

Book Reviews

A Mesoamerican Site

Fábrica San José and Middle Formative Society in the Valley of Oaxaca. ROBERT D. DRENNAN. University of Michigan Museum of Anthropology, Ann Arbor, 1976. xii, 292 pp., illus. Paper, \$8. *Memoirs of the Museum of Anthropology*, No. 8. Prehistory and Human Ecology of the Valley of Oaxaca, vol. 4.

During the past ten years, Kent Flannery of the University of Michigan and his associates have conducted a well-conceived survey of the prehistory and human ecology of the Valley of Oaxaca, homeland of the civilized Zapotec people of southern Mexico. The excavations described in this volume were carried out by Robert Drennan as part of this project, at a site called Fábrica San José, a settlement of the Middle Formative period (850 to 450 B.C.) located on a tributary stream of the Río Atoyac, about 4½ kilometers northwest of the larger and more ancient site of San José Mogote.

In several important respects Drennan's analysis differs from most past reports on Mesoamerican excavations. For instance, he has taken as his unit of analysis not the more traditional stratigraphic layer uncovered in a narrow trench, but what Marc Winter has called the "household cluster": groups of archaeological features which seem to represent the living and working area of a single household. While this may seem old hat to a generation of new archeologists who have been doing exactly the same thing in North America north of the Río Grande, it is a relatively new approach in Mesoamerica, especially in Formative village remains. Studied in this way, the remains yield insights on Formative society lacking in more old-fashioned site reports.

Another innovation in this volume is Drennan's approach to seriation. The standard method of deriving chronology from potsherds has been to construct "battleship curves" based upon percentages of types or wares as they change through time. In recent years,

more mathematically sophisticated archeologists have applied computer programs to the ordering of matrices of similarity scores, so that the highest values fall near the diagonal—this is the so-called Brainerd-Robinson technique. According to Drennan, a chronology based upon "battleship curves" is subjective and there are several objections to the Brainerd-Robinson technique, including the possibility that dissimilarities may represent something other than just variation through time, such as class, wealth, or climate.

Using 22 "proveniences" in a pilot study, Drennan was able to arrange his potsherds (classified into "wares") into a convincing chronology, by means of a combination of multidimensional and nonmetric scaling; he thus avoided the assumptions built into the Brainerd-Robinson method. Flannery, in his introduction, favorably compares the six months it took Drennan to carry out this analysis with the six years that a colleague has taken to do the same with his ceramics using more standard methods. While I have not counted up all the potsherds from Fábrica San José, six months does seem like a very long time to work out a ceramic chronology for a modest-sized collection, considering that a machine for high-speed computation was involved. I suspect that until more convincing evidence is presented for the time-saving abilities of computer-based seriation, the rest of us are going to continue to float in our subjective "battleships."

Having established his chronology, Drennan was in a position to describe the community for each of the three Middle Formative phases represented at Fábrica San José; he applied the chi-square test to determine whether the distributions of certain artifacts among the household clusters can be attributed to factors other than chance. The community was always small: over a period of four centuries it grew from three to 10 or 11 households, thus never rising above the level of a large hamlet. The cultural poverty of the offerings placed with sub-

floor burials calls to mind the Middle Formative hamlets and villages excavated many years ago by the late George Vaillant in the Valley of Mexico—the other end of the wealth spectrum from some of the coeval Olmec centers such as La Venta and Chalcatzingo.

In an interesting appendix, Richard I. Ford describes carbonized plant remains. The inhabitants of Fábrica San José relied heavily on a dyad (no pun intended) of maize and avocados rather than on the supposedly more typical triad of maize, beans, and squash. The avocado, whether cultivated or not, has been generally overlooked as a staple item in Mesoamerican diets, yet it is very early and important in the Tehuacan valley of Puebla and is represented by casts in Early Formative debris at Salinas La Blanca on the Pacific coast of Guatemala.

I must lodge a small complaint about the quality of book production. While the cost of high-quality typesetting and printing is very high in archeology and it would be difficult for a small institution or museum to maintain the lavish standards once set in this field by the Carnegie Institution of Washington, the drab appearance of the text and halftones, as well as the amateurish line drawings, detracts from the worth of this volume. Nevertheless, this is a fine and innovating report which will be most valuable to other Mesoamericanists for the analytical methodology employed.

MICHAEL D. COE

Department of Anthropology, Yale University, New Haven, Connecticut

Contributions to Archeology

Cultural Change and Continuity. Essays in Honor of James Bennett Griffin. CHARLES E. CLELAND, Academic Press, New York, 1976. lxxviii, 378 pp., illus. \$24.50.

James Bennett Griffin has been one of the most influential figures in the study of the prehistory of eastern North America. His career covers most of the era of the growth of that field of study as it expanded and became professionalized, that is, from the late 1920's to the present day. Last year he retired from academic and administrative responsibilities at the University of Michigan. The volume under review is one of two being published in commemoration of his contributions. (The other, entitled "Papers for the Director," is issued by the University of Michigan Museum as part of its series *Anthropological Papers*.)