

a valuable resource for both investigators and students of biological gerontology.

Edward J. Masoro, PhD
Professor Emeritus
Department of Physiology
University of Texas Health Science Center
San Antonio, TX 78284-7756

References

- Costa, Jr., P. T., & McCrae, R. R. (1995). Design and analysis of aging studies. In E. J. Masoro (Ed.), *Handbook of physiology, Section 11: Aging* (pp. 25-36). New York: Oxford University Press.
- Finch, C. E. (1990). *Longevity, senescence, and the genome*. Chicago: The University of Chicago Press.

AN INSTITUTION: THE HANDBOOK OF THE PSYCHOLOGY OF AGING

Handbook of the Psychology of Aging, fourth edition, edited by James E. Birren and K. Warner Schaie. Academic Press, San Diego, CA, 1996, 416 pp., \$69.95 (cloth), \$39.95 (paper).

Birren and Schaie's *Handbook of the Psychology of Aging* series has long been an institution among students and researchers. I daresay that everyone in the field of psychology of aging has read chapters from these handbooks over and over again since the first volume was introduced in 1977 (Birren & Schaie, 1977). The *Handbook* is eagerly anticipated whenever a new edition is advertised by the publisher, and the chapters are considered to be authoritative, up-to-date reviews.

I remember spending close to an entire year preparing a chapter on memory for the 1985 *Handbook* (Birren & Schaie, 1985) after absorbing the chapter on the same topic by Craik in the 1977 edition. I have since treasured the well worn and underlined 1990 chapter on memory by Hultsch and Dixon. The chapter by Smith on memory was the first one I examined when the 1996 *Handbook* was delivered.

Forty years ago the *Handbook of Aging and the Individual* (Birren, 1956), set the standard and the format for all subsequent handbooks by Birren and Schaie. The handbooks began with a section on history, systems, methods, and definitions; subsequent sections reviewed biological, social or environmental influences, and were followed by a major section on behavioral processes. For those who are students of cognition, the 1956 *Handbook* contained two chapters on learning processes, one by Edward A. Jerome and the other by Harry Kay. Memory was reviewed in a chapter on intelligence and problem solving by Harold E. Jones. It is interesting to note that these 1956 reviewers are no longer household names in the current literature, a sign of the changing of the guard.

How do Birren and Schaie remain on the cutting edge in their handbooks? First, the reviews have always been taken seriously by researchers, and those who were chosen as authors took the task seriously as well. Second, different reviewers have been used for the same topic so that different perspectives could be presented. Readers could see how the same literature was interpreted differently by different reviewers. It is common for journal articles to cite reviews of the same topic from different handbooks in this series, for the handbooks frequently review some non-overlapping areas within the same topic. Further, Birren and Schaie have invited different associate editors to join them so that editorial perspective has remained fresh over time.

Birren and Schaie have tried different formats in the three handbooks published since 1977. The 1985 *Handbook* included sections on psychological applications to the individual and psychological applications to society. These sections were continued in the 1990 edition (Birren

& Schaie, 1990). Also in the 1990 edition, there were "half chapters" — shorter chapters used to introduce new topics or topics that had not been developed adequately in the research arena. This format was not continued in the 1996 *Handbook*.

The 1996 *Handbook* has fewer chapters and topics than the previous editions because the editors felt that there had not been sufficient progress made on some of the topics to warrant new reviews. The international flavor remains. The latest edition is divided into three sections: (1) Concepts, Theories, and Methods in the Psychology of Aging, (2) Biological and Social Influences on Behavior, and (3) Behavioral Processes.

This compact volume has again picked out current, cutting-edge issues in both resolved and unresolved areas. Three chapters on theories and methods are presented in the first section. In the traditional opening chapter by Birren with coauthor Schroots, the familiar concepts, definitions, and developmental sequence of gerontological psychology are presented. New in this chapter are summaries on patterns of change, as well as new developments in how we view the science of aging. The next two chapters outline problems in the traditional cross-sectional design and the "Achilles Heel" in the selection effects, along with issues in isolating individual differences in cognitive change, as well as issues in studying change over time. Both of these chapters present important methodological issues that gerontological researchers must master.

Section Two on biological and social influences presents six chapters, three in the biological domains, one bridging health and behavior, and two in the social domains. The three chapters in the biological domains focus on two general topics with which psychologists must gain more familiarity. The first is identifying genetic and environmental influences on observed behavior (Chapter 4); the other is behavioral neuroscience (Chapters 5 and 6). All three chapters are timely reviews. They show that psychologists are increasing their precision and methodologies as they examine a widening sphere of influences on behavior. The chapter on health and behavior (Chapter 7) provides an important discourse on the influences of health and disabilities on behavior, as well as the influences of behavior on health. Age-associated mediators are discussed. Although health is recognized as an important concomitant variable in behavioral aging research, this chapter points to the fact that health could take the center stage in influencing behavior. Finally, two emerging fields that have had important influences on the study of observed behavior are reviewed: social cognition (Chapter 8) and religion and spirituality (Chapter 9). Both could account for individual differences that have not been adequately explored in the study of behavioral differences and changes with age.

As in the previous handbooks, the section on behavioral processes receives the major emphasis. Twelve chapters

are included in this section. Some of these chapters cover areas traditionally reviewed in the handbooks, including peripheral senses (Chapter 10), motivation (Chapter 12), memory (Chapters 13 and 14), intelligence (Chapter 15), personality (Chapter 17), and clinical issues (Chapter 21). There are also reviews in areas such as posture, gait, and falls (Chapter 11), everyday problem solving (Chapter 16), terminal decline (Chapter 18), activity and exercise (Chapter 19), and job performance and career development (Chapter 20).

Although the topic of motivation had been reviewed in each of the previous Handbooks, the amount of work on motivation in the aging person is still very limited. Chapter 12 is an excellent summary of recent work on achievement-related motivation in old age, reconciling the findings in arousal and cognitive theories.

The two chapters on memory are worthwhile reading. Chapter 13 categorizes our extant explanations of memory aging in precise ways. This reader wishes that the section on "Is it Aging or Something Else?" could be expanded and made more comprehensive. Chapter 14 provides a useful compendium in examining memory deficits in language in three closely related themes of the language-memory hypothesis, the new-versus-old connection hypothesis, and the distributed defect hypothesis.

Chapter 15 summarizes the data on intellectual development that has been reported since 1988. The section on the reversibility of intellectual deficit by education and training is particularly useful. Chapter 19 examines the facilitative effects of engaging in activities for physical and intellectual competency. This chapter provides information on the influence of habitual levels of physical activity as well as physical performance in old age. The review on personality research (Chapter 17) focuses on stress and coping. Chapter 21 provides a concise summary of the literature on the frequencies and nature of mental disorders in old age.

The review of everyday problem solving (Chapter 16) is the second such review in the handbook series. The first appeared in the 1977 *Handbook*. The 1996 review is authoritative and comprehensive. It examines antecedent factors, everyday problem characteristics, as well as the influences of everyday problem-solving behavior on physical and psychological well-being.

The review of the terminal decline phenomenon and the terminal drop hypothesis (Chapter 18) is refreshing. This phenomenon has received a significant amount of discussion since it was first reported by Kleemeier (1962); however, supporting evidence has been limited and unclear. This chapter does an excellent job of summarizing and clarifying issues.

How does one ultimately assess the quality and impact of the 1996 *Handbook*? I believe it should be viewed as part of a series which may be the single most important contribution in the psychology of aging. As a single, stand-alone volume, the 1996 *Handbook* contains up-to-date reviews of pertinent areas in the psychology of aging. Some materials are repeated from previous volumes, but if the reader could only buy this volume, then the repeated materials are needed to present a somewhat balanced presentation. The comprehensiveness of reviews varies from chapter to chapter; however, most authors are careful in delineating the scope of their review, as well as in citing other reviews that contain additional information. By carefully tracking the reviews in the four volumes, the reader can be treated to an encyclopedic coverage of practically all the important topics within the psychology of aging. *Handbook* chapters are written by individual authors with pretty much a free hand on the selection of the contents within a general area. Integrative chapters or an introduction by handbook editors for each section would be welcomed.

I heartily recommend putting a copy of this latest volume on the bookshelf. It will be used frequently.

Leonard W. Poon
University of Georgia Gerontology Center
100 Candler Hall
Athens, GA 30602-1775

References

- Birren, J. E. (1956). *Handbook of aging and the individual*. Chicago: Chicago University Press.
- Birren, J. E., & Schaie, K. W. (1977). *Handbook of the psychology of aging*. (1st ed.). New York: Van Nostrand Reinhold.
- Birren, J. E., & Schaie, K. W. (1985). *Handbook of the psychology of aging*. (2nd ed.). New York: Van Nostrand Reinhold.
- Birren, J. E., & Schaie, K. W. (1990). *Handbook of the psychology of aging*. San Diego, CA: Academic Press.
- Kleemeier, R. W. (1962). Intellectual changes in the senium. *Proceedings of the American Statistical Association*, 1, 290-295.

BOOKS RECEIVED

Aging — General

Adulthood and Aging: Research on Continuities and Discontinuities, edited by Vern L. Bengtson. Springer Publishing Company, New York, 1996, 391 pp., \$52.95 (cloth).

The Aging Individual: Physical and Psychological Perspectives, by Susan Krauss Whitbourne. Springer Publishing Company, New York, 1996, 304 pp., \$42.95 (cloth).

Geriatrics/Clinical Gerontology

Clinical Manual of Geriatrics, by Edmund T. Lonergan. Appleton & Lange, Stamford, CT, 1996, 632 pp., \$27.95 (paper).

Elder Practice: A Multidisciplinary Approach to Working with Older Adults in the Community, by Terry Tirrito, Ilene Nathanson, and Nieli Langer. University of South Carolina Press, Columbia, SC, 1996, 245 pp., \$18.95 (paper).

Gerontological Nursing: Concepts and Practice, second edition, by Mary Ann Matteson, Eleanor S. McConnell, and Adrienne Dill Linton. W. B. Saunders Company, Philadelphia, PA, 1997, 1006 pp., no price listed (cloth).

Psychological Treatment of Older Adults: An Introductory Text, edited by Michel Hersen and Vincent B. Van Hasselt. Plenum Press, New York, 1996, 351 pp., \$39.50 (cloth).

The Practical Handbook of Clinical Gerontology, edited by Laura L. Carstensen, Barry A. Edelstein, and Laurie Dornbrand. Sage Publications, Inc., Newbury, CA, 1996, 718 pp., \$65.00 (cloth).

History

Complaint to the Lord: Historical Perspectives on the African American Elderly, by Leslie J. Pollard. Susquehanna University Press, Cranbury, NJ, 1996, 288 pp., \$43.50 (paper).