

steps from wherever: traditional theoretical analysis, sophisticated phenomenology, or some combination of the two, or intuition if it can be fruitful.

This book is on the right track, but carries us only a very little way forward. Written for professional solar astronomers or advanced graduate students, it relies very heavily (by rough analysis as much as 50 percent of the total contents) on close paraphrasing of published articles. This is particularly true with respect to theoretical developments. However, the serious student of solar astronomy will have to refer to the original papers themselves, since some of the omitted portions of published articles represent the heart of the matter. The author provides virtually no criticism or analytical insights to make understanding easier, or to relate developments from various points of view. The value of this tabulation lies in the author's choices, involving his judgment. Most professionals will prefer to substitute their own. As uncritical précis, the book has merits, but one might hope for more from its laudable objectives.

The book closes with the paradoxical remark that "while a comprehensive picture . . . is slowly emerging . . . much . . . remains to be done." You can read that two ways. I am not, on the whole, as optimistic about the present accomplishments of solar astronomy. Instead, major qualitative insights still remain to be found by people with wits and knowledge. They may be discouraged by parts of this book.

Most professionals, and libraries, will wish to have it. Proceed with caution in using it, however; as a tutorial handbook it is weak; as a guide to some, though not all, of the literature it is probably useful.

JAMES W. WARWICK  
*Department of Astro-Geophysics,  
University of Colorado, Boulder*

## Physics Series

**Advances in Nuclear Physics.** Vol. 1. MICHEL BARANGER and ERICH VOGT, Eds. Plenum, New York, 1968. xiv + 416 pp., illus. \$18.50.

Whatever our regrets, modern physics has clearly become fragmented into subfields that have little overlap. One well-defined subfield is nuclear physics, which occupies "a central position between elementary particle physics on one side and atomic and solid state

physics on the other." Therefore it is fitting that there appears a new series of review volumes devoted exclusively to topics in nuclear physics. The editors of this series are known for the clarity and completeness of their own research contributions. Their aim is to secure articles that present up-to-date pedagogic treatments of topics in the current research literature. It may be that soon the best way to enter research in some area of nuclear physics will be to study the pertinent articles of this series.

The five articles of volume 1 bear out this expectation. DeBoer and Eichler give a definitive study of the reorientation effect, an effect that allows the measurement of quadrupole moments of excited states. Starting with a qualitative introduction to the theory of Coulomb excitation, the article moves along smoothly to procedures for the practical design of reorientation experiments. Malcolm Harvey summarizes the content and status of the  $SU_3$  submodel of the nuclear shell model. Although his subject is inherently somewhat dry, the article seems extremely thorough and clear. A series of nine appendices form a précis of relevant topics in group theory. Georges Ripka summarizes the Hartree-Fock theory of deformed light nuclei. In this theory the configuration mixing caused by the two-nucleon in-

teraction is approximated by using single-particle states generated by a deformed single-particle potential. Despite a resemblance to the Nilsson theory, the Hartree-Fock theory leads to qualitatively different results. The article starts from first principles and proceeds with clarity toward its goal of enabling the reader to perform his own calculations. The juxtaposition with Harvey's article is helpful, because the  $SU_3$  theory and the deformed Hartree-Fock theory yield related reductions of the nuclear shell model. A valuable article by Vogt presents the modern form of the statistical theory of nuclear reactions. This simple theory gives accurate accounts of most of the flux that enters low-energy nuclear reactions. Heretofore it was necessary to consult the research literature to learn how the old theory of Wolfenstein and Hauser-Feshbach had been improved. The article includes worked-out examples. Ian Duck treats the much-discussed nonrelativistic three-nucleon system. It is odd that the author stresses Amado's contributions but in the concluding section remarks (correctly) that Mitra's work on the same problem handles the physics more completely. Mitra's work is not presented.

N. AUSTERN

*Department of Physics,  
University of Pittsburgh,  
Pittsburgh, Pennsylvania*

## Social Class and Psychiatric Care

**A Decade Later.** A Follow-up of *Social Class and Mental Illness*. JEROME K. MYERS and LEE L. BEAN, in collaboration with MAX P. PEPPER. Wiley, New York, 1968. xiv + 250 pp. \$7.95.

Ten years ago, research reported in *Social Class and Mental Illness* added further empirical documentation to an already fairly well-established fact: that the lowest socioeconomic class in the society is greatly overrepresented among clients of psychiatric treatment facilities. A. B. Hollingshead and F. C. Redlich, the sociologist and psychiatrist who authored that report, focused on two related but distinct questions: First, is the risk of developing a psychiatric disorder a function of social position? Second, are there class differentials in the quality and type of psychiatric treatment received? Because of the inherent difficulty of disentangling causal relations in a cross-sectional study of a population that was already in treat-

ment, the answer the study gave to the first question was suggestive but equivocal.

Over the past decade, work of increasing sophistication has begun to throw more light on such components of the problem as class of origin, social mobility, educational and occupational achievement, the course of illness, and the paths into and out of treatment. The answer to the second question, on the other hand, was clear and definite. Lower-class patients received less-preferred treatments—custodial care in state hospitals rather than intensive treatment in private hospitals or out-patient clinics, drugs and other somatic treatments rather than psychotherapy. In short, patterns of class discrimination evident in other sectors of the society were also present in the psychiatric treatment of mental illness. This was hardly a startling finding, certainly not to the members of these classes,

but it was important to have the process documented in detail.

The present volume is directed to another aspect of this second question. In following up the patients who were studied ten years ago, Myers and Bean ask whether the consequences of the treatment received, in the form of recovery and adjustment, are also class-related. The answer is a clear affirmative. And again, while this is hardly surprising, the consistency and pervasiveness of the findings could lead to a reconsideration of and possibly to changes in present views of the problem of mental illness and in current ways of organizing psychiatric care and treatment. As will be noted below, however, the authors are themselves the captives of a traditional medical-psychiatric point of view, and their proposals tend to trivialize the importance of their own findings.

After a thorough search of psychiatric agency records, combined with field surveys, the investigators were able to locate 99 percent of the original group of patients who were to be included in the follow-up study (patients originally in treatment with private psychiatrists were not included for reasons having largely to do with original commitments regarding confidentiality and the required approval of the physicians). Interviews, focused primarily on questions of personal and social adjustment, were completed with 88 percent of the former patients who were no longer hospitalized, and with a member of their families; a matched control group of persons who had never been treated for a mental illness was also interviewed, on similar topics.

A central finding is that, of those patients who were hospitalized at the time of the original study, the percentage still hospitalized ten years later increases steadily from 39 percent in the highest social classes (designated I-II) to 57 percent in the lowest (class V). About four-fifths of these patients in each social class had been continuously hospitalized. There are no class differences in the percentages who have died in the interim—about 30 percent of the original cohort. The percentage now living in the community declines from 31 in classes I-II to 10 in class V. This finding is not altered when statistical controls are introduced for sex, age, race, religion, marital status, previous hospitalization or its length, type of hospital, or type of psychiatric treatment. Clearly, social class is the most significant of the variables studied in determining an

individual's chances of being released from a psychiatric hospital to return to life in his community.

For those now in the community, the findings with regard to current psychological and social adjustment are more complicated. Members of the higher social classes, for example, are more likely to be receiving outpatient treatment either privately or in clinics. There is the interesting and at first apparently anomalous finding that among those who had originally been hospitalized the higher social class groups are more impaired psychologically, whereas among those formerly in clinic treatment it is class V that shows most current impairment. In their discussion of these findings the authors attribute the differentials both to the social control functions of hospital psychiatrists, who, they argue, may use more stringent criteria for the release of lower-class persons, and to unequal access to resources, psychiatric and otherwise, of the different class groups.

There is much more in the volume—other measures of adjustment, responses of family members, economic and social role performance patterns—which serves to underscore and strengthen the general trends outlined above.

Follow-up studies are still relatively rare in this field, and each new one must be welcomed. Further, this study is unique both for the time span covered and for the attention given to social class. Its findings bear directly on the planning of psychiatric facilities and on the training of psychiatrists. It is my view, however, that the force and impact of the work are limited by the authors' implicit and unquestioning acceptance of the contemporary medical-psychiatric model of mental illness and treatment. Since they accept the psychiatrist's definition of the problem, their solutions are restricted to tinkering with the system or patching it up; essentially, they exhort the psychiatrists to behave better as psychiatrists. One would never guess from reading the analyses and the proposals that more radical approaches to definitions of illness and to forms of treatment have been proposed in recent years. More searching questions might have been raised about, for example, the relation of mental illness as deviant behavior to other forms of social deviance, about the role of psychiatrists as social control agents in the very definition of some problems as "psychiatric," and perhaps about possibilities of non-psychiatric forms of intervention.

The book merits and will undoubtedly receive serious attention from administrative psychiatrists. It does not, however, challenge their basic assumptions. More radical critics of the present system of psychiatry will find much support here for their views, and the book could serve as a resource for the development of more far-reaching and more profound proposals than are offered here or were intended.

ELLIOT G. MISHLER

*Department of Psychiatry, Harvard Medical School and Massachusetts Mental Health Center, Boston*

## Books Received

**Advances in Biomedical Engineering and Medical Physics.** Vol. 1. Sumner N. Levine, Ed. Interscience (Wiley), New York, 1968. viii + 407 pp., illus. \$16.

**Advances in Freeze-Drying.** Louis Rey, Ed. Hermann, Paris, 1966. 214 pp., illus. 120 F.

**Biochemistry: A Brief Course.** Abraham Mazur and Benjamin Harrow. Saunders, Philadelphia, 1968. vi + 450 pp., illus. \$8.75.

**Biographical Memoirs.** Vol. 39. National Academy of Sciences of the United States of America. Published for the Academy by Columbia University Press, New York, 1967. x + 572 pp., illus. \$5.

**Calculation of the Properties of Vacancies and Interstitials.** Proceedings of a conference, Shenandoah National Park, Va., May 1966. U.S. Department of Commerce, Washington, D.C., 1966 (available from Superintendent of Documents, Washington, D.C.). viii + 202 pp., illus. \$2.50. National Bureau of Standards Miscellaneous Publication 287.

**The Chemical Physiology of Mucopolysaccharides.** Proceedings of a symposium, Milan, Italy, September 1965. Giuliano Quintarelli, Ed. Little, Brown, Boston, 1968. xvi + 240 pp., illus. \$13.50.

**Class Field Theory.** E. Artin and J. Tate. Benjamin, New York, 1967. xxvi + 259 pp., illus. Cloth, \$9.50; paper, \$3.95.

**Disk-Elektrophorese.** Theorie und Praxis der diskontinuierlichen Polyacrylamidgellelektrophorese. H. Rainer Maurer. Gruyter, Berlin, 1968. xvi + 221 pp., illus.

**The Drug Scene in Great Britain.** Journey into Loneliness. Max M. Glatt, David J. Pittman, Duff G. Gillespie, and Donald R. Hills. Arnold, London, 1967 (distributed in the U.S. by Williams and Wilkins, Baltimore). viii + 117 pp. Paper, \$2.95.

**Endotoxin Susceptibility and Endotoxin Hypersensitivity.** Tibor G. Kováts. Szeged, Hungary, 1967. xii + 101 pp.

**Energy Bands in Semiconductors.** Donald Long. Interscience (Wiley), New York, 1968. xiv + 212 pp., illus. \$9.95.

**The Epidemiology of Multiple Sclerosis.** Milton Alter and John F. Kurtzke, Eds. Thomas, Springfield, Ill., 1968. xiv + 204 pp., illus. \$10.50.

(Continued on page 1382)