quence, he refuses to take the plunge into what the changes in other aspects, whose occurrence he clearly demonstrates, might mean.

Kirch then moves to the major question and shows, most convincingly, that in the last 3000 years the area of the island has increased by nearly half and the subsistence patterns have changed in unexpected ways. The first occupants dined off turtles, wild flightless birds, and giant shellfish. Within a few hundred years at most these had gone, the birds to extinction and the shellfish and turtles to much smaller sizes and numbers, and people lived off pigs, dogs, and fowls and gardens of largely imported plants. It is this period that provides evidence of swidden horticulture, in the form of extensive spreads of charcoal, and erosion of soil from the volcanic slopes. The latter helped create today's highly productive Rakisu lowland garden area. Over 2000 years perhaps a million cubic meters of earth were moved by this cause. Kirch also argues that although natural forces—tectonic uplift, high-energy transport of reef bioclastics and sand—initiated the enlargement of the land area and were primarily responsible for the tombolo, it was humans who, by eroding, conserving, and gardening the land, transformed those gains into the present environment.

The costs of these changes are also demonstrable. In the long-term there was a decline in protein intake—today's inhabitants have found the physical and social costs of keeping even pigs too high, and only fowl survive. In the shorter term, specific changes can be linked to events reported in oral histories, and Kirch shows that changes in balances of power between chiefly lineages can be related to such events as the closing of the crater lake.

Pacific islands have long been touted among anthropologists as laboratories wherein many of the difficulties of studying large land and social units are removed. What Kirch and Yen have done is to point out that they are also part of the real world, where land and people live in a close embrace. The particular history of Tikopia, we are beginning to find out, was repeated time and again throughout the Pacific. Industrial humans are not the only environmental manipulators.

Tikopia is an exemplar of archeology, able to use garbage, natural history, and people's memories to help explain the world around us, and us to ourselves.

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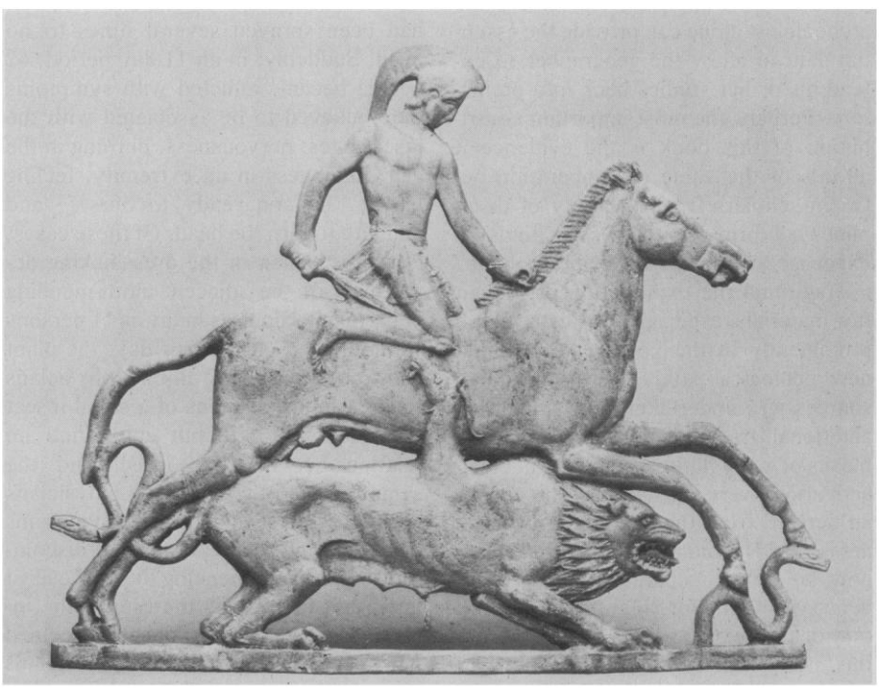
Cultural Change in the Aegean

An Island Polity. The Archaeology of Exploitation in Melos. COLIN RENFREW and MALCOLM WAGSTAFF, Eds. Cambridge University Press, New York, 1982. xiv, 362 pp., illus. $65.

The island of Melos is the most southwesterly member of the Cyclades group in the Aegean Sea. Archeologically it has been known since the discovery of the famous statue the "Venus de Milo" in 1820; the British School at Athens undertook excavations at the ancient town of Melos and at the prehistoric sites of Phylakopi and Pelos in 1895–99, and sporadic excavations and chance finds have been made during the present century. But prior to the project that forms the subject of the present review, no detailed archeological survey, coupled with environmental studies, had ever been undertaken on the island.

The project treated here was carried out as part of the overall program of renewed excavations at the site of Phylakopi in the years 1974–77. For archeological readers it should be stressed that this volume does not constitute an excavation report; rather it concentrates on the development of settlement and society in Melos from the earliest period to the present century, and on explanations that may be adduced to account for the observed changes. The work is divided into four major sections covering the history of society in Melos from earliest prehistory through the post-Roman period; environmental considerations including geology, resources, land-use, and other aspects; the relationship of the inhabitants of Melos to their island environment; and trade in all periods in raw materials and manufactured goods between Melos and other areas of the Aegean world.

The underlying aim of the work is to investigate changes in the spatial and temporal patterns of human culture and the emergence of complex society "in a particular, well defined area of study where a flourishing urban society, with its own individuality and originality, twice developed upon well-attested local foundations" (Late Bronze Age Phylakopi and the Melian city-state of the mid-first millennium B.C.). Such a study should cast light more generally on the dynamics of cultural change in the Greek world and beyond. A systemic approach is adopted to the study of cultural change on Melos, and in diachronic perspective a certain degree of underlying regularity is seen in the factors governing the evolution and decline of the two major phases of urban settlement on the island. Data pertinent to this study have been



Terra-cotta relief from Melos, about 440 B.C., depicting Bellerophon on Pegasos. Height, 14 centimeters. "In the fifth century the major clay products connected with Melos are the so-called Melian reliefs. . . . They are mould-made panels, painted with a variety of colours . . . and consisting of scenes from myth and domestic life. . . . Their purpose seems to have been as decoration for furniture or boxes and chests, and for nailing on to house walls as 'pictures.' About one-fifth of the total known are said to have been found on Melos, and their fabric has been connected with that of 'Melian' vases. . . . The preponderance of finds from the islands makes the suggestion of local production plausible." [From *An Island Polity*; reproduced courtesy of the Trustees of the British Museum]

gathered not only through archeological field survey but also from a wide variety of sources including classical authors and inscriptions, early European travelers, and modern statistical studies.

This volume is an important contribution, from both the theoretical and the factual points of view, to the archeological literature concerned with the Aegean. Though previous archeological excavation reports have frequently contained specialist appendixes concerning environmental and other matters, such studies have usually lacked a coherent conceptual framework within which all the data can be analyzed and brought to bear on a central theme. The editors are correct in implying that the detailed reconstruction of the archeological-historical sequence for a certain area should not be an end in itself but should serve as a starting point for discussion of possible explanations for the observed changes. Although the idea of such comprehensive studies is not new, such an approach has been adopted only on a small number of Aegean and Near Eastern projects, and publication of the reports of most of these is still pending. This volume also demonstrates the importance of human geographical studies in the determination of factors influencing settlement systems. Geographical models can be of great assistance to the archeologist engaged in such analysis; conversely the archeologist alone can provide the essential data to allow the geographer to extend his or her studies back into prehistory. Perhaps the most important contribution of this book is the evidence it affords of the value of cooperation between scholars from a variety of disciplines all bringing their own kinds of expertise to bear on a specific problem.

Trade and the exploitation of Melian raw materials, especially obsidian, figure prominently in the volume. A detailed new geological study of the obsidian sources was undertaken, and numerous additional trace element analyses (by means of x-ray fluorescence and neutron activation) were carried out. The obsidian derived from the two Melian source areas (Sta Nychia and Demenegaki) can now be clearly separated, but no evidence was found for differential exploitation of the two sources. The claim that this study represents the first detailed characterization of an obsidian source in the Old World is not exaggerated; of interest for characterization studies in general is the conclusion that little variation may be expected in the composition of samples derived from the same obsidian flow in the Mediterranean area. It is also of interest to note that, despite evidence for the utilization of Melian obsidian as far back as the 11th millennium B.C. at Franchthi Cave on the Greek mainland, the earliest known sites on Melos itself date to the Late Neolithic period (later fourth millennium B.C.), and only in the succeeding earliest phase of the Early Bronze Age (3300 to 2700 B.C.) is clear evidence encountered for permanent settlement.

Although the objective of using Melos to illustrate the dynamics of culture change in general proved difficult to fulfill, the volume represents a considerable advance over the level of studies frequently appended to published excavation reports. Matters for further research have been delineated, and the value of the underlying comprehensive approach has been clearly demonstrated. It is to be hoped that comparative research in other regions will demonstrate the extent to which similar processes may be observed with regard to cultural change.

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Affliction in the Workplace

Mass Psychogenic Illness. A Social Psychological Analysis. MICHAEL J. COLLIGAN, JAMES W. PENNEBAKER, and LAWRENCE R. MURPHY, Eds. Erlbaum, Hillsdale, N.J., 1982. xvi, 270 pp. $29.95. Environment and Health.

It was June, the height of the production season for women's clothing in the Northern mill. For several weeks previously, workers had been complaining about the bite of an insect, and the plant had been sprayed several times to no avail. Suddenly, in an 11-day period, 62 people became afflicted with symptoms they believed to be associated with the insect bites: nervousness, burning in the calf, numbness in an extremity, feeling like a "balloon ready to burst," and inability to turn the head. Of these cases, 59 were women in the dressmaking department or the adjacent cloth-mending department. Since as many as 11 persons were afflicted on the first day, the plant had to be shut down. Baffled physicians found a few specimens of a small insect the size of a mite but could find no relation between the insect and the symptoms. By the tenth day, physicians declared that, though the symptoms were certainly real and of great discomfort to those experiencing them, the least important factor was the bite of the insect; anxiety and nervousness seemed most pervasive. Although the physicians were hesitant to use the phrase, the newspapers were already calling it an "episode of mass hysteria."

A brief account of the "June bug epidemic," the subject of a case study published by Alan C. Kerckhoff and Kurt W. Back in 1968, appropriately opens this most interesting and useful book on a phenomenon the authors call mass psychogenic illness (MPI). In its broadest sense MPI refers to any "outbreak" of illness-like behaviors for which a biological basis is initially suspected but for which a biological cause is not found or, in retrospect, the biological cause adduced is judged not to be credible. Thus, the term covers such strange behaviors as the "dancing manias" of the Middle Ages in which hundreds of persons would engage in dancing to exhaustion (the Italian version was considered by people in that age to be the result of the bite of the tarantula). It also includes instances of demonopathy in which "epidemics" of strange cries, convulsions, abnormal movements, and the like were attributed to demonic possession (late 16th and early 17th centuries). Coming closer to our own time, MPI includes school children fainting and vomiting during the rehearsal of a school play and episodes (usually ranging from several hours to a week or 10 days) of fainting, nausea, vomiting, and feeling dizzy occurring in visible and public form among workers in modern industrial work settings.

Anyone coming to the collection of papers in this book expecting to find accounts of such phenomena as dancing manias and demonopathy will be disappointed. The symposium on which the book is based was sponsored by the National Institute of Occupational Safety and Health, and with one exception, to be discussed later, the authors take as their purview the occurrence of MPI in 20th-century industrial work settings. This is in keeping with the interests of two of the editors, Colligan and Murphy,