number of artifacts is proportional to the status of the residence unit within a specific longhouse, that all longhouses were occupied for the same duration, and that all trash was discarded adjacent to the longhouse.

4. The author develops an equation to determine annual discard rate for flint. The exercise is rendered less meaningful when we know that the flint source is a mile away.

5. Statistical treatments determine a significant clustering of plain blades and endscrapers on western sides of longhouses and sidescrapers and cores on eastern sides. He interprets that to mean sexual division of labor, with females working on the western side and males on the eastern side.

However, not all is faulty with the volume. When the author sticks to description of site features, material culture, and statistical manipulation, he is right on the mark. The volume contains a large number of figures, tables, plates, and a fine bibliography. If one is looking for an English language examination of the central European neolithic with a large data base, and can discount some interpretations, this can be considered a worthwhile account.

**For Concordance in Archaeological Analysis: Bridging Data Structure, Quantitative Technique, and Theory.** *Christopher Carr*, ed. Kansas City, MO: Westport Publishers, 1985. 642 pp. n.p. (cloth).

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This important book consists of a collection of 18 chapters on statistical analysis in archeology written by 15 different authors. Seventeen of the papers are original contributions. One chapter (chap. 11 by Williams, Thomas, and Bettinger) is reprinted from an earlier work edited by Charles Redman (*Research and Theory in Current Archaeology*, John Wiley, 1973).

As the title indicates, the book focuses on the critical relationship between data structure, quantitative techniques, and theory. In Carr's words, the subject of the book "is the relatively unexplored middle ground between philosophy of science, statistics, and archaeological and anthropological theory. . . . this book focuses on the integration of all three concerns . . . [and] calls for archaeologists to develop and make explicit the logical arguments and propositions that link theory, quantitative technique, and data to each other and the phenomenon of interest" (p. xv).

These are important issues that, as Carr notes, often are not adequately dealt with. One can only agree with him that "*Explicit justification* of the selection of data and methods for analysis, in relation to the expected and empirical nature of the phenomenon of interest, is one means by which logical inconsistencies and false premises in current theory are revealed, inadequacies in current techniques are uncovered, and new theories and methods are suggested" (p. xv; emphasis in original).

The 18 chapters are grouped into six parts. Parts 1 and 2 deal primarily with "the general nature of logic involved in the analysis of complex data structures" (p. xvi), focusing on a major problem: how does one deal with an archeological record that resulted from multiple processes when working with analytic models that presuppose data generated by single processes? A number of deductive and inductive strategies are proposed to aid in identifying and eliminating extraneous data variability and arriving at appropriate analytic procedures.

The remaining chapters deal with such diverse topics as the conceptual and logical structure of data base management systems (part 3), regional analysis and settlement pattern studies (including predictive modeling, environment/site-location relationships, Linear Programming, and theoretical consideration of the nature of site loci; part 4), new techniques for intrasite spatial analysis (part 5), and artifact analysis (including absolute seriation of ceramics, study of lithic technological indices, and new views on projectile point typologies; part 6). The contributions are generally of good quality, and discussions of the diverse topics are unified by a concern with the theoretical and logical bases of statistical analyses, the relationship of phenomena of interest to relevant data structures, and identification/selection (or construction) of quantitative techniques appropriate for study of given data sets.

The book is not particularly easy reading and presupposes a fair knowledge of statistics, especially multivariate techniques. Some chapters are long and difficult to wade through. For example, Carr's contribution on intrasite spatial analysis (chap. 13) is a small book in itself: 150 pages, 26 tables (some several pages long), and 15 figures, plus 161 references arranged under seven different subject headings, plus listings of two computer programs. Carr's introduction to each part, however, provides an overview of each paper in that section and will be useful in providing an

idea of the book's content for those who want to first (or only) scan the volume.

Although the book "can serve as a reader in graduate level courses on archaeological research design or quantitative methods" (p. xvi), it is not one that can be used to teach the mechanics of statistical applications. Rather, the main concern is "the general nature of logic involved in analysis" (p. xvi). Thus, because the book deals with the more challenging aspects of statistical analysis, it represents a valuable addition to the literature.

**Migrations in Prehistory: Inferring Population Movement from Cultural Remains.** *Irving Rouse.* New Haven, CT: Yale University Press, 1986. 216 pp. $20.00 (cloth).

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*Migrations* begins with an introduction to dispersal theory, examines four cases of strict migration (Polynesian, Eskimo, Japanese, and Taino), and ends with potent conclusions. Twelve fundamental concepts are provided, including one that breaks up migration into levels based chiefly on group size, and another that weighs alternatives to migration. For each case, the author provides a description of the setting, hypotheses, linguistic and physical anthropological tests, the archeological test, and a summary evaluation.

Rouse recognizes that migration as an explanation for cultural variation has been variously successful. Still, he concludes that the four cases demonstrate "migrationism" to be a viable explanation when handled as suggested. I agree. Moreover, his approach for reaching this conclusion (testing hypotheses with independent data) has been used successfully by physical anthropologists such as W. W. Howells (Pacific islanders), and W. S. Laughlin (Aleuts).

This book could have two major effects. As it provides a simple (i.e., fundamental) formal procedure for evaluating the possibility of migration from cultural remains, more culture history research can be expected. Because it is a powerful statement on the value of the independent findings of physical anthropology and linguistics, those of us trying to save human skeletal remains from reburial may gain additional support from the archeological community.

Has Rouse followed his own advice? Generally, yes, but in the Polynesian case he remarks (p. 29) that "physical anthropologists

have lagged behind linguists in studying population movements in the Pacific," yet there is no mention of Michael Pietrusewsky's work or that of most other physical anthropologists. For Eskimos he relies mainly on archeologist Don Dumond's views on Arctic physical anthropological findings instead of evaluating for himself what was originally written. Clearly, in these and in other cases, had Rouse given as much attention to the evidence from physical anthropology as he did to that from linguistics, then these unfavorable comments would not be in order, and his tests for migration would have been strengthened.

In spite of my few criticisms, I am delighted with this book and the formal procedure it provides on how to evaluate whether migration or some other process is responsible for cultural variation in space and time. Rouse's cases show by example precisely how to identify a past migration.

**Peer Polity Interaction and Socio-Political Change.** *Colin Renfrew* and *John F. Cherry,* eds. New Directions in Archaeology. New York: Cambridge University Press, 1986. 188 pp. $42.50 (cloth).

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This new volume in the New Directions in Archaeology series grew out of a symposium held at the Society for American Archaeology meetings in Minneapolis in 1982. The most striking quality of the book is the coherence of the papers. The organizers, Colin Renfrew and John F. Cherry, clearly set a well-defined agenda for the session. The participants address the questions set forth within the areas of their own geographical and chronological expertise.

The first chapter, by Renfrew, presents definitions and general discussion, along with some specific applications. Ten papers follow, each examining the question of peer polity interaction in a particular context. The final chapter is a review and prospect for the future by Cherry and Renfrew.

A "polity" is defined by Renfrew as "the highest order sociopolitical unit in the region in question." Polities exist in small-scale and in large-scale societies, in egalitarian and in hierarchical ones. The authors argue that we can learn much about cultural dynamics by looking at interactions between peer polities— sociopolitical units of equal scale and power. This approach contrasts with central place