

CONTENTS

PART ONE

Background	1
1: Research on the Psychology of Aging: Principles and Experimentation	3
	<i>James E. Birren</i>
	<i>V. Jayne Renner</i>
Definitions of Aging	3
Types of Age	4
Concept and Theory	5
The Nature of Time	5
Time Dependent Processes	7
Evolution of Aging	8
Methodology	10
Familial Longevity Factor	13
Functional Age	15
Experimental Gerontology	17
Psychology of Aging and Action Research	20
Intervention	21
Mechanism and Population Representation	24
Experimental Psychology of Aging	26
Social Conformity	27
Speed of Response	28
Perceptual Masking	30
Reaction Time and Practice	30
Research Evaluation	31
Epilogue	34
2: Quasi-Experimental Research Designs in the Psychology of Aging	39
	<i>K. Warner Schaie</i>
Introduction	39
Assumptions About Aging and Change Over Time	40
Designs for the Study of Adult Development	44
Sampling and Generalizability	51
Suitability of Test Instruments	56

3: Issues in Studying Developmental Change in Adults from a Multivariate Perspective	<i>John R. Nesselroade</i>	59
Why a Multivariate Orientation to the Study of Behavioral Change in Adulthood		59
Applications of Conventional Multivariate Procedures		62
Extension of Conventional Multivariate Procedures to the Study of Change		63
Multivariate Procedures and Models Designed for Developmental Analysis		65
4: History of Psychological Gerontology	<i>Klaus F. Riegel</i>	70
Paradigmatic Orientations		70
Anglo-American Orientation		72
Continental European Orientation		80
Dialectical Orientation		82
Appendix		88
5: Biological Theories of Aging	<i>Nathan W. Shock</i>	103
The Role of Theories		103
Historical Perspective		103
Biological and Physiological Theories		103
Genetic Theories		104
Nongenetic Cellular Theories		106
Physiological Theories of Aging		109
Aging and Physiological Controls		111
Summary		112
6: Toward a Sociological Theory of Change in Adulthood and Old Age	<i>Marjorie Fiske Lowenthal</i>	116
Background		116
Constructs from Developmental Studies		117
Fluid Constructs		118
Individual Commitment in Social Context		119
7: Toward Psychological Theories of Aging and Development	<i>Paul B. Baltes</i> <i>Sherry L. Willis</i>	128
Introduction		128
Nature of Scientific Theory		129
Nature of Psychology		131
Psychological Theories of Aging and Development		134
Summary		147

PART TWO

	Biological Basis of Aging and Behavior	155
8: The Neural Basis of Aging	<i>William Bondareff</i>	157
Age Changes in Neuroglia		157
Intraneuronal Accumulation of Lipofuscin		158

Atrophic Changes and Neuronal Death	162
Age-Associated Changes in Neuronal Organelles and Cytochemistry	164
Synaptology of Senescent Brain	167
Age Changes of the Neuronal Microenvironment	168
9: Aging of the Autonomic Nervous System <i>Vladimir V. Frolkis</i>	177
Main Principles of Organization in the Autonomic Nervous System and Trends in its Age Changes	177
Vegetative Reflexes With Aging	178
The Hypothalamic Function in Aging	180
Efferent and Afferent Influences of the ANS in Aging	181
Transmitter Metabolism of the ANS With Aging	184
Vegetative Ganglia in Old Age	184
Visceroreception: Feedback in the ANS	186
Pharmacotherapy of the ANS in Old Age	186
10: Behavior Genetics <i>Gilbert S. Omenn</i>	190
Introduction and Aims of Behavior Genetics	190
Methodology of Behavior Genetics	191
Behavior Genetics of Aging: Studies of Animals	203
Behavior Genetics of Aging: Studies in Man	206
11: Psychophysiology of Aging <i>Gail R. Marsh</i> <i>Larry W. Thompson</i>	219
Electrocortical Measures	219
Evoked Potential Measures	229
Autonomic Nervous System Correlates	237
Conclusions and Comments	241
PART THREE	
Environmental and Health Influences on Aging and Behavior	249
12: Stress, Disease, Aging and Behavior <i>Carl Eisdorfer</i> <i>Frances Wilkie</i>	251
Introduction	251
Stress Research	252
Stress and Disease	257
Stress, Disease, and Behavior	267
Conclusion	270
13: The Impact of the Environment on Aging and Behavior <i>M. Powell Lawton</i>	276
Defining the Environment	276
The Interface of Individual and Environment	277
The Resource Environment	277
Urban and Rural Environments	282
Population Mixes—The Suprapersonal Environment	284

Planned Housing	286
Involuntary Relocation, Morbidity, and Mortality	290
Institutions	292
Theories of Man-Environment Relations	295
14: The Cross-Cultural Perspective: Notes Toward a Comparative Psychology of Aging <i>David Gutmann</i>	302
Introduction: Methods, Shortcomings, and Possibilities of Cross-Cultural Studies	302
The Age-Grading of Male Passivity	304
The Informal Age-Grading of Male Passivity	305
Towards a Species Psychology of Masculine Aging	307
Towards a Comparative Psychology of Longevity	308
The Age Grading of Female Dominance	309
The Older Woman as Witch	311
Age-Sex Roles and the Parental Imperative	312
Preliterary Gerontocracy: The Old Man as Hero	312
Trust and Survival in Later Life	314
The Intergration of Nature and Social Nurture in Later Life	316
Shortcomings of Disengagement Theory	317
Modernization and Disengagement	317
Rural and Urban Aging	319
The Matriarchy of the Cities	320
Passive Mastery in Urban Males	321
Aging and the Mind of the City	321
15: The Impact of Social Structure on Aging Individuals <i>Vern L. Bengtson</i> <i>Patricia L. Kasschau</i> <i>Pauline K. Ragan</i>	327
Social Definitions of Time and Aging	328
Social Differentiation and Aging: Group Variations in Patterns of Aging	331
Social Change and Aging	343
Implications for Research and Theory	347
PART FOUR	
Behavioral Processes	355
16: Motivation and Activity <i>Merrill F. Elias</i> <i>Penelope Kelly Elias</i>	357
Introduction	357
Definitions	357
Emphasis and Organization	358
Animal Research: Motivation and Activity	358
General Activity Level	361
Aversive Stimulation	368
Sexual Drive and Activity	371
Human Motivation Studies	372
Anxiety-Arousal	372

Classical Drive Studies	375
Activity: Sex Drive	376
Activity, Work, and Leisure	378
Conclusions	378
17: Age Differences in Human Memory <i>Fergus I. M. Craik</i>	384
Introduction	384
Models of Memory	385
Short-Term Retention	387
Age Differences in Secondary Memory Performance	400
Broader Implications	414
18: Learning and Aging <i>David Arenberg</i> <i>Elizabeth A. Robertson-Tchabo</i>	421
Longitudinal Studies	421
Theoretical Developments and Trends	425
Age Differences in Verbal Processes	426
Transfer and Interference	430
Animal Learning	432
Conclusions	445
19: Motor Performance <i>A. T. Welford</i>	450
Introduction	450
Limitations Due to Peripheral Mechanisms	451
Limitations Due to Central Mechanisms	453
Relationship of Sensorimotor Performance to Other Variables	485
Industrial Studies Relating to Sensorimotor Performance	486
Summary Conclusions	490
30: Visual Perception and Communication <i>James L. Fozard</i> <i>Ernst Wolf</i> <i>Benjamin Bell</i> <i>Ross A. McFarland</i> <i>Stephen Podolsky</i>	497
Structural Changes and Their Behavioral Significance	499
Sensitivity and Adaptation of the Eye to Light	507
Basic Visual Functions	512
Visual Information Processing	517
Context Effects in Perceptual Judgments and Information Processing	521
Practical Applications	528
Conclusions	528
21: Auditory Perception and Communication <i>John F. Corso</i>	535
Introduction	535
Clinical Features of the Aging Auditory System	537
Auditory Psychophysics in Older Adults	540
Language and Speech Communication	544
The Psychology of Deafness and Communication Disorders in Older Adults	548
Conclusions	550

22: Taste and Smell	<i>Trygg Engen</i>	554
Detection and Discrimination		554
Preference		557
Possible Explanations for Age Effects in Taste and Smell		558
Conclusions		559
23: Age Changes in Touch, Vibration, Temperature, Kinesthesia, and Pain Sensitivity	<i>Dan R. Kenshalo</i>	562
Introduction		562
Cutaneous Sensitivity		563
Kinesthesia		572
Complex Sensitivities		574
Summary, Conclusion, and Comments		575
24: Intellectual Abilities	<i>Jack Botwinick</i>	580
Does Intelligence Decline in Old Age		580
Cross-Sectional Investigations		583
Longitudinal Studies		589
Later Life Changes		593
Ability Levels		599
Survival		602
Summary Highlights		603
25: Changes in Problem Solving Ability in Old Age	<i>Patrick Rabbitt</i>	606
Piagetian Theories Applied to Changes in Problem Solving Ability in Old Age		607
Work on "Concept Formation" Tasks		607
Use of Training Procedures as a Methodological Tool		608
Experiments Examining Transfer in Concept Formation and in Some Verbal Learning Tasks		609
Experiments on the Deduction of Principles Underlying Switching Circuits		613
Probability Matching, Calculations of Odds, and Willingness to Respond		615
Possible Effects of Changes in Rate of Information Processing With Age Upon Problem-Solving Ability		618
Changes in Capacity for Perceptual Organization in Old Age		619
Decline in Intellectual Capacity with Age in Everyday Life		622
26: Personality and Aging	<i>Bernice L. Neugarten</i>	626
Introduction		626
Adult Personality: A Developmental Perspective		629
Theories of Adult Change		631
Time and the Life Span		633
Studies of Age-Related Change in Personality		635
Longitudinal and Follow-Up Studies		640
Recent Theoretical Formulations		642
Conclusion		644
27: Psychopathology and Social Pathology	<i>Eric Pfeiffer</i>	650
Introduction		650
Functional Psychiatric Disorders		653

Organic Brain Syndromes	660
Social Pathology	665
28: Morale, Careers and Personal Potentials <i>Sheila M. Chown</i>	672
Introduction	672
Morale	672
Assessment of Personal Potentials	674
Careers	677
Reactions to Frustration	681
Future Research	685
29: Clinical Assessment and Aging <i>K. Warner Schaie</i> <i>Joyce P. Schaie</i>	692
Introduction	692
Techniques of Assessment	696
Relating Assessment Data to the Life Prospects of the Aged Client	713
Some Concluding Thoughts on the Status of Clinical Psychological Assessment	716
30: Intervention, Treatment, and Rehabilitation of Psychiatric Disorders	724
	<i>Carl Eisdorfer</i>
	<i>Bernard A. Stotsky</i>
Introduction	724
Issues in Treatment	725
Physical Interventions	725
Psychological Therapies	732
Social, Institutional, Environmental	735
Conclusion	740
Author Index	751
Subject Index	774