Notes on Culture History and Archaeological Strategy in the Pacific Basin

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RÉSUMÉ

Après avoir fait ressortir les points saillants de l'histoire culturelle du bassin du Pacifique, l'auteur trace quelques pistes de recherches qui ont cours dans le monde de l'archéologie du Pacifique. Il traite aussi des méthodes de l'archéologie sous les aspects suivants: collecte des données, chronologie et reconstruction ethnographique.

Archaeology in the Pacific Basin has grown from embryonic beginnings in the thirties to a complex and diverse area of specialization with numerous field workers pursuing a wide range of goals. Centers for training and research have developed in Hawaii, Australia, and New Zealand; and at least three journals, *Asian Perspectives, Archaeology and Physical Anthropology in Oceania,* and the *New Zealand Archaeological Association Newsletter* devote themselves in large measure to closing the information gap. Regional meetings, which have done so much to stimulate and direct research in areas such as the American Northeast and Southwest, are still rare, but occur at least every five years with the Pacific Science Congress. A summary of the major field work is published periodically in the *Council for Old World Archaeology Surveys and Bibliographies,* (Area 21).

The archaeology of Polynesia, Micronesia, and Melanesia, with the exception of New Guinea, is entirely Neolithic; that is, the prehistoric communities produced their food in gardens and lived in villages or scattered homesteads of some permanence. For this reason the complex macro-developmental pictures from pri-

mitive bands to rich cities which we find in other areas will not be part of the Pacific scene. Unfortunately, Pacific archaeology, in world surveys, is often contained in a paragraph appended to the archaeology of Asia as the end of the line, trailing off from the centers of Old World development.

In this cursory overview, my purpose is to outline the highlights of the culture history of the area as it stands today, and to enumerate some of the broader approaches which the Pacific archaeologist uses in portraying the events of the past. I cannot hope to give more than an overview; for those who are interested in the latest details, two recent publications edited by Yawata and Sinoto (1968) and Highland *et al.* (1967) represent peaks of recent achievement.

CULTURE HISTORY OF THE PACIFIC BASIN

The peoples of Micronesia, Melanesia, and Polynesia are of predominantly Asian origin, although contacts with America, in the case of Polynesia at least, may have occurred (Heyerdahl 1963, Simmons 1966), probably between 800 and 1300 A.D. (Green 1967:227). As the homeland of Malayo-Polynesian speakers, South China has been hypothesized (Solheim 1964, Chang 1964, Grace 1964). Two major horizons in mainland China and Taiwan are possible candidates — the Cord-Marked and the Lungshanoid (Chang and Stuiver 1966); very recently, a strong case has been made for the former as the more promising candidate (Green, personal communication). The populations which produced the Cord-Marked pottery are thought to have created secondary vegetation (through slash and burn agriculture) which is reflected in the pollen sequence of Sun Moon Lake, Taiwan, beginning at 9,000 to 10,000 B.C. (Chang and Stuiver 1966). The end of the Cord-Marked pottery horizon has been indirectly dated at about 2,500 B.C. Root crop agriculture seems to have been the major means of subsistence, although actual plant remains have not been found in the sites. The subsequent Lungshanoid culture, with rice agriculture, a means of subsistence unknown in Oceania outside the Marianas (Yawata 1963), appears to be too late and too speci-

alized to be closely related to later Malayo-Polynesian manifestations.

Little is known of the full cultural assemblage of the makers of Cord-Marked pottery, since the remains were found in thin, interrupted layers of the bottom layers of the Feng Pi T'ou and Ta P'eng K'eng sites; further excavations in Taiwan and Southeast Asia are imperative.

There are few clues to the relationship between the early Neolithic, based on rootcrops, which will gradually be substantiated with continuing research, and the beginnings of food production in New Guinea which are believed to have occurred before 4000 B.C. A decade ago, this early date would have come as a shock to most people; however, now there are indications that polished lenticular adzes, associated with as yet unknown subsistence activities, may have existed in New Guinea and Autralia far earlier than this date (Donald Mulvaney, personal communication). The existence of hunting and gathering groups as early as 10,000 B.P. is now strongly suggested (Bulmer and Bulmer 1964:48) but their relation to subsequent and modern groups is not clear. The key variables in dating these early cultures in New Guinea are post-Pleistocene sea levels which were low enough to allow migration on foot from Australia only as late as about 10,000 years ago. While the mountain areas of New Guinea, which are populated by Papuan speakers, are the areas which have received the most attention, they may be the least relevant for the total picture of migration. Future excavation of coastal areas, where field conditions are most difficult, will be the most rewarding in these terms.

Archaeological excavation has been undertaken in the islands to the east of Melanesia in New Britain, the New Hebrides (Shutler 1967), New Caledonia, and Fiji. Here, the earliest pottery horizon has been termed Lapita, after the type site in New Caledonia. It is dated between 1300 B.C. and 500 B.C. in Fiji (Green 1968, Palmer 1966), while present dates from New Caledonia for Lapita extend roughly from 900 B.C. to 400 B.C. The eastern limit of this horizon is Tonga, where it is known as early as 400 B.C. (Green 1967:222). At this eastern fringe it formed a local tradition which continued to develop until contact times. Close similarities in design and execution exist throughout

the area from Watom Island on the west to Tonga on the east, straddling the contemporary Polynesia-Melanesia boundary line which traditional ethnographers have always placed at Fiji. Although expositions of all the distinguishing characteristics and the local cultural variants involved at this time level have yet to be presented, the general consensus is that the pottery is diagnostic of populations whose culture and language later evolved into the Polynesian cultures of the ethnographic present. Within Polynesia, there subsequently evolved Eastern and Western variants of Polynesian culture. As mentioned above, Polynesian groups may ultimately be traced back to the Cord-Marked horizon in South China and Formosa; how exactly the Cord-Marked relates to the Lapita horizon cannot be determined without much more excavation in the intervening areas.

Two additional pottery horizons are found in Melanesia. The first, marked by Paddle-Impressed Ware, was initially dated at 100 B.C. by Gifford from his excavations in Fiji (Gifford and Shutler 1956:89). Although it is rather poorly represented in the rest of Melanesia, there are hints that it might ultimately be related to stamped pottery from Southeast Asia and South China (Chang 1964, Roger Green, personal communication), which is also dated in the first few centuries B.C. Another pottery complex, of incised ware from the Shepherd group of the central New Hebrides, is also dated at about 500 B.C. (Garanger 1966) but its relations are not yet clear. Details and comparisons of the associated artifacts of these pottery horizons or complexes are not yet definitive.

The colonization of Western Polynesia is now believed to have taken place about the beginning of the first millennium B.C. (Green 1967:222). From Tonga to Samoa, and then to the Marquesas, seems to have been the sequence of contact. The Marquesas were the center of dispersal for the islands of Eastern Polynesia. In the past five years, opinions that the Society Islands were the origin of movements have changed with new excavations and interpretations, primarily by Emory and Sinoto (1964:158; Sinoto 1966). From excavations of the site of Hane on the southern coast of Uahuka Island, Marquesas, and his re-evaluation of Suggs' excavation of Ha'atuatua on Nuku Hiva, Sinoto has concluded that the initial settlement of the Marquesas took place

about 400 A.D., more than 500 years later than had initially been proposed. Suggs had concluded that the Marquesas were colonized from Western Polynesia by people who possessed a variety of Melanesian traits; pottery, certain adzes, *Tonna* shell scrapers, and shell discs for head ornaments (Suggs 1961:177-179). These artifacts appear to be constituents of the assemblages found in Lapita sites.

Similarities in artifacts between the Marquesas and Hawaii at early time levels indicate that Hawaii was populated first from the Marquesas and later, possibly about 1200-1400 A.D., from Tahiti. As one might expect, Marquesan connections are not as obvious as those with Tahiti; this from the study of folklore. Problems in radiocarbon dating exist both for Easter Island and Hawaii, where individual dates are too early to fit Sinoto's revised sequence (Sinoto 1966). However, the problematical early Easter Island date of 386±100 A.D. is suspect on stratigraphic and artifactual evidence (Green 1967:224), and the date from South Point, Hawaii, is currently undergoing re-evaluation by the Bishop Museum.

The earliest published dates for the Society Islands are in the 11th or 12th centuries A.D. (Kroll 1967). An important burial site on Maupiti, the most westerly of the inhabited islands of the Society Group, dated by stylistic means at about 900 A.D., has its closest affinities with New Zealand and the Marquesas (Emory and Sinoto 1964). The importance of the Maupiti burials is great because they display early artifact forms rarely found in the surface collections from Tahiti. These early artifacts are almost identical with burials from New Zealand, at the early Moa Hunter site of Wairau Bar. The affiliations of the later phase of culture in New Zealand, Classic Maori, are not as direct.

Eastern Polynesian culture achieved its distinctiveness and variety through isolation, while western Polynesian cultures maintained more constant inter-island contact. The historical derivation of the eastern Polynesian fishing complex, which looms large in the archaeological record in the absence of pottery, is not clear, since fishhooks of all varieties are notably rare in Western Polynesia. An episode in the evolution of the new hook forms can be seen at Hane, Marquesas, where the Western Polynesian trolling hook

gradually gives way to an Eastern Polynesian type in a single stratified site (Sinoto 1966:299). The variety of hooks and their increased numbers may have arisen locally as an adaptation to the reefless islands where nets and traps were of less value.

While Melanesia and Polynesia can be shown to have interrelated culture histories, Micronesia remains an enigma. Although "the case against a Polynesian movement through Micronesia has become even more sharply drawn today than it was a decade ago" (Green 1967:218), diffusion back and forth across the boundary between the two areas — the northern edge of Melanesia and the Gilberts — appears to have been frequent and relatively intense. Davidson's work on Nukuoro (1968), a Polynesian outlier south of Ponape, has demonstrated that atoll sites as small as 3/5 sq. mi. can yield abundant information. It is hoped that data will soon be forthcoming from untouched areas such as the Gilberts and the Marshalls now that atoll excavation has been shown to be feasible. Although there are few comparative data, it seems that the artifacts from Nukuoro resemble those from adjacent islands in Micronesia and even Melanesia (Green 1967:221) despite the fact that, physically and linguistically, the present population of Nukuoro is Polynesian.

Osborne's recent publication concerning Palau provides comprehensive survey data from which one could proceed to excavation immediately (1966). Preliminary survey by University of Hawaii graduate students doing summer ethnological field work in the Marshalls indicates that abundant surface remains do exist, and a recent detailed survey of Guam by Reinman (1966) lays the foundation for a comprehensive archaeological program on that island.

The Micronesians probably originated from the Philippines, which lie only 700 miles to the west of the Caroline Islands. This second route into the Pacific, postulated by both Spoehr (1954) and Osborne (1966) remains difficult to substantiate, since comprehensive sequences for Guam, Palau, and all of the Philippines with the exception of Palawan (farthest from Micronesia) are not even tentative. Similarities in some stone remains, including large rock-cut coffins, between Palau and the east coast of Formosa are probably the result of a common Philippine source.

With huge archaeological gaps still existing in the western Pacific there is much to be done for the Pacific culture historian. Comprehensive programs such as those launched by the Bishop Museum for Polynesian culture history have been very effective in showing how migrations and evolution in isolation produced the major cultures within Polynesia. However, earlier derivations can barely be suggested at this point.

THE STRATEGY OF PACIFIC ARCHAEOLOGY — SOME CONSIDERATIONS

Some thoughts concerning three aspects of Pacific archaeology, data collection, construction of time sequences, and ethnographic reconstruction are mentioned here for their interest to archaeologists from other areas, and to those in other aspects of anthropology in the Pacific who use the products of local archaeological research.

Data Collection

For many reasons, excavation and survey yield fewer results per unit of expended energy in the Pacific than in other areas. Not only are sites relatively rare and often scattered along shorelines; they may be partly submerged or covered with present habitations, especially on islands where land is scarce. Warm, humid climates in all areas except southern New Zealand and highland New Guinea mitigate against satisfactory preservation. The most abundant and useful artifact, pottery, is not found in several areas of the Pacific, and fishhooks, which have replaced pottery for seriation, do not occur in comparable numbers. This makes statistical analyses difficult to interpret.

In some areas, great emphasis has been placed on rock shelters and caves because of greater preservation and fewer chances of disturbances than are usually found on open sites. Yet it is obvious that a total picture of the islanders' lifeways cannot be formulated on the basis of one kind of site.

There are areas in the Pacific, as in other parts of the world, where the importance of individual artifacts overshadows the stra-

tigraphic and contextual data, where screening is used as a substitute for careful digging, and routine formulae to excavation problems obscure the nature of settlement and particular artifact associations. "Table-top" archaeology (Jennings 1944), in which students dig artificially constructed sites where locations and associations are known by the instructor, have been initiated by the Kamehameha Schools in Honolulu, and may be the most suitable substitute to chaotic student excavations.

Slowness in publication and the circulation of manuscripts in restricted "kula" arrangements are also deterrents to rapid digestion and synthesis of information.

Chronology

Contrary to statements by Dening (1967:29) that Pacific anthropologists have neglected the topic of change in the study of the island populations, one finds that the archaeology of the area has been devoted largely to the construction of local sequences, a pre-requisite in any area of new archaeological research (Spoehr 1952).

Pottery seriation is now in process in Fiji, Samoa, and parts of Melanesia. For Eastern Polynesia, as mentioned above, seriation has been based on fishhooks (Emory, Sinoto, and Bonk 1959, Sinoto 1962, 1967). These, unlike the decoration on pottery, appear to have much less range for variation, since many innovations would render them dysfunctional. Sinoto (1967:345) states:

> Changes in the typological (functional category?) and structural features of fishhooks are readily observable within an island group but the ratio between point and shank heights, the materials used, the types of manufacturing tools, and the manufacturing methods are the distinctive elements observable between the island groups.

Thus, types in the local literature are ecosocial or functional, rather than historical or stylistic (Chang 1967:113), reflecting changes in fishing practices which can be fitted into a sequence. For this reason, a reworking of the typologies in use with greater emphasis on the assumptions involved is unavoidable, while at the same time the reasons for the patterns of change, other than the simple passing of time, should be sought out.

Attempts are now being made to achieve relative dating by means other than radiocarbon and seriation. These include the use of trace element frequencies which may relate eventually to datable trends in climatic changes (Sabels 1967) and obsidian hydration determination which has been used to cross-check radiocarbon dates on Easter Island (Evans 1965) and in archaeological analysis in New Zealand.

Ethnographic reconstruction

While in the Western Pacific we are still unable to equate language groups with archaeological assemblages without numerous reservations (Ferrell 1966) the eastern areas such as Polynesia, appear to be much less complex. Ignoring, for the moment, the question of the existence of an early non-Polynesian language in Easter Island (Heyerdahl 1963) one might conclude that the pattern of prehistoric cultural differences between island groups is closely reflected in current linguistic reconstructions (Green 1966). A phase of culture, extending from New Caledonia to Samoa, appears to fit exactly the area from which those populations immediately ancestral to Polynesians are derived. Davidson, however, has found that for the outlier of Nukuoro, presently inhabited by Polynesian speakers, the excavated materials do not closely resemble Polynesian material culture and has warned us again that race, language, and culture do not always fit neatly together (1968), particularly in the western portions of the Pacific where the situation is not one of simple fission of single communities and a finite number of later contacts.

The direct historical approach, used in Tahiti by Roger Green and his colleagues, may be the most useful technique both for establishing chronologies and for ethnological reconstruction when the excavated remains are so scant. In his detailed historical study of the valley of Opunohu on Mo'orea, Society Islands, Green (Green *et al.* 1967) established from an examination of written sources what kinds of settlements were occupied when the valley was visited in the early part of the 19th century, and then proceeded to the problems of ramification and stratification in Tahitian society in the 18th century in inland and coastal zones.

The same strategy of working from contact sites back into the prehistoric was utilized on Samoa (Green, Davidson, and Peters 1967:27).

While the work in Samoa and Tahiti has not produced the most complete chronologies, it has been the most oriented toward settlement studies and broad ecological problems which have been virtually untouched in Hawaii. This approach is now being initiated by both the Bishop Museum and the University of Hawaii on the islands of Maui and Hawaii. Extremely valuable and detailed manuscript accounts of the dwelling complexes and religious structures, compiled in connection with several State Parks surveys on the island of Hawaii, should be followed up by excavation, since survey itself is not effective without sub-surface exploration.

By nature, the archaeology of the Pacific Basin, with diverse cultures built on a generalized root-crop Neolithic subsistence base in all but a few areas, lends itself to the exploration of hypotheses of drift and adaptation rather than universal evolutionary schemes. Although the interest which evolutionist or neo-functionalist ethnologists have in ecology has been shared by the archaeologists, specific projects designed to assess these processes have been rarely mentioned (Davidson 1967:373; Green 1968) since their significance was initially suggested by Vayda and Rappaport (1963). First, however, we must establish the patterns of contact and colonization before we can assess the effects of drift between "founding" populations and their derivatives. As basic data accrue in the next few years and the historical framework becomes more secure, it is to be hoped that projects of this nature will be undertaken.

The future of Pacific archaeology leads through increased knowledge of the culture history to the generation of local theories and hypotheses concerning culture in general as well as to the testing of those that have been created in other areas. We may also expect the interaction of scholars from the surrounding countries and of America and Asia with institutions within the area itself to result in a blending of Old and New World strategies and concepts into new forms more operable and heuristic than those of either region alone.

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