Cross-Cultural Psychological Research

In this book, **Thai Peasant Personality: The Patterning of Interpersonal Behavior in the Village of Bang Chan** (University of California Press, Berkeley, 1965, 245 pp., $6), Herbert H. Phillips successfully presents a "description and analysis of selected aspects of the psychological life of Central Plain Thai peasants . . . an approach for dealing with some of the problems involved in designing and carrying out cross-cultural personality research . . . [and an example] of the recent anthropological trend toward team research." Moreover, the author's awareness of the complexity of interpersonal behavior and of the problematic nature of our attempts to describe and analyze it recommend his book to more readers than share the three immediate concerns announced in its preface. Like most satsifying but stimulating studies, this book settles some long-standing questions, asks some that it does not answer, and raises some of which it does not take consistent account.

This study consists of the first two stages of its author's ideal "five-stage cumulative research program." Stage 1, "naturalistic observation," he regards as "descriptively the most interesting, but methodologically the most vulnerable." I find Phillips's treatment of this stage (pp. 14 to 109 and 200 to 208) accurate and remarkably insightful in substance, eloquent in style, and far more exciting and less "vulnerable" methodologically than the Sentence Completion Technique (SCT) which is the core of the second stage. His careful delineation of what is, and is not, meant by such concepts as "loose social structure" and "social cosmetic" convert otherwise misleading slogans into penetrating descriptive devices. His discussions of conformity and of psychological isolation will probably prove quite important for comparative studies. His insistence that "human behavior is typically polyphasic" and variable in "commitment" makes his account of the psychological dimensions of interaction far more sophisticated than most.

The author, however, by sometimes identifying native justifications of conduct with analytic explanations of behavior, occasionally fails to maintain his level of sophistication. Another occasional lapse which, like the first, is more instructive than destructive, is also, like the first, typically anthropological. Phillips, probably along with most modern ethnographers, feels that his "major intellectual task . . . is to make explicit that which is implicitly held by his informants." However, he frequently uses the traditional, plausible, but nonetheless misleading device of locating and explaining Thai phenomena by means of contrasting items of behavior observed in a Thai village with items of behavior imagined of "Westerners" (for example, pp. 65, 66, 69, 80, 87, 145, 155, and 195).

The author's treatment of the theory, administration, and interpretation of the SCT is careful, considered, and candid. Although his discussions of translation, cross-cultural concept equivalence, psychological access, and situational determinants of response are among the book's major contributions, it is often unclear how the SCT-generated materials are intended to relate to the observationally based materials.

This book is essential reading for Thai specialists and is highly recommended to all interested in cross-cultural psychological research. My criticisms of it are intended to emphasize its further importance to those concerned with the psychology of interpersonal behavior.

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The Cell: Its Structure, Function

One of the primary goals of morphology is the adequate description of the cell as a three-dimensional complex of molecules, particularly macromolecules, and of the changes this complex undergoes with time. This book, **Ultrastructural Plant Cytology** (Elsevier, New York, 1965. 387 pp., $24), by A. Frey-Wyssling and K. Muhlethaler, presents a thorough and penetrating analysis of the progress that has been made toward achieving this goal.

The authors emphasize that any structure ranging from simple molecules to macromolecules and cell organelles has to be analyzed and understood in its three-dimensional configuration and in its spatial relationship to its neighbors. Consequently the physical and stereochemical aspects of macromolecules, such as polysaccharides, proteins, and nucleic acids, are carefully treated in part 1, including atomic distances, bond angles, interatomic and intermolecular forces, volumes of unit cells, and relative space-filling of various types of molecular packing. This part, about one-third of the book, also contains an outline of virus ultrastructure. Part 2, approximately two-thirds of the book, is devoted to the discussion of individual cell organelles ranging from the cytoplasmic matrix through cell membranes, Golgi apparatus, spherosomes, and lysosomes to mitochondria, plastids, nucleus, and cell wall. The content is restricted to the molecular and ultrastructural morphology of a generalized cell, a plant cell in particular. Descriptions of specialized cell types, such as those from phloem and xylem, are provided only tangentially.

The book is very impressive owing to its systematic approach and the wealth of detailed and precise information presented with each subject. In most instances controversial topics are discussed as such, and the various viewpoints are considered carefully. The authors deviate from this pattern when presenting their own provocative theories on the origin of mitochondria and plastids from initial bodies budding off the nuclear envelope, and on the irreversible or monotropic development of cell organelles. In those instances, a more balanced discussion of the vast amount of data and their various interpretations would have been preferable. I noted several minor defects—the subject index is rather brief, a few of the electron micrographs do not quite approach present-day technical standards, and the construction of the English has a Germanic flavor.

The book is highly recommended for any student in biology who is interested in molecular morphology.

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Microbiology

Chemical Microbiology (Butterworth, Washington, D.C., 1965. 255 pp., $7.50), by Anthony H. Rose, reminds me of Stephenson's *Bacterial Metabolism*, published in the 1930's, but Stephenson's book was closer to the developing frontier of the science.

Rose begins with a chapter on bacterial anatomy—the nature and chemistry of flagellae, fimbriae, capsules, cell wall, cell membrane, and cytoplasmic

inclusions, the latter including DNA and nuclear structure, ribosomes, mitochondria, chloroplasts, granules, and even transfer-RNA. The next chapter is devoted to such aspects as the environment of microbial growth, nutrients, inhibitors, *p*H, radiation, and temperature. A short chapter on metabolic principles precedes a chapter on permeation and two chapters on energy release and biosynthesis. The latter includes protein and nucleic acid synthesis as well as synthesis of smaller molecules. The regulation of metabolism, both genetic and environmental, is treated in the next chapter. The final two chapters deal with growth and reproduction and with differentiation; the latter is primarily concerned with spore formation.

It is difficult to assess the usefulness of a book of this sort. To one who is quite familiar with the field it will seem curiously incomplete in that the author is trying to cover so much information that he can treat very little of it in any depth. But how does it appear to one who is not familiar with the subject? It could provide an overall survey or serve as an introduction to any of several areas of knowledge. But it could also be a source of difficulty because the author rarely mentions the type of experimental evidence available to support the concepts discussed; indeed, he seems to ignore experiment almost entirely. The volume may well be a useful introduction to the subject, but there are enough uncertainties about it to preclude wholehearted recommendation.

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Paleo-American Prehistory

It is now generally accepted that man was present in the New World during the terminal phases of the last Ice Age. There remains, however, considerable difference of opinion as to when the first migration may have occurred. At one extreme are those who hold that there is no evidence for man prior to the terminal phases of the Wisconsin (Two Creeks interval). Others postulate a very early migration, perhaps even pre-Wisconsin, and accept as evidence for this position a number of localities which have yielded only crude tools with general resemblances to Early and Middle Paleolithic materials in the Old World. Most authorities find themselves somewhat between these extremes. On one hand, they are impressed by the fact that none of the so-called early "pre-projectile" localities have been adequately studied, or by the fact that when they are studied, as in the recent work at Tule Springs, the evidence for early occupation cannot stand careful scrutiny. On the other hand, it is also evident that the earliest firmly dated industry in the New World, the Clovis Complex, with radiocarbon dates clustering between 9000 and 9500 B.C., is markedly unlike any known industry of similar age in Northeast Asia. These differences must have resulted from a long period of isolated development. Two facts—that American Indian languages are diverse and distinct from those of the Old World and that, physically, the American Indian is varied and racially different from the populations in Siberia—are cited as further evidence for a respectable antiquity for man in the New World. The only problem is that the evidence for this antiquity has not been found.

In this book, **Paleo-American Prehistory** (Idaho State University Museum, Pocatello, 1965. 251 pp., $5), Alan L. Bryan presents an integrated theory in support of a very early occupation of the New World. Bryan summarizes all of the major localities, in some instances offers alternative interpretations, and attempts to reconstruct a historical sequence. The reconstruction is formulated on three basic premises: (i) that American projectile point tradition evolved within the New World from a basic leaf-shaped form; (ii) that the several projectile point traditions evolved at different times and in different places; and (iii) that man was present in the New World prior to the initial development in the Old World of bifacially flaked stone points.

I consider this very useful book one of the most thought provoking of those available on this subject, but the nonspecialist should approach it with caution. First and foremost, he must remember that the above premises are only hypotheses, because there is no irrefutable direct evidence to support them. Second, one must be very cautious in using some of the data from this book. For example, Bryan states that ". . . radiocarbon dates more than 25,000 years old have been obtained from southern North American sites which do not yield 'classic' 'early man' projectile points" (p. 2). He does not state, however, that serious doubts have been raised about every one of these localities. Another example—and there are many others—is his use of the data from Sandia Cave, and in particular his dating of the Sandia occupation at 20,000 B.C. (p. 42). In other sections of the book Bryan indicates not only his awareness of this problem (there appear to be reasonable grounds for questioning whether the dated samples came from Sandia Cave), but also his knowledge about the recent work by Haynes which suggests that the initial occupation of Sandia Cave was several thousand years later than 20,000 B.C. Nevertheless, in the synthesis sections, a date of 20,000 B.C. for Sandia Cave is used in a manner that leads the reader to believe there was no question about the evidence.

Unless the reader is aware of the dubious nature of most of the data on which Bryan builds his theoretical framework, he may find himself convinced of the plausibility of the arguments; they remain very questionable, to say the least, when alternative interpretations are given adequate consideration. Although I am prepared to accept as probable the postulation that the American projectile point traditions are of New World origin, I remain skeptical concerning the available evidence to support this position. The proof of the argument must rest on new data, carefully collected and adequately documented.

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History of Medicine

W. D. Foster's book, **A History of Parasitology** (Livingstone, London; William and Wilkins, Baltimore, 1965. 210 pp., $8.25), undoubtedly grew out of his earlier works—*A Short History of Clinical Pathology* (1961) and *"The rise of chemical pathology"* (1963). In the preface Foster says, "There is no book on the history of parasitology in English and I am not aware of one in any other language. This gap in the literature I have tried to fill in outline. . . . The period covered is from ancient times to about 1920 by which time parasitology was a well established branch of biology." He explains that he has not included more modern work because "to assess its relative importance would need a professional parasitologist which I am not.