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# *The Quantitative Approach to the Relation between Population and Settlement Size*. S.F. COOK and Robert F. Heizer. Reports of the University of California Archaeological Survey. No. 64, University of California Archaeological Research Facility, Berkeley, 1965. 97 pp., 10 figs., 9 tables. No price indicated.

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## Abstract

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archaeological sites by various chemical, biological, and other means.

PART 3. *Dating the Events in Prehistory.* Part 3 explains and evaluates: (1) physical-chemical dating techniques (radiocarbon analysis, potassium-argon analysis, thermoluminescence, natural low-level radioactivity analysis, magnetic dating, chemical analysis, patination, and obsidian hydration); (2) geochronological dating techniques (varve analysis, correlation of Pleistocene features, rate of sedimentation, and study of beaches, terraces, and dunes); (3) biological techniques (palynology, paleontology, and dendrochronology); (4) miscellaneous dating techniques (sequence dating, cross-dating, astronomical dating, dating by calendars, dating by estimating the rate of refuse accumulation, and dating through the geographic relation of sites to geologic features).

PART 4. *Describing and Interpreting Prehistory.* The subjects covered in this final section are indicated by the chapter headings: Prehistoric Economy, Determining the Use of Artifacts, Prehistoric Society, and Writing Culture History. Some of the important topics treated here are site reporting, construction of regional histories, classification of prehistoric cultures, and the reconstruction of prehistoric diet, technology, architecture, transportation methods, demography, and social organization.

This book does not quite achieve the objective stated in the preface of presenting " . . . a balanced and systematic overview of the history, method, and theory of archeology." The book is, in fact, more of a potpourri of particulars than an overview; there is more concern with specifics than with generalities. The main literary technique is to state the nature of a problem or a concept, then to relate how a particular archaeologist dealt with the problem in a specific instance, or how a particular archaeologist has delineated the concept. In most cases there is no comprehensive theoretical discussion of a problem or a concept, merely illumination by example. An exception is Chapter 17, which presents brief but excellent statements on writing site reports and regional histories and on constructing prehistoric models of culture.

There is a decided looseness in the general organization of the book which most readers will undoubtedly find distracting to some degree. For example, in Chapter 2 a history of archaeology is begun, is brought up through the 19th century, and then is terminated abruptly, a brief statement on salvage archaeology being the only reference to archaeology in the 20th century. Chapter 3 starts off on a completely different tack, and the history is never resumed (although there are incidental references to 20th-century archaeology scattered through the book). To cite a second example of loose structure, there are two at least to this reviewer. For example: "Preservation is predictable, yet whimsical" (p. 68). And [after stating that time, space, and culture are the three elements that comprise the archaeological context, and after discussing time as an element of context]: "The remaining aspects of archeological context, culture, [sic], and space can be considered together. Without culture, space is simply geography, and without space there is no culture in the usually accepted sense of the word" (p. 66). In considering archaeological surveys: " . . . if a site is obscured by heavy vegetation, it is possible to plot buildings that to all practical purposes are invisible. To do this requires two persons, one with a compass and one with a drawing board. One person with a compass stands on the corner of a building and sights both the drawing board and the second person, who is also at a corner. The second person may not be able to see the drawing board. In this manner, by shooting from a known position to an unknown position, a whole town can be mapped expeditiously. . . ." (pp. 93–5).

The merits of this book far outshine its shortcomings. A beginning student who reads this book carefully will become acquainted with most of the fundamental concepts of archaeology, will reach an elementary comprehension of the nature of archaeological data, and will gain some understanding of archaeological methodology. The explanations and evaluations of ancillary technical processes such as radiocarbon analysis, magnetic dating, and the like are precise, exceptionally lucid, mercifully brief, and — insofar as I am able to judge — authoritative. I know of no other publication that treats these technical processes so simply and clearly. The bibliography, both for technical processes and for basic archaeological theory, is comprehensive although not exhaustive.

Despite a somewhat discursive structure and an occasional ambiguity, this volume will undoubtedly prove valuable as a text for beginning students and as a standard reference for both advanced students and professional archaeologists.

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It has been customary to illustrate an idea or hypothe-

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To cite a second example of loose structure, there are two separate sections with the identical heading, *How to Find Sites*, one in Chapter 3 (pp. 46–8), the other in Chapter 6 (pp. 87–90). These are needlessly repetitive, and they even contradict each other on one point — the question of what proportion of sites is found by chance.

Although the writing style is clear in the main, there are occasional passages that do not make complete sense,

sis concerning relationship between sets of variables such as population size and area by graphs, many of which are simply diagrammatic. These are useful means of summarizing or perhaps simplifying data expressed in the text. However, Cook and Heizer make the point that, if possible, such graphs would be much more satisfying if real figures had been supplied so that assumptions and hy-

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