Book Reviews

Naven. A survey of the problems suggested by a composite picture of the culture of a New Guinea tribe drawn from three points of view. Gregory Bateson. Stanford University Press, Stanford, ed. 2, 1958. xix + 312 pp. Illus. + plates. $6.

When *Naven* first appeared, in 1936, it had a mixed reception. Some praised it as a new departure in anthropological method and theory, others damned it as bad ethnography or ridiculed it as pretentious nonsense. Its reissue, in 1958, will probably cause much less stir—not because many of the methods and theoretical matters it deals with are out of fashion but because they are now so fully in fashion and because they are now receiving more systematic and articulate treatment by other authors. I am not well enough informed to know what part *Naven* played in introducing these fashions—Bateson has not been widely quoted or credited—but the fact remains that the book antedated by several years the present popular preoccupation with many of the matters it deals with.

Naven is the native name for a ceremonial behavior pattern of the Iatmul people, who live on the Sepik River of New Guinea. *Naven* ceremonies are performed by adults in celebration of achievements of a sister's child—such acts as homicide, the first killing of a food animal, the first planting of a yam, the first beating of a slit gong, and the like. Typically, the celebrants don clothing of the opposite sex and show their respect to nephew or niece by various self-demeaning gestures. The book grows out of Bateson's attempt to explain this behavior pattern in terms of other aspects of Iatmul culture and, in so doing, to experiment with some new ways of thinking about ethnographic data. It is not designed to be a standard ethnographic report. This second edition of the work contains the first-edition text, unchanged and complete, together with a new 22-page postscript.

Discarding the conventional institutional and functional approaches to ethnographic presentation as inadequate, Bateson utilizes the following approaches (some of them new, some of them borrowed):

"1. *Structural* or 'logical' relationships, between the cognitive aspects of the various details of cultural behavior: the cognitive reason for behavior.

"2. *Affective* relationships between details of cultural behavior and the basic or derived emotional needs and desires of the individuals: the affective motivation of details of behavior.

"3. *Ethological* relationships, between the emotional aspects of details of cultural behavior and the emotional emphases of the culture as a whole.

"4. *Eidological* relationships, between the cognitive aspects of details of cultural behavior and the general patterning of the cultural structure.

"5. *Sociological* relationships, between the cultural behavior of individuals and the needs of the group as a whole: the maintenance of solidarity, etc." (pages 29–30).

In addition, the author acknowledges the value of two other approaches, developmental psychology and economics, but omits use of them because of inadequate data.

In his chapters on "Structural relationships" Bateson attempts to account for the personnel and the kinds of transactions involved in a *naven* ceremony as logical manifestations of several general premises implicit in Iatmul culture. In this he specifically makes use of Radcliffe-Brown's principle of *identification* [as exemplified in the latter's article on the "Mother's brother" in the *South African Journal of Science* **20**, 542 (1924)], and although he stretches this kind of reasoning almost beyond the limits of credibility, this part of his analysis is interesting and readable.

In his chapter on the "sociology" of *naven*—that is, on its effects upon the integration of Iatmul society—Bateson shows how the ceremony, occurring as it does between members of separate patrilineages, serves to maintain ties between these types of social units, which might otherwise remain hostilely separate because of the absence of other integrative mechanisms (for instance, centripetal community political hierarchies or repetitive marriages between specific patrilineages). Like the chapters on culture structure, this portion of the book is straightforward, noninnovating, and on the whole plausible.

Next, Bateson plunges into the formulation and exemplification of his concept of ethos, which he defines as "the expression of a culturally standardized system of organization of the instincts and emotions of the individuals" sharing a particular culture (page 118). Fortunately the terms of this definition are vague enough to allow the author wide leeway for his rich characterizations of the contrasting ethoses of Iatmul men and women—here again Bateson's reportorial skill escapes the strait jacket of his methodological experimentation. In fact, so vivid are some of his descriptions of Iatmul behavior that one can forgive him for his efforts (which he himself eventually deplores) to classify ethoses and relate them to Kretschmerian and psychiatric types.

Perhaps the most interesting innovation to come out of Bateson's treatment of ethos in his concept of "schismogenesis" ["a process of differentiation in the norms of individual behavior resulting from cumulative interaction between individuals" (page 175)]. *Complementary* schismogenesis is said to occur when, for example, one person of an interacting pair becomes more and more assertive and the other more and more submissive, while *symmetrical* schismogenesis is manifest in the behavior of two individuals who attempt to outboast one another. Again, Bateson displays much more skill in applying these labels to Iatmul behavior than he does in extending their application to psychiatric patients, culture contact situations, and international armament rivalries—although it must be said that he makes a good case for some similarity among these diverse interactions.

Bateson's final approach to the study of Iatmul culture concerns its *eidos*—that is, a standardization of the *cognitive* aspects of the personality of the individuals sharing the culture (page 220). One aspect of Iatmul *eidos* is said to be the great multiplicity and complexity of its ideas or assumptions, and with this goes the high value placed upon erudition (as opposed to rote memorizing). Other characteristics of Iatmul *eidos* are said to be intellectuality, a love of paradox (a sense of pluralism along with a sense of monism, a sense of *direct* dualism ("that everything has a sibling"), a sense of *diagonal* dualism ("that everything has a symmetrical counterpart"), and patterns of thought which govern the seriation of individuals and groups (for instance, the identity of alternate generations) (page 235).

Bateson was certainly not the first ethnographer to describe cognitive aspects of nonliterate cultures, but he must be given credit for helping to revive this phase of ethnography and for

attempting to relate cognitive with other aspects of culture.

The earlier edition of *Naven* closes with a chapter titled "Epilogue 1936." In it the author describes with disarming honesty and almost masochistic candor his shortcomings as a field ethnographer and his flounderings as an analyst. We are presented with the picture of an inadequately trained young man dumped into an enormously complex culture—not knowing what or how to investigate. Some direction is said to have been provided by a visit from two other ethnographers (Margaret Mead and Reo Fortune) and by a reading of Ruth Benedict's *Patterns of Culture,* but it is reported that the data first began to acquire form and meaning in the author's mind after he left the field and began to read more widely in the social sciences. Quite aside from its other merits and demerits, the book is a fascinating slice of autobiography of a highly intelligent, sensitive, and creative individual whose influence upon his contemporaries would undoubtedly be much greater if he were able to communicate his ideas with a clarity equal to his creativity.

Turning now to the final chapter ("Epilogue 1958"), the only new part of this second edition of *Naven,* one finds the theoretical positions of the book discussed in the light of modern developments in cybernetics and communication theory, fields with which Bateson has been closely associated for many years. In my opinion this epilogue adds little or nothing to the value of the book. It is not particularly useful to learn that those aspects of the *naven* ceremony which serve to keep schismogenesis within controllable limits are analogous to "negative feed-back" mechanisms in machines and organisms. Nor is reference to Russell's theory of logical types quite essential for the fairly simple point the author wishes to elucidate. In fact, this postscript merely serves to emphasize the more irritating features of the original work and to obscure its very substantial merits, I shall continue to assign *Naven* to students of social anthropology—but not because of its theoretical formulations themselves (although some of these are useful), and not because of the analogies it draws between human interaction and self-governing machines (although these are suggestive ideas), and most certainly not as an example of how to present ethnographic data. Rather, I will recommend it as a unique and instructive effort, by a highly intelligent and creative fellow student, to record and make sense of behavior in an exotic society.

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General Zoology. Gairdner B. Moment. Houghton Mifflin, Boston, 1958. xii + 632 pp. Illus. $7.50.

General Zoology. Claude A. Villee, Warren F. Walker, Jr., Frederick E. Smith. Saunders, Philadelphia, 1958. xix + 877 pp. Illus. $7.50.

In these two volumes, both written by men who have previously published successful texts of general biology at the college level, wide divergence in approach is evident on almost every page. Moment uses the popular two-column format and appeals to the eye-minded with handsomely presented photographs and diagrams in abundance. Villee, Walker, and Smith use a single-column format for an intrinsically logical path through the same material, but with illustrations more compact, diagrammatic, and sometimes a bit crowded. Yet, in total wordage, Moment's book is only slightly shorter.

Moment gets through general considerations of zoology and of chemical and living levels of organization rapidly enough to consider whole organisms by page 42. After full coverage of the Protozoa through Ctenophora (in 80 pages), he digresses at length to take up reproduction, embryology, genetics, and evolution (in 102 pages) and then returns for the rest of the animal phyla—considering the styles of organization in each group, functional anatomy, ecology, and behavior. Further discussion is given to ethology, ecology, and conservation in the final chapters. Moment emphasizes current discoveries (for example *Neopilina* among the mollusks), ends each chapter with a list of review topics, and ends the book with a glossary.

Villee *et al.* may assume a better scientific background for students using their book, since each subject is analyzed from simple to complex, eventually reaching the recognizable organism. General considerations, including such details as the glycolytic cycle, meiosis, extraembryonic membranes, and morphogenesis, occupy the initial 147 pages, and animals, as such, are not introduced until page 148. Each group is handled in relation to a described type, with the frog as the central vertebrate. In consequence, many anatomical and physiological features are given triple consideration: (i) in the introductory material, (ii) in relation to specific phyla, and (iii) in a further discussion, extending for 146 pages, following the conspectus of phyla. Genetics, evolution, ecology, and conservation are discussed in the final chapters. Essay-style examination questions are provided at the end of each chapter, but a glossary was omitted deliberately.

The Moment book stresses the liberal-arts approach for purposes of making a zoological contribution toward a general education; it bids informally for student interest and points to the relationship between methodology, new discoveries, and economic applications. Its taxonomy seems modern, although some may be alarmed to find less familiar names for all insect orders (for example, Coleopteriformes, not Coleoptera).

The text by Villee *et al.* should appeal to the dedicated, technical zoologist for whom the living animal as a going concern means less than the problems involved in its physical and chemical operation. That the Krebs cycle and related phenomena are reached on page 73 (in Moment's book on page 520) is an indication of comparative emphasis.

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Heat Transfer. vol. II. Max Jakob. Technical and editorial assistance by Stothe Peter Kezios. Wiley, New York; Chapman & Hall, London, 1957. xxxii + 652 pp. Illus. $15.

In volume I, the author treated the basic equations of heat transfer, thermal properties of matter, heat conduction, convection without phase change, and convection with phase change. In volume II he takes up radiation, applications to thermometry, heat exchangers, regenerators, cooling towers, falling liquid films, transpiration cooling, turbine blade cooling, high-speed boundary layers, liquid metal heat transfer, and packed columns. There are also supplements to volume I.

For each topic the author reviews the available references and calls attention to misprints and errors in early works. Time and again one finds a footnote indicating that in private communication "Mr. X" has furnished the author with the correct derivation or data to replace the material previously published.

The author had considerable experience as an experimentalist, and he devotes much space to suggestions for experimental methods.

It is doubtful that anyone except Max Jakob could have written this book. The treatment of each topic is exhaustive and at a high level. Jakob had an extensive file of references, assembled over half a century of his professional life. The list of references for volume II occupies 19 pages. He was schooled in the European tradition, and his thoroughness is apparent on every page.

A few topics have been omitted: the Oppenheim network method for radiation calculations, new work on noniso-