CONTENTS

Stimulus Discrimination 47
Pattern-Recognition Learning 53
Attentional Learning 54
Expertise and Maintenance of a Perceptual Skill 56

Adult Age Differences in Learning Mental Skills 57
Adult Age Differences in Procedural Learning 57

Dissociation and Procedural Learning 57
Evidence for Procedural Learning in Late Adulthood 63

CHAPTER • 3 Verbal Learning

Introduction 66
Adult Age Differences in Paired-Associate Learning 66

Historical Perspective: Early Studies 67
Historical Perspective: Methodological Problems and Issues 69
Stage Analysis of Potential Age-Sensitive Processes 77

Research with Manipulable Independent Variables: Preexperimental Associative Strength 84
Research with Manipulable Independent Variables: Rate of Item Presentation 86
Research with Manipulable Independent Variables: Mediational Instructions and Materials 91
Research with Manipulable Independent Variables: Intentional versus Incidental Learning 97

Comments 98

Adult Age Differences in Serial Learning 98

Historical Perspective 98
Research with Manipulable Independent Variables 99
Analysis of Age-Sensitive Processes 102

CHAPTER • 4 Mnemonics and Transfer

Mnemonics 105
Pegword Method 106
Method of Loci 106
Keyword Method 108
Supplementary Procedures 110
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Differences Variables</td>
<td>111</td>
</tr>
<tr>
<td>Alternative Methods of Mnemonic Training</td>
<td>113</td>
</tr>
<tr>
<td><strong>Adult Age Differences in Transfer</strong></td>
<td>117</td>
</tr>
<tr>
<td>Specific versus Nonspecific Transfer: Implications for Adult Age Differences</td>
<td>117</td>
</tr>
<tr>
<td>Laboratory Studies of Nonspecific Transfer</td>
<td>120</td>
</tr>
<tr>
<td>Laboratory Studies of Specific Transfer</td>
<td>122</td>
</tr>
<tr>
<td>Comments</td>
<td>129</td>
</tr>
</tbody>
</table>

**CHAPTER • 5 Sensory Memory and Short-Term/Primary Memory**

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>131</td>
</tr>
<tr>
<td>Overview of the Human Memory System</td>
<td>134</td>
</tr>
<tr>
<td>Adult Age Differences in Sensory Memory</td>
<td>135</td>
</tr>
<tr>
<td>Iconic Memory</td>
<td>135</td>
</tr>
<tr>
<td>Echoic Memory</td>
<td>141</td>
</tr>
<tr>
<td>Other Senses</td>
<td>149</td>
</tr>
<tr>
<td><strong>Adult Age Differences in Short-Term/Primary Memory</strong></td>
<td>149</td>
</tr>
<tr>
<td>Primary Memory: STS Capacity and Memory Span</td>
<td>151</td>
</tr>
<tr>
<td>Primary Memory: STS Capacity and the Recency Effect</td>
<td>157</td>
</tr>
<tr>
<td>Primary Memory: Flexibility of Representation</td>
<td>160</td>
</tr>
<tr>
<td>Primary Memory: Rate of Loss of Information</td>
<td>162</td>
</tr>
<tr>
<td>Primary Memory: Search of Content</td>
<td>168</td>
</tr>
</tbody>
</table>

**CHAPTER • 6 Models of Long-Term Episodic Memory**

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>175</td>
</tr>
<tr>
<td>Dual-Store Models</td>
<td>175</td>
</tr>
<tr>
<td>Nature of Dual-Store Models</td>
<td>175</td>
</tr>
<tr>
<td>Explanation of Age Differences in Secondary Memory</td>
<td>176</td>
</tr>
<tr>
<td><strong>Levels-of-Processing Model</strong></td>
<td>181</td>
</tr>
<tr>
<td>Nature of the Levels-of-Processing Model</td>
<td>181</td>
</tr>
<tr>
<td>Orienting Tasks and Variation in Depth of Processing</td>
<td>183</td>
</tr>
</tbody>
</table>
Noncued Recall versus Cued Recall: Encoding or Retrieval as the Locus of Age Differences in Episodic Memory 187
Elaboration as the Locus of Age Differences in Episodic Memory 190
Cognitive Resources and Cognitive Support 193
Trace Distinctiveness as the Locus of Age Differences in Episodic Memory 193
Primary Memory and the Recency Effect Reconsidered 196
Comments 199

General Resources 201
Overview 201
Processing Rate and Working-Memory Models 203
Inhibition Model 207
Network Theory 207
Processing Rate and Adult Age Differences in Episodic Long-Term Memory 208
Working Memory and Adult Age Differences in Episodic Long-Term Memory 212
Inhibition and Adult Age Differences in Episodic Long-Term Memory 220
Generality of Resource Decrements 223

CHAPTER 7 Long-Term Episodic Memory: Effortful Phenomena

Introduction 229
Adult Age Differences in Organizational Processes 229
Categorical Organization 230
Other Forms of Intrinsic Organization 238
Subjective Organization 240
Multitrial Free Recall 243
Generation Effect 244
Encoding Variability and the Lag Effect 246
Recognition Memory 249
Single Item Recognition Memory 249
Recognition versus Recall 253
CHAPTER • 8  Long-Term Episodic Memory: Discourse

Introduction 276

Adult Age Differences in Sentence Memory 277
Syntactic and Semantic Constraints 277
Normal Sentence Recall 279

Adult Age Differences in Paragraph Memory 281
Recall of Ideas 281
Modality of Presentation 282
Attributes of the Text 283
Comprehension of Content 283
Medical Information 289

Adult Age Differences in Memory for Longer Discourses 289
Schema Abstraction 290
Levels of Propositions 292
Qualitative and Quantitative Age Differences in Discourse Memory 294
Procedural Variables 295
Attributes of the Discourse 298
Prior Knowledge 299
Individual Differences Variables 303
CHAPTER • 9 Long-Term Episodic Memory: Automaticity and Rehearsal Independence

Introduction 306
Adult Age Differences in Memory for Noncontent Attributes of Episodic Events 307
Frequency-of-Occurrence Memory 307
Temporal Memory 312
Spatial Memory 315
Source Memory 321
Other Noncontent Attributes 323

Adult Age Differences in Memory for Activities and Actions 326
Memory for the Content of Activities and Actions 327
Encoding of Activity and Action Information 335
Memory for Noncontent Attributes 339
Reality Monitoring and Source Memory 342

Adult Age Differences in Other Forms of Rehearsal-Independent Memory 343

CHAPTER • 10 Long-Term Episodic Memory: Retention and Forgetting

Introduction 346
Adult Age Differences in Real-Life Forgetting 346
Impersonal Events 346
Personal Idiosyncratic Events: Autobiographical Memory 352
Why Forgetting? 354
Proactive and Retroactive Interference 354
Interference Proneness 355
Problems in Testing the Interference Proneness Hypothesis 355
Laboratory Studies: Retention of Successive Lists 357
Laboratory Studies: Single-List Retention 362
Laboratory Studies: Retention of Activities and Actions 367
Laboratory Studies: Retention of Noncontent Attributes 369
CONTENTS xi

CHAPTER • 11 Long-Term Episodic Memory: Implicit Memory

Nature of Implicit Memory 370
Adult Age Differences in Implicit Memory 374
Why Age Sensitivity on Some Tasks and Not Other Tasks? 382
Conscious Recollection versus Automaticity 383
Future Research 385

CHAPTER • 12 Generic (Semantic) Memory and Metamemory

Introduction 387
Adult Age Differences in the Internal Lexicon 388
Age Differences in Structure 388
Age Differences in Lexical Access for Words 395
Stimulus Degradation and Lexical Access 402
Verbal Fluency 404
Age Differences in Lexical Access for Categorical Information 404
Separate Memory Systems? 409
When Lexical Access Fails 412
Adult Age Differences in the Use of Syntax 414
Adult Age Differences in Metamemory 415
Age Differences in Off-Line Evaluation of Episodic Memory 416
Age Differences in On-Line Evaluation of Episodic Memory 424
Age Differences in Episodic Memory Monitoring Skills 428
Age Differences in Self-Evaluation of Factual Memory Proficiency 431

REFERENCES 433
AUTHOR INDEX 513
SUBJECT INDEX 533