Cognitive and Social Neuroscience of Aging

Fully updated and revised, *Cognitive and Social Neuroscience of Aging*, *2nd Edition* provides an accessible introduction to aging and the brain. Now with full color throughout, it includes over 50 figures illustrating key research findings and anatomical diagrams. Adopting an integrative perspective across domains of psychological function, this edition features expanded coverage of multivariate methods, moral judgments, cognitive reserve, prospective memory, event boundaries, and individual differences related to aging, including sex, race, and culture. Although many declines occur with age, cognitive neuroscience research reveals plasticity and adaptation in the brain as a normal function of aging. With this perspective in mind, the book emphasizes the ways in which neuroscience methods have enriched and changed thinking about aging.

Angela Gutchess is Professor of Psychology at Brandeis University, with appointments in neuroscience and at the Volen Center for Complex Systems. She received her PhD in psychology from the University of Michigan and her BA/BS from Boston University. Her research investigates the influence of age and culture on memory and social cognition, using behavioral, neuroimaging (fMRI), electrophysiological (ERP), and patient (aMCI) methods. She has authored more than 100 peer-reviewed papers on these topics, and coedited *The Cambridge Handbook of Cognitive Aging: A Life Course Perspective* with Ayanna Thomas. Her research has been funded by the National Institute on Aging, the National Science Foundation, the Alzheimer's Association, and the American Federation for Aging Research. As a Fulbright Scholar, she had the opportunity to spend a research semester in Istanbul, Turkey, at Boğaziçi University. Dr. Gutchess was elected to the Memory Disorders Research Society and the Governing Board of the Psychonomic Society, serving as Chair in 2023.

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Cognitive and Social Neuroscience of Aging

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Preface

This book is intended as an introduction to how the brain changes with age, including memory, cognition, cognitive training, emotion, and social processes. The reviewed research focuses on studies with humans, including both structural and functional changes to the brain with age, drawing primarily on neuroimaging methods. It is intended for audiences with some knowledge of the fields of psychology, aging, or neuroscience who wish to learn more about the combination of these topics. The book does not assume intensive knowledge of neuroanatomy, as chapters include several figures illustrating the brain regions relevant to the processes affected by aging. The depth of coverage, however, also makes this book appropriate for those with considerable knowledge of the topic of aging, as it reviews primary literature across a wide variety of functions impacted by aging.

This book will introduce readers to the effects of aging on the brain, presenting research across several domains of psychological function, including memory, cognition and training of cognitive function, emotion, and social processes. Topics include consideration of individual differences and the impact of disorders (e.g., Alzheimer's disease or mental health) on brain function with age. The second edition features expanded coverage of individual differences related to identity, including race, culture, and sex. Although behavioral methods typically identify declines with aging, particularly for cognitive abilities (e.g., perception, memory), cognitive neuroscience research reveals plasticity and adaptation in the brain as a function of normal aging. The book is written with this perspective in mind, emphasizing the ways in which neuroscience methods have enriched and changed our ways of thinking about aging, as well as an appreciation of the many types of changes that can occur.

Advantages of this text include the following:

- Comprehensive review of the aging literature, with coverage of a wealth of topics
- An eye to social and emotional aging processes, which often are not treated in an integrated manner with cognitive processes
- A number of figures displaying effects, as well as an introduction to the methods, making the findings clearer to novices to the field
- Depth of coverage of the literature on different topics, making the text also appropriate for advanced students and scholars in the field.

The book is written for an advanced college-level audience, and could be adopted as a primary textbook for an advanced undergraduate or graduate course on the cognitive neuroscience of aging. It could be used as a supplementary text for a course on aging; it is written to be used in tandem with a textbook overviewing the field of aging. As such, the text could be employed in courses about aging and lifespan development, drawing from disciplines such as psychology, neuroscience, gerontology, nursing, human services, and prehealth tracks.

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