

## Book Reviews

**College Teaching by Television.** Report of a conference sponsored jointly by the Committee on Television of the American Council on Education and the Pennsylvania State University at University Park, Pennsylvania, 20-23 Oct. 1957. John C. Adams, C. R. Carpenter, Dorothy R. Smith, Eds. American Council on Education, Washington, D.C., 1958. 234 pp. \$4.

With the big wave of prospective college students already in the secondary-school pipeline, the search for solutions to the problem of the college teacher shortage has become acute. One of the principal hopes for alleviation rests in the use of closed-circuit television broadcasts. The hope is that with the intelligent and skillful use of this mass medium, large increases in the number of college teaching personnel will prove unnecessary. For this reason, the American Council on Education and Pennsylvania State University have sponsored two major conferences on teaching by television in colleges and universities. One of these was held in 1952; the other in 1957. This volume reports the proceedings of the later conference, held at Pennsylvania State University, 21-23 Oct. 1957.

Because a great deal of experience in the use of television in higher education has been gained in this decade, the conference was able to draw upon administrators, technicians, instructors, and researchers who have devoted a large portion of their time to the problems. The conference enabled these people to present the results of these experiences and to take a hard look at some of the persistent problems in the use of televised instruction.

As C. R. Carpenter, director of the Division of Academic Research and Services at Pennsylvania State, and one of the outstanding pioneers in behavioral research in audio-visual communications, put it, "The development of 'A Perspective of Televised Instruction' is one of the principal purposes of this conference." The attempt to attain this perspective was made by first appraising the gains, if any, that have been made in televised instruction.

The principal presentation on this topic was a paper by Carpenter on some of the advantages and disadvantages of televised instruction. The principal dis-

advantage, stressed both by Carpenter and by many other participants, is the problem of professor-student interaction. How can students ask questions and otherwise participate in discussion when television is used as the instructional medium? A number of subsequent contributors to the conference related their experience in dealing with the problem. Perhaps the most interesting of the devices used to establish student participation is the one reported by E. P. Adkins of State University College for Teachers, Albany, New York. Multiple classrooms presided over by graduate assistants receive a televised lecture. When a student wants to say something, he raises his hand; the assistant signals the instructor by pressing a lever which turns on a red light. At a signal from the instructor, the assistant presses a lever which opens the audio circuit from his particular classroom to the studio and the other receiving rooms and closes the instructor's circuit. Adkins reports that this results in "fast-flowing discussion with no more pause than in the traditional situation."

A number of participants reported that a good deal of research of the straight-evaluation variety has been conducted, in which the effectiveness of televised instruction is compared with that of ordinary classroom teaching. Almost always these comparisons reveal no superiority for either method. The eminent Yale theorist and experimenter in the field of learning, Neal E. Miller, made the most fundamental points about this problem in his paper, which is reported on pages 28 to 42 of the book. Miller points out that research which is directed toward comparing televised instruction with ordinary live instruction has been not very imaginative. By the use of learning theory, it is possible to isolate the important variables that could be utilized in televised instruction and measure their teaching effectiveness. He points out that "studies aimed simply at comparing the two techniques, without taking into account the specific requirements of the task, are likely to produce misleading and inconsistent results. . . . We are just beginning to get sophisticated enough to advance from the stage of grossly comparing televised instruction with ordinary instruction to the stage of finding out how this new medium can be used most

effectively and what particular problems it can best be used for." He then refers briefly to examples of experiments that have tested significant variables, such as audience participation, which has been demonstrated to improve learning from films primarily because it guarantees practice of the correct or desired responses.

The volume has some important shortcomings that should be mentioned. It does not, perhaps, present a complete summary of the relevant research that has been done. For example, in my judgment, the systematic program of research on audio-visual communication carried on under the auspices of the U.S. Air Force, directed by A. A. Lumsdaine, and that carried on under the aegis of the Navy's Special Devices Center, which includes the research of C. R. Carpenter and his associates at Pennsylvania State University, are highly relevant to problems of television instruction. Some of these are referred to in the selected bibliography on pages 224-226. I would particularly like to call attention to "Graphic Communication and the Crisis in Education," by Miller *et al.* [*Audio-Visual Commun. Rev.* 5 (1957)] and to *Learning from Films* by Mark A. May and A. A. Lumsdaine (Yale Univ. Press, New Haven, 1958).

In spite of this shortcoming, all college and university officers as well as television producers concerned with educational programing will find that *College Teaching by Television* is a report very much worth reading. It provides a good account of experience to date in the use of television in collegiate instruction.

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**The Motivation, Productivity, and Satisfaction of Workers.** A prediction study. A. Zaleznik, C. R. Christensen, F. J. Roethlisberger, with the assistance and collaboration of George C. Homans. Graduate School of Business Administration, Harvard University, Boston, Mass., 1958. xxii + 442 pp. Illus. \$6.

This is a worthy successor to the noted Hawthorne studies of industrial behavior, to which it is ideologically related. A major conclusion of the Hawthorne research, it will be recalled, was that social factors play a major role in determining worker productivity and satisfaction. The present study attempts to apply a precise research design which will verify (or reject) a variety of hypotheses set up to predict the levels of productivity and satisfaction of industrial workers.

Three theories of worker motivation

are offered. Briefly, these are as follows: (i) external and internal rewards (worker behavior stems from external rewards, such as pay, and from rewards internal to the work group, such as status); (ii) distributive justice (worker motivation is a function of what the worker perceives as a "fair return" on his social investment, which includes considerations of age, education, seniority, and so forth); and (iii) social certitude (the notion that the worker seeks especially a condition of security in his relations with others).

The results will distress managers everywhere, for they indicate with startling uniformity that the external rewards (pay, promotion) which management can supply have almost no effect on productivity or satisfaction. The most important single determinant appears to be social status (being of the right ethnic group, age, and educational level, and having the right job classification). Also found to be important was being rewarded by the group—that is, accorded the treatment appropriate to a person of such status. People rewarded by the group tended to produce at the norm, the group-defined level. People rejected by the group might be high producers or low producers; the data do not give a satisfactory clue about why an individual went one way or the other.

The authors deserve praise for an important investigation, well planned and carefully executed. They draw black marks for poor editing of the manuscript (some sentences are virtually incomprehensible) and for failing to prepare a needed index.

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**The Practice of Sanitation.** Edward S. Hopkins and Wilmer H. Schulze. Williams and Wilkins, Baltimore, Md., ed. 3, 1958. ix + 487 pp. Illus. \$8.

The broad field of environmental sanitation has been surveyed well by the authors. Extensive revisions have been made in this edition to make the text more valuable as a guide to physicians, sanitarians, nurses, and others seeking a comprehensive reference and descriptive book.

Details are lacking for most of the fields covered, with the possible exception of public water supplies, urban sewage disposal, and milk and milk products. Many good references are given at the end of each chapter so the student will not lack for adequate supporting material where necessary.

Environmental sanitation is a phase of public health which concerns many dis-

ciplines, such as medicine, nursing, sociology, engineering, entomology, food technology, the basic sciences, and the administrative arts. The reader will gain a clearer picture of the interrelationship of these many disciplines from the clear and concise presentation by the authors of this new edition.

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**Patients, Physicians, and Illness.** Source book in behavioral science and medicine. E. Gartly Jaco, Ed. Free Press, Glencoe, Ill., 1958. viii + 600 pp. \$7.50.

This book is offered as a source book in behavioral science and medicine. The editor holds the novel title of associate professor of medical sociology (University of Texas Medical Branch). In this book he brings together the writing, research, and ideas of representatives of the behavioral sciences on varied aspects of medicine. By *behavioral sciences* he means sociology, cultural anthropology, and social psychology.

He believes that reaction against specialization in medicine (with a consequent loss of interest in the "total patient") and the wider recognition of "functional" and "psychosomatic" illness have resulted in renewed interest in the whole patient. This, in turn, has led to increased interest of medicine in the behavioral sciences, which have already been recognized by many as constituting a basic science for psychiatry and which may eventually be so recognized by all other branches of medicine.

The body of the book is by 63 authors (ten are physicians, the rest behavioral scientists) who have contributed 55 chapters, of which 20 have not been published previously. The chapters are grouped into seven sections, and the editor has written a brief synoptic passage for each section.

The first section is concerned with social epidemiology and social etiology—that is, the connection between conditions of social stress and the onset of illness. Here one finds discussions of the relations between socioeconomic status and chronic disease and between church attendance and stress reactions affecting the cardiovascular system, and of the concept of "sociosomatic" illness, which is the sociological counterpart of "psychosomatic" illness.

The second section deals with health and the community—that is, community health practices, dietary habits, preventive health techniques, and health programs ending in success or failure. Here

one learns that whether or not medical research is stimulated toward controlling a certain disease may depend on which social class is affected by it; that the community power structure affects the outcome of community health programs; and that our very concepts of health and illness depend on the cultural values and social structure of our society.

The third section deals with medicine as a social institution in its own right, having many norms, rituals, and values of its own. There are papers on folk and primitive medicine, the patient-physician relationship, normative components of hygienic practices in a tuberculosis hospital, and the relation of changes in the American family system to some social and psychological aspects of illness and treatment.

The fourth section deals with the "patient role"—the patient's orientation in a hospital, his response to pain as a function of the social class to which he belongs, his behavior as a patient if he is a Christian Scientist, or conditions which induce him to seek the help of quacks instead of authorized physicians.

The fifth section is devoted to the social process of medical education and its impact upon the student-physician, the various phases of his development from premedical training to the establishment of practice, the transformations of personal characteristics of students in a medical school, some similarities and differences between the clergy and the medical profession as they affect medical education, and the process of professionalization of the physician.

The sixth section deals primarily with the physician-patient relationship and how it is affected by the social and personal milieu of the physician and his patients. The articles involve analyses of specialization in medical practice; factors that develop good doctors or lawsuits for malpractice; the relation between surgeons and their patients in a teaching hospital; the significance of the patient's cultural environment to the practice of pediatrics; the consequences of socialized medicine in England—with its increase in "functional illness"—for the physician-patient relationship; and the relation to the medical profession of marginal nonmedical healing groups such as osteopaths and chiropractors.

The seventh section focuses on the medical setting: hospital, clinic, and office. Here one finds discussions of the social structure of hospitals; hospital ideology and communication among various categories of ward personnel; differences in organization, staffing, and operations between publicly supported and privately operated mental institutions; the functioning and structure of the hospital operating room; the effect of the status system of an outpatient psychiatric