Book Reviews

Psychology Examines Its Own Habitat

The American College. A psychological and social interpretation of the higher learning. Nevitt Sanford, Ed. Wiley, New York, 1962. xvi + 1084 pp. $10.

Anyone who has served an American college thoughtfully must at some time have despaired at the little help science has given him in solving educational problems. Now comes *The American College,* edited by Nevitt Sanford, casting a bright gleam of hope.

Only psychology among the behavioral sciences has provided more than a trickle of studies useful to higher education. Until recently social scientists devoted more attention to the systematic study of the environments of Australian aborigines and Greenland Eskimos than they did to their own habitat, the college and university. But there has been a change. There are now active groups of behavioral scientists, as well as historians and philosophers, giving imaginative attention to the student, the teacher, the institution, and to the interaction of each with the others and of all with the larger society. *The American College* brings together new work of 30 students of the undergraduate liberal arts college. The Society for the Psychological Study of Social Issues sponsored the volume and provided an editorial committee. Nevitt Sanford, in addition to editing the book, contributed four important chapters, collaborated on another, and wove the remainder together with introductions to each major section. *The American College* is not an anthology or a mere collection of reports. It is a carefully planned and executed "psychological and social interpretation of the higher learning."

Education, Sanford says, may be thought of as the "inculcation of skills and knowledge respecting the material, social and cultural worlds," or it may be thought of as "aiming at the fullest development of the individual." Neither way of thinking excludes the other, but which way is emphasized is all important to the study of education, as it is to its conduct. The first way is essentially adaptive; the second is developmental, and it is the developmental approach to education that provides the thread Sanford uses to weave the book. Since Sanford and his colleagues are concerned with all the inner psychological and outer social forces that affect the development of the individual student, the materials have the complex texture of real life.

The focus shifts from the college as a whole to the entering students, academic procedures, student society and student culture, student performance in relation to educational objectives, interaction of students and educators, the effects of college education, higher education in the social context, and research and policy in higher education. But whatever the focus, each subject is considered in relation to all others and ultimately to the development of the individual student.

The American College smoulders with dissatisfaction at the imperfection of our liberal arts education. It sees it with its ends ill defined, its means unconsidered, its policies uninformed by theory, its methods untested by experiment. Sanford sums up the dissatisfaction in an epilogue. "It should now be plain to all that our colleges are not doing what they might to realize their potential or even to achieve minimal objectives. It should be plain, indeed, that our colleges, with the cooperation —both deliberate and unwitting—of major forces in our society, and through ill designed social organization and poorly motivated teachers, actually deprive thousands of students of the opportunity to find themselves and to educate themselves." This is not free-swinging criticism; it is the sober summing-up of a mass of evidence.

Though *The American College* smoulders with dissatisfaction, it sparkles with suggestion. Scarcely a chapter ends without seminal proposals for research or practice. If the suggestions of this book were taken, how would undergraduate liberal arts education be changed? First and most profoundly, by viewing itself as a subject of scientific inquiry rather than as a kind of alchemy in which each wizard's formula is as good as the next. Second, the center of attention would shift to the student and his development as an individual. Third, the teacher and his methods would be seen in the light of their ability to further the student's development. At the same time the forces in society and the college that affect the teacher would be given thoughtful attention. Fourth, the curriculum would be seen as a means to personal and intellectual development. Fifth, vastly more attention would be given to the societal and cultural forces that impinge on and play on the institution and that affect the student.

The college, like the university, is the institutional expression of reason. But the college differs from the university in having limited objectives. *The American College* shows how those objectives can be defined and, as far as possible, reached.

It is a happy circumstance that the volume appears in the 100th anniversary year of Vassar College. Nevitt Sanford, now professor of psychology and education and director of the Institute for the Study of Human Problems at Stanford University, was for several years coordinator of the Mary Conover Mellon Foundation at Vassar. The "Vassar Studies" make important contributions to *The American College*— as they will to the American college.

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History of Chemistry

Bruna Boken. Carl Wilhelm Scheele. Uno Boklund, Ed. Sponsored by the Swedish Academy of Sciences and various Swedish research foundations (available from the Editor), Stockholm, 1961. 171 + 424 pp. Illus. $19.

The *Bruna Boken,* according to Boklund, is a collection of the material that was not fitted into the five groups of Scheele papers assembled a few hours after Scheele's death on 21 May 1786. In 1829 this overflow material was bound into a "brown book." As a part

of his extensive studies of Scheele's work, Boklund has now published the 44 manuscripts (155 pages) in facsimile, with transcription, an undertaking which certainly required much patience and knowledge. In 47 pages of closely printed notes, Boklund discusses problematic and important passages. He also gives his reasons for the dates he ascribes to these laboratory notes and letter drafts. One group was written between 1765 and 1775, the other between 1779 and 1786. In the introduction (about 100 pages) he discusses Scheele's place in the history of chemistry, particularly with regard to the discovery of oxygen and Lavoisier's indebtedness to him. This is followed by a complete Swedish translation of Scheele's German manuscripts in the *Bruna Boken*. The appendixes contain first publications of some letters and a note on a central register of Scheele's 15,000 to 20,000 experiments. The English summary (4 pages) will be very helpful to those who may have some difficulty with the Swedish and German texts. Many will wish that Boklund's important discussion of this material were made available in English.

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Theoretical Problems

Trends in Social Sciences. Donald P. Ray, Ed. Philosophical Library, New York, 1961. 169 pp. $4.75.

This book is another manifestation of the increasing interest of the American Association for the Advancement of Science in the social sciences—or in the sciences that have, for the moment, come to be called the behavioral sciences. The volume is a collection of papers presented at a symposium on social and economic sciences at the annual meeting of the AAAS in 1958; Donald P. Ray organized the symposium and edited the volume. Ray's orientation, as presented in the introduction, is based on the widespread assumption that the compelling nature of modern social problems, the growing financial support for the social sciences, and the emphasis on an interdisciplinary approach are likely ingredients to speed the maturity of the scientific aspects of social inquiry. As representatives, he chose social sciences scholars who had served as fellows at Ralph Tyler's Center for Advanced Study in the Behavioral Sciences.

In markedly varying vocabularies, Kenneth E. Boulding, the economist, Harold D. Lasswell, the political scientist, and Edward A. Shils, the sociologist, present three substantive essays that are essentially critiques of current efforts, rather than expressions of confidence in current trends. All three are eminent scholars interested in the relationship between social science and public policy. Boulding sketches briefly the Keynesian revolution and points to the rapid transformation of economics from the 1920's to the 1950's. He describes the present period as one of "hesitation" because economics can no longer be limited to the variables of prices, outputs, and inputs. Instead, he believes that diffusion of theory from other disciplines and the techniques of "systems simulation" are essential aspects of the frontiers of economics. Harold Lasswell finds the frame of reference of current political science too constricted for its tasks. Therefore, he offers one designed to orient political science to the problem of the realization of human dignity in the world community. Edward Shils focuses on "macrosociology" as the essential problematic issue of research sociology. Macrosociology "is not the study of presumably self-contained bits and pieces of society . . . it is the study of the large society which embraces particular institutions." According to Shils, macrosociology has been neglected, with the result that sociologists are not able to contribute to the understanding of consensus and dissensus in modern society.

John W. Tukey, a mathematician sympathetic to the work of social scientists (a rare trait), contributes an outstanding essay, "Statistical and quantitative methodology," which identifies some of the problems common to the various behavioral sciences. His essay is important because he seeks to close the gap between statistical manipulations and the philosophy of science as the subject is taught in the universities today. The concluding essays deal with trends in interdisciplinary research. Ralph Tyler describes experiences at the Center for Advanced Study in the Behavioral Sciences, and Harry Albert reports on "the funding of social science research," a topic which seems indispensable for any volume on trends in social science.

The volume is by no means a compendium or high-level textbook for scholars or professionals in other fields who are interested in the substantive findings of social science. Instead, it is an analysis of the persistent theoretical problems that remain to be solved in the development of a more unified and adequate social science.

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Psychological Testing

The Measurement of Abilities. Phillip E. Vernon. Philosophical Library, New York, 1961. viii + 276 pp. $7.50.

Intelligence and Attainment Tests. Phillip E. Vernon. Philosophical Library, New York, 1961. 207 pp. $7.50.

The Measurement of Abilities is a 1955 revision of a 1939 book, whereas *Intelligence and Attainment Tests* first appeared in 1961. The author (professor of educational psychology, University of London, Institute of Education) addresses primarily students of psychological testing, teachers, and others who use tests. Despite considerable overlap, the first devotes more space to elementary statistics; the second offers more on methods and results of mental testing. The presentation of statistics, necessarily somewhat superficial, at times seems outmoded as to notation, terminology, computational techniques, or concepts. Nonetheless, wisdom is manifest throughout, and notably in sections on the establishment and interpretation of school marks.

Some readers will not be enlightened by Vernons strivings to retain a Spearman-type "general factor" and to reconcile it with preferences of others who identify more specific mental abilities. A more sophisticated audience may deplore the repeated suggestion that other types of test scores be converted into I.Q.-like indices, despite recognition of faults of the original ratio I.Q. Vernon's addiction to the normal curve of error, as representing the true state of affairs in nature, also may mislead the unwary.

Some specific matters treated are indigenous to the British educational system and general culture. For this reason alone, neither book appears ideal for use as a textbook in the United States. Nor would the lay read-