

international affairs. It is a pity that he has learned nothing from the work of others about what may be the key elements in the study of such difficulties.

The Club of Rome, which sponsored this work, appears to have as members a considerable group of high-powered top executives who are concerned about the state of the world. Unless they regard themselves as nothing more than a fancy wine-tasting and entertainment society, I suspect they should be able to sponsor a somewhat less naive form of advocacy than this latter-day essay in technocracy; or they should provide some guidance.

With his three books Forrester has succeeded in publicizing the concept of the applicability of large computer models and feedback systems to human affairs. He has generated at least some enthusiasm and backing from individuals with power and money. If his next book deals successfully with how to identify the key variables and parameters in these large systems, and with an example or two with more than casual empirical content, perhaps the value of such models can be accepted as more than an article of faith. In the meantime, he has demonstrated how to approach the understanding of human affairs in an energetic, simplistic, and superficially attractive but nonetheless dangerously wrong manner.

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## Human Potential

**The Uses of Talent.** DAEL WOLFLE. Princeton University Press, Princeton, N.J., 1971. x, 204 pp., illus. \$6.50.

This book deals with the selection, education, deployment, and utilization of scientists, humanists, professionals, and others of comparable talent. Making a biological analogy, Dael Wolfle, who was director of the first Commission on Human Resources, sees these processes in the context of a national ecological macrocosm, in which specialized talents enter into an evolving association with one another. The system generates specialists who work out various adjustments to one another, yet at the same time develop tensions and pressures which keep the whole system in a dynamic state. The book is an informative description and wise assess-

ment of this ecological system, and of its strengths and maladjustments, together with carefully conceived and realistic suggestions for improvement.

Wolfle is dealing with a field, the economics of human resources, which is not nearly so well developed as its prototype, the study of the production and distribution of material wealth. Nevertheless, a great deal of information and many ideas are available. Much research is under way and has been reported by psychologists on the identification of abilities and on the psychodynamics of motivation, by sociologists on social structures and processes that influence individual performance and aspirations, by political scientists on how social policies and priorities affect educated manpower, and by economists on the changing relations between supply and demand of specialists.

Without pretending that such inquiries are sufficiently advanced to constitute a science of human resources, Wolfle nevertheless aims to make a start in bringing together and integrating this already formidable body of material. With the help of concise writing and numerous charts and graphs, he arrays his complex data simply and clearly, and produces a number of ingenious but well-validated interpretations. In the process, he examines such questions as the changing demand for college graduates, the personal and social return on educational investments, the relative influence of ability and social class in determining who goes to college, the effect of geographical and occupational mobility upon the utilization of talent, and the personal and social priorities in the uses of talent.

Among other things, he demonstrates rather convincingly that even if a nationwide effort is made to uncover and develop talented human potential in social classes and groups that are now submerged, including women, the nation is not likely to be overwhelmed with an army of overqualified people in the foreseeable future. Even if financial barriers and deficiencies of educational background are removed, the numbers of people motivated to advance educationally are not likely to increase so drastically as to seriously outrun increasing demands for talent caused by the combination of technological advance and higher standards of competence. However, the ways of utilizing talent are likely to change a great deal. For example, proportionately less of

the pool of talent will be used in university and four-year college teaching; more will be used in activities in which an upgrading of present standards of competence may be expected.

Wolfle has written an excellent, illuminating book.

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## Laser-Produced Plasmas

**Laser Interaction and Related Plasma Phenomena.** Proceedings of a workshop, East Windsor Hill, Conn., June 1969. HELMUT J. SCHWARZ and HEINRICH HORA, Eds. Plenum, New York, 1971. xiv, 510 pp., illus. \$25.

For the present, at least, the laser-produced plasma is a seriously considered contender in the race toward controlled thermonuclear fusion. This is even more true today than it was when the Hartford Workshop of which this book is the proceedings was held, because in the last two years high-efficiency gas lasers have become engineering certainties. This book serves a particularly useful function, for it introduces the reader to the areas of research, the main contributors, and the problems that were evident at the time the symposium was held. It will be of great value to those planning to initiate research in this area, for the newcomer will be able to bypass the usual literature search and make use of the many references given at the end of each paper.

Unfortunately, the important problem of long-wavelength ( $10.6 \mu\text{m}$   $\text{CO}_2$  laser) interaction is barely mentioned. The currently exciting phenomena of nonlinear absorption and turbulent heating can most easily be studied at this wavelength, and a book of this type could stimulate more activity here.

The volume covers most aspects of laser plasma research, but some are covered in much more detail than others. Notable for completeness are papers by DeMaria *et al.* on "Picosecond laser pulses," by Guenther and Bettis on "Laser triggered switching," and by Shearer and Barnes on "Numerical calculations of plasma heating by means of subnanosecond laser pulses." The influence of Hora is evident in the book, as he presented four papers, three of which are rather detailed the-