whereby we choose between different value systems. So long as we treat science as value-free we shall continue to have a bad methodological conscience when considering questions of meaning in human life. Unaided science cannot provide a political strategy for the guidance of a blind technology. There is evidently a growing scepticism about the power of science, by itself, to improve the human lot. If there is a dualism, it lies in our two-fold image of man: on the one hand, "the lowly puppet-like figure described by science" and, on the other, "the bold, pioneering, self-possessed and self-determining fellow who invented science and appears to control the scientific establishment".

Science and Culture concludes with a report on the integrity of science prepared by a committee of the American Association for the Advancement of Science. This important document, which should be studied by statesmen and administrators as well as by scientists, puts a finger on the social hazards of experimental interference with nature, and it draws attention to the need for assembling facts relevant to value judgments. How, for example, can the benefits of nuclear testing be balanced against increased medical hazards from fall-out? The need for foresight is highlighted by glaring failures, exemplified by the adverse effects of large-scale spraying of pesticides. Above all, the report emphatically insists on free scientific debate which, for example, did not precede the *Starfish* experiment in which a 1·4 megaton bomb was detonated with melancholy repercussions now widely familiar.

Students of this book may feel it necessary to read between the lines. For it is hard to escape the impression that some contributors, skating on thin ice, would have liked to refer openly to the war in Vietnam or to the absence of China from the United Nations. If they refrained from doing so, it is because they are scholars, not politicians. Nevertheless, they see the writing on the wall and they have made it possible for others to share their vision.

J. COHEN

WOMEN IN SCIENCE

Women and the Scientific Professions

Edited by Jacquelyn A. Mattfeld and Carol G. Van Aken. (The M.I.T. Symposium on American Women in Science and Engineering.) Pp. xvii+250. (Cambridge, Mass., and London: The M.I.T. Press, 1965.) 6.95 dollars; 53*s*.

IN October 1964, the Association of Women Students of the Massachusetts Institute of Technology sponsored a symposium on the problems faced by American women in the scientific and engineering professions. *Women and the Scientific Professions* gives an account of the proceedings. The contributors included psychologists and sociologists as well as scientists. The welcome extended by the President of the Institute, where the enrolment of women is increasing, is encouraging.

The account is divided into four parts. The first, a discussion on the commitment required of a woman entering a scientific profession, was begun by Bruno Bettelheim, professor of education in the University of Chicago. The moderator was Mrs. Bunting, who as president of Radcliffe has promoted a scheme to help women with families to pursue advanced projects on a part-time basis. Prof. Bettelheim gives his reasons for accepting the invitation, adding disarmingly, "I knew it might put me out on a limb". He is deeply concerned with the adjustment of all human beings to living with modern technology. It is probably natural that I find myself in agreement with the comments of the physicist, Chien-Shiung Wu, and the anatomist, Mrs. Nachmias, on his contribution to the specific problems of a woman's commitment to her work. I am glad to see the point made that, although the majority of girls may not want to be scientists, those who do should not be made to feel odd. There is a realistic article by Mina Rees, who urged that women "must bring to the task the competence and objectivity that the task requires". Rita McCabe, of I.B.M., discussed the position of women in the computer industry, a field new to everyone and in which women have not been hampered by a long tradition that it is for men only. Dorothy Simon, vice-president of Avco Defense and Industrial Products Group, compared the position of American women in science and engineering with that of women in other countries, as deduced from the representation of, for example, the United Kingdom, India and Japan at the first International Conference of Women Engineers and Scientists held in New York in June 1964. This volume will be of interest to all those who hope to attend the second of these conferences, which is to be held in Cambridge in 1967.

The second part, on "Who wants Women in the Scientific Professions ?", begins with an extremely interesting study by Alice Rossi of "Barriers to the Career Choice of Engineering, Medicine or Science among American Women". This occupies more than a quarter of the book and should be useful for reference. It is followed by a valuable article by the chairman of the Corporation of the Massachusetts Institute of Technology, who gave evidence from several sources that the proportion of women in professional occupations is dropping and that few women reach the executive and more highly paid ranks of their profession. Also, out of the 707 members of the National Academy of Sciences, only five are women. This is lower than the corresponding ratio among Fellows of the Royal Society. Both he and Prof. Jessie Bernard made it clear that it is idle for women to talk of discrimination, when there are not enough women with high qualifications. Richard Bolt gave a factual account of the present situation in industry and government.

Part 3 is a discussion on the case for and against the employment of women and includes contributions from two men experienced in recruitment in industry and the civil service. It emerges that it is only in quite recent years that the United States Civil Service has required that all appointments be made regardless of sex, with very rare exceptions.

The closing part consists of addresses by Mrs. Gilbreth, an example to us all of a woman who lives the lives of several ordinary women, and Erik H. Erikson, professor of human development at Harvard. He asked the delegates whether they had not listened too much and said too little and it would be interesting to know what was said from the floor. The whole volume is characterized by an objective approach to the problems involved, neither minimizing the difficulties nor presenting them as insuperable.

With a reasonably careful search I have not found out whether the credit for the mathematical gibberish on the dust jacket goes to a man or a woman, but the recurrence of "$m = c^2$" rather offends the eye of a physicist.

BERTHA JEFFREYS

CANCER BIOCHEMISTRY

Biochemical Approaches to Cancer

By Dr. Eric Reid. (The Commonwealth and International Library of Science, Technology, Engineering and Liberal Studies: Biochemistry Division.) Pp. xi+198+3 plates. (London and New York: Pergamon Press, Ltd., 1965.) 21*s*. net.

TWELVE years have elapsed since the publication of the second edition of the late Dr. J. P. Greenstein's classic, *Biochemistry of Cancer*. This work was authoritative, comprehensive and well documented. The advances in biochemical knowledge since 1954 make a new work on the subject most desirable. Dr. Reid's *Biochemical*