
15. Distributional Analysis of Chalcatzingo Figurines

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The preceding chapter on figurines emphasized description, classification, and an analysis of figurine attributes. However, as the author noted, a whole piece analysis of figurine types would also be very enlightening. This chapter presents a brief analysis of the figurine types based on the data in Table 14.1, which shows the distribution of figurine (head) types across the site.

The general purpose of this study was to discern patterned variation in the manufacture, use, or deposition of figurines. Such variation may have been due to differences in chronology, preference, place of manufacture, etc., although the limited data precluded determining which of these alternatives best accounted for the figurine distribution.

Since only the distribution data given in Table 14.1 were available, the analysis was focused on some very basic problems, i.e., discerning variations in the frequencies of the different types for the site as a whole as well as for the individual terraces, and an investigation of the composition of the "figurine population" for each terrace (that is, what type combinations are present). Each of these problems is discussed in detail below.

FREQUENCIES OF EARLY AND MIDDLE FORMATIVE FIGURINE TYPES

Since Chalcatzingo is a multi-component site, the first step in this investigation of community patterning was to separate the figurines according to the period (Early, Middle, or Late Formative) they belong to, in order to hold the time factor constant. Unfortunately, a refined chronology of the Chalcatzingo figurine types is lacking. However, some types are known to date to the different periods by comparison to Valley of Mexico sites, and these comparisons were used to separate the types.

The known Early Formative types are D, K, and C9. The frequencies of these types at Chalcatzingo are shown in Figure 15.1 as percentages by comparing the frequency of each type to the total number of Early Formative types. Figure 15.2 displays similar data for the Middle Formative types (C1–C8, Ch1–Ch5, Ch2, A, and F). The Late Formative figurine types (E and G) are not considered since there was such a small occupation of the site at that time.

Figure 15.1 shows that the D2 figurine was by far the most common type during the Amate phase, comprising 61 percent of the Early Formative figurine population. It was therefore a basic type for the community, and it occurred in all the Amate phase components at the site. A similar preference for the D2 type apparently existed at other Early Formative sites in Morelos and the Valley of Mexico. As was mentioned in Chapter 14, "baby-face" (C9) figurines were rare at Amate phase Chalcatzingo.

For the Middle Formative, Figure 15.2 shows that all of the types of the C series, the major Valley of Mexico Middle Formative figurine series, were represented at Chalcatzingo. It is readily apparent that the most common Middle Formative figurine type at the site was the C8, which made up 41 percent of the figurine population of that period. Ch1-2's rank second in quantity, comprising 16 percent of the figurines, and the other types hover between 0.2 and 6 percent.

The abundance of C8's contrasts sharply with this type's rarity or absence at other Middle Formative sites outside the Chalcatzingo–Río Amatzinac area (Grove, personal communication). This distribution tends to support the hypothesis (Grove et al. 1976: 1206–1207) that the C8 type was significant to Chalcatzingo and its immediate interaction area. It is also evidence of the greater in-

dependence of this area from the Valley of Mexico during this time. This idea is further supported by the importance of the Ch series of types, which were not found in the Valley of Mexico but also seem local to the Chalcatzingo area.

Eighteen C8 figurines were recovered from Telixtac (62 percent of the figurine assemblage there), but none were found in the limited Huazulco sample (see Table 14.1). The Telixtac C8's all occurred in Area I, the location of the site's "elite" residence (Chapter 22). This distribution suggests that outside of Chalcatzingo, the C8 type may have been present only in larger villages, such as Telixtac, and then only with the elite of those villages. This is speculation, however, and project surface reconnaissance collections contain too few figurines to test these hypotheses. The importance of C8 figurines at Chalcatzingo is discussed in greater detail in a later section of this chapter.

DISTRIBUTION OF MIDDLE FORMATIVE FIGURINES AT CHALCATZINGO

Tables 14.1 and 14.2 show the distribution of all head and body figurine types for each excavation area at Chalcatzingo. None of these areas failed to yield figurines, and thus it can be presumed that general figurine usage was not restricted to certain site areas. Within the excavation areas, Harlan (1979: 472) noted that figurines were most frequently associated with structure floors, burial fill, and ceremonial features, and were less common in general fill.

Since figurines were found on all site areas, the next step in this analysis was to determine whether they were more abundant at certain parts of the site than others. In order to control for time, only Middle Formative figurines were considered for this and further analysis. Be-

cause the volume of earth excavated differed from one excavation area to the next, each area had to be weighted to make the figurine numbers comparable. A ratio of the number of figurines (head type only) to m³ excavated was calculated for the different site areas (see Table 4.1). The ratios are presented in Table 15.1.

In calculating this ratio, some non-Middle Formative figurines were unavoidably included because this study derives from Table 14.1, which does not provide data on individual excavation units needed to separate out figurines from other periods. In order to reduce the error this procedure introduces, only certain Cantera phase terraces were selected for the analysis—PC (Strs. 1 and 2), T-4, T-11, T-20, T-23, T-24, T-25, and T-27. They were chosen because they have evidence of primarily Cantera phase structures, thus narrowing the time frame and context under consideration, and they all have a Middle Formative figurine sample size of at least fifty. These restrictions should render the data more comparable.

Table 15.1 shows that figurines are more abundant in some site areas than others, and thus are not equally distributed across the site. The ratio ranges from a low of .035 fig/m³ for T-4 to a high of 2.70 fig/m³ for T-24. Perhaps significantly, the "elite" areas of the site (PC, T-25, T-27?) do not have the highest quantities of figurines. Terraces 11, 20, and 24 all rank higher than any "elite" area in this respect.

T-24 has a ratio twice that of the next highest-ranking terraces (T-11 and T-20), indicating the radical nature of figurine frequency at this terrace, which is somewhat at a distance from the center of the site. It has been suggested (Harlan 1975) that the very high quantity of figurines on T-24 may be due to its location midway down the steep foothill slope of the Cerro Delgado. That is, many figurines may simply have washed down from areas above the terrace, areas which were not excavated. T-11 and T-20, which rank second and third in figurine quantity, are in somewhat comparable topographic positions, and the same explanation could apply. However, two terraces with the lowest figurine counts, T-4 and PC, are also in areas of heavy slopewash deposition. Thus, intrasite variation in figurine frequency may be significant for cultural rather than mechanical reasons.

An alternative, nonmechanical explanation which has been proposed for the

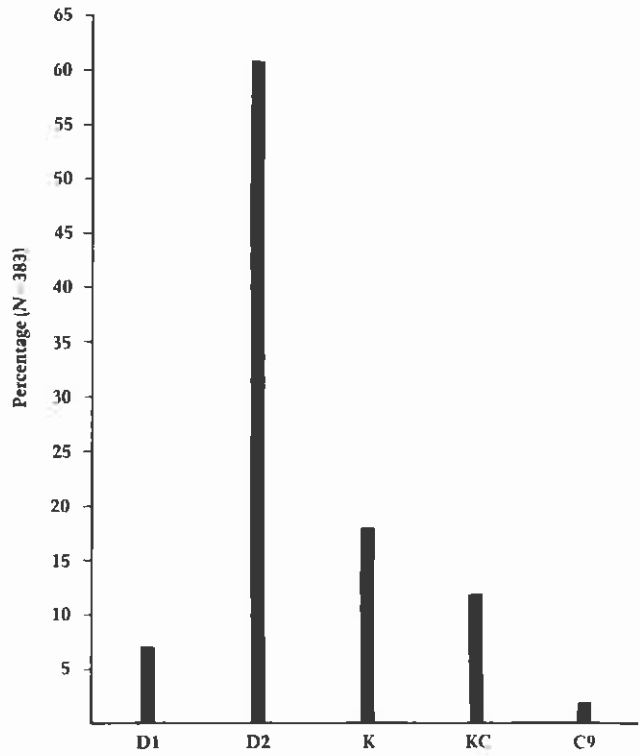


Figure 15.1. Frequency of Early Formative figurine types at Chalcatzingo.

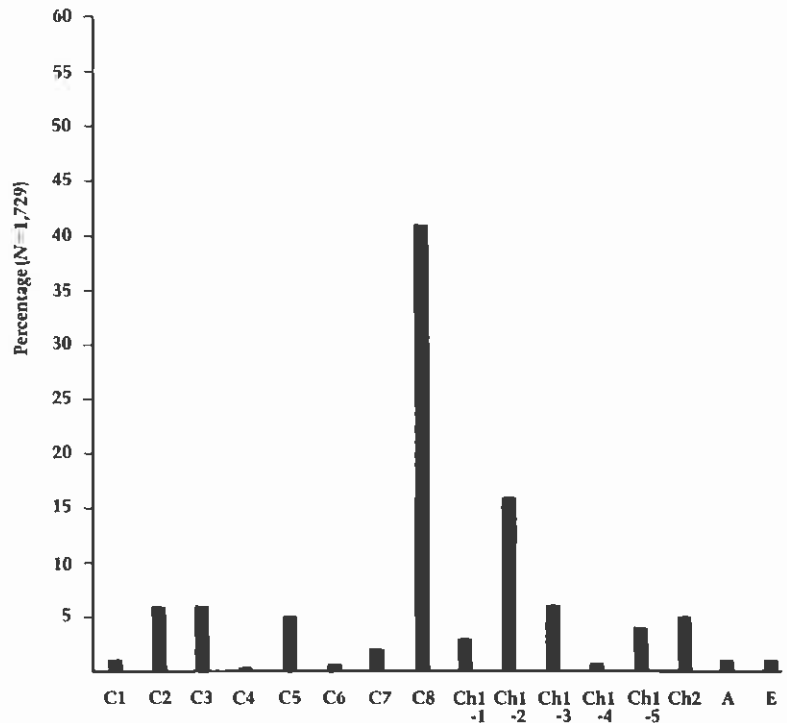


Figure 15.2. Frequency of Middle Formative figurine types at Chalcatzingo.

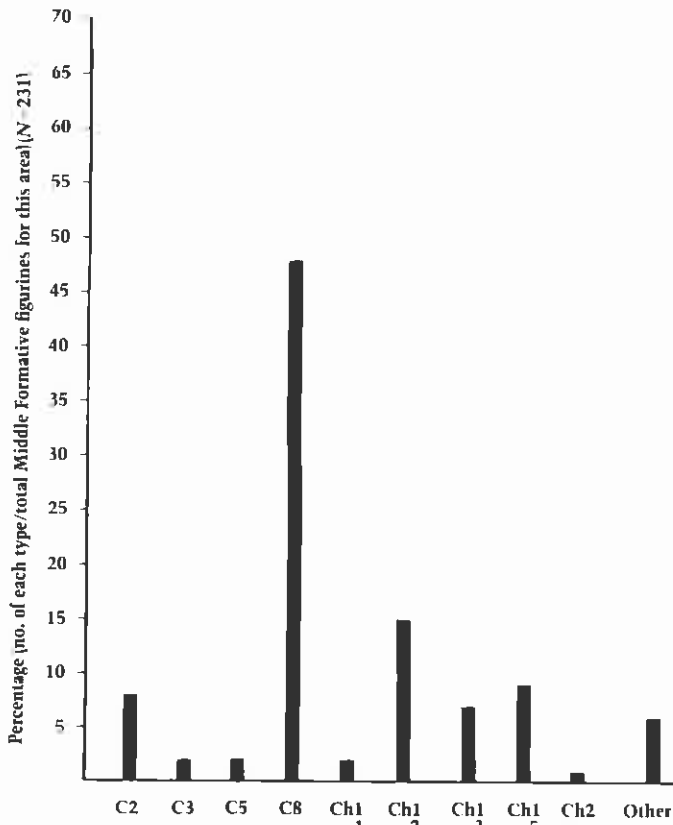


Figure 15.3. Middle Formative figurine population at PC Structures 1 and 2.

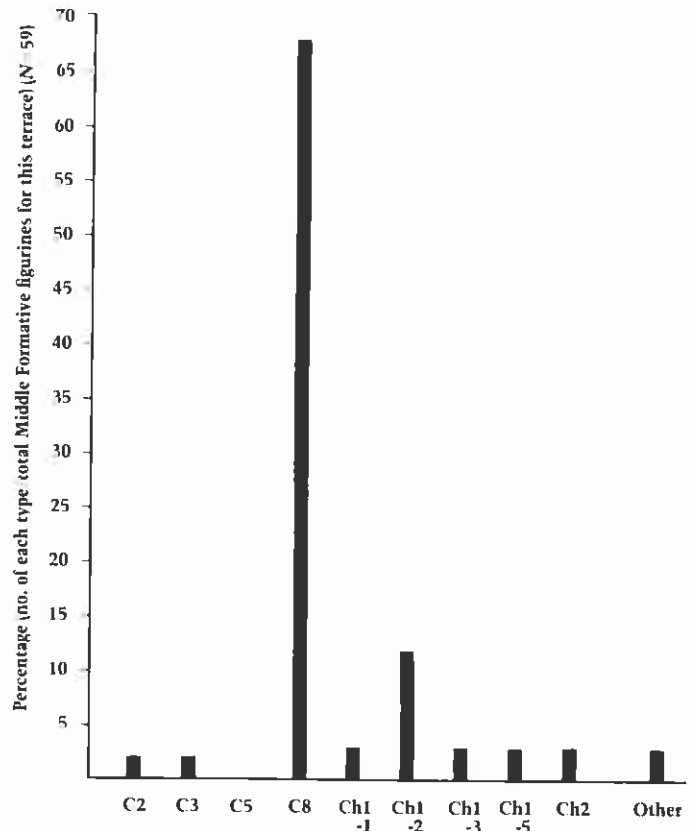


Figure 15.4. Middle Formative figurine population at T-4.

abundance of figurines on T-24 is that it was a locus of figurine manufacturing activities (Harlan 1979:488). The available data are inconclusive on this point. No kiln or evidence of firing activities was uncovered, and the T-24 figurines do not vary significantly from those of other terraces, e.g., by being broken during firing as opposed to normal breakage (Grove, personal communication). Thus, we are more likely dealing with concentrated figurine utilization and/or deposition on T-24, the purposes of which we cannot determine with the available data.

INTRASITE DISTRIBUTION OF FIGURINE TYPES

The next step in the analysis was to consider the relative percentages of the various figurine types present on individual terraces. The composition of the figurine population of the previously selected terraces was calculated by comparing the frequency of each type to the total number of Middle Formative figurines at each

terrace. The percentages obtained are displayed in Figures 15.3–15.10. Only Middle Formative figurine types with a sample size of fifty or greater were included in this part of the analysis: C2, C3, C5, C8, Ch1-1, Ch1-2, Ch1-5, and Ch2. Note that almost all of these types were present on the selected terraces. There seems to be no clear pattern of restricting particular types to certain site areas.

Table 15.2 summarizes the frequencies of each type in each terrace taken from Figures 15.3–15.10 and also gives the relative frequencies of all Middle Formative types for the entire site taken from Figure 15.2. This table shows that for the most part, the figurine assemblages on the different terraces are biased toward the C8 type, with Ch1-2's a distant second and the other types relatively low in frequency. This is generally the same distribution that was found for the site as a whole. It appears that with a few exceptions, the types are randomly distributed across the site. The major exceptions are the low representation of

C8's on T-11, the only terrace where Ch1-2 figurines outnumber C8's; the high frequency of C3's on T-20; and the very high frequency of C8's compared to the other types on T-4, T-24, T-25, and T-27.

In order to determine whether there were strong affinities between any two types in terms of their co-occurrence at the site, Pearson correlation coefficients were computed for the selected figurine types utilizing the samples from twenty-one terraces which had total figurine counts of twenty or more. A constant was added to the counts for the types, and their logarithmic values were taken to make the relationships appear more linear. The correlation coefficients displayed in Table 15.3 are derived from these transformed variables.

Table 15.3 reveals several fairly strong between-type relationships. Among the Ch1 series, the Ch1-5/Ch1-3, Ch1-5/Ch1-1, and Ch1-2/Ch1-3 correlations are high enough to warrant some comment. First, it is possible that the distinctions among the Ch1 types are not "real" in

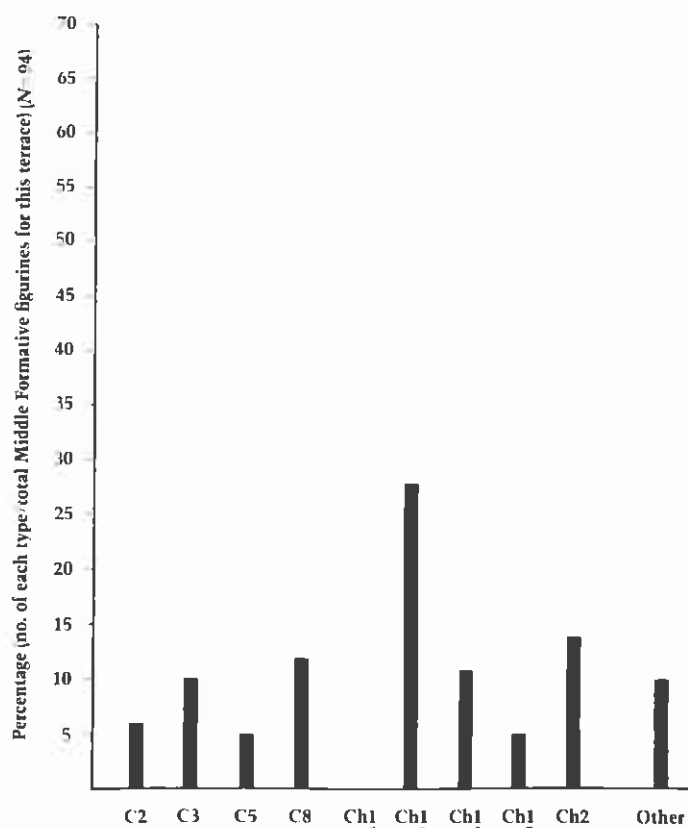


Figure 15.5. Middle Formative figurine population at T-11.

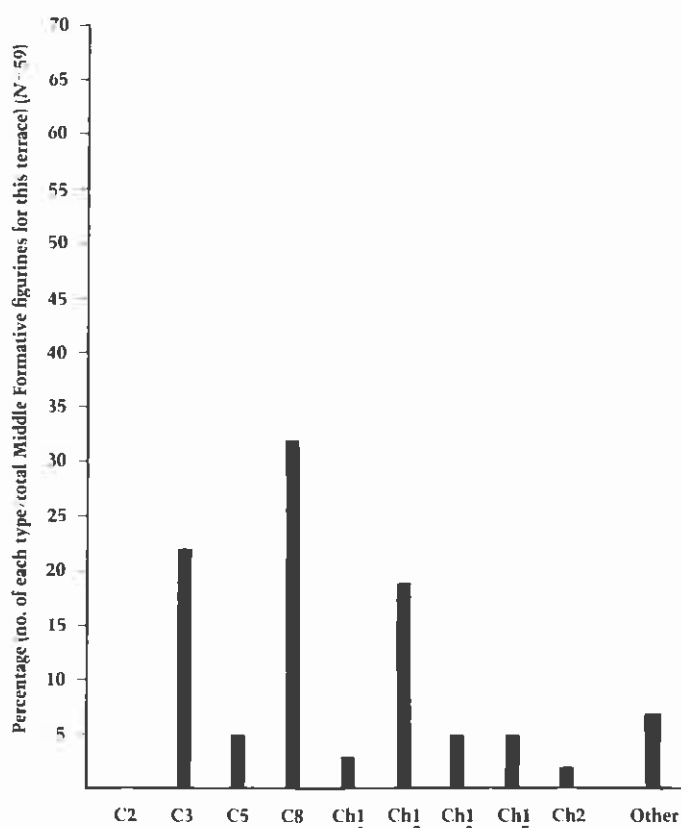


Figure 15.6. Middle Formative figurine population at T-20.

the sense of having been recognized by the people of Chalcatzingo. Instead, they may form a continuum of allowable variation in what was considered a single type. Or, alternatively, it is possible that they were recognized as different types but were used and/or deposited together in the same areas.

Within the C series, the correlation matrix shows a rather strong relationship only between C3 and C5 figurines. Paul Tolstoy (1979: Fig. 1) has shown that in the Valley of Mexico these two figurine types date to the Early La Pastora phase, corresponding to the Early Cantera subphase at Chalcatzingo. In the Valley of Mexico the C3 and C5 types postdate the C1 and C2 figurines. Thus, the correlation of the C3 and C5 types at Chalcatzingo may reflect a chronological factor, in that C3 and C5 may have been used together within a relatively limited time span during which some other types of the C series were not being used.

Comparisons between the C and Ch1 series reveals a fairly high relationship between the Ch1-5 and C5 types, al-

Table 15.1. Ratio of Figurines (Head Types) to Excavation Volume for Selected Terraces

Terrace	Figurines	Excavation Vol. (m ³)	Fig. m ⁻³
PC Strs. 1 & 2	272	374	0.73
T-4	73	209	0.35
T-11	98	72	1.36
T-20	74	55	1.35
T-23	111	130	0.85
T-24	119	44	2.70
T-25	124	124	1.00
T-27	93	97	0.96

\bar{X} = 1.16
SD = .70

Table 15.2. Summary of Middle Formative Figurine Population at Chalcatzingo (Selected Types)

	Figurine Types as % of Total Middle Formative Figurines for Each Area								
	C2	C3	C5	C8	Ch1-1	Ch1-2	Ch1-3	Ch1-5	Ch2
Total site	6	6	5	41	3	16	6	4	5
PC Strs. 1 & 2	8	2	2	48	2	15	7	9	1
T-4	2	2	0	68	3	12	3	3	3
T-11	6	10	5	12	0	28	11	5	14
T-20	0	22	5	32	3	19	5	5	2
T-23	6	3	1	44	6	29	4	2	1
T-24	6	6	2	54	1	12	6	4	5
T-25	5	3	1	66	3	8	2	1	8
T-27	0	5	2	55	0	23	6	0	3

Table 15.3. Correlation Coefficients

	C2	C3	C5	C8	Ch1-1	Ch1-2	Ch1-3	Ch1-5	Ch2
C2	1								
C3	0.4943	1							
C5	0.5534	0.7390	1						
C8	0.3267	0.4313	0.3737	1					
Ch1-1	0.6481	0.5741	0.6612	0.6367	1				
Ch1-2	0.3394	0.4606	0.4408	0.7002	0.5054	1			
Ch1-3	0.4610	0.5146	0.5644	0.6864	0.5552	0.7027	1		
Ch1-5	0.5613	0.5759	0.6954	0.6490	0.7588	0.5084	0.8005	1	
Ch2	0.3545	0.3522	0.4224	0.3855	0.4018	0.6199	0.5533	0.4191	1

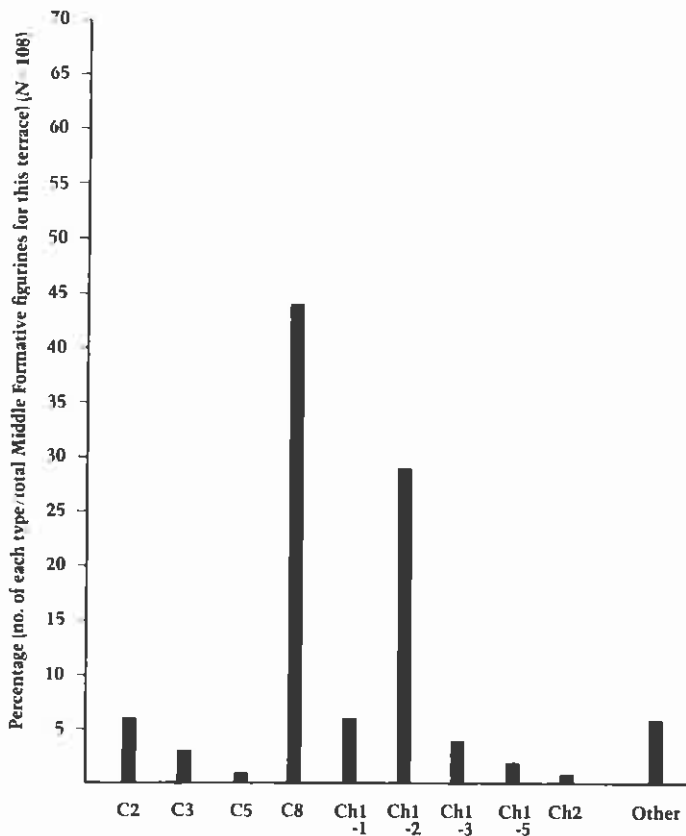


Figure 15.7. Middle Formative figurine population at T-23.

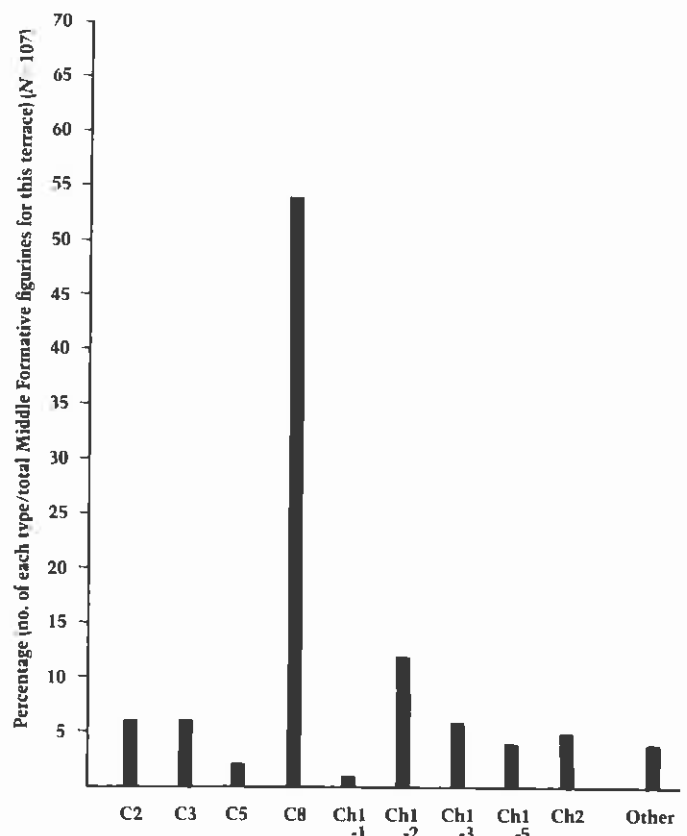


Figure 15.8. Middle Formative figurine population at T-24.

though not quite as strong as those previously mentioned. This seems to be the only case of a type in the Ch1 series co-occurring to a significant degree with its counterpart in the C series (although the samples for some other types were too small to be included in the analysis).

Finally, there is a good positive correlation between the C8 and Ch1-2 types. These two types are not from the same series and do not form counterparts of each other as do Ch1-5 and C5, for example. It is possible that these two types correlate because they functioned together in rituals or in other activities. However, the C8 and Ch1-2 figurines seem to be the numerically most important representatives of two different aspects of ritual activity, such that they may not necessarily have been used in the same rituals.

One can separate the figurines into two *kinds*—stylized and nonstylized (portrait)—based on superficial evidence. The Ch1-2 type is extremely stylized and rather carelessly made, a characteristic shared with other figurines of the C and Ch series with the exception of the C8 type. C8 figurines present great variety

and were probably portrait figurines, depicting the features of actual personages (Chapter 27). The C8 figurines are also well made, revealing more care and workmanship than any other figurine type. Furthermore, only figurines of this type received special surface treatment such as orange slip and/or polishing (Grove et al. 1976:1207).

Thus it is possible that the C8 figurines, probably made to depict the current ruler(s), were used for different purposes than the stylized figurines. For example, C8's may have been made for ritual centered on the cult of the ruler, a cult which began in the Early Formative among the Gulf Coast Olmec and is characteristic of the Classic Maya. The stylized figurines, on the other hand, may have been used in rituals of another kind, e.g., curing, calendrical celebrations, invoking other personalized or nonpersonalized supernatural powers. This is the same dichotomy that is exhibited by the site's monuments (Chapter 9): there are both portrait monuments down on the terraces and nonportrait depictions of supernatural/mythical events on the slopes of the Cerro Chalcatzingo (Grove 1981b).

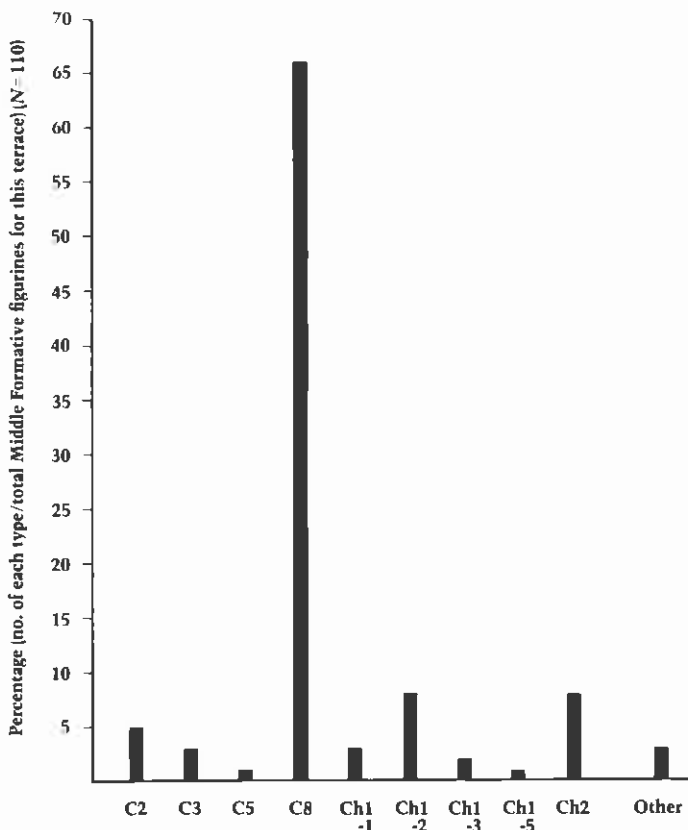


Figure 15.9. Middle Formative figurine population at T-25.

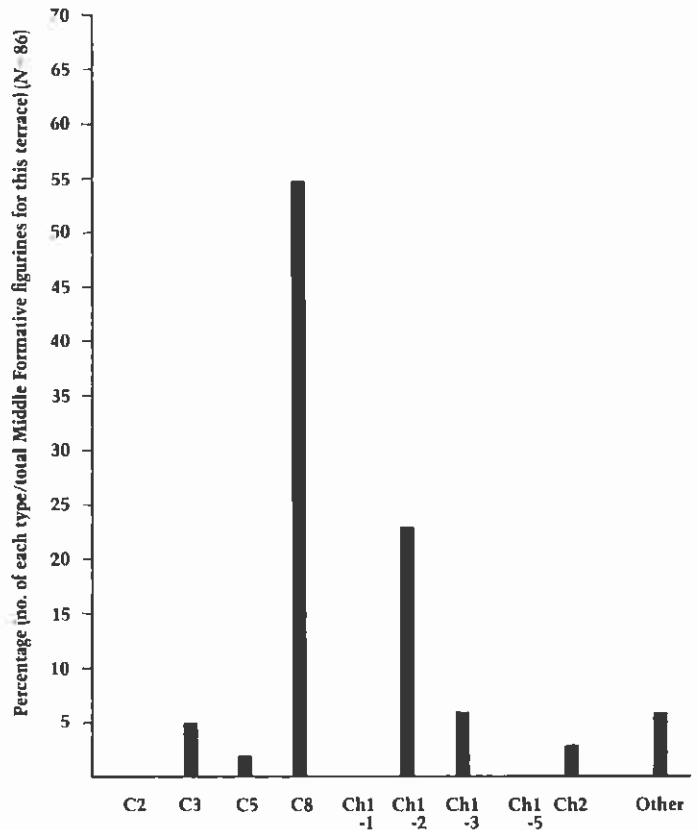


Figure 15.10. Middle Formative figurine population at T-27.

The fact that there is a good positive correlation between the C8 and Ch1-2 figurines implies that the two aspects of ritual were performed to more or less the same degree across the site, or at least that the broken figurines from each aspect were deposited on the same terraces. Two exceptions to this are T-25 and T-11. T-25 has the second highest frequency of C8's and the lowest frequency of Ch1-2's among the selected terraces (see Table 15.2). Thus, this terrace seems to have been a focus of ritual concerning the cult of the ruler; the altar and its interments of high-ranking individuals may very well have been involved as well in this cult. T-11, on the other hand, the site of a regular residence, has the lowest frequency of C8's and therefore high frequencies of several other types of both the C and Ch series, implying that rituals of the ruler cult were much less frequent here compared to the rest of the site.

On the whole, the overwhelming number of C8's at Chalcatzingo and their occurrence at nearby sites (e.g., Telixtac) demonstrate the pervasiveness of the cult of the ruler centered at Chalcatzingo. The stylized figurines are numerically best represented by the Ch1 series of types. Both the Ch types and C8's are local to Chalcatzingo and its immediate interaction area, and their manufacture and/or use may have been controlled by the Chalcatzingo elite (see Chapter 14).

Thus, Middle Formative Chalcatzingo can be contrasted with the Early Formative situation by a shift in figurine utilization and therefore in ritual using figurines away from the Valley of Mexico types toward a local tradition of stylized types, and by the influx of a new cult, the cult of the ruler, reflected in both portrait figurines and portrait monuments and probably coming from the Gulf Coast.

RESUMEN DEL CAPÍTULO 15

El análisis de la distribución de las figurillas se enfocó sobre las variaciones en frecuencia de los diferentes tipos, a través del sitio y en las terrazas individuales. Para el sitio como un todo, D2 es el tipo más común del Formativo Temprano (fase Amate), el cual comprende el 61 por ciento de los tipos del Formativo Temprano. Este es el mismo patrón que se encuentra para este mismo periodo en el Valle de México. Para el Formativo Medio, sin embargo, las figurillas de Chalcatzingo se separan del patrón del Valle de México, y sus dos tipos más frecuentes son el C8 (41 por ciento) y el Ch1-2 (16 por ciento), los cuales, ambos, se encuentran restringidos fundamentalmente a Chalcatzingo y a sus zonas más inmediatas. Otros tipos de las series C y sus contrapartes de Chalcatzingo se encuentran presentes sólo en muy pequeñas cantidades.

Este patrón de frecuencia de los tipos de figurilla del Formativo Medio es válido no sólo para el sitio como un todo, sino también para cada terraza individualmente, en donde los tipos aparecen estar distribuidos al azar dentro de los contextos de las casas de la fase Cantera. La distribución de la cantidad de figurillas (todos los tipos) es menos azarosa, presentando en T-24, por mucho, el mayor número de figurillas por volumen de tierra excavada, mayor que en ninguna otra terraza.

Los dos tipos más frecuentes, C8 y Ch1-2, representan dos maneras diferentes de figurillas—el de retrato y el estilizado. Es posible que hayan sido empleados en diferentes modos de ritual o en diferentes aspectos del mismo ritual, y presentan un patrón de co-ocurrencia, a través del sitio, bastante fuerte. Las figurillas de retrato, C8, las cuales son las más cuidadosamente hechas de todos los tipos, probablemente muestran a los gobernantes de Chalcatzingo y fueron usadas en asociación con el culto al gobernante, el cual también se encuentra presente en los monumentos del sitio, y es un culto que pudo haber tenido su origen en los centros olmecas de la costa del Golfo.