

volume dealing with biochemical applications have been greatly extended. The third edition also contains a series of very useful appendixes, the one on chromatography being particularly noteworthy in its detailed description of the use of autoradiographic techniques as a means of augmenting the information that can be obtained from the original paper chromatogram.

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Report of the Conference on Recent Developments in Cloud-Chamber and Associated Techniques. Comprising collected papers of the conference held under the joint auspices of the Physical Society of London and University College, London, March 1955. N. Morris and M. J. B. Duff, Eds. University College, London, 1956. 227 pp. Illus. 30s.

This volume is composed of the papers presented at the Conference on Recent Developments in Cloud-Chamber and Associated Techniques, held in London in 1955. There are 46 papers, plus reports of six discussion sessions. The reports cover the following variations of cloud chambers: diffusion, multiple plate, high pressure, fast cycling, and pure vapor. Problems of measurement and interpretation of tracks and apparatus for reprojection and measurement were discussed in one of the sessions (five papers). Circuits, counters and apparatus used for counter-controlled operation, and other peripheral matters are taken up in a number of papers. The bubble chamber, which was quite new on the scene at the time the conference was organized, was accorded a short presentation. However, because of the rapidity with which the development of this device has proceeded in the last few years, the material given in the report can now be considered to be only an introduction to the subject. Most of the authors are from laboratories in England, but there is a good representation from the United States and other countries.

It would be pretentious to try to rate the contents of the volume—its contributors constitute a large fraction of all the practicing experts in the cloud-chamber business, and it is therefore authoritative by definition. As in any report of a conference, the value of the written version depends on the care with which the manuscripts were prepared and assembled—the standard set by the editors. In the preparation of this volume, the editors are to be commended. They have been thorough in gathering the pertinent written material, references, and discus-

sion. What is even more commendable in a work of this kind, they have made sure that the graphs and pictures are accompanied by full captions.

In the volume at hand we have without doubt the most complete statement existing on the art of cloud chambers. It is so complete, in fact, that one cannot help wondering, with a little nostalgia, if this will be the treatise to end treatises on the subject. In the past decade or more we have seen large sections of the area of usefulness of the cloud chamber taken over by the counter, the photographic emulsion, and the bubble chamber. It is easy to extrapolate and think that possibly before very long the displacement will be complete. There are, however, at least two areas which come to mind in which the cloud chamber still holds its position: (i) counter-controlled operation (preexpansion tracks), especially as applied to the study of cosmic rays, and (ii) the study of low-energy particles, particularly where it is desired that the tracks be long enough so that their curvatures in a magnetic field can be measured. Bubble chambers at present cannot be counter-controlled because no way has been found to produce expansion within the lifetime of the activation produced by the moving particle, and they are not suited to the study of low-energy particles because of the high stopping power of the liquid. Photographic emulsions obviously cannot be counter-controlled, and they have limitations similar to those of the bubble chamber where low-energy particles are concerned. These examples are enough to show that, in spite of a narrowing of the field, there do remain applications for the cloud chamber which are not challenged by the other techniques. Perhaps, therefore, the present excellent volume of reports does not have to be considered a swan song.

Everyone working with cloud chambers or concerned with the interpretation of cloud-chamber results will find the volume very interesting and valuable.

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Psychological Aspects of Aging. Proceedings of a Conference on Planning Research, Bethesda, Md., April 24–27, 1955. John E. Anderson, Ed. American Psychological Association, Washington, D.C., 1956. 323 pp. \$2.

This is a significant book which can be read with profit not only by those specifically interested in problems of aging but also by graduate students and others entering research in any field of scientific psychology or the social sciences. The conference which it reports was held

under the auspices of the American Psychological Association and was financed by the National Institute of Mental Health. Its purpose was to survey the field of possible research on aging that might be made by different branches of psychology.

The book begins with the text of the opening address by J. H. Sheldon, who was at the time president of the International Congress of Gerontology and to whose untiring efforts to foster international cooperation in this field, the invitation to give this address was a fitting tribute. The papers which follow are divided into five sections. The first deals with personality changes during the adult years and their relation to social adjustment. The second considers the nature of, and means of assessing, age changes, mainly from a psychophysiological standpoint. The third section outlines the more strictly psychological studies of changing ability, measured in the main by so-called "mental" tests. The fourth section discusses problems of training and education in the light of changes, with age, in the capacity to learn and of shifts in the pattern of motives brought by older people to their tasks. The fifth section is a consideration of age changes as they affect employability. There follows a masterly summary and ordering, by the editor, of proposals for future research raised by the other contributors.

As is evident from the scope of the various sections, the papers are representative of many different branches of psychology, and their scientific quality varies with that of the branch from which they have come. Almost all are, however, of high standard within their own fields.

The book as a whole would seem to be important for four reasons. First, it makes clear that psychological studies of aging during the adult years are now developed to a point at which they merit serious attention, both from psychology generally and from other branches of science.

Second, the papers as a whole provide an accurate view in research terms, without sentimental distortions, of the field as it must be considered by psychologists intending to enter it. Anyone who has attempted the difficult task of doing research on aging will know that a man often takes 2 or 3 years to become oriented and to begin making his own contribution. The present book should enable him to form a quick appraisal of the kind of work that has been done and of the areas in which contributions are now required, and thus it should give him a flying start and a better perspective than his predecessors have enjoyed.

Third, there is a repeated insistence on the need to view aging as a continuous process over the whole life-span. Most discussion in the past has been con-