Book Reviews

Proceedings of a Conference on the Utilization of Scientific and Professional Manpower. Columbia Univ. Press, New York, 1954. xii + 197 pp. $3.50.

The conference program summarized in this volume was sponsored by the National Manpower Council and Columbia University. Eli Ginzberg and Henry David, who planned the conference and edited the materials for publication, have been extremely skillful in carrying over into the text the atmosphere of discussion in the conference. The report is recommended for the interest of the controversial issues raised for discussion as well as for the practicality of its suggestions and findings.

Kenneth Boulding raised what was, perhaps, the most controversial issue, when he protested the delusive simplicity of the concept of "manpower," and claimed that it was appropriate only to a planned economy. He argued for considering "men in their infinite variety and sacredness," and of interfering only to "free the market to pursue its normal course." In the discussion that followed this paper, there was agreement that individuals and their incentives are the key to some manpower problems, but differences of opinion developed on the need for planning, on the role of professional societies and education, and on the influence of military policy.

The impression left by the other introductory papers, presented by James D. Zellerbach, Frank Pace, Jr., and Seymour L. Wolfbein, was that, for better or worse, administrators of educational and placement programs are faced with problems in the recruitment, training, and utilization of professional workers and have to do some planning in this context.

Then the conference got down to cases. That nurses and auxiliary medical workers and teachers are currently in short supply was generally accepted by conference participants. It was noted that many workers with the requisite training are lost to these professions because they leave for other kinds of jobs or, in the case of women, retire from the labor market. In this connection, the quality of students in training and incentives to remain in the teaching and nursing professions were of considerable interest to working groups in the conference.

Numerous instances of "skill dilution" through the substitution of the services of persons with less training for the performance of some functions were noted, particularly in engineering and medicine. Among the recommendations to increase the productivity of professional workers were modifications of the equipment and construction of schools and hospitals, development of new work patterns such as the "team approach," improved leadership and administration, and continuing reappraisal of the appropriateness of training programs.

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Introduction to Aeronautical Dynamics. Manfred Rauscher. Wiley, New York; Chapman & Hall, London, 1953. xiv + 664 pp. Illus. $12.

This textbook is the culmination of the author's teaching of a special course in dynamics over a period of 20 years. The course is focused on the needs of third-year undergraduate students in aeronautical engineering for a thorough grounding in the principles of the dynamics of particles, dynamics of rigid and elastic bodies, and dynamics of fluids, preparatory to the study of the theory of the dynamic stability of aircraft in the following year.

The chapters of the book are readily separated into two groups, one covering topics in solid dynamics, the other topics in fluid dynamics. The arrangement of chapters is determined by the teaching plan for related courses, particularly that in applied aerodynamics. Thus the sequence is particle dynamics, fluid dynamics, rigid bodies, and oscillations.

Throughout the book fundamental principles are emphasized, but aeronautical applications are introduced when they are appropriate. With a few exceptions, each chapter ends with a list of problems that illustrate the principles, usually by an aeronautical application. An excellent treatment is given the problem of the motion of a particle of variable mass with application to rocket propulsion, a subject that is very confusing to those who have forgotten the accurate statement of the energy and momentum principles.

The topics in fluid mechanics are indicated by the chapter headings: "Fundamental equations of fluid motion," "Stream function and velocity potential," "Fluid motion about simple bodies," "Transformations," "Airfoils," "Airfoils in three dimensions," "Viscosity." Discussions of compressible flow are limited to one-dimensional problems, incompressible flow to two-dimensional problems, including the theory of airfoils of finite span, which is of course an adaptation of two-dimensional theory.

The final chapters deal with the kinematics of rigid bodies, the concepts of momental ellipsoid and principal axes, precessional and nutational motions, and oscillations with one and two degrees of freedom.

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Scientific and Technical Papers. Seinen Yokota. Compiled and published by the Yokota Memorial Committee, Univ. of Tokyo, Tokyo, Japan, 1954. xx + 398 pp. + 137 tables. Illus.

This memorial publication of the late Seinen Yokota, professor emeritus of the University of Tokyo, contains a biographical sketch as well as 46 scientific and technical papers, most of which were written in English. Although his special fields were