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THE EVOLUTION AND ORGANISATION OF PREHISTORIC SOCIETY IN POLYNESIA

Edited by Michael W. Graves and Roger C. Green

19

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MONOGRAPH

SAMOAN *TIA 'AVE* AND SOCIAL STRUCTURE: METHODOLOGICAL AND THEORETICAL CONSIDERATIONS

David J. Herdrich and Jeffrey T. Clark

By the time of western contact, societies of Polynesia varied in their characteristics and levels of complexity. One characteristic they did share, however, was internal and external rivalry and competition. In some cases, this competition led to more pronounced social stratification and centralisation of power. While the hierarchically ranked society of Samoa was quite complex, an examination of monumental structures (often referred to as star mounds and termed here *tia 'ave*) appears to support Goldman's (1970) position that late Samoan society had taken a different, more decentralised trajectory. In the phrasing of Samoan scholar Malama Meleisea (1987:1), traditional politics in Samoa were based on "a unitary system of dispersed power."

A generally accepted characteristic of complex societies is the presence of monumental architecture. A structure can be regarded as monumental if its size and elaboration are excessive for its practical function (Trigger 1990:119). In the Samoan archipelago, *tia 'ave* are examples of this. Green (this volume) observes that such monumental communal structures are not visible on the archaeological landscape of Polynesia prior to the 10th to 12th centuries A.D. It is important to examine such structures because, as Kirch (1990), Green (this volume), and others have shown, monumental architecture has the potential of providing evidence relevant to understanding the structure and evolution of late prehistoric social systems in Polynesia.

Recent information gathered on *tia 'ave* has allowed for the re-examination of ideas concerning their structural characteristics, distribution, function and categorisation (Herdrich 1991). In this paper we will summarise those ideas, then focus on methodological problems concerning various aspects of the research on the structures, and suggest a possible relationship between these monumental structures and Samoan social evolution that was not discussed by Herdrich (1991). Though much additional excavation must be done on these features, the suggested relationship provides a working outline of critical aspects of a social evolutionary scheme for late Samoan prehistory.

TIA 'AVE STRUCTURES

Previous investigations in Samoa identified a class of structures that, due to their shape, were referred to as "star mounds" (e.g., Frost 1978; Green and Davidson 1969, 1974) or, alternatively, as "cog mounds" (Jennings *et al.* 1976; Jennings and Holmer 1980). Although the term 'cog mound' was introduced because most of these structures appear to "resemble gears or cog wheels" (Holmer 1976:18), 'star mound' has gained wider acceptance and use. Drawing from Davidson's (1974a) earlier work on these and related structures, Herdrich (1991) has argued that the constructed term *tia 'ave* be used to refer to any rock or earthen mound (*tia*) with one to 11 ray-like projections (*'ave*). Other characteristics of *tia 'ave* are that they have a surface area of at least 50 m^2, exhibit structural closure by either natural or man-made boundary markers, and were constructed in forested rather than residential areas. Their probable primary function is suggested as pigeon-catching (Herdrich 1991). The term *tia 'ave* encompasses the star/cog mounds as well as other 'specialised sites' discussed by Davidson.

These distinctive mounds have been found only in the Samoan archipelago (Fig. 6.1). Thus far, one *tia 'ave* has been found on Manono, eight have been reported on Savai'i, 56 on 'Upolu (Green and Davidson 1969, 1974; Jennings *et al.* 1976; Jennings and Holmer 1980), 76 on Tutuila (Best *et al.* 1989; Buck 1930; Clark 1980, 1989; Clark and Herdrich 1988; Frost 1978; Leach and Witter n.d.; Leach and Witter 1987), and, reported here for the first time, three on Ta'u. Of the Tutuila features, 62 were found by the authors during systematic surveys of the ridge tops throughout the two eastern-most counties of the island (East Vaifanua and Sa'ole), and slightly into a third county (Sua) (Fig. 6.2). The three Ta'u examples were discovered during surveys of the ridges above Faleasao village (Fig. 6.3).

The structures display considerable variation (examples of 'typical' *tia 'ave* forms are presented in Fig. 6.4). Some are circular while others are elongated, with the latter

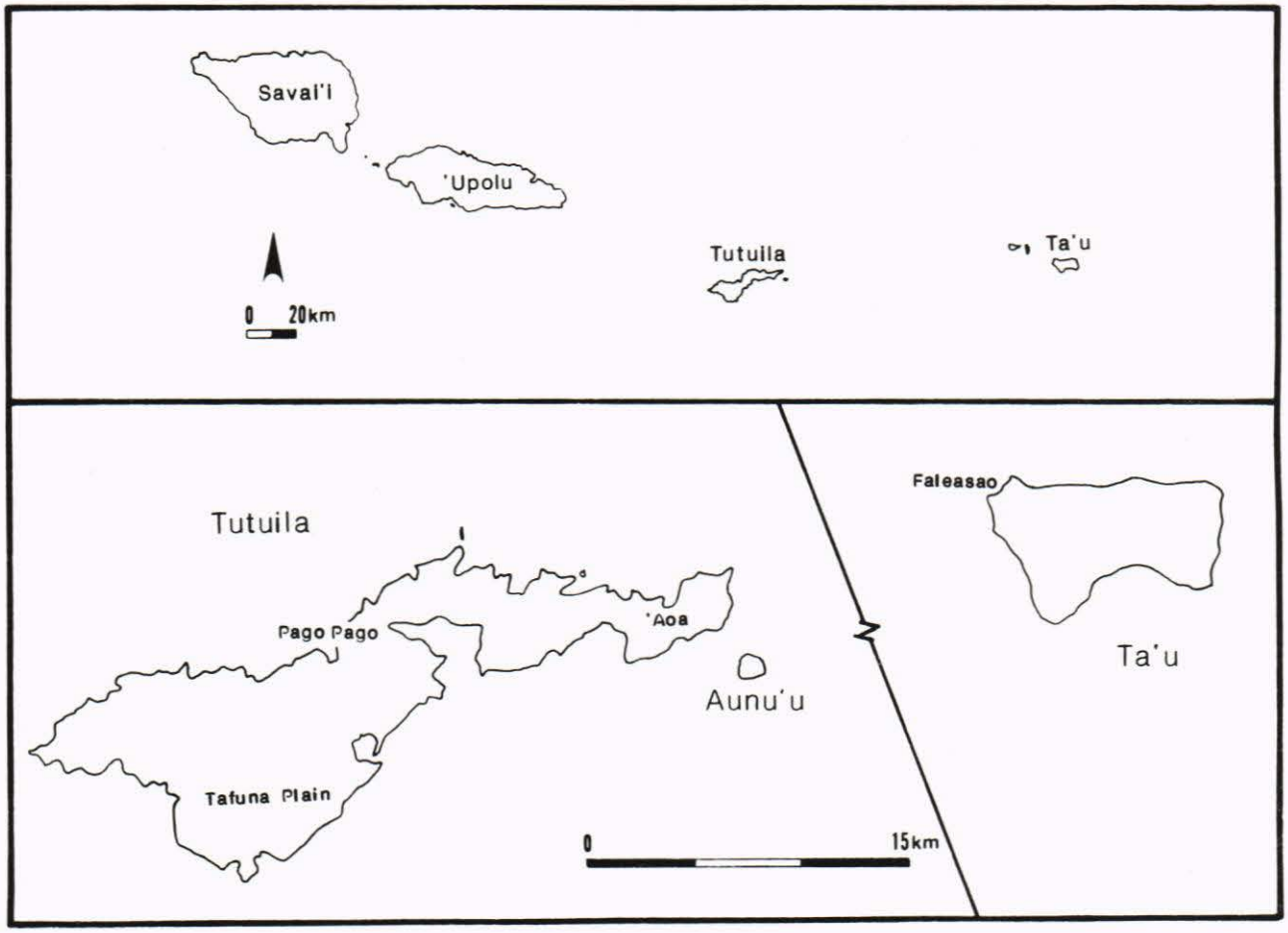

FIGURE 6.1. Upper map: the main islands of the Samoan archipelago. Lower maps show Tutuila and Ta'u Islands.

form as a product of narrow ridge-top locations. The mounds range in diameter or length from 6 to 30 m, but are generally 10 to 15 m in size. The heights of the structures vary from 0.2 to 3 m; most of the structures on the ridge tops are less than 1 m high but those on the Tafuna Plain are 2-3 m in height. Structures with earthen interiors are frequently faced, fully or partially, with basalt boulders, although in some cases coral slabs or combinations of the two materials are present. In some instances the rays are formed entirely of soil with no rock facing, and in other cases the entire mound is built almost completely of rock. The differential use of rock appears to be based on the local availability of boulders. For some structures the 'mound' was constructed simply by forming a series of rays along the edges of a ridge top, as well as on one or both ends, with little additional interior fill.

Tia 'ave on peaks and on flat ground display full closure by rays, while those on the ridge tops often lack rays on one or more sides. Where the edge of the ridge top is sheer, the bluff provides the boundary of the *tia*, and in other cases the up-slope end is marked simply by a linear ditch that crosses the ridge. At some structures ditches provide better definition of the rays. At one site where the ridge top is comparatively steep, the up-slope ray was dug into the slope, forming a negative image of the ray and thereby maintaining a roughly level surface. On several structures depressions and/or stone rings are present, usually slightly off-centre or, in a few cases, off the mound entirely. Occasionally, boulder alignments are found on or near the *tia*.

Davidson (1974a) has argued that circular 'star mounds' were related to single-rayed mounds and multi-rayed non-circular mounds. We have recently identified two compound *tia 'ave* that provide support for assigning multi-rayed and single-rayed *tia* to the same category. Both of the compound *tia* consist of a combination of a single-rayed structure and a multi-rayed structure; in one case they are linked by a path and in the other they are connected by a stairway.

The latter of these compound *tia 'ave* is located on the Tafuna Plain of Tutuila and has not been described

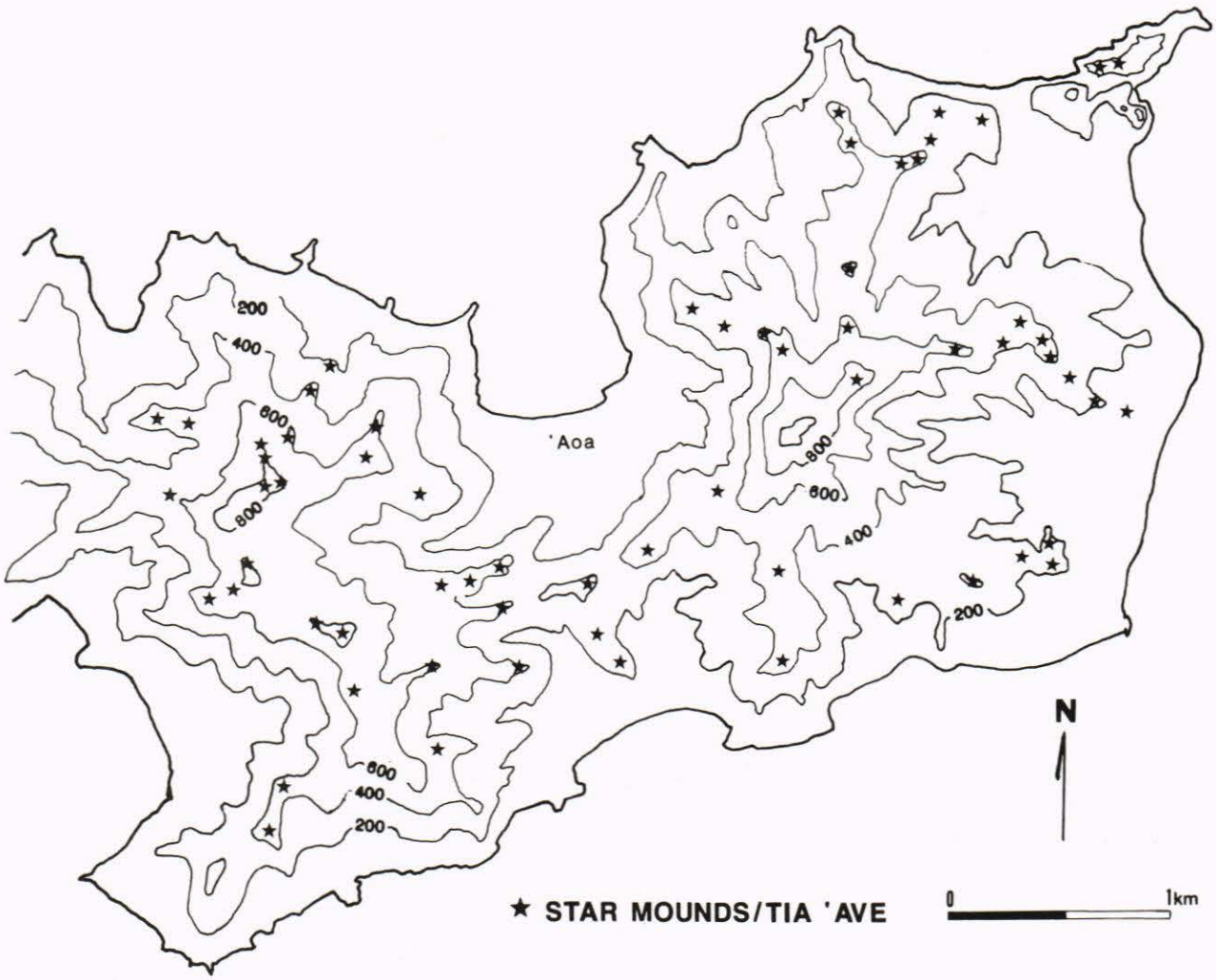

FIGURE 6.2. Distribution of *tia 'ave* on the eastern end of Tutuila, American Samoa. Contour interval 200 ft (61 m).

previously in detail. This *tia 'ave* is composed of two large, differentially-elevated sections, with a combined length of *ca* 34 m (Fig. 6.5). The western section is the highest part of the mound, measuring *ca* 3 m in height. This section has five rays that project outward from the platform's centre. The western-most ray has been greatly disturbed by rock-robbing for recent constructions. The eastern-most arm extends into a stairway that leads down to the second, lower, section (1.5 m high) of the *tia 'ave*. The distance from the end of the western arm to the end of the eastern one is *ca* 11 m.

The lower section is a complex structure having six surface features. Feature 1 is the stairway connecting the two sections, hereafter referred to as the upper and lower tiers. The lower tier has a roughly triangular, or ray-like, shape. The apex of the triangle points toward the upper tier and is the area where the two tiers are connected by the stairway. Feature 2 is a prominent boulder, which appears to be part of an *in situ* lava flow that composes part of the south wall, and sticks up about one metre above the lower tier's surface. Feature 3 is a stairway in the south-east corner of the lower tier. Feature 4 is a low rectangular platform measuring 1.8 by 1.7 m, and it has soil/cinder/rock fill retained by a single outer course of boulders.

Feature 5 is a triangular platform resting on top of the lower tier. It is *ca* 5 m in length, 4 m across at the back and tapers to an apex. It is constructed of an outer facing of rock two courses high, with a fill of black cinders and soil. In the south-east corner of the feature is an indentation that appears to be an entrance. Also, on the south wall there is a large

boulder that projects *ca* 0.3 m above the platform surface. In general, this platform feature resembles what Herdrich (1991) has called single-rayed *tia 'ave*. If one considers the platform shape, the entrance and the boulder on the south wall, this feature seems to 'model' the larger tier on which it rests. The significance of this 'modelling' is unknown.

Feature 6 consists of two pieces of lava that seem to have been purposely placed one above the other. The upper one is embedded into the surface of the lower tier and is located just north of the mid-section of the single-ray *tia 'ave*. The exposed portion of it faces roughly north-east. Its shape is distinctive having three projecting 'teeth' or 'rays'. This rock covers a small passageway that extends at least 1.2 m into the lower tier. In this entrance and extending partially out of it is a long linear stone. The purpose of this feature is unknown.

Although we are confident with our definition and categorisation of *tia 'ave*, there remains a significant methodological problem: a reliable chronology is lacking for these structures. There is good reason to accept Davidson's (1974a:243) proposal that such structures in Western Samoa fall into the late prehistoric time frame, and that the American Samoa structures are of similar age. Hewitt's (1980) excavations at Mt. 'Olo, 'Upolu, indicate that one *tia 'ave* was constructed within the last 400 years, and Holmer's (1976) excavations at another Mt. 'Olo *tia* indicate construction sometime from about A.D. 1420 to 1640. For Tutuila, Best *et al.* (1989:28) report a radiocarbon date of <250 B.P. from the base of a ridge-top *tia 'ave*.

However, without a chronology for the different types of mounds, one cannot determine what their evolutionary relationship is to one another. Is the variation synchronic or is there diachronic change from, say, single-rayed mound to multi-rayed? Are *tia 'ave* related to mounds that do not exhibit rays, such as examples found in Western Samoa and on the Tafuna Plain of Tutuila? The answers to these questions can only come with much additional testing designed to date significant numbers of mounds representing the full range of structural variability.

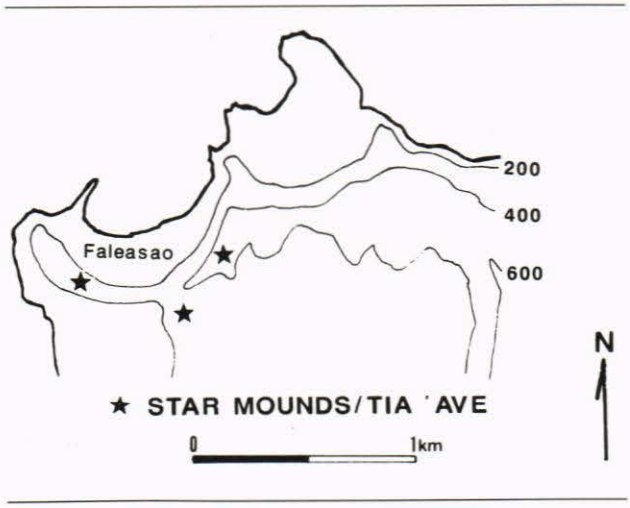

FIGURE 6.3. North-eastern Ta'u Island, showing the locations of the three known *tia 'ave* in Manu'a. Contour interval 200 ft (61 m).

DISTRIBUTION

In our work, we have discovered a distribution pattern on Tutuila that places these mounds in forest locations, either on the ridge tops or in the unpopulated lowland rain forest of the Tafuna Plain (Clark and Herdrich in press). The distribution of *tia 'ave* is not uniform, either within an island or from island to island. In eastern Tutuila, for example, we have found 6.25 *tia 'ave* per km^2 in East Vaifanua County but only 4.15 *tia 'ave* per km^2 in Sa'ole. Undoubtedly, the number of *tia 'ave* on Tutuila is very high indeed. Frost (1978:250), citing Davidson, has argued that due to the large number of structures in eastern 'Upolu and Tutuila, the origin of such mounds was in that area and they were not used in large numbers in Western Samoa. While *tia 'ave* are now known for Manu'a, they are not common. This suggests that *tia 'ave* originated in central Samoa. And while pigeon-catching was practiced in Tonga, Niue and 'Uvea, rayed mounds of the type discussed here have only been reported for Samoa.

However, our findings also raise the very real question of sampling error. Our work has shown that many of these structures are extremely low. A mound that is only, say, 0.2 m high and covered in dense vegetation can easily be overlooked. We, in fact, initially walked over a few of these structures and only found them on a second pass of an area. In addition, while the Western Samoa surveys covered more total area than our surveys, they did not cover as many ridge tops as the eastern Tutuila surveys, especially in Savai'i, Samoa's western-most island (see Green and Davidson 1969:Figs. 1, 28, 29, 30, 31, 32, 33, 34, 35). Thus, the actual distribution of *tia 'ave* in the Samoan archipelago is yet to be detailed.

This observation should not be taken lightly. Hunt and Kirch (1988:165-166) claim that *tia 'ave* (referred to as 'star mounds') are absent from Manu'a. Their reasons for this claim are that: a) their informants had denied knowledge of *tia 'ave*, b) there are no references to *tia 'ave* in the 'rich local traditions', and c) in spite of extensive survey they had not found any *tia 'ave*.

While Manu'a does have unique cultural traits that distinguish it slightly from the rest of Samoa (Mead 1930),

we question the Hunt and Kirch claim concerning *tia 'ave* for three reasons. First, our informants on Tutuila also had denied knowledge of any *tia 'ave*, yet we found 62. Second, while there are no references specifically to star-shaped mounds in the local traditions of Manu'a, there are references to mounds, or *tia*, being used for pigeon-catching on Ta'u (Hunt and Kirch 1987:26; Kramer 1902-3:1:425; Moyle 1981:173). Third, their survey was primarily coastal, while the distribution pattern we have discovered indicates that *tia 'ave* are predominantly on ridge tops or sometimes scattered in lowland forest. Given these considerations, we surveyed the ridge tops above the village of Faleasao on Ta'u on three afternoons with the explicit purpose of checking topographic features likely to support *tia*. This resulted in the discovery of three *tia 'ave*.

The first of these *tia 'ave* sites is on a prominent point at 148 m (485 ft) above sea level, on the south-east portion of the ridge arc. The *tia 'ave* is badly disturbed and the vegetation is dense over most of the area. There are five rays: four poorly defined rays are on the south side and a faint front ray. On the north side there is only the crest of a sheer ridge. The front ray is low (*ca* 0.2 m) with a few rocks as facing. The side rays are broad, the indentations are mild and occasional rocks are along the edges. The best-defined ray is the last one, which appears to have a facing of crudely stacked rocks and is about 1-1.2 m high. The structure is approximately 32 m long and several metres wide. At the rear (north-east) of the structure the ridge top rises abruptly.

The second *tia 'ave* was found on a high point at 82 m (270 ft) above sea level, on the south-east end of a ridge-top high-point. The site is actually a double structure, with a small front *tia 'ave* and a larger *tia 'ave* immediately up-slope. The first is *ca* 22 m long and the front ray is marked by two very large basalt boulders on edge. There are three rays on the north-east side, and the edge of the indentation between the last two rays has four chunks of coral; otherwise there is no definite facing to the rays. The south-west side of the structure is marked by the crest of a steep drop. Near the middle of the structure is a short (3 m) alignment of rocks, some placed on edge.

The larger upper *tia 'ave* is *ca* 35 m long and up to 11 m wide. The front ray begins at, and slightly overlaps the rear of, the first structure. A couple of large boulders and two big chunks of coral mark the face of the ray. There are six rays on the north-east side and the ridge crest again constitutes the south-west side. Occasional water-worn boulders and pieces of coral are found along the ray faces and on the top and just off of the structures. Atop the *tia*, near the rear, is a short (less than 2 m) alignment of rocks and slabs on edge, with a perpendicular slab on edge at the rear of the alignment. This may mark a grave, and if so it may well post-date the *tia*. There may be an additional two or three slumping rays at the rear of the identified structure, but there was no rock or coral facing seen and the vegetation cover did not allow for an adequate view.

The third *tia 'ave* is on the ridge directly behind and above Ta'u marsh at an elevation of *ca* 95 m (310 ft). The *tia* has six well-formed rays and a possible seventh. The *tia* is roughly oval in shape, but it did not exhibit complete closure by rays. The rays were about 0.5 m high and made of two or three courses of stacked boulders. The *tia* was approximately 25 m in length and 10 m wide. Dense vegetation and time constraints did not allow for a more detailed assessment.

The presence of *tia 'ave* on Ta'u in expected localities inland illustrates the predictive power of the currently known distribution pattern. However, further empirical work is called for to record the exact distribution of these structures. Such work is important as it may yet turn out that particular variations are associated with geographically distinct areas. This may reflect competition between political groups and provide us with data on the evolution of these important features. Without such data, a clear understanding of the origin and evolution of these structures cannot be fully described and explained.

FUNCTIONS

Various hypotheses have been suggested as to the function of *tia 'ave*. They postulated that the mounds functioned as burial features, house platforms, boundary markers, defensive structures, pigeon-catching mounds and ritual platforms. Herdrich (1991) has marshalled extensive evidence from the ethnohistorical and archaeological literature and finds a joint pigeon-catching and ritual site hypothesis to be the strongest working hypothesis. Rather than recapitulate that discussion here, we will mention four pieces of archaeological evidence that ties pigeon-catching to *tia 'ave*.

A kava-grinding stone was found by Peters (1969) at one *tia 'ave*, and a preliminary kava ceremony was said to have occurred at pigeon-catching competitions (Pritchard 1866). Cairns on a *tia 'ave* in Savai'i, one on each arm, have been interpreted as seats by Scott (1969:72, 86, Fig. 36), and Buck (1930:535) notes that pigeon-catching was the only activity in Samoa which involved the use of seats (*nofoaga*). Stone circles on some mounds may be the enclosures reported by Buck (1930:539) to have served as cages for captured pigeons. A pit in one *tia 'ave* (Scott 1969:72 Fig. 36, 86) resembles those that served as decoy stations on Tongan pigeon-catching mounds (Ferdon 1987;

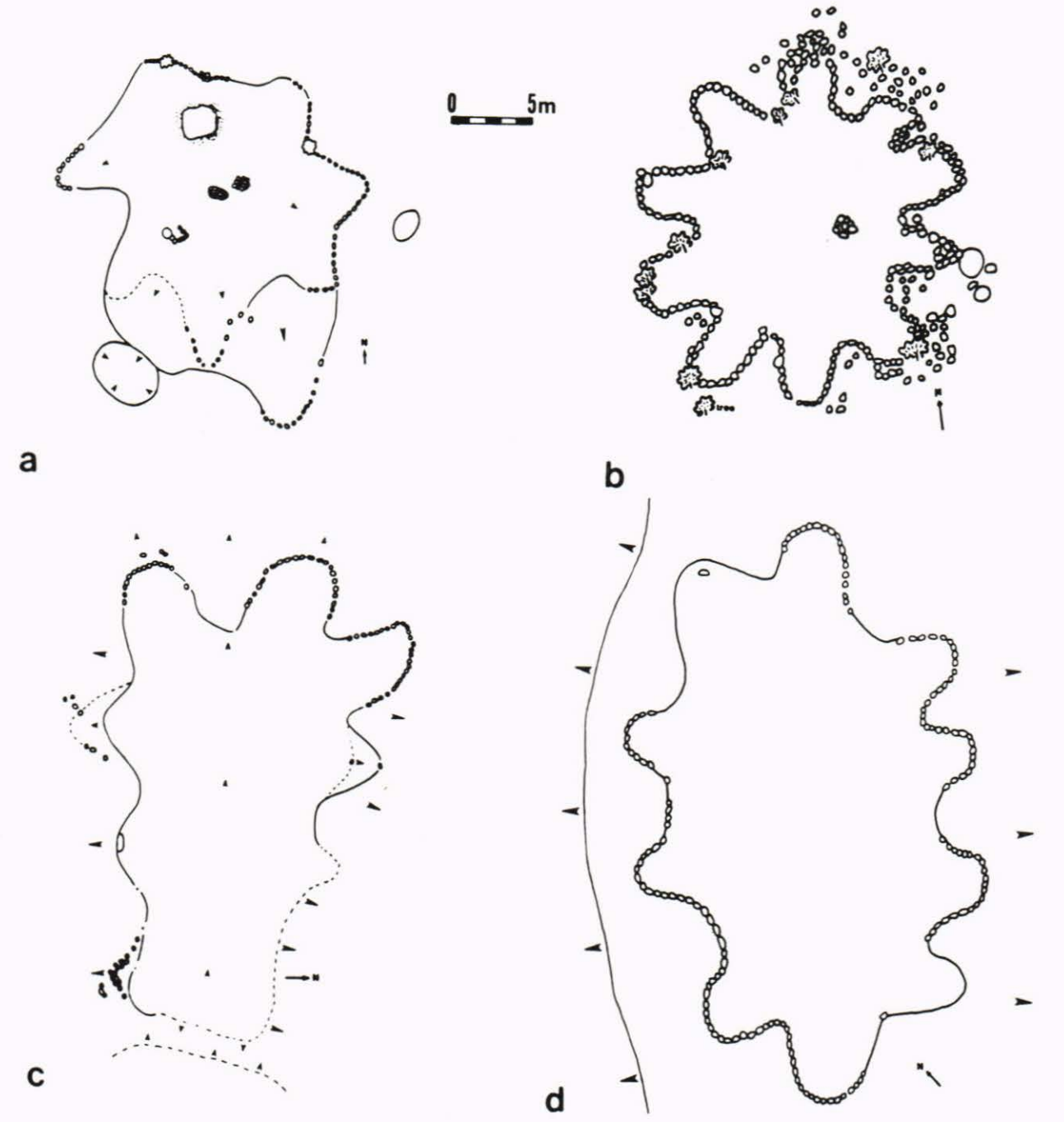

FIGURE 6.4. Four examples of 'typical' *tia 'ave* from American Samoa: a. AS-21-18; b. AS-22-9; c. AS-21-19; d. AS-22-12.

Kirch 1990; McKern 1929). We further note that excavations have ruled out the burial and house platform hypotheses, while the boundary marker hypothesis has no supporting evidence. Furthermore, though some mounds may also have had a defensive role, the vast majority clearly did not.

Since Davidson's (1974a) pioneering work, the pigeon-catching/ritual hypothesis has not been explored in depth. Pigeon-catching was an extremely important chiefly sport in Samoa. It had a five-month season from June until the end of October which involved nearly the entire population, who followed their *matai* (chiefs) into the forest to observe and

support the competition. *Tia seu lupe* (or pigeon-catching mounds) are where the sport and various rituals were said to have occurred. In addition, there is some evidence that ties pigeon-catching mounds to divination and healing rituals (Davidson 1974a:205; Moyle 1974:165), and to marriages of *matai* (Herdrich 1991).

Of the mounds that have been excavated, no specific methodology designed to test the pigeon-catching/ritual hypothesis has been employed. Past excavations were at either stone mounds, which would not preserve the necessary evidence, or earth- filled mounds that were investigated in a way that provided a test for the burial and residential hypothesis but were ineffectual with regard to the pigeon-catching hypothesis (Holmer 1976; Peters 1969).

Future excavations need to be sensitive to these possibilities and archaeologists need to carry out excavation strategies designed to find additional remains related to pigeon-catching. For example, if hunting blinds (*fale seu*) had been set up on the rays of the mounds, the most likely location for the small posts would have been on the sides of the rays, but so far, in earthen mounds where there would be a possibility of finding post molds, the placement of excavation trenches has been through the middle of the rays (Best *et al.* 1989:21, Fig. 4.1; Peters 1969:211, Fig. 90). Clearly, more ethnohistorical research needs to be done on the rituals that may have occurred on these mounds in order to find possible archaeological correlates.

Understanding the function of *tia 'ave* is a key component of constructing an evolutionary understanding and explanation of these structures. Given current limitations on knowledge of the function or functions that these structures supported, it is impossible to decide or investigate what selective pressures may have influenced their evolution. In addition, even if one can establish a chronology and trace the structural modifications through time, one cannot be certain that the most recent function of the structures extends back to their genesis.

In an elegant paper that discusses the concept of "exaptation" (or preadaptation), Gould (1985) demonstrates that structural continuity through time cannot rule out the possibility of diachronic functional shifts. He argues that the assumption of functional continuity may have blinded us to understanding the evolution of complex biological structures. Certainly the same potentially applies to units of social structure and to architectural structures.

Gould and Vrba (1981) argue that it is useful to distinguish between a structure's "function" and "effect". A structure "built by selection for its current role" is said to have a function, while the "operation of a useful character not built by selection for its current role" is labelled an effect.

If *tia 'ave*, at the point of European contact, served as pigeon-catching mounds and had ritual functions, one needs to ask if this was always the case. Was one the initial function and the other a later effect? With regard to the possible defensive role of some mounds, was their primary function defensive or did they function primarily as pigeon-catching mounds, and in cases where structure size and position gave them a defensive effect, were they also used in such a manner? Or was there an entirely different initial function that we have not yet explored?

These questions also extend to any symbolic functions that these structures may have served (Note 1). We believe it is a mistake to assume, as Kirch (1990) apparently does, that the symbolic function of a "monumental" structure, such as *tia 'ave*, is solely and necessarily to reflect and support the position of the dominant social structure. Such an assumption robs us of any evolutionary understanding of social change and the role of symbols in social change. In this regard, Gailey's (1983:243-244) question is important for *tia 'ave*: why are all of these supporting rituals necessary if the dominant social structure is all encompassing and shared? Without empirical exploration of the symbolic allusions tied to structures such as star mounds, we cannot be certain that they do indeed represent the dominant social scheme, especially given the extensive variation present. Furthermore, while a particular structure may support symbolism that reinforces the dominant social structure, this may only represent a later effect of that symbolism. The function, for example, of early Christian symbolism was certainly not to support the dominant social structure imposed by Rome, though it obviously did so by the time of the Holy Roman Empire.

In addition, there is an inherent variability within symbolism: there is not just one symbolic message, but an indefinite number of possible competing interpretations (Keller and Lehman 1991; Lehman 1978; Wessing 1978). As Wessing (n.d.) points out, "as with the varied genetic make-up of individuals in a population, this variation in mental constructs gives the population great flexibility when faced with varied situations." In other words, "individual creations of reality ('individual versions of the "common" culture') are adaptive in the face of social change" (Keesing 1974 cited in Wessing n.d.).

'Exaptation' may also have an important role here. As Gould and Vrba (1981) define exaptation it can refer to "a character, previously shaped by natural selection for a particular function (an adaptation) which is coopted for a new use, or to a character whose origin cannot be ascribed to the direct action of natural selection (a nonaptation), which is coopted for a current use." Much of symbolism seems to arise as a nonaptation (or as more popular usage

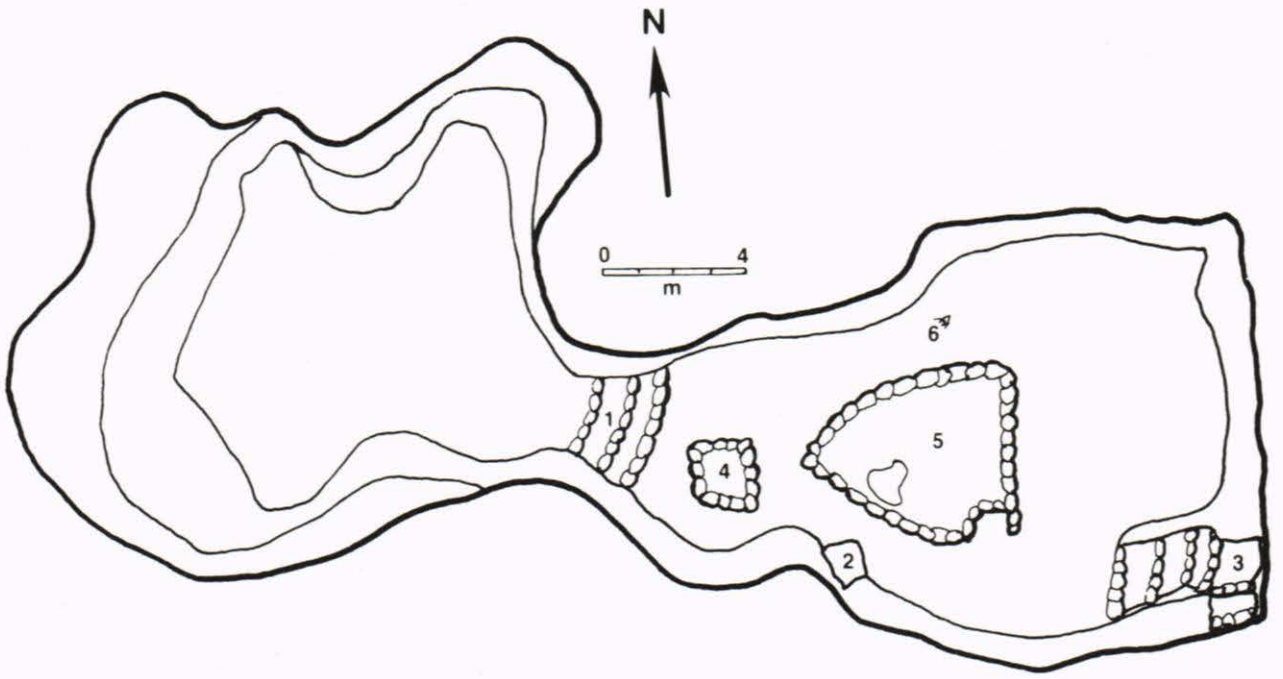

FIGURE 6.5. Compound *tia 'ave*, Tafuna Plain, Tutuila, American Samoa.

would have it a nonadaption) which is coopted for some later use to become an exaptation.

Furthermore, we should keep in mind that though one interpretation of a symbol is politically dominant, this does not exclude co-extensive variation. And this variation may provide selective advantage in the future. The variations within pigeon-catching symbolism, for example, are evident if one considers the following. The 'snaring' of the most *lupe* (which literally means pigeons and metaphorically stands for women as possible for marriage) is encouraged as a main theme in many Samoan proverbs. However, though this 'snaring' is a social goal of an alliance-based social system, one can go too far. Moyle (1988) has recorded an old song that was performed by one village to another in which one village asks for forgiveness concerning the excessive number of *lupe* (i.e., women) that an individual had 'snared' for marriage. The song assures the rival village that the man involved is an 'old decoy' and hence not a further threat. Thus, we see from the perspective of competing (cognitively based) theories of appropriate behaviour, similarities with conflicts over what is the 'correct' interpretation of this Samoan metaphor.

To summarise the above discussion, *tia 'ave* are structures unique to the Samoan archipelago. Recent research in American Samoa has shown these features to be far more numerous and widespread than previously thought. *Tia 'ave* are somewhat varied in form and size and, as a class, appear to date to the last few centuries before Western contact. The primary function of these structures at contact was probably as sites for pigeon-catching and for other ritual performances. At their inception, or at the same time as the above functions, the sites may have had other uses as well. In any case, the size and elaboration of *tia 'ave* appear to be in excess of what was needed for the purely practical functions for which they were intended (this is so irrespective of whether they were used as sites to catch pigeon, ritual performances, graves, house platforms, boundary markers and so on). Therefore, *tia 'ave* constitute a class of monumental architecture.

Monumental structures such as these also have a symbolic function in society. But the fact that they were constructions of a complex society cannot be taken to mean that they therefore only reinforced the dominant power structure. In other words, neither the practical nor the symbolic function of *tia 'ave* was unidimensional relative to time and structure form. The same sign can symbolise different things to different people, depending on their position in and perspective on the social structure. In the following section we will explore the role of *tia 'ave* in late Samoan social evolution.

TIA 'AVE AND SOCIAL EVOLUTION

In discussing Samoan social evolution, Goldman (1970:249) argues that the Samoan political system shifted direction in the second millennium A.D. as the traditional system of genealogically based power and authority was altered. Citing Kramer (1902-3) and Von Bulow (in Williamson 1924 I:69), Goldman (1970:249) puts this change at *ca* A.D. 1200 or 1600, respectively and claims the change to have been brought on by the Tongan occupation and their later expulsion. Goldman (1970:250-251) argues that the Tongan occupation broke up an earlier system dominated by the religious power of the Tui Manu'a (the paramount chief of the Manu'a group) and that the response was a "reliance upon the democratic principle of decentralization." Instead of one source, there were countless sources of divine power."

Herdrich (1991) provides evidence that the *tia 'ave* may have been symbolically associated with different villages and supernormal beings based on variation in the number of rays on the mounds. In this regard, it may be no accident that there is variation in the number of rays associated with *tia 'ave* between counties (e.g., East Vaifanua county contains the only three *tia 'ave* in American Samoa that have eleven rays). Thus, rather than symbolically supporting a centralised authority, *tia 'ave* may have been indicative of competition between rival villages and cults.

There is little archaeological evidence for a long-term Tongan occupation in Samoa, although Tonga almost certainly invaded islands in the Samoa group, and in the late prehistoric and early historic years, Tonga continued to exercise some influence in Samoa (Gunson 1990). Tongan imperialism also spread to Fiji (Best 1984) and 'Uvea (Kirch 1984; Sand this volume). In any case, there is evidence for changing socio-political conditions over the last one thousand years or less. After *ca* A.D. 1000, large house mounds began to appear in Western Samoa, although they do not reach the size and number seen in Tonga (Davidson 1974b). These mounds are likely to have been reflecting increasing social differentiation within the population. Intensive warfare, as reflected in ridge-top forts, may go back to the first millennium A.D. in Samoa, as suggested by excavations at an 'Upolu site, but it seems likely that warfare intensified during the last millennium A.D. (see Frost 1978). The construction of *tia 'ave*, as noted above, appears to date to the last few centuries, which also corresponds with Goldman's hypothesised shift.

In the new system, warfare and conquest were relied upon more and more to acquire titles and power. Thus, power, which had previously been acquired more through divinely ordained hereditary lines, came to reside in titles that could be established through individual achievement. This shift also entailed a lessening of the power of specific high gods and an increased emphasis on personal and village gods. As a result, there were many supernatural aids to success and power, not a centralised deity linked to an established divinely-legitimate, hereditary class, and therefore a dilution of the sacred power of high chiefs. Genealogical rank was not ignored, it was simply more open to challenge. Seniority was not irrelevant, but primogeniture was not the central principle for inheritance or succession to titles. As Goldman effectively demonstrates, status rivalry was a critical facet of Polynesian societies and hardly unique to Samoa. But the shift in emphasis from birth-right to demonstrated personal qualities marked an important deviation from the ancestral pattern, and from the pattern that becomes so fully developed in East Polynesian societies.

With stress placed on personal achievement over divinely-linked genealogy, monumental works, as embodiments of hereditary power and authority, did not become particularly important in late Samoan prehistory. What was important was the continued expression of the personal qualities that demonstrated one's fitness to lead, which was a reflection of his *mana*. *Tia 'ave*, we propose, came to reflect both the position of the constructing social unit (i.e., the *matai*) and the field in which personal ability and *mana* could be expressed. They therefore would have become places of power in their own right. The idea that power or *mana* is associated with these mounds is not mere speculation. A Samoan *ali'i* (high chief), in an interview with Forsyth (1983:168-169), related the following concerning star mounds:

"Do you know the star mounds? Well, they had to do with the Taulasea [traditional Samoan doctor] and energy and with special powers. The ancient Samoans did not build those just to catch pigeons. No Sir! They were part of our ancient religion, and so were the Taulasea and the Taulaitu [spirit medium]. Look into the archaeology data on the mounds. The energy is still so strong on those mounds that it raises the hair on your body to visit them. I saw a star mound in Savai'i and felt the power which is still there. The whole time I was there, my head felt a pressure on it, producing a feeling that it was swelling."

Thus, pigeon-catching carried out at *tia 'ave* was more than a sport of chiefs. Its significance carried far beyond a test of individual skill, because the importance of that skill carried far beyond the immediate arena in which it was expressed. Personal prowess, supernatural favor and *mana* were demonstrated and therefore reinforced or diminished through action. The competition for pigeons was a relatively benign arena for competition for status. It may even have been a surrogate competition for warfare (John Kneubuhl pers. comm.), although the symbolic

relationship with warfare was not missed (Herdrich 1991:394, 418).

Catching pigeons also provides a metaphor for the capture of wives, which in turn was a metaphor for increasing power and status (Schultz 1965). Marriage provided a forum for the critically important ceremonial exchanges of valued goods (Hjarno 1979-80). The key was not the accumulation of goods for their own sake, but the ability to give them. More giving meant more prestige, as it reflected *mana*, personal accomplishments and, therefore, one's suitability for titles and for marrying into families with other high titles.

From this perspective, *tia 'ave* served as arenas for the reinforcement of local social structures *and* for usurpation by subordinates and rival political groups. They were focal points for the needed demonstration of personal abilities that could bolster, enhance, or diminish an individual's standing in the community. Over time, this exhibition as a demonstration of ability and, to a degree, right-to-rule, may have grown out of hand. Ethnohistorical reports indicate that titles sometimes resulted from the outcome of a competition (Davidson 1974c:8), and, in one case, a title was forfeited for the sake of the sport (Henry 1958:97, cited in Green 1969:102). Such possibilities logically develop from the suggested importance of pigeon-catching.

Competitive pigeon-catching, along with the use of *tia 'ave*, was abandoned shortly after Christianity reached the islands. Missionaries discouraged its practice for pragmatic reasons, in that it took people away from church and schools for extended periods of time, and, we suspect, because they recognised a connection between the activity and the old religion (Herdrich 1991:422). This connection was through symbolic association of supernatural entities by the number of rays, and in the link between success and continued verification of *mana*. With Christianity, continued verification of *mana* would have declined in importance.

The cessation of pigeon-catching eliminated a major arena for contesting the personal qualities and supernatural links of superordinate chiefs. The adoption of Christianity by ruling chiefs would have served to solidify and enhance the dominant power structure by cutting off the supernatural legitimacy of rivalry and usurpation. Thus, pigeon-catching, as a physical link between the old religion and the socio-political organisation, would have been a prime target for missionary restrictions and one that ruling chiefs would find advantageous to abandon. There is a parallel here with the situation in Hawaii where the ruling chiefs abrogated the traditional taboos, thereby undermining the structural legitimacy of junior usurpation of power (Sahlins 1981).

In summary, we argue that *tia 'ave* are structures that have pigeon-catching as the central focus, although their actual function in Samoan society is much more complex, as reflected by the fact that they served other roles (e.g., potential defensive features and as sites for ritual activity related to marriage, healing and warfare). These different roles reflect a contemporary convergence related to supernaturally sanctioned competition for prestige, status and power, or some of them may have represented later functional shifts or *effects* in the evolution of *tia 'ave*.

Furthermore, these mounds provide markers of the shift in Samoan social evolution from divinely-based hereditary rank to personal achievement and ability as the basis for political power. They then came to represent both the current power relations and the forum for changing power relations. Their abandonment also provides a marker for a new shift in power relations in which an emerging dominant social order strengthens its superordinate position by adopting Christianity.

CONCLUSION

In this paper we have pointed to several methodological problems that have hindered a clear understanding of *tia 'ave*. One of these is sampling error, in our view, due to under-developed models of distribution patterns. That problem was often exacerbated by the low height of many mounds and by the dense tropical vegetation. In addition, while informant testimony can be useful at times, it needs to be treated as any empirical claim and tested. Ethnohistorical information can also be quite valuable, especially when one tries to determine which native categories correspond with what archaeological features. However, due to the potential unreliability of some ethnohistorical sources, such use must be driven by empirical hypothesis testing.

Much work remains to be done to clear up critical questions regarding *tia 'ave* chronology and function. However, there are sufficient ethnohistorical data and potential archaeological data to show that there is a significant relationship between the evolution of *tia 'ave* and evolution of Samoan society as a whole. The distributional variation in the number of mounds, the number of rays on mounds, the size of the mounds, as well as the materials used to build them, together with ethnohistorical accounts of their symbolic value and their use relative to the acquisition of power, status and titles, provides evidence that Samoan society was experiencing increasing differentiation and decentralisation. In addition, an examination of the forces behind the abandonment of these structures at the period of early Western contact is likely to reveal important evidence about Samoan social institutions and power relations.

Further investigations of these structures can provide a clearer understanding of Samoan social evolution in particular and evolutionary mechanisms in general. Finally, we contend that studies examining the role of monumental and other complex social structures in social evolution will be aided by a rejection of the assumption that structural continuity of form implies functional continuity, and that symbolic associations necessarily derive from and support a dominant social structure.

NOTES

1. We take symbolism to be a cognitive process. It should also be understood that we reject Harris' (1979) emic/etic distinction which views symbolism as "epiphenomenal" and follow, instead, the view of Friedman (1980) who shows that the "etic" is a product of the "emic."

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