Rehovot and the constantly extending Technion at Haifa are, of course, mentioned. The work of all continues and grows, though the splendid buildings and equipment of the two first-named are to-day held sterile and unused by the State of Jordan. The amazing transformation of the desert Negev is also described.

Undoubtedly those who so devotedly and cheerfully labour to create the new Israel are sustained by the sense that they are path-finders for future generations not only in Israel but even over the whole world. Recalling how almost each one has, personally or through others beloved, suffered from the mistakes of the world behind us, who will call their aspiration priggish or even unreasonable?

DOROTHEA WALEY SINGER

CONTROL OF HUMAN CONDUCT

Social Control

By Dr. Joseph S. Roucek and Associates. Second edition. Pp. viii+603. (Princeton, N.J.: D. Van Nostrand Company, Inc.; London: Macmillan and Co., Ltd., 1956.) 50s. net.

THIS is yet another of the immense array of introductory texts produced in the United States which deal with various aspects of the study of sociology. It opens by restating the familiar theme of increases of crime and chaos in the post-war world which leads to the conclusion that, "if mankind is ever to be free from fear of aggression . . . , the wise control of human conduct is far more significant than any degree of mastery of the world of nature". This is quite unexceptionable, if somewhat trite. But, unfortunately, we may be misled too readily by the suggestion that the book attempts to deal with the intimidating problem as to how "wise control" is to be exercised. Social control is quickly redefined in the opening paragraphs as the "processes, planned or unplanned, by which individuals are taught, persuaded or compelled to conform to the usages or life-values of groups", which begs the whole question as to whether these usages, etc., can be continued further into the twentieth century without undue loss, or even peril. Furthermore, the most important issue latent in this formulation, as to the extent to which social control can be effectively planned and executed—even within this narrow context—is given only the briefest and most superficial treatment.

For the most part, the book provides a very general and at times somewhat dogmatic account of the social and psychological influences which shape our personalities and our societies in ways we tend to take for granted. The social 'conditioning' of personality, the leadership process, propaganda and similar topics are all passed in review without any general conclusion being reached. The final chapter on "Social Control and the Atom Bomb" is characterized by a deep pessimism: the last sentence in the book is that "the doom of mankind may already have been decreed". Whether this is intended as a judgment based on mature reflexion on the problems of social control, or whether it is a merely irresponsible or somewhat unconsidered remark, is not clear. But it can only be regretted that the brief and somewhat naïve section on economic and social planning could not have been greatly expanded, so as to deal with the basic problem of "wise control" which is posed but not discussed, let alone resolved.

It is recognized that some kinds of public planning and administration are successful, and have provided the foundations on which the modern urbanized way of life has been based. But it has proved exceedingly difficult to widen and strengthen these foundations, and the fact has not been recognized that the time has come when precise questions as to how and why must be put, with all the intellectual and moral courage that we can command. T. S. SIMEY

MODERN ASTRONOMICAL OPTICS

Proceedings of a Symposium on Astronomical Optics and Related Subjects

Held in the University of Manchester, April 19th–22nd, 1955. Ed. by Prof. Zdenek Kopal. Pp. xv+428. (Amsterdam: North-Holland Publishing Co.; New York: Interscience Publishers, Inc., 1956.) 45 guilders; 90s.

THE contents of this impressive volume cover a very wide field of problems ranging from abstract considerations on information theory to questions of a very practical nature concerning dye filters, interferometers, etc. But they all have one common denominator: they refer to problems characteristic of modern astronomy which, extending its observations to invisible objects—that is, to very faint and distant stars and star-systems—has to develop new methods of registering and analysing the observable data. These again give rise to quite novel difficulties.

Modern electronic devices make it possible, for example, to measure with photomultipliers, attached to the 200-in. telescope at Palomar, the light intensity of a star of not much less than magnitude 24, which would correspond to observing Sirius as far away from us as one million parsecs; it should be possible to measure even fainter stars. However, how will the observer locate such a star in the photometer if this star is invisible—that is, it cannot even be located on a photographic plate? Similarly, when formerly the observer wished to make a spectral investigation of a star, he produced an image of this star on the slit of a spectrograph, keeping during the exposure the star image steady on the slit. For faint objects this is no longer possible. So different devices have to be developed to enable monochromatic analysis of very faint invisible light sources. The last chapter, on filter photography of thin films, is thus devoted to problems of this kind.

Since a great refinement is a common necessary feature of all observations, all disturbing effects, like the scintillation of star images, have to be carefully analysed to eliminate their influence; Chapter 5 deals with resolution problems and scintillation. It becomes thus also clear why the information theory plays an important part. The actually observed effects frequently appear to be scarcely related to what the observers actually wish to find out; thus a minute analysis of the content of information in the observed data is needed.

This book is a rich source of information for every modern astronomer. An astronomer brought up in the tradition of spherical astronomy and celestial mechanics may feel a bit bewildered, like a connoisseur of classical music or painting listening to music by Hindemith or looking at pictures by Braque.

E. FINLAY-FREUNDLICH