

organized, reviewed, and answered insofar as the data allow, more briefly and clearly in the report of the American Psychiatric Association Task Force on Late Neurological Effects of Antipsychotic Drugs (1980).

In summary, this is a reference work with some valuable papers for the researcher, but it is incomplete and inadequately organized. I would not recommend this book to clinicians. ■

Mothers and Infants: A Potpourri

Robert W. Bell and William P. Smotherman (Eds.)
Maternal Influences and Early Behavior
New York: SP Medical & Scientific Books, 1980. 442 pp. \$45.00

Review by
Bennett G. Galef, Jr.

Robert W. Bell is professor and chair of the Department of Psychology at Texas Tech University. He contributed the chapter "Neonatal Malnourishment and Social Grouping" to G. Serban's Malnutrition and Mental Health. ■ William P. Smotherman, assistant professor of psychology at Oregon State University, is interested in parental influences on the behavior of the developing infant. ■ Bennett G. Galef, Jr., professor of psychology at McMaster University in Hamilton, Ontario (Canada), is on leave as visiting professor in the Department of Psychology at the University of Colorado in Boulder. He has written chapters on weaning in D. J. Gubernick and P. H. Klopfer's Parental Care and in L. M. Barker, M. Best, and M. Domjan's Learning Mechanisms in Food Selection.

In the two decades since Harriet Rheingold (1963) edited her widely known *Maternal Behavior in Mammals*, there have been major empirical and theoretical advances in the understanding of the behavior of mothers and infants, and of the interactions between them. The editors of the present volume have identified and sought to respond to the real need for an integrative volume providing an overview of current research and theory in the area.

Contributions by 32 authors total 18 chapters varying enormously in their stated purpose and consequent scope. (Unfortunately, discussion, even mention, of all 18 is precluded by limitations of space.)

Of the more than 400 pages of text, 25% are devoted to three reviews of well-developed areas of investigation. One, Rosenblatt and Siegel's discussion of maternal behavior in laboratory rats, is clearly the outstanding contribution to the volume. It is a model of scholarship, clarity of exposition, and fruitful integration of causal and functional explanation in behavioral research. Rosenblatt and Siegel propose that maternal behavior is regulated by different processes before and after parturition; during the former phase the reproductive physiology of the mother dominates, whereas the latter phase depends on stimulation received by the dam from her young as the result of behavioral interaction. The liberation of postpartum maternal behavior from hormonal control is discussed as functioning to allow females to maintain maternal care of one litter while entering the hormonal state (inappropriate for the maintenance of maternal behavior) required for postpartum estrus, the occurrence of which markedly increases a rodent female's lifetime fecundity. Within this framework Rosenblatt and Siegel describe and integrate 20 or more years of research from both the authors' laboratories and elsewhere.

Smith and Sales's review of ultrasonic communication in infant rodents, although far more restricted in scope and theoretical import, provides a succinct but comprehensive review (through 1977) of the known causes and effects of infant ultrasonic vocalizations. Hennessy, Laughlin, Wiener, and Levine analyze thoughtfully the range of effects of malnutrition on the behavior of mothers and young and the consequent patterns of interaction.

The remaining 15 chapters are a mixed lot. Some are concise, useful reviews of extensive research programs in individual laboratories (e.g., Gandelman on the hormonal and external stimulus control of maternal aggression in mice; Moltz and Kilpatrick on the control of emission of "maternal pheromone" in rats; McGinnis on the Cambridge studies of the effects of maternal separation on infant primates; Sackett and Holm on factors affecting pregnancy outcome in pigtail macaques, and Kaplan and Cubicciotti on the role of early experience in the development of social preference in squirrel monkeys). Other chapters are, in both style and con-

tent, similar to journal articles, describing fairly limited studies in considerable detail. Yet others are extensive expositions of preliminary results or experiments in progress, which although interesting, do not invariably contribute information proportionate to the space they occupy.

Bell and Smotherman cite Harriet Rheingold's (1963) volume as the "proximate stimulus" to their own publication, inviting comparison of the present collection with the earlier one. The comparison is not favorable to the present effort. Reading the two volumes, one might suspect that the field has retrogressed rather than advanced in 20 years. The absence of material collected in the field, the restriction of attention to rodents and primates (17 of 18 chapters), and the narrowness of the range of theoretical perspectives included in the present volume all compare unfavorably with Rheingold's pioneering work. Even though the volume under review has many high points (for example, the Rosenblatt and Siegel chapter, Thoman and Freese's eloquent discussion of communication between human mothers and infants, Moltz and Kilpatrick's ability to communicate some of the excitement of research on the frontier), the cumulative effect is surprisingly uninspiring, given the originality and energy of current research and theorizing in the areas of mother-young interaction and infant behavior. There is no mention of parent-offspring conflict or of parental investment theories and little sign of the broad progress in field research on parent-young relations. Many of the exciting findings in the laboratory study of infant behavior and mother-young interaction are similarly unmentioned or barely touched upon.

Ideally, contributions to edited volumes gain in perspective and generality through the juxtaposition of different points of view, the revelation of unexpected parallels in the behavior of different species, and the uncovering of common principles applicable in different preparations or at different levels of analysis. Such synergistic effects are, in part, serendipitous, but cannot occur unless editors both impose some organization on the contributed material and collect materials having the potential to complement and conflict in interesting ways. A multi-authored volume can also provide comprehensive, up-to-date coverage of a diverse area at a level of sophistication not possible in a singly authored text. But comprehensive coverage requires selection of contributors of widely varying backgrounds and interests.

In the preface to *Maternal Influences*, Bell and Smotherman state their intention to "bring together the contributions of many years of investigations from a number of laboratories involved in the systematic investigation of mother-offspring interactions." If by "bring together" they meant the physical juxtaposition of descriptions of a variety of research programs carried out at different locations, they have succeeded; unhappily, in other regards, they have not. This collection of papers, diverse in form, neither adequately reflects the breadth and excitement of the field nor forms a whole greater than the sum of its parts. No uniformity of purpose has been imposed on the contributors in preparing their manuscripts. No grouping or organization of the manuscripts is apparent in the published work.

The result is a book of less interest than many of the chapters that comprise it. Thus there is still an unfulfilled need for a contemporary supplement to Rheingold's volume. ■

A Pallid Forest With Abstract Trees

Kellogg V. Wilson
From Associations to Structure: The Course of Cognition. *Advances in Psychology* 6
 Amsterdam: North-Holland, 1980.
 354 pp. Dfl 75,—(\$36.50)

Review by
 Arthur C. Graesser

Kellogg V. Wilson is associate professor in the Departments of Psychology and Computing Science at the University of Alberta in Canada. He contributed a chapter to J. R. Royce and W. W. Rozeboom's The Psychology of Knowing and another to Royce's Multivariate Analysis and Psychological Theory. ■ Arthur C. Graesser is associate professor of psychology at California State University, Fullerton. He is author of Prose Comprehension Beyond the Word (in press).

If Wilson's dreams were to come true, psychologists would be inspired by associationistic theories that acknowledge the existence of mental processes and internal

representations. Psychologists would be disciples of Hebb and Tolman rather than having been seduced by the radical behaviorism of Watson and Skinner or by the mystical structuralism of Chomsky and Piaget. According to Wilson, a viable psychological theory lies in a neoassociationistic middle ground between the extreme forms of S-R behaviorism and the extreme forms of structuralism. Wilson defends this middle ground as a theoretical framework for studying virtually every area of psychology. In this defense of neoassociationism, Wilson considers several criteria for evaluation, including empirical support, formal adequacy, and scope.

In principle, Wilson's neoassociationistic position does not clash with the views of most researchers in cognitive psychology. Wilson considers rules, propositions, and structures to be perfectly respectable constructs that should be at the heart of a psychological theory. At the same time, however, Wilson does not propose or endorse any particular system with specific rules, propositions, and structures. According to Wilson, it would be impossible to defend a specific system, because several alternative systems can always accommodate available data. Wilson's strongest claim is that the neoassociationistic position is formally and computationally adequate because it can be equated with a Turing machine that has unrestricted rewriting rules that can generate unrestricted network structures. However, this claim alone is not particularly informative to cognitive scientists who have been investigating the nitty gritty details of specific rule systems, semantic networks, and representational theories. In a sense, Wilson's neoassociationistic theory accounts for all behavior but predicts and explains little.

One of the disappointing aspects of this book is its failure to develop several critical arguments and findings in sufficient detail. For example, Wilson claims that there is an important distinction between input that passes information to a structure and input that controls another structure. Unfortunately, Wilson never develops a system in enough detail to illustrate why this distinction is needed and how it would be implemented. The scope of Wilson's coverage of experimental research was broad, ranging from developmental, neurophysiological, and cognitive psychology to the study of motivation and emotion. However, Wilson sacrificed depth for breadth. He was concerned with the conclusions of the empiricists more than with the experimental methods and patterns of data that

seem necessary for the reader to understand the importance of the contributions. Wilson was preoccupied with the forest and overlooked some trees—he, in fact, glossed over some landmarks in psychology.

This book should be valuable to psychologists who are not absorbed in the esoteric issues of the cognitive sciences and to the reader who prefers not to be bogged down with detailed empirical and technical matter. I would recommend the book to behaviorists who are skeptical of some contemporary developments in cognitive psychology and to the cognitive psychologists who are interested in their historical roots. ■

Denial of Evil

Silvano Arieti
The Parnas
 New York: Basic Books, 1979. 165 pp.
 \$10.00

Review by
 Shlomo Breznitz

Silvano Arieti is professor of clinical psychiatry at New York Medical College. He has received the 1975 National Book Award in the field of sciences, the 1964 Frieda Fromm-Reichmann Award, and the 1978 Sigmund Freud Award. Arieti is author of Interpretation of Schizophrenia and of Creativity: The Magic Synthesis, and editor-in-chief of the American Handbook of Psychiatry. ■ Shlomo Breznitz is the Lady Davis Professor of Psychology and director of the Ray D. Wolfe Centre for Study of Psychological Stress at the University of Haifa in Israel. He has written The Denial of Stress.

The Parnas is a strange and fascinating book, and in many ways as incredible as only true life can be. It is not a clinical case history, and yet all the major features of a clinical report are present. Nor is it a historian's account of the last days of the remaining Jews in Pisa during Nazi occupation, although it clearly gives precisely such an account. Is it then a story? A beautiful, and somewhat personal story about the Parnas, a beautiful and noble person? A story it is, but not just a story. In writing *The Parnas*, Arieti attempted to combine the clinical description with a