

In his "Concluding Remarks" he says:

There are many behavior scientists who do not find the approach taken in this book attractive. By-and-large, these are ones who have begun their study of human behavior in more complex contexts and who have found these principles wanting, at least at their present stage of development. And their response has been to devise other language systems which appear more amenable to the variety of emotions, interests, personalities and intellects encountered in such contexts. And this, too, is a reasonable approach since no one can confidently foretell what a comprehensive theory of behavior will look like.

A particular strength of the book is its exemplification of the nature of science. Logan is careful to outline the basis for theoretical statements. He cautions the reader concerning interpretations. He welcomes the new discoveries that will come and the effect they will have on the theories and explanations he proposes now. The book is a good one to illustrate psychology as a science and the nature of a relatively "young" science.

The book is recommended for students of educational psychology: it is a good "first book." It is also recommended for practicing teachers who desire a review of learning theory and motivational techniques. The ideas are perhaps most useful for in-service teachers, who have had experiences with students and their problems of learning and adequate motivation. The true-false items found at the end of each chapter provide an interesting self-testing device for summarizing and applying the principles in each chapter.

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AMERICAN BELIEFS AND ATTITUDES ABOUT INTELLIGENCE, by Orville G. Brim, Jr., David G. Glass, John Neulinger, and Ira J. Firestone, with the assistance of Sally C. Lerner. 1969. Russell Sage Foundation, New York. 291 pp. \$7.75.

Standardized tests are one of the foundation stones of the American educational system. Everybody is aware of them, and most people take them. But, as this study points out, there are wide lacunae in popular understanding of the rationale of such tests.

This volume is part of a program of studies focusing on the social impact of intelligence tests. The program is jointly underwritten by the publisher, the Carnegie Corp., and the U.S. Office of Education. The present volume is essentially a public-opinion survey of 10,000 secondary-school students in three groups: public, private, and parochial.

An introductory explanatory chapter is followed by 11 substantive chapters, each of which summarizes student opinion on one aspect of intelligence testing. Following the authors' recommendation to treat each chapter as a separate essay, I read several chapters carefully and with interest: those dealing with the origin and stability of intelligence, the accuracy of intelligence tests, ability grouping in schools, and self-estimates of intelligence. I skimmed some of the remaining chapters: on experience with tests, attitudes toward testing, reporting of results, and perceived consequences of testing.

The authors' conclusion, stated in the introductory chapter, is that there is wide variance, and much confusion and misunderstanding, in student beliefs and attitudes about intelligence testing. This conclusion seems to be supported by summaries of results in the 11 substantive chapters. Several appendices deal with the methodology of the study, and thus amplify the summaries given in the body of the book. The authors also indicate how access may be gained to the full returns—a commendable procedure. A final appendix compares a survey of adult opinion with returns from students. There are differences, but they do not appear to be striking.

The authors have some recommendations. Because of the importance of intelligence and other standardized tests in the American social structure, they urge that "major national efforts be made to educate the American population about the nature of intelligence and its testing." This effort should reach students, school personnel, and the general population, including parents. They also urge that schools be more open in giving out test results.

This careful study should be of great interest to people working in psychology, evaluation, guidance, and administration. The classroom biology teacher who picks it up will probably feel as the boy did about the book on elephants: there is more here about intelligence tests than he wants to know.

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SCIENCE FOR THE ELEMENTARY SCHOOL, by Edward Victor, 2nd ed., 1970. Macmillan Company, New York. 796 pp. \$10.95.

This is a new edition of a widely used textbook of elementary science education. Although this is a new edition, a comparison with the previous edition reveals few significant changes other than the rewriting of certain sections for greater clarity. Only five pages are devoted to the development, philosophy, and objectives of federally financed projects in elementary science curricula. One sample lesson is provided from four separate projects; however,

no analysis or comparison is offered.

The book separates well into two parts: (i) pedagogic aspects of teaching science and (ii) basic science information and learning activities. Basic science information is treated mainly by way of an outline of facts (content), and the section on learning activities suggests a demonstration approach to the teaching of science and does not emphasize process skills. The content section on aerospace and space travel has not been rewritten since the 1965 edition, and the content section dealing with weather does not include information on weather satellites or on other, recently developed means of predicting and analyzing the weather.

The section devoted to methods of teaching science does not encourage the teacher to emphasize the activity approach. No help is given the teacher in developing questioning techniques and skills. Little attention is paid to the development and use of behavioral objectives. Teachers are encouraged to use quantitative as well as qualitative results in the classroom, but no information is provided on how to help children obtain quantitative data and then deal with the data.

The book is well organized and may be a useful reference for the elementary teacher. The subject matter, or topic, outline will be most useful to pre- and in-service teachers. The book has no particular interest for biology teachers unless they are assisting in an in-service program.

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INNOVATION IN LIBERAL ARTS COLLEGES, by Michael Brick and Earl McGrath. 1969. Published for the Institute of Higher Education by Teachers College Press, Columbia University, New York. 173 pp. \$3.95.

The system of higher education in America is undoubtedly under stress. Whereas innovation in the curriculum of secondary schools started dramatically with MSG math, PSSC physics, and BSCS biology at least a decade ago, such awareness of need for change and innovation in higher education became most apparent to educators soon after the Berkeley uprisings. The liberal arts college by its very nature should have been the scene of innovation. The authors describe such innovation in separate chapters on curriculum, instructional methods, the new role of students, and organization of the liberal arts college.

One of the most refreshing developments was the interdisciplinary approach: some institutions began to teach the interrelatedness of physics, chemistry, biology, and mathematics. In extending this concept, faculty were