. Mexico, D.F.

Coe, Michael D.

- ms. Excavations at Nohoch Ek, British Honduras. Honors thesis, Department of Anthropology, Harvard University, Cambridge, Mass. 1950.

Coe, William R. II

- 1955 Excavations in El Salvador. University of Pennsylvania, University Museum Bulletin 19, No. 2. Philadelphia.

Covarrubias, Miguel

- 1946 Mexico South, The Isthmus of Tehuantepec. New York
- 1946 El arte "Olmeca" o de La Venta. Cuadernos Americanos 4:153-79. Mexico, D.F.
- 1950 Tlatilco: el arte y la cultura preclasica del Valle de Mexico. Cuadernos Americanos No. 51, pp. 149-62. Mexico, D.F.

Cummings, Byron

- 1933 Cuicuilco and the archaic culture of Mexico. University of Arizona Bulletin 4, No. 8. Social Science Bulletin, No. 4. Tucson.

Drucker, P.

- 1943a Ceramic sequences at Tres Zapotes, Vera Cruz, Mexico. Bureau of American Ethnology Bulletin 140. Smithsonian Institution, Washington, D.C.
- 1943b Ceramic stratigraphy at Cerro de las Mesas, Vera Cruz, Mexico. Bureau of American Ethnology Bulletin 141. Smithsonian Institution, Washington, D.C.
- 1948 Preliminary notes on an archaeological survey of the Chiapas coast. Middle American Research Records 1, No. 11. New Orleans, Tulane University.
- 1952 La Venta, Tabasco, a study of Olmec ceramics and art. Bureau of American Ethnology Bulletin 153. Smithsonian Institution, Washington, D.C.

Ekholm, Gordon F.

- 1944 Excavations at Tampico and Panuco in the Huasteca, Mexico. Anthropological Papers of the American Museum of Natural History 38, No. 5:321-509. New York.

Johnson, Frederick (ed)

- 1951 Radiocarbon dating. Society for American Archaeology Memoir 8. Menasha.

Kidder, A.V., J.D. Jennings, and E.M. Shook

- 1946 Excavations at Kaminaljuyu, Guatemala. Carnegie Institution of Washington, Publ. 561. Washington, D.C.

Longyear, John M., III

- 1952 Copan ceramics, a study of southeastern Maya pottery. Carnegie Institution of Washington, Publ. 597. Washington, D.C.

Lothrop, Samuel K.

- 1927 Pottery types and their sequence in El Salvador. Indian Notes and Monographs, Museum of American Indian, Heye Foundation 1, No. 4:165-220. New York.
- 1933 Atitlan: an archaeological study of ancient remains on the borders of Lake Atitlan. Carnegie Institution of Washington, Publ. 444. Washington, D.C.

MacNeish, Richard S.

- 1954 An early archaeological site near Panuco, Vera Cruz. Transactions of the American Philosophical Society, n.s. 44, Pt. 5. Philadelphia.

Merwin, R.E. and G.C. Vaillant

- 1932 The ruins of Holmul, Guatemala. Memoirs of the Peabody Museum of Harvard University 3, No. 2. Cambridge, Mass.

Newell, H. Perry and Alex D. Krieger

- 1949 The George C. Davis site, Cherokee county, Texas. Society for American Archaeology Memoir 5. Menasha.

Noguera, Eduardo

- 1941 La ceramica de Cholula y sus relaciones con otras culturas. Revista Mexicana de Estudios Antropologicas 5:151-61. Mexico, D.F.
- 1946 Cultura de El Opeño. In México Prehispanico, pp. 150-54. Mexico, D.F.

Nuttall, Zelia

- 1926 The Aztecs and their predecessors in the Valley of Mexico. Proceedings of the American Philosophical Society 65:245-55. Philadelphia.

Piña Chan, R., A. Romero and E. Pareyon

- 1952 Tlatilco: nuevo sitio preclasico del Valle de Mexico. Tlatoani 1, No. 3-4:9-14. Mexico, D.F.

Popenoe, Dorothy H.

- 1934 Some excavations at Playa de los Muertos, Ulua River, Honduras. Maya Research 1:61-88. New Orleans.

Porter, Muriel Noe

- 1953 Tlatilco and the pre-classic cultures of the New World. Viking Fund Publications in Anthropology, No. 19. New York.

Proskouriakoff, Tatiana

- 1950 A study of classic Maya sculpture. Carnegie Institution of Washington, Publ. 593. Washington, D.C.

Ricketson, O.G., Jr. and E.B. Ricketson

- 1937 Uaxactun, Guatemala, Group E. 1926-1931. Part I: The excavations; Part II: The artifacts. Carnegie Institution of Washington, Publ. 477. Washington, D.C.

Sears, Paul B.

- 1951 Pollen profiles and culture horizons in the Basin of Mexico. In *The Civilizations of Ancient America*, ed. Sol Tax, pp. 57-62. Selected Papers of the 29th International Congress of Americanists, Vol. 1. Chicago, University of Chicago Press.

Sejourne, L.

- 1952 Interpretacion de las figurillas del archaico. *Revista Mexicana de Estudios Antropologicas* 13:49-63. Mexico, D.F.

Shook, Edwin M.

- 1945 Archaeological discovery at Finca Arizona, Guatemala. *Carnegie Institution of Washington, Notes on Middle American Archaeology and Ethnology*, No. 57. Washington, D.C.
- 1951 The present status of research on the pre-classic horizon in Guatemala. In *The Civilizations of Ancient America*, ed. Sol Tax, pp. 93-100. Selected Papers of the 29th International Congress of Americanists, Vol. 1. Chicago, University of Chicago Press.

Shook, Edwin M. and Alfred V. Kidder

- 1952 Mound E-III-3, Kaminaljuyu, Guatemala. *Contributions to American Anthropology and History*, Carnegie Institution of Washington 9, No. 53. Washington, D.C.

Smith, A. Ledyard

- 1950 Uaxactun, Guatemala: excavations of 1931-1937. *Contributions to American Anthropology and History*, Carnegie Institution of Washington, No. 41 (Publ. 546). Washington, D.C.

Sorenson, John L.

- 1955 A chronological ordering of the Mesoamerican pre-classic. *Middle American Research Records*, Middle American Research Institute, Tulane University 2, No. 3. New Orleans.

Stirling, Matthew W.

- 1940 An Initial Series from Tres Zapotes, Vera Cruz, Mexico. National Geographic Society, Contributed Technical Papers 1, No. 1. Washington, D.C.
- 1943 Stone monuments of southern Mexico. Bureau of American Ethnology Bulletin 138. Smithsonian Institution, Washington, D.C.

Strong, William D., A. Kidder II, and A.J.D. Paul

- 1938 Preliminary report on the Smithsonian Institution-Harvard University archaeological expedition to northwestern Honduras, 1936. Smithsonian Miscellaneous Collection 97, No. 1. Washington, D.C.

Thompson, J. Eric S.

- 1939 Excavations at San Jose, British Honduras. Carnegie Institution of Washington, Publ. 506. Washington, D.C.
- 1940 Late ceramic horizons at Benque Viejo, British Honduras. Contributions to American Anthropology and History, Carnegie Institution of Washington, No. 35 (Publ. 528). Washington, D.C.
- 1941 Dating of certain inscriptions of non-Maya origin. Theoretical Approaches to Problems, Division of Historical Research, Carnegie Institution of Washington, No. 1. Washington D.C.
- 1943 Some stone sculptures from southeastern Quetzaltenango, Guatemala. Notes on Middle American Archaeology and Ethnology, Carnegie Institution of Washington, No. 17. Washington, D.C.

Vaillant, George C.

- 1930 Excavations at Zacatenco. Anthropological Papers of the American Museum of Natural History 32, Pt. 1. New York.
- 1931 Excavations at Ticoman. Anthropological Papers of the American Museum of Natural History 32, Pt. 2. New York.
- 1935a Excavations at El Arbolillo. Anthropological Papers of the American Museum of Natural History 35, Pt. 2. New York.

Vaillant, George C.

- 1935b Early cultures of the Valley of Mexico. Anthropological Papers of the American Museum of Natural History 35, Pt. 3. New York.
- 1939 History and stratigraphy in the Valley of Mexico. Smithsonian Annual Report for 1938, pp. 521-30. Washington, D.C.

Vaillant, George C. and S.B. Vaillant

- 1934 Excavations at Gualupita. Anthropological Papers of the American Museum of Natural History 35, Pt. 1. New York.

Waterman, T.T.

- 1929 Is the Baul stela an Aztec imitation? Art and Archaeology 28:182-87. Washington, D.C.

Wauchope, Robert.

- 1948 Excavations at Zacualpa, Guatemala. Middle American Research Institute, Tulane University, Publ. 14. New Orleans.
- 1950 A tentative sequence of pre-classic ceramics in Middle America. Middle American Research Records, Middle American Research Institute, Tulane University 1, No. 14. New Orleans.
- 1954 Implications of radiocarbon dates from Middle and South America. Middle American Research Records, Middle American Research Institute, Tulane University 2, No. 2.

Willey, Gordon R.

- 1955 The interrelated rise of the native cultures of Middle and South America. In New Interpretations of Aboriginal American Culture History. 75th Anniversary Volume of the Anthropological Society of Washington.

Willey, Gordon R. and Philip Phillips

- 1955 Method and theory in American archaeology II: historical-developmental interpretation. American Anthropologist 57: 723-819. Menasha.