

*Household Shrines at Tikal, Guatemala: Size as a reflection of economic status **

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Excavations at Tikal, Guatemala, in 1962 and 1963 demonstrated the existence of a specific pattern of structures with the household groups at the site (Becker, 1971). Similar clusters have been noted at numerous other sites throughout the Maya realm (Becker Ms.). At Mayapan almost every residential group appears to reflect this configuration has been demonstrated (Becker, 1982). In fact, not only is the distribution of groups at Tikal containing a household shrine apparently random, but the size of the ritual structure itself varies greatly among the building clusters.

Recently, an attempt was made to undertake a statistical analysis of the residential distribution of persons of varying social class (or status) at the archaeological site of Tikal, Guatemala, based on the sizes of the residential units presumed to have been occupied by these Classic period Maya (Arnold and Ford 1980; see also Ford and Arnold, 1982). The authors noted that several previous publications about the Maya have included statements suggesting that the concentric zone theory of occupation applies to the sites noted in these respective statements (Arnold and Ford, 1980: 713-714). Their summary of these observations is useful in that it shows an historic trend in

* ABSTRACT: Excavations at Tikal, Guatemala have identified special function buildings within certain household clusters. Various attributes of these buildings at Tikal suggest that they served as household shrines («oratorios»). Some authors recently have attempted a statistical analysis of the spacial location of structures which were used in Classic period Tikal as a test of the urban concentric zone theory. However, errors in their methodology negate their conclusions, and correct information should be noted by Mayanists. Not all of the «shrines» at Tikal are vaulted, nor is the size of these structures uniform. These basic considerations suggest that the size of the household shrine is directly correlated with the economic position of the occupants, and need not correlate with distance from the center of the site.

the ways in which scholars have thought about Maya sites, which at no time appears to have been subjected to objective criticism. Their data from Tikal, however, is seriously flawed and warrants comment.

Arnold and Ford (1980: 714) note that Haviland (1963: 517) concludes: «Social differences ... correlate *roughly* with distance from the center of the site» (italics mine). The authors then proceeded «to test the hypothesis that residential proximity to central civic-ceremonial precincts correlates with status...». Several points in their article warrant discussion and have been reviewed earlier (Haviland, 1982; Folan et al., 1982). One particular set of assumptions may be of great importance in evaluating the entire procedure which Arnold and her colleague have chosen to test this hypothesis. This specific feature not only negates the Arnold and Ford thesis, but reflects a means by which status differences may be shown.

Inspection of a map of Tikal (Carr and Hazard, 1961) provides striking evidence that there are many obvious exceptions to the concentric zone theory at this ancient Maya site. In fact, some Mayanists believe that this map covers the *entire* civic-ceremonial precinct of Tikal, which in no way seems to reflect a concentric zoned distribution of social class as inferred from size of residential groups. The «Barringer group» in the southwestern sector of the site (Group 6B-2: Becker, 1982) and Group 7F-1 in the southeastern sector (Haviland, 1981) are quite large and apparently upper status residential complexes, but located at a considerable distance from the Great Plaza, which is generally inferred to be at the «center» of Tikal. These and other obvious exceptions, however, do not invalidate the concentric zone theory, as Arnold and Ford (1980) point out. Since house size and distance from center may occur in varying frequency, a statistical analysis definitely was warranted. However, errors made by Arnold and Ford in the basic assumptions regarding structures at Tikal, even before subjecting the data to analysis, have led to conclusions which cannot, therefore, be considered to be accurate.

In their evaluation Arnold and Ford (1980) have relied upon «absolute size» of groups as one of the features providing an archaeological manifestation of the status of the occupants. One would assume that the data on size alone taken from the map of Tikal (Carr and Hazard, 1961) could be used in their calculations, computed either as linear or as volumetric measurements: such as the diagonal length of a group or the total mass of stone in all the structures of the group. However, Arnold and Ford (1980: 715-16) include a series of other factors which generate considerable problems in quantification. Of these four other features besides building size which these authors consider, I wish only to comment on their use of the «Pre-

sence or absence of shrine / oratory», and their observations related to this category of structures.

The authors assume that these specific ritual buildings at Tikal, always situated on the east side of residential groups, are «usually of vaulted masonry construction...». an inference which is incorrect and which completely distorts their data base. Their inference does not derive from either the map (Carr and Hazard, 1961) nor my work on the subject (Becker, 1971). This problem is further complicated by the authors' erroneous assumption that these «presumed shrine structure are of nearly uniform size throughout the site» (Arnold and Ford, 1980: 717). Not only are these structures not generally vaulted, but they are by no means uniform in size. Nor are these shrines *significantly* better constructed relative to other buildings in their respective groups, as stated by these authors.

In fact, the shrines at Tikal vary widely in floor area as well as in the presence of absence of vaulting. The variations which occur in this class of building are so random in the large sample tested that I would not consider formulating any hypothesis regarding quality of construction (see Becker, 1971). Even close examination of the map fails to provide clues as to regularity in the distribution of these structures at Tikal.

The error which Arnold and Ford have made concerning the various construction features of shrines may be related to their error in using Wauchope's (1938) data as a reference point. From these earlier data they suggest that about one-third of the «housemounds» at Tikal had masonry superstructures. When Wauchope (1934, 1938) was conducting his pioneering work, housemounds of very small size rarely were detected. Thus, only those structures with the remains of vaulting, high building platforms, or large mounds resulting from the presence of interior benches of masonry generally were recognized as structures. The majority of the small structures identified by the expert and specialized mappers at Tikal (Carr and Hazard, 1961) would not have been detected by the mappers who conducted the Uaxactun housemound survey. However, I do not wish to evaluate aspects of the Arnold and Ford paper not related specifically to their assumptions regarding the shrines at Tikal.

The mistaken assumption that the oratorios or shrines located on the east of residential groups at Tikal were uniform in size and vaulting is the central error in the Arnold and Ford (1980) hypothesis. They also incorrectly inferred that the quality of construction is better for these buildings than for others within the same group. There is absolutely no direct evidence available to suggest that groups which include shrines were occupied on the whole by individuals of higher status than groups without shrines. This information can be docu-

mented by an analysis of the map, but would require verification through statistical analysis. Rather than relying on simple linear or volumetric measurements, as I suggested above, Arnold and Ford (1980) have added various other «criteria» in an attempt, one must presume, to improve their case. The presence of an additional but subjective factor in their calculations, in the form of «labor investment», only obscures the hard data, which remains as follows: (1) the absolute size of the individual buildings, and the groups of which they are part, as estimated from the map or provided from excavations, (2) the presence or absence of vaulting; which can be accurately inferred through use of the map but also known via excavations, (3) relative sophistication of construction of specific structures, as evaluated by excavators. These data do include aspects which are sufficiently subjective to create analytical problems, and raise the very important question of «culture-bound» theory formulation. At this point we should be seeking to improve our data base and our analytical techniques, not seeking to increase our subjective evaluations of these situations.

The quantification and evaluations made by Arnold and Ford incorporate unnecessary effort which detract from the basic evidence. A more direct and reliable approach to the data would be appreciated. *Not only do these inferences in their work tend to confuse the issues, but they also create «data» which future researchers should realize are not derived from direct observations.* In formulating theories or in testing hypotheses we must maintain close attention to the actual data base, and not add inferences which confuse the basic issues or the factual information.

These concerns lead us to make note of the wide range of variation in the size, configuration, and quality of the architectural groups at Tikal. Most of these clusters of buildings must have been residential compounds for extended family units. The great differences among these groups to a great degree must reflect differences in social class within the site. These differences do not appear to be correlated with spatial distance from the center of Tikal which is believed to be at The Great Plaza.

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