

Prehistoric Social Complexity on Pohnpei: The Saudeleur to Nahnmwarki Transformation

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Abstract—Oral accounts indicate that an island-wide polity under the rule of the Saudeleur titular chiefs was once formed in early prehistoric times and was later transformed or replaced by the Nahnmwarki system in which multiple autonomous polities ruled different parts of Pohnpei. This paper evaluates these accounts against recent archaeological data and attempts to determine whether the transformation represents a substantive change in the complexity of traditional Pohnpeian society.

Introduction

In the past decade of archaeological and ethnographic research, much has been learned about the prehistory of Pohnpei. Now is a good time to address some of the basic questions about complexity of social and political organization which many of us have taken as a given in our research. Such a consideration will serve to sharpen the focus of research in the future, as well as provide insights into questions of fundamental anthropological interest concerning the development of chiefdom societies.

We have chosen to focus on the structural simplification in the Pohnpei political system which is documented in oral tradition. We are calling this the Saudeleur to Nahnmwarki transformation. If this change was in truth a decentralization of a formerly centralized polity, in effect a dramatic change in socio-political organization, then it has important theoretical implications for understanding the evolutionary dynamics of chiefdom societies. To our knowledge, such a transformation, while proposed in the literature on Pacific island societies (e.g. Cordy 1982, Friedman 1981, 1982), has never been well documented. The Pohnpei case is particularly important because it is one of the few for which relatively abundant data are available. We believe any comprehensive understanding of social complexity must explain such instances of apparent devolution.

Friedman's (1982) sequence proposes elite control of long distance prestige goods trade as the basis of power and maintenance of political hierarchies in small centralized theocracies. The loss of a prestige-good monopoly brings on a rapid transformation of the system. Two subsequent evolutionary trajectories are proposed. In one case, trade density increases as access is open to more people, with polities evolving finally into a Big-Man system. In the alternative case, collapse of trade results in increased competition, which then results in warfare, decreasing productivity and a consequent decline of the hierarchy.

Cordy's approach to evolutionary dynamics is taken largely from Wright and information theory (Wright 1977; Wright & Johnson 1975; Johnson 1978). In Cordy's (unpub.) review of the levels of stratification present in Micronesia, he proposed that population

size, island size and behavioral isolation covary predictably with number of social strata present within each society. Thus given an increase in population and available territory, (i.e., either conquest or expansion into unoccupied land), a threshold would be passed which would require the creation of an intermediate decision-making level (Wright 1977). The obverse of this coin is a revolt or loss of territory which could push an unstable 4-strata society back over the threshold into a 3-strata society.

Archaeological indicators, according to Wright (1977), of a transition to state organization will include a rise of large centers dominating three or more subsidiary levels of settlement hierarchy, and the location of these centers in areas suggesting that access to agricultural land and water is not the deciding locational factor. The appearance of new elite funerary patterns, a sudden population increase, and a shift in the organization of craft manufacture or distribution are additional indicators.

As we are focusing on devolution or decentralization, the Pohnpei case might be expected to show evidence for a number of attributes. These include the abandonment of centers, disappearance of elite funerary patterns, a population decrease, a reverse shift in the organization of craft manufacture and distribution and a shift in the organization of governmental structure (see also Renfrew, 1979 for a more comprehensive list). With these possibilities in mind, we turn to the Pohnpei data.

Oral Traditions

The primary sources of Pohnpei oral tradition are *The Book of Luelen*, written over a period of many years by Luelen Bernart (Fischer *et al.* 1977), and an unpublished account written by his grandson, Masao Hadley. As Pohnpei custom discourages the sharing of esoteric or traditional knowledge with outsiders, it is especially fortunate that such detailed accounts are available. In addition, other accounts may be found in various historic and ethnographic documents (e.g., Athens 1981, Hambruch 1932–36, Hanlon 1988, Riesenberger 1968).

Pohnpei tradition divides the history of the island into four periods: The Age of People; The Age of Saudeleur; The Age of Nahnmwarki; and The Age of the Foreigners. It is the middle two ages with which we are concerned.

Tradition records the unification of the independent and sometimes warring clans on the island into a single polity. Possessing sacred powers, the two brothers responsible for the unification came to Pohnpei with their followers from an unspecified location. After attempts in several places, they finally selected the reef flat off Temwen Island as the proper place to construct their "place of prayer." Now known as Nan Madol, this site is characterized by a large complex of artificial islands and special archaeological features.

The first brother died before the work was completed. The second brother then finished the work and created by edict three geographical/political subdivisions (*wehi*): Madolenihmw, Sokehs, and Kiti. Legend also tells of "master builders" who came from each of the three subdivisions, and a fourth from Katau. In building the ruler's compound on Pahnkedira islet, each of the four corners were built by one of the builders and named for the *wehi* from which he came. It is said that if a corner collapses, the *wehi* will also collapse.

The leaders who followed the second brother were the Saudeleur. Traditions record

two Saudeleur during the early portion of this period. One legend relating to this time establishes the charter for the political divisions with the story of the first turtle sacrifice on the islet of Ideht. The divisions were henceforth known as *wehi*, or “turtle states.” Madolenihmw was further divided into seven parts, Kiti into four, and Sokehs into six. Each of these parts had a titled chief whose responsibility was to organize tribute for the Saudeleur.

At Nan Madol in this period, oral traditions specify the existence of builders from all three *wehi* participating in the work of Nan Madol, of defenders (or guards) for both the tombs at Nan Dauwas and for Pahnkedira islet, the Saudeleur residence. A priestly class is indicated by the attribution of special duties, such as the turtle ceremony and the care of the sacred eel at Ideht islet, and by the tradition that one half of the Nan Madol complex, known as Nan Madol Powe, was reserved for priests’ residences. The other half, known as Nan Madol Pah, was the residential domain of the chiefs and their retainers.

The following portion of the Saudeleur period is known as the “Cruel Period.” Stories (varying in completeness) of a minimum of six rulers are told of this period. Each illustrates an undesirable trait, including greed, cannibalism, excessive wealth, treachery and capriciousness. One story tells of two brothers watching the traffic of canoes in the lagoon, bringing prepared food to Nan Madol.

Finally, the last Saudeleur was so haughty and arrogant that he captured one of the gods, Nan Sapwe. Divine intervention followed, naturally, and Nan Sapwe was freed and flew off to Katau. There he impregnated a woman of his own clan, who then bore a son named Isokelekel. Tradition tells that, when grown, Isokelekel came to Pohnpei with a force of 333 people and defeated the Saudeleur in battle at Nan Madol.

Isokelekel’s assumption of power and creation of the new office of Nahnmwarki was validated by the descent of a canoe from heaven, according to tradition. His independent rule was transitional, as another legend testifies to the creation of the title of Nahnken and the subsequent establishment of the dual chiefly lines characteristic of the Nahnmwarki period. In this legend, the wife of the Nahnmwarki was about to give birth. The Nahnmwarki left for another part of the island, and instructed his wife to kill the newborn if a male, but to keep it if female. During his absence, a male child was born. Instead of killing it as instructed, the wife gave it to a clan brother to raise. The Nahnmwarki later encountered the child, who contravened every rule of respect behavior at first meeting. The Nahnmwarki, divining the paternity and fore-ordained role of the boy, gave him the title of Nahnken. The boy’s first act as Nahnken was to co-habit with and marry his father’s sister. The importance of this act is that it established the parameters governing the royal intermarriage rules of two lineages of different clans, thus providing for continuity of two complementary ruling lines.

In the sequel to this particular story, this Nahnken leaves Madolenihmw to the care of his sons, who were eligible for the office of Nahnmwarki, and establishes a fourth independent state in Uh, taking there the office of Nahnmwarki for himself.

Also in this period, Isokelekel conferred the office of Nahnmwarki for Kiti on Sou Kiti, the high chief of Kiti, and for Sokehs on Lempwei en Sok, the high chief of Sokehs. He retained for himself the office of Nahnmwarki of the *wehi* of Madolenihmw. This act effectively decentralized the island, with each of the three *wehi* having its own Nahnmwarki. And then, according to Hadley, small groups banded together to form land sec-

tions called *kousap*. This was done in order to facilitate cooperation in paying tribute to the Nahnmwarki. The office of section chief was created to be responsible for each section.

Isokelekel built the first ceremonial meeting house (*nahs*) on the islet of Palakap at Nan Madol. The Nahnmwarki line of titles was then organized with various rights and duties conferred on the title holders. The responsibilities pertaining to at least the two ranking directly below the Nahnmwarki concern communications for the Wasai and ceremonial rites and procurement of ceremonial food for the Dauk (Bath 1984b).

According to Hadley, it was in the time of the 5th Nahnmwarki of Madolenihmw that a typhoon devastated the island, famine ensued, and Nan Madol was abandoned. Luelen Bernart's earlier account, however, does not mention the abandonment of Nan Madol.

A story accounts for the ending of the eel and turtle ceremony at Nan Madol, which happened, according to Hadley, during the rule of Luhk en Kesik in 1836. The story relates that one of the high priests was ignored in the distribution of the sacred turtle meat. Angered by this slight, he and his clan brothers killed the sacred eels in the pool on Ideht (but see Athens [1984b: 134–135] for an 1852 historic account of a presumably similar ceremony at Ideht).

Oral Accounts and Archaeological Verification

Oral traditions, like archaeological remains, do not persist as static unaltered entities through time. Just as a host of natural and cultural processes are continually at work changing the character of archaeological deposits (Schiffer 1976), we may expect oral traditions to be transformed through time by any of a number of social and psychological processes (see Goody 1968). Thus, while we believe that the Pohnpei oral accounts do in fact have a historical basis, many of the particulars have undoubtedly changed. Also there are many aspects of the oral accounts which would leave little or nothing in the way of material correlates that would allow verification. With these caveats in mind, there are still a number of events, major themes, and even certain particulars in the oral accounts that should be archaeologically visible. Because of limited space, we can enumerate here only some of the most salient examples pertaining to our interest in social transformation.

1. The presence of Nan Madol on the reef flat off the shores of Temwen island is one of the most obvious and empirically true implications of the oral accounts. In addition, we would also expect to find remnants of similar construction at the various locations mentioned in the traditions as those locations which initially proved unsatisfactory for the construction of Nan Madol.

2. As the traditions are not complete as to the number of successive Saudeleur, we cannot estimate the date of the original construction of Nan Madol on the basis of oral accounts. We can, however, obtain archaeological evidence of the beginning and ending of the turtle ceremony, which would be roughly contemporaneous with the Saudeleur period.

3. According to the tradition of the two brothers, we would expect that Nan Madol, as a chiefly religious and administrative center, did not assume its role in a gradual fashion; rather, its prominence and construction was a concerted, one-time event, encompassing only the lifetime of the two founding brothers.

4. Chiefly occupation at Nan Madol should begin with the Saudeleur period and end in 1836 with the fifth Nahnmwarki.

5. The oral accounts speak of the use of "master builders" for the construction of Nan Madol; this should be indicated in the sophistication, scale and complexity of construction at Nan Madol.

6. As oral accounts indicate a spatial division at Nan Madol between sectors used by priests and chiefs, there should be some evidence for functional specialization at the site.

7. The islet of Ideht should have deposits relating to the cooking of turtle and a pool in which the sacred eels were kept.

8. Evidence of the first *nahs* structure on Pohnpei should be found on the islet of Palakapw. If dated, it should be roughly contemporaneous with the rule of Isokelekel.

9. From the story of the origin of the three original *wehi*, we might expect to see subsidiary religious and administrative centers in Madolenihmw, Sokehs, and Kiti.

Ethnographic Historical Verifications of Oral Accounts

For the Nahnmwarki period, historical and ethnographic data provide a valuable source of information of aspects of the oral accounts. The following points are the most relevant for our purposes:

1. At the time of Western contact, there were four independent chiefdoms on the island—Madolenihmw, Sokehs, Kiti, and Uh. Uh must have come into existence early in the Nahnmwarki period. A fifth *wehi*, Net, was formed in 1874, during the historic period (Hanlon 1988).

2. Each of these independent chiefdoms was organized into sections (*kousapw*), and each had a section chief responsible for organization of tribute to the Nahnmwarki. This tribute was given only to the Nahnmwarki to which the section belonged. Nan Madol had already been abandoned as a residential center by the time of Western contact.

3. Each *wehi* had both a Nahnmwarki and a Nahnken. Each chiefly line had a ranked series of titles, with each title having specific tasks or functions.

Archaeology at Nan Madol

ORAL ACCOUNT IMPLICATION NO. 1

Nan Madol is comprised of a cluster of artificial islets built on the offshore reef flat of Temwen Island. At the latest count, there are 92 of these islets, most of which are separated by narrow water courses sometimes referred to as canals. Including the canals, Nan Madol encompasses approximately 80 hectares. Actual islet area is estimated to be slightly over 30 hectares (Bath 1984b).

A reasonably detailed map of the entire Nan Madol complex was first compiled by Hambruch (1911). Based on information from his informants, he divided Nan Madol into three main sectors: the grave-wall, the royal "town", and the priests' "town." Recent work (Athens 1980, 1984a, 1984b, Ayres *et al.* 1983) tends to support this tri-partate division. The islets comprising the outer wall of Nan Madol contain the majority of tombs and/or mortuary features, and the fewest platforms/foundation features. The royal sector and the priests' sector share the characteristic of having few mortuary features but contrast

with one another in islet size and construction. Islets in the royal sector are much larger, higher, and of more elaborate construction.

Though Nan Madol is sometimes referred to as a city or town, we believe such value-laden and imprecisely defined western terms have an inappropriate connotation for what may have been the political and social reality of Nan Madol. It was first and foremost a center in which the elite of Pohnpei society were physically separated from the populace over which they held some sort of dominion. It was also clearly a religious and ceremonial center, in which such activities were presided over by the Saudeleur. Finally, mortuary activities were clearly an important element in the functioning of Nan Madol.

Our data (Athens 1980, 1984a, 1984b) do not provide any evidence that Nan Madol was a specialized craft production center or a tribute collection and redistribution center. These ideas have held (and perhaps still do hold) important places in the literature of chiefdom societies. However, they appear to be inappropriate in so far as the characterization of Nan Madol is concerned.

ORAL ACCOUNT IMPLICATION NO. 2

The onset of the turtle ceremony can be inferred for the dating of the coralline mound of stone oven residue on the islet of Ideht. This rubble mound of burned coral debris presumably formed as a result of the cyclical preparation of turtle for distribution to the priests over the lengthy period during which the ceremony was practiced at Nan Madol.

Excavations in the mound by Smithsonian archaeologists in 1965 produced 3 radiocarbon dates indicating a span of AD 1200 to AD 1400 (Smithsonian 1965: 253). Our more recent dates (3 determinations) confirm the initiation of the turtle ceremony at about AD 1200 but suggest a terminal date in the AD 1500–1600 range. Based on this information, the Saudeleur era appears to have lasted, therefore, around 300 to 400 years. It is interesting in this regard that Athens (1984a) calculated an ending date for the Saudeleur period of AD 1628 based on an estimate for the average length of reign for a presumably complete list of all 22 Nahnmwarki of Madolenihmw.

As previously noted, some form of the turtle ceremony continued into the historic era. There is no evidence that the ceremony during this era involved preparation of turtle meat in a stone oven.

ORAL ACCOUNT IMPLICATIONS NO. 3 AND 4

The third implication, concerning the construction of Nan Madol within the lifetime of the two founding brothers, has not been demonstrated by the archaeological evidence. The archaeological data indicate a very long span of occupation at Nan Madol, and furthermore, that this occupation began well before the Saudeleur era.

Radiocarbon dates of islet fill indicate an initial occupation on sand beaches, bars or possibly on stilt houses over the reef as early as AD 1 (Figure 1). This was followed by stages of low platform or islet fill construction beginning by approximately AD 900. Our dates, which were not associated with islet fill, but recovered from charcoal deposits in platform fire pits, were from AD 900 to essentially modern. Ayres' (1983) excavations on the islet of Pahnkedira recovered evidence for two major building phases: the first at ca

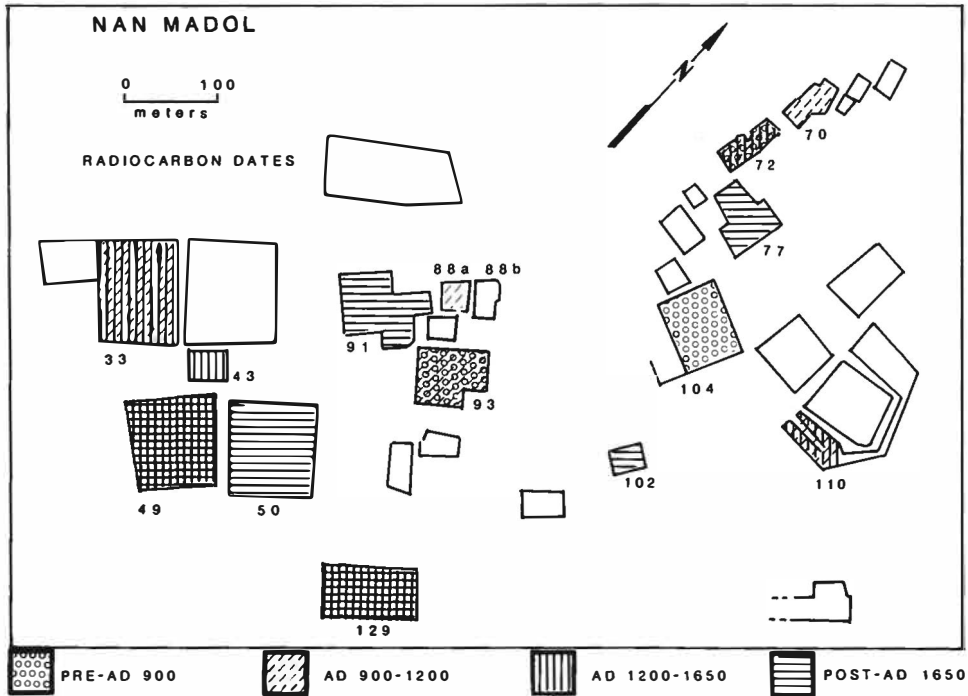


Figure 1. Nan Madol radiocarbon date distribution. Dates from Athens (in prep.) and Ayres *et al.* (1983). Base map from Athens (in prep.).

AD 900–1100, which may not have involved true megalithic construction, and the second from AD 1300 to 1500, which did involve megalithic construction. If islet construction is taken to be characteristic of the Saudeleur period, then we would have to conclude that that relevant time span begins around AD 900. If, however, megalithic construction and the turtle ceremony are taken to be characteristic of the Saudeleur period, as indicated by the fourth oral account implication, then the relevant time span begins around AD 1200. We believe the latter date is more reasonable given what we now know of the archaeology of Pohnpei.

Nan Madol, in its final form, was clearly residential, based on the number of platforms and house foundations now recorded. In our sample of 29 islets, 76 platforms, 21 foundations, 5 *nahs* and 25 mortuary features were recorded. In Ayres' 1981 survey (Ayres *et al.* 1983) of two islets, 30 platforms, 1 *nahs*, and 4 mortuary features were recorded.

ORAL ACCOUNT IMPLICATION NO. 5

The existence of a class of master builders or architects is implied by several lines of archaeological evidence. One of these has to do with islet size. A histogram based on Hambruch's (1936) measurements indicates a skewed and slightly trimodal distribution of

islet size (Fig. 2). The greatest number of islets fall in the 500 to 1000 m². A significant number, however, are far larger than 1000 m². Construction of the larger islets implies planning and organization of labor, both of which suggest skilled personnel were responsible for the erection of the major islets.

Islet walls of columnar basalt correlate highly with the royal town and with mortuary structures (Figs. 3, 4). There are no sources of columnar basalt close to Nan Madol. These stones, averaging between 1 to 5 tons (but some much heavier), had to be transported from the main island, presumably by raft. While boulders used in construction may have been more readily accessible on Temwen Island, they would also have been brought to the building site. Some of these boulders, particularly those in the sea wall in back of Nandauwas, weigh up to 50 tons. According to Hambruch's (1936: 15) informants, "... the building materials, which quite often weighed a ton, were brought into their present position by means of the inclined surfaces of tree trunks, especially coconut palms, using leverage—tree trunks were used for this also and the tractive force of Hibiscus ropes." (HRAF English translation).

Architect William Morgan (1988) provides many details and observations concerning the construction of Nan Madol. He regards Nan Madol as a site from which there is "... no greater record of prehistoric achievement . . . in all of Micronesia . . ." (Morgan 1988: 85).

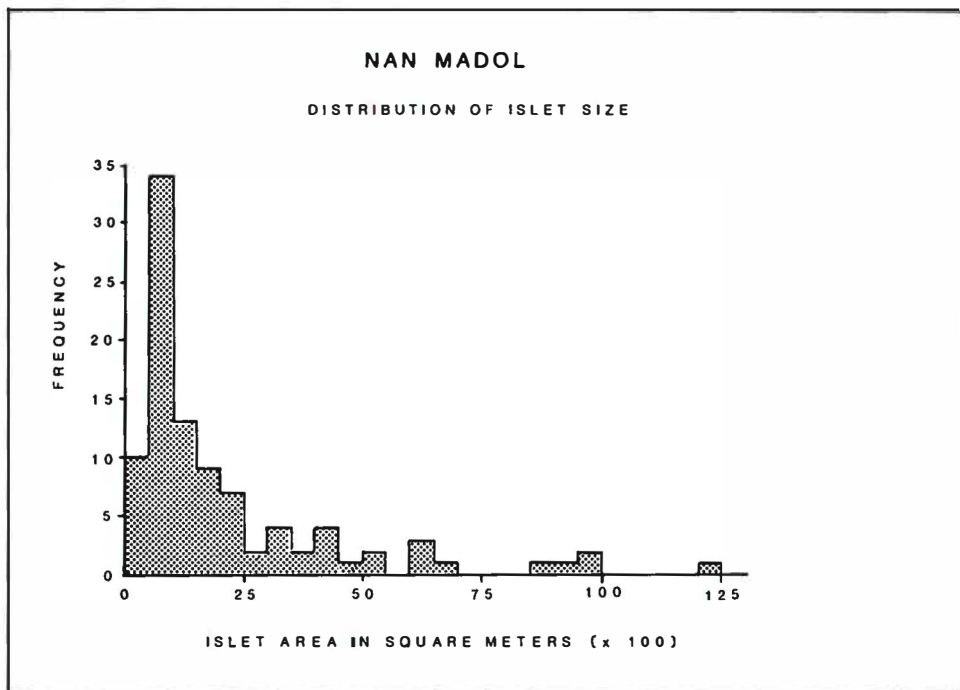


Figure 2. Islet size distribution, based on Hambruch's (1936) data.

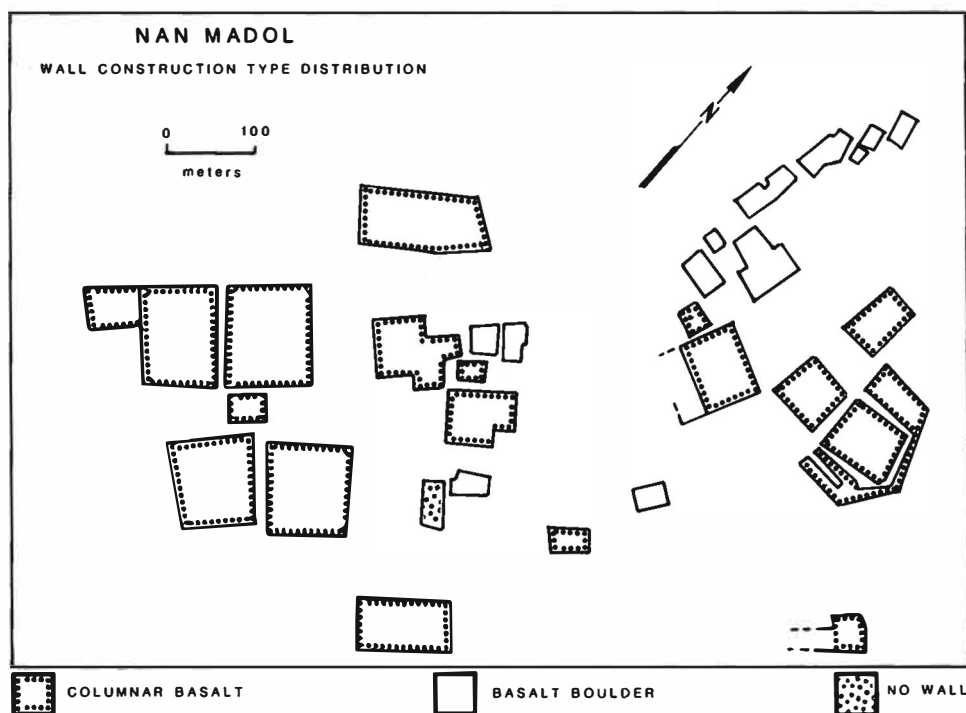


Figure 3. Distribution of islet wall construction types. Columnar basalt header-stretcher construction versus basalt boulder stacked construction, based on Athens' (in prep) data.

ORAL ACCOUNT IMPLICATION NO. 6

The existence of functionally distinct priestly and chiefly/administrative sectors at Nan Madol may be provisionally affirmed on several grounds. Though the artifact distribution data (Athens 1984b) has not yet been fully analyzed and documented, preliminary tabulations of surface collections indicate that utilitarian artifacts, including various types of adzes and grinding stones, are strongly associated with the priestly sector. In contrast, these artifacts tend to be much less common from either mortuary islets or the chiefly residential compound of Pahnkedira (Ayres *et al.* 1981). Large *sakau* (kava) pounding stones, which are ceremonial in function, are found primarily on mortuary islets and on Pahnkedira.

The spatial distribution of the islets is also of interest. As Hambruch's (1911) map shows, the priests' sector exhibits the greatest number of islets, very closely spaced. The royal sector, on the other hand, has fewer islets and more distance between them. The grave-wall extending from Karien on the northeast to the entrance channel in the southwest, was never completed. With the exception of the canals on both sides of Lemenkou (Figure 1, no. 129), the line of mortuary islets is nearly continuous. Nandauwas, Pohndauwas and Pahndauwas (see Hambruch's 1911 map) form a mortuary complex,



Figure 4. Photograph of west wall, Nandauwas islet, illustrating header-stretcher construction and corner treatment. Photo by Athens.

connected to each other by the first seawall east of Nandauwas, which also forms the exterior walls of Pohndauwas and Pahndauwas.

If the islets are partitioned by how much labor had been invested in their construction, three main groups may be distinguished. These generally correspond to the same three previously identified sectors: priestly, royal, and mortuary. The priests' sector, where islets' retaining walls are built predominantly of small to medium sized basalt boulders (as opposed to columns), have the lowest labor investment. The second highest labor investment is in the royal sector, where retaining walls, built of columns, tend to be higher and the islets larger. The greatest labor investment was made in the mortuary islets, which often have high interior enclosure walls of columnar basalt, as well as relatively high columnar retaining walls.

ORAL ACCOUNT IMPLICATION NO. 7

According to oral traditions, The islet of Ideht should have deposits relating to turtle cooking and a pool for the sacred eels. As previously noted, there is, in fact, a large mound of coralline debris, over 2 meters high, which covers the southwest end of the islet and overflows the walls. Excavation revealed that the entire mound represents the residue

of stone ovens (burned and fragmented coral cooking stones with charcoal). Turtle bone was present in small quantities. Two very large (45 cm long), presumably ceremonial, *Tridacna* adzes were recovered from the mound deposit. A small cavity used for the sacred eels is also present on the islet. Less than a meter in diameter, it is located within a high rectangular enclosure wall of basalt columns.

ORAL ACCOUNT IMPLICATION NO. 8

As expected from the oral accounts, a U-shaped *nahs* was recorded on Palakapw islet. Though this particular structure was not dated, other radiocarbon dates from platform fire hearths on Palakapw are late, indicating that the terminal use of Palakapw's structures dates to the Nahnmwarki period. One charcoal sample from islet fill dates to AD 1350–1495, suggesting actual islet construction during the Saudeleur period. On the islet of Us en Nam (no. 91), another very large *nahs* with a two-tiered platform was also dated to the Nahnmwarki period (Athens 1984b).

ORAL ACCOUNT IMPLICATION NO. 9

Two large archaeological sites which may have fulfilled the role of subsidiary religious and/or chiefly centers have been recorded on Pohnpei. One, recorded by Davidson (1967), is Sehnpehn in Madolenihmw. The second, called Sapwtakai, was recorded in Kiti (Bath 1984a).

Radiocarbon dates recovered from Sapwtakai indicate an occupation span of roughly AD 1325 to AD 1700. Its stylistic similarity to Nan Madol lies in the use of columnar basalt and construction methods. Also like Nan Madol, the greatest labor investment is represented by the site's central tomb structure. Unlike Nan Madol, however, Sapwtakai is situated inland on a mountain peak at 200 meters above sea level (Figs. 5, 6). The Madolenihmw site recorded by Davidson (1967) is also an inland site, up in the mountains.

A population of elites and priests at Nan Madol would have to depend on tribute from the Pohnpei mainland for subsistence. This is not directly amenable to archaeological verification, as the primary tribute would have been breadfruit. At the upland sites, Sehnpehn and Sapwtakai, elites and priests would have had to depend on tribute for marine protein. At Sapwtakai, shell midden, turtle bone and fish bone are recovered from platform pits and a midden dump. In short, access to subsistence resources was not a factor in the location of either Nan Madol or Sapwtakai.

Discussion

The archaeological record verifies the abandonment of elite centers. The few nucleated sites known on Pohnpei are unoccupied archaeological sites. Megalithic architecture, a hallmark of the Saudeleur era, ceased during the 18th century. There are no nucleated centers which are associated with the Nahnmwarki system. The historic and present settlement pattern (Bath 1984b) is one of dispersed homesteads, and it would be very difficult

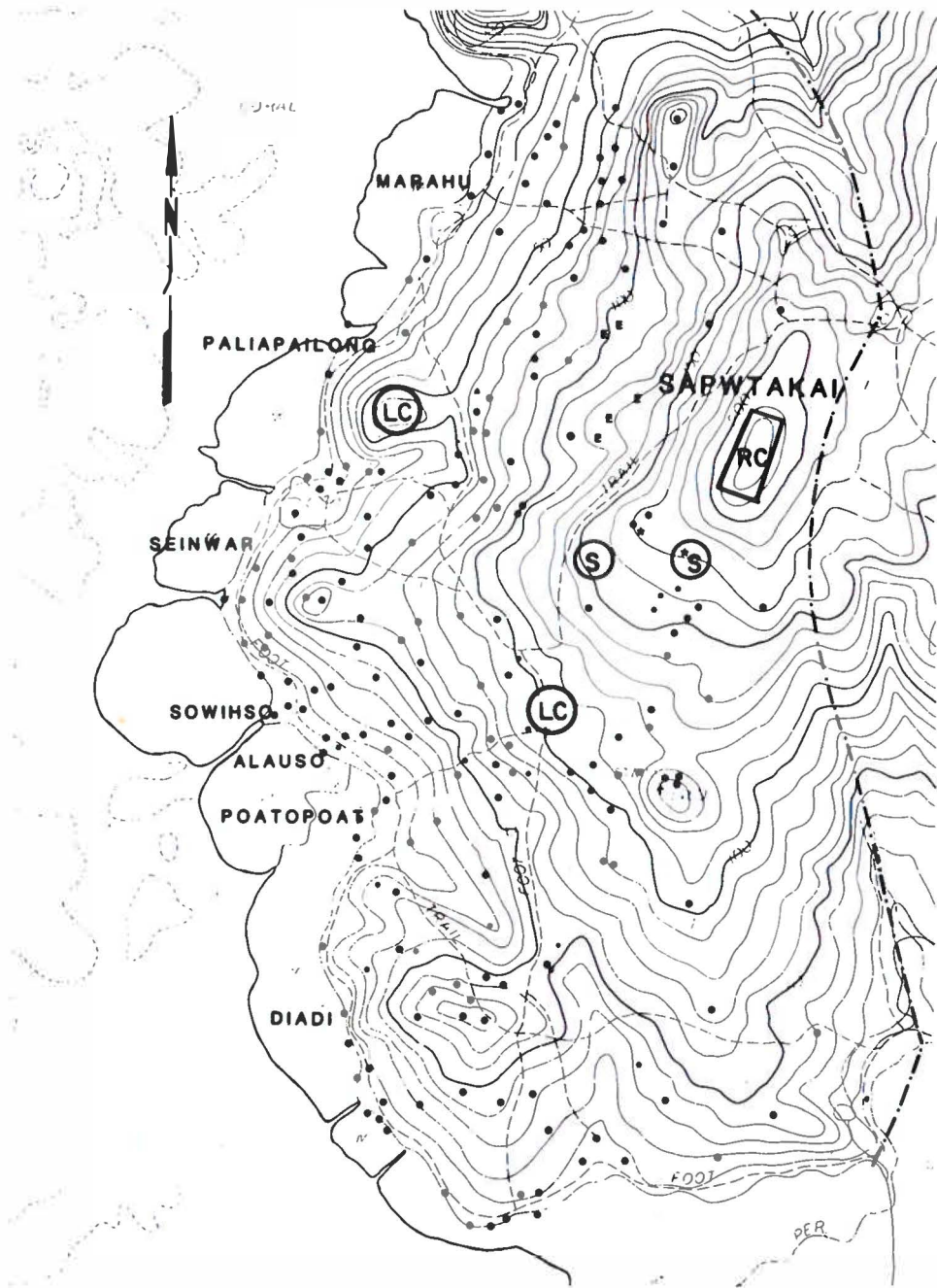


Figure 5. Site distribution in old political division of Kepihleng (now a portion of Kiti). RC = Sapwtakai, possible regional center. S = specialized center: one is the Kiti Rock location and the other is Peinkareraua. LC = two sites which were possible local centers. Based on data from Bath (1984a) and Streck (in prep).

SAPWTAKAI

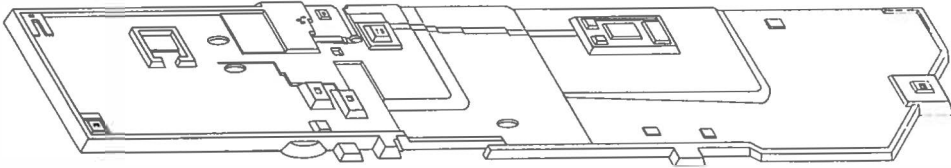


Figure 6. A perspective reconstruction, not to scale, of Sapwtakai. From Bath (1984b).

to archaeologically differentiate between a Nahnmwarki's residence and that of any other person. This change in settlement pattern suggests a major re-structuring of socio-political relationships.

Given the legends of the later Saudeleur period, in which the rulers are presented as incarnations of various societal evils, and the Isokelekel legend, involving semi-divine origins, we believe that a revolt by the *wehi* chiefs was responsible for the downfall of the Saudeleur rule. Isokelekel changed the political order by separating the *wehi* and appointing a Nahnmwarki for each. The first Nahnmwarki of Madolenihmw changed the social order by creating the dual chiefly lines.

Implications for Evolutionary Theory

If our interpretation of oral accounts and archaeological data is viable, in the sense of a centralized and highly stratified social organization of the Saudeleur period disintegrating and leaving multiple chiefdom polities in the Nahnmwarki period, then a real change did occur in social organization. Furthermore, we believe that this change was a "devolution" or simplification of the social structure.

The Pohnpei example of decentralization does not, clearly, fit well into either Goldman's (1970) or Friedman's (1981, 1982) evolutionary sequences.

In the case of Friedman's sequence, there is no archaeological evidence for trade in long distance prestige goods (e.g., Athens 1980, 1984b, Ayres *et al.* 1983), which he proposes as the basis of power and maintenance of political hierarchies in small, centralized theocracies. If there had been a loss or interruption of long distance trade on Pohnpei, then the collapse of the Saudeleur rule and subsequent decentralization of power in the Nahnmwarki period would be expectable in Friedman's model. However, the power base that Friedman proposes for the rise of centralized authority simply seems to be absent on Pohnpei.

As for Goldman's sequence, the only possible fit for Pohnpei would be in his "Stratified" group, which places the hierarchical social organization of this island with those of Hawaii, Tonga, and the Society Islands. However, the clear breaks which he sees between high ranks and commoners in economic and political status may not have been as characteristic of the Saudeleur era in Pohnpei as Goldman's depiction of the Hawaii case. It is also notable that Goldman does not take into account the possibility of oscillating evolutionary stages.

The evolutionary dynamic approach taken by Cordy (unpub.) more closely parallels the events in Pohnpei, in that we may postulate a revolt which forced an unstable 4-strata society back over some threshold into a 3-strata society. The difficulty here is identification of the nature of the threshold, as no evidence exists for sudden population increase/decrease or pressure on available land resources.

We believe that competition theory may be more useful in seeking to identify the selective forces responsible for hierarchical systems (Athens unpub.). In this context, the nature of power represented by Nan Madol is questioned. In brief, we propose that the remains of Nan Madol represent primarily a religious and ceremonial center with, consequently, a power base which was founded on the *wehi* chiefs. Secondary, or regional centers, are therefore viewed as potentially competing centers. Nan Madol's role was, in essence, to provide a dispute control and resolution mechanism (see also Rappaport 1971). Since there was no positive selective basis for sustaining the Saudeleur in this position of authority, and perhaps because of the growing costs of maintaining the system, it eventually collapsed into the decentralized Nahnmwarki system.

Conclusion

If there is any one point we wish to stress, it is that cultural evolution cannot and should not be considered an inherently progressive phenomenon characterized by increasing complexity and differentiation in the sense of Spencer and other 19th century evolutionary anthropologists. Although we cannot be certain of the underlying causes of the Pohnpei transformation, and the nature of the Saudeleur system is far from being demonstrated with confidence, it is nevertheless clear that we have an instance of cultural devolution. It is particularly interesting that this case of devolution is, as far as we know, an autogenous one.

The Pohnpei case, we believe, poses a potentially interesting opportunity for theory building in anthropology. It is in this direction that anthropology must move if serious headway is to be made in our understanding of cultural process and evolution.

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