ing on the study, must have problems with its health care delivery. Rural areas began to lose their share of physicians with the surge in medical specialization in the 1940s and 1950s and continue to suffer today, despite federal and state programs designed to assist rural practitioners (such as the National Health Service Corps, Rural Health Initiative, Appalachian Regional Commission, etc.) and the development of residencies in family practice at many medical schools. The fact that medical care could be the right of every citizen magnifies the problem, making the easy access to quality care for every citizen the responsibility of the medical profession, the government, and/or both.

The authors of this book chose a case-study approach, comparing matched rural self-sufficient and federally sponsored (non-self-sufficient) practices to determine the characteristics that make the former practices financially viable. The purpose of the book is to “explore why financial self-sufficiency has been so difficult to achieve in rural areas” and to articulate “policy changes which would foster self-sufficiency” in rural practices. The first half of the book sets the stage by giving working definitions of “ruralness” and “access to care,” and by describing selection and breakdown of practices as to extent of self-sufficiency. There is also a chapter on past rural health policy actions. The final two chapters describe rural practice development and present policy recommendations, while the appendix presents a linear program to maximize practice income by varying reimbursement rates and service mix.

The major weaknesses of the book derive from the limitation of its analysis to the more traditional forms of health care delivery. There is only passing consideration, but no statistical analysis, of “physician extenders,” such as physician associates and nurse practitioners, and practically no mention of the possibility of application to rural areas of pro-competitive health delivery systems such as Health Maintenance Organizations. The chapters on past policy efforts are quite informative and the in-depth analysis of each practice quite complete, but because the authors did not deal with all modes of delivery, this study of only ten practices loses even more generalizability. The findings are reasonable and carefully supported, but are not useful for a policy maker trying to choose, from among HMOs, physician extenders, and private practices, the system that supplies the best health care most self-sufficiently. For instance, the appendix develops a linear model for a rural practitioner to maximize his income by varying reimbursement rates and service mix, but with no mention about the quality of care.

This book could serve as a guide to further studies of the problem and as a handbook for physicians planning to set up rural practices. It even has a chapter on practice development. It is not comprehensive enough to be of much service to a policy maker.

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Biobehavioral Aspects of Aggression. Edited by David A. Hamburg and Michelle B. Trudeau. New York, Alan R. Liss, Inc., 1981. 288 pp. $38.00.  
Bibliography of Aggressive Behavior. A Reader's Guide to the Research Literature. Vol. II. Edited by Kenneth E. Moyer and Michael Crabtree. New York, Alan R. Liss, Inc., 1981. 459 pp. $46.00.

As the chapters of the first volume attest, aggression can be studied from a variety
of perspectives. An evolutionary approach can be used to understand what conditions favor the expression of aggressive behavior. The aim of a mechanistic analysis is to understand the genetic and biochemical basis of aggression. Finally, since aggression is often viewed as disruptive to human society, techniques for predicting and influencing the aggressive potential of both normal and pathologically aggressive individuals are of obvious practical value.

In general, the first volume is edited well and there are a number of recent references. The introductory chapter usefully abstracts the main points of the following twelve chapters, and all articles are accessible to the nonspecialist. Because of the extreme breadth of the material covered, it is impossible for a single reviewer to critique knowledgeably all the chapters, which range from studies of chimpanzee behavior to the role of therapy in resolving conflicts between family members. Medically oriented readers should be aware, however, that the evolutionary perspective is seriously shortchanged. Barchas's claim that the evolutionist cannot reliably predict the conditions most likely to elicit aggression is simply false; there is an extensive theoretical literature on this subject whose predictions are confirmed by numerous empirical studies. The broad usefulness of such an approach is all too obvious when one reads the review of biochemical, pharmacological, and genetic studies of aggression. Any animal behaviorist would have predicted the relatively recent physiological findings that "predatory aggression" (i.e., the capture of food) is distinct from other types of aggression involving the defense of resources or offspring. The many theoretical and field studies of parent-offspring conflict and changes in behavior associated with the onset of sexual maturity would be relevant to the two chapters on adolescent aggressive behavior. A comparative anthropological review of aggression in "primitive" societies would also have helped to place our own aggressive tendencies in better perspective.

The references found in articles published in the journal Aggressive Behavior from 1975-1979, which comprise the second volume, can be used to gain entry into a variety of areas which deal with aggression. Although once again some fields are under-represented, the fine subject index can be used to locate articles whose bibliographies will lead into subjects poorly covered by this journal. This saves the reader from having to consult directly the twenty volumes, although the price for this service is rather high.

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INTRACELLULAR pH: ITS MEASUREMENT, REGULATION, AND UTILIZATION IN CELLULAR FUNCTIONS. Edited by Richard Nuccitelli and David W. Deamer. New York, Alan R. Liss, Inc., 1982. 594 pp. $88.00.

It has been two decades since Mitchell proposed that pH gradients are integral parts of energy transduction mechanisms in the energy-producing organelles of cells. Since that time it has become clear that proton gradients across membranes are of fundamental importance in cell function not just for energy coupling, but perhaps also for what might be called information transfer: the regulation and mediation of the response of the cell to the outside world.

This volume is an edited version of conference proceedings on this topic from the