

# Book Reviews

## Behavior

### BEHAVIOR AND LEARNING

by Howard Rachlin. 1976. W. H. Freeman and Company (600 Market Street, San Francisco, California 94104). 613 p. \$12.95.

As mentioned in the preface, this textbook was designed by the author for undergraduate courses in learning which emphasize conditioning and animal learning. The book presents the background material necessary for understanding the important concepts and issues of learning research and theory and progresses from simple to more complex topics. Although intended to be used in a one semester course, the book contains an overabundance of material for one semester's work.

The opening chapter provides a historical account of behaviorism and furnishes a perspective for the rest of the book. The author follows with a careful and detailed discussion of environmental and behavioral events, behavioral patterns, classical conditioning, and devotes two chapters to instrumental conditioning. The author explores the basic principles and mechanisms of instrumental conditioning and takes a careful look at theory. Limits of behavior change is the subject of the next chapter and this is followed by an interesting discussion of secondary reinforcement and stimulus control. The concluding chapters are concerned with two-factor theory and choice. There are ten chapters in all.

All chapters, except Chapter one, contain one or more articles reprinted from the psychological literature. These articles were selected by the author to provide the student with an opportunity to read and interpret original research related to the material discussed in the book. Chapter eight includes a number of articles which illustrate the point that scientists do not always agree and in fact may reach opposite conclusions from the same data. All of the articles used in the book appear to be appropriate and greatly enhance the overall worth of the book. In addition to the articles, a se-

lected and useful bibliography is included at the end of each chapter.

Illustrations include drawings, charts, and graphs, which are clearly labelled and amplify text material. Overall, the author has done a good job in creating a book that is well-organized, clearly written, and interesting in addition to covering the material. This would make an excellent textbook for courses related to animal learning research and theory and would also be a good reference for those with some interest in the subject.

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### SOCIOBIOLOGY AND BEHAVIOR

by David P. Barash. 1977. Elsevier North-Holland, Inc., (52 Vanderbilt Avenue, New York 10017). 378 p. Price not given.

This is an exciting time for biology. A sparkling new subfield has emerged—a rather infrequent incident. Barash devotes his book to this subfield, and does it with some expertise. A foreword by E. O. Wilson, referring to this "excellent primer," grants some authority to Barash's words.

The work is directed at introductory courses in the social sciences and in biology, and attempts to "make a case" for Sociobiology. It is well exemplified, and swiftly comprehensive. Its ten chapters review the evolutionary theory, the concept and evolutionary significance of behavior, including altruism, and finally the bases of such sociobiological behaviors as reproduction, parenting, aggression, and territoriality. The book ends with a lively, and admittedly speculative, safari into human sociobiology.

Some minor objections to the book are these: (1) Although apparently designed to supplement introductory courses, its length and complexity may detract from its usefulness; in most introductory courses there is just too little time and too much core content (but the readers should render their own judgments in this regard). (2) Barash attempts to reach

the uninitiated, with such tools as conversational language ("where it's at") and occasional pinches, such as a reference to the arrogance of social science, the religious hypocrite, the reason why parents impose views on premarital sex, etc., but perhaps he overdoes it a bit. (3) His refusal to accept evolution at the societal level (instead stressing an "inclusive fitness" whereby animals do not display altruism so much for the social group as for their own individual survival advantage) seems to contradict the core of Sociobiology theory, which implies that the societal level of life is just another level, albeit more complex than the organismic level. Thus, natural selection operating at this level, as at previous ones, could be expected to enhance group or population survival fitness, and if such requires the self-sacrifice of individual organisms, then it is not unlikely that "self-sacrifice" genes do exist in populations. As Barash states, it is populations that evolve, not individuals; therefore, he is in error when asserting that "True altruism, in the sense of giving more than one gets, should . . . never evolve, because individuals demonstrating such behavior would be . . . less fit than their selfish competitors." (p. 79). (4) He refers to "survival of the fittest" as "Darwin's expression" when, in fact, it was Spencer's.

But the author has produced a work that is in some ways superior to Wilson's bible, for it refrains from the undue anthropomorphisms for which *Sociobiology: The New Synthesis* has been criticized. The case for an evolution of behavior, the methodology of behavior quantification, and the need to assess the human societal dimension are presented quite well in a very interesting format. Tables on grouping patterns (p. 126-7) and on mating systems (p. 161) are valuable instructional guides.

The book is valuable, but perhaps as introduction to the uninitiated professor or as core reading in advanced courses or seminars.

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