Medicine for the Explorer

Like so many offerings, **Exploration Medicine: Being a Practical Guide for Those Going on Expeditions** (Williams and Wilkins, Baltimore, 1965. 426 pp., $11), edited by O. G. Edholm and A. L. Bacharach, is an edited version of the proceedings of a symposium held at the Royal Army Medical College in 1962. Owing to skillful editing, the multiple authorship has not resulted in tiresome redundancy or in many instances of conflicting advice. In his introduction Sir Raymond Priestley, the president of the Royal Geographical Society, says—and I agree—that the book should be required reading for every member of every party proceeding from the "known" to the "unknown" or the "little known." The text progresses in a logical fashion from planning and the principles of preventive medicine to the care of the injured, the management of medical emergencies, and the problems of survival. The last half of the book deals with particular environments: hot and cold climates, high altitudes, and underseas. The tone of each section is authoritative and dogmatic, but not overly technical. Because most of the contributors are or have been members of the armed services, the advice offered reflects contemporary experience and research in military medicine.

The dominant themes are knowledge, training, observation of the rules, and preparedness. In spite of elegant plans and abundant technical resources, every expedition faces the risk that sickness or injury or other vicissitudes may force it to abandon every objective except that of survival. In such emergencies the essential component becomes the human element—the undeviating intention never to give up, and the conviction that every hazard and difficulty will be overcome. The explorer who has read this book and who has it with him when trouble occurs should be able to cope with most of the difficulties that may arise.

The arm-chair explorer who is not likely to join any expedition can read this text with pleasure and fascination. The detached, almost clinical, style arouses curiosity and evokes vivid images of adventure and hardship and courage.

G. V. LeRoy

Metropolitan Hospital, Detroit, Michigan

On the Discovery and Introduction of the Poliomyelitis Vaccines

The unique and somewhat spectacular introduction of poliomyelitis vaccines provides an excellent opportunity to study the social structure of contemporary American science. The concept of big science, the primary role of a private health agency, the extensive promotional campaigns, the search by the government for its proper relation to science, and the creation of a popular hero are all important aspects of any study. Unfortunately, they are poorly treated in **Breakthrough: The Saga of Jonas Salk** (Trident Press, New York, 1966. 445 pp., $5.95), by Richard Carter.

Focusing on Salk, Carter narrates the development of polio vaccines. He recounts Salk's entrance into the field of polio research, his immunological studies, the development of a vaccine, the Francis field experiment, the Cutter vaccine problems, and the subsequent introduction of a live vaccine. However, Carter raises Salk to a level somewhere between hero and demi-god and thus provides little critical evaluation of the man or his work. In this attempt to glorify Salk, any truths that are present are invalidated by Carter's excesses. Much of this book would probably embarrass Salk himself. This is unfortunate, because the picture of Salk that emerges, in spite of Carter, is that of a highly competent and assertive scientist who, owing to circumstances somewhat beyond his control, became a popular hero and lost standing in the scientific community.

Running throughout is the theme that Salk fought the scientific "myth" which stated that dead virus vaccines could not and would not work. Carter concludes that the use of a live vaccine has been a cruel and dangerous hoax perpetrated on the American public for reasons of personal ambition and political expediency. It is true that the opposition to Salk's vaccine was made with greater vigor than probably purely scientific interests necessitated, but the fact remains that most virologists and immunologists believe that live virus vaccines of all types give a longer lasting immunity than comparable dead vaccines. Although much of what he says is true, Carter has so stacked his argument that it loses its credibility.

This book is directed toward a lay audience and seeks to prove a point rather than create understanding of contemporary science. Its one-sided presentation probably has done more harm than good to Salk, because it continues the image of Salk as public hero but does nothing to aid Salk's standing within the scientific community.

TIMOTHY O. LIPMAN

College of Physicians and Surgeons, Columbia University

Urban Planning

These books are useful additions to the growing literature on urbanism. Both are luxuriously but purposefully illustrated. Paul D. Spreiregen's **Urban Design** (McGraw-Hill, New York, 1965. 255 pp., $12.50) consists of an amplification of 12 articles originally published in the *Journal of the American Institute of Architects*. The book is addressed to architects, but it is a first-rate guide for all who want an insight into that profession's concepts of urban design. It offers a vision of what our cities could be to all who despair of the atrocities committed in the name of urban progress. In language and in a cascade of sketches, Spreiregen emphasizes that mass society does not demand a chaotic environment.

Percy Johnson-Marshall's **Rebuilding Cities** (Aldine, Chicago, 1966. 398 pp., $15) is a celebration of Spreiregen's argument. Professor of Urban Design and Regional Planning at the University of Edinburgh and formerly group planning officer of the London County Council, Johnson-Marshall brings a practical intelligence gained in the post-war reconstruction of London and Coventry to bear on the problems of reconstructing cities on a more humane scale. At first glance, Johnson-Marshall's case studies of the rebuilding of London, Coventry, and Rotterdam seem to stress the efficacy of heavy bombing in urban improvement. A closer look, however, makes clear that the war's devastation only provided an opportunity—an opportunity that can be replicated in urban renewal areas and in the development of new suburbs and communities. The important ingredi-

ent in city building was the legislative authority that directed the planners and builders toward imaginative and socially useful design rather than to the restoration of mediocrity, monotony, and chaos.

Johnson-Marshall underscores Spreiregen's point that a legislative framework must exist for comprehensive, socially functional, and visually inspiring urban design—and that the three elements interact. One could read into Spreiregen's work, with its concern for principles of urban growth and design, a subliminal authoritarian bias to allow the master architect to work his will on the city. Johnson-Marshall's more empirical work suggests a tempering of this bias, however.

Two statements from Johnson-Marshall's studies of London and Coventry, respectively, make the vital point that building cities is not and cannot be the prerogative of a single intelligence, a single discipline, or a single approach. In discussing the rebuilding of the area about the Tower of London, he attributes as much importance to the blight-removing efforts of the Reverend "Tubby" Clayton of the Church of All Hollows as to the Nazi bombs. Commenting on the complex problems of personal and intergovernmental relations involved in developing and executing the redevelopment program, he concludes thus—"Truly, planning in the modern city is very much a diplomatic activity, apart from the highly complex technical design problems involved." The point is driven home in the study of Coventry—"The lessons of Coventry are clear. Cities are at heart a design problem and need teams of imaginative, devoted and practical designers, with outstanding leadership and with enlightened public patrons in order to create a civilized environment, but all this must be backed by legislation and adequate finance."

In the year of the demonstration city and the urban observatory, those devoted to the improvement in the quality of urban civilization can find both inspiration and practical counsel in the words and pictures of *Urban Design* and *Rebuilding Cities*.

ROYCE HANSON
Washington Center for Metropolitan Studies, Washington, D.C.

Honors Programs and Higher Education

The spread of honors programs, education designed to provide the abler student with special experiences, is a remarkable characteristic of the current campus scene. The editor of **The Superior Student in American Higher Education** (McGraw-Hill, New York, 1966. 299 pp., $7.95), Joseph W. Cohen, reports that the number of such programs has more than tripled in the period 1957 to 1965. These were the eight years of the Inter-University Committee on the Superior Student (ICSS), and Cohen, first chairman of the committee, has given us a book that ably summarizes the work of this group. The ICSS served as a clearinghouse for information about honors programs and certainly did much to stimulate their development.

Contributors to the volume detail the organization and operation of honors programs in universities (including professional schools as well as arts colleges), in small, private colleges, and even in a surprising number of secondary schools. In doing so, the philosophy of such programs is well stated, and any reader curious about how the concept of honors has evolved in American higher education will be amply rewarded for his effort. Unfortunately, one curious about the effectiveness of such educational modifications must turn from the book frustrated. Although a very fine chapter is devoted to the evaluation of honors programs, it is something of a disappointment that the focus of the discussion by Paul Heist and Lois Langland had to be how evaluative research *ought* to be done rather than the results of such studies. Too often neglected in the research to date are the absolute requirement that educational goals be translated into testable hypotheses about changes in the behavior of participants, the recognition that the study of change demands careful pre- and post-experience assessment, and, finally, an appreciation for the insights that stem from a comparison of these changes with changes afforded by control groups —"non-honors" students in honors programs and "honors" students in non-honors programs. The growing popularity of such special programs, together with their expense (one contributor estimated the cost for the honors student is one-third greater than that for the student in the usual curriculum), offer the expectation that the academic community must soon have more complete evaluation.

Lest these comments tar me as anti-honors, the evaluation of superior student programs is probably no more deficient than the evaluation of remedial courses or, for that matter, than that of just about any of our conventional college programs. The ever-increasing enrollment pressures that confront American higher education suggest that such ignorance may be only too preciously purchased.

CLIFFORD E. LUNNEBORG
Department of Psychology, University of Washington, Seattle

History of Science

Volumes 1, 2, and 3 of **The Correspondence of Henry Oldenburg** (University of Wisconsin Press, Madison, 1966), edited by A. Rupert Hall and Marie Boas Hall, mark the beginning of another major project to publish the sources of the scientific revolution. Inevitably the reviewer must ask himself what the contribution of such an edition is. The correspondence of Newton, the works of Kepler—with them the reviewer need not put such questions; their justification is so obvious that they require no rationale. But why the correspondence of Henry Oldenburg? As I plowed wearily through volume 1 (558 pp., $12.50), which covers the years 1641 to 1662, I could not help asking the question, and asking it again. Certainly the letters in volume 1 would furnish a major source to the biographer of Henry Oldenburg, but most of them hardly appear worthy of the time, labor, and expense invested in their publication. The Halls are recognized and acclaimed historians of science, and I for one would have preferred to see, not the raw material of biography, but the product they could have made it yield. In volume 2 (704 pp., $12.50), 1663 to 1665, and volume 3 (679 pp., $12.50), 1666 and 1667, Oldenburg the man fades into Oldenburg the secretary of the Royal Society, but many of the letters continue to raise the same query. True, as material relevant to one specific question their value is high; through them we see the growth of an international community of science. Nevertheless, the authors of most of the letters, which come from the corners of Europe and beyond, are obscure, and the scientific content of many of their letters approaches zero.