## **Brief Contents**

#### **PART 1:**

Origins and Methods of Psychology

#### CHAPTER

The Origins and Methods of Psychology—1

#### **PART 2:**

Biological Foundations, Perception, and Sleep

#### CHAPTER

- 2 The Biology of Behavior—53
- **3** Sensation and Perception—107
- 4 Sleep, Dreaming, and Consciousness—175

#### **PART 3:**

Learning, Memory, Cognition, Motivation, and Emotion

#### **C**HAPTER

- **5** Learning and Behavior—205
- **6** Memory—243
- 7 Motivation—281
- Emotion and Stress—309
- Gognition: Thinking and Language—339

#### **PART 4:**

Developmental Processes and Individual Differences

#### **CHAPTER**

- 10 Development: Conception Through the End of Life—379
- 11 Intelligence—451
- 12 Personality: Theories and Assessment—479

#### **PART 5:**

The Nature and Treatment of Behavioral Disorders

#### **C**HAPTER

- 13 Behavioral Disorders—519
- 14 Social Psychology—587

Appendix 631

Glossary 657

References 681

Index 709

## Table of Contents

Preface XIII
About the Author XV

PART 1:	Origins and Method	S
	of Psychology	





### The Origins and Methods of Psychology 1

			_			_	
1.1	The	Study	of	<b>Psyc</b>	ho	logy	1

#### 1.2 Definition of Psychology 2

- 1.2a Psychology as a Science 2
- 1.2b The Study of Behavior 4
- 1.2c The Study of Humans and Other Animals 5

#### 1.3 Psychology's History 7

- 1.3a Structuralism
- 1.3b Functionalism 9
- 1.3c Psychoanalysis 10
- 1.3d Behaviorism 11
- 1.3e Gestalt Psychology 12
- 1.3f Humanistic Psychology 13

#### 1.4 Contemporary Psychology 13

- 1.4a Fields of Specialization in Psychology 14
- 1.4b Careers in Psychology 19

#### 1.5 The Scientific Method and Behavior 20

1.5a The Purpose of
Psychological Research 21

#### 1.6 Research Methods 24

- 1.6a Nonexperimental Research Methods 2
- 1.6b Experimental Research Methods 34
- 1.6c Ethics in Psychological Experiments
- 1.6d Ethical Guidelines for Research 37

#### 1.7 Statistical Concepts for Research 38

- 1.7a Descriptive Statistics 39
- 1.7b Inferential Statistics 41
- 1.7c Evaluating Opinions, Beliefs, and Scientific Evidence 42

Chapter Review 44

Terms and Concepts 49

Pop Quiz 50

#### PART 2: Biological Foundations, Perception, and Sleep





#### The Biology of Behavior 53

- 2.1 Overview of the Nervous System: Organization and Function 53
- 2.2 Neurons: Basic Units of the
  - Nervous System 55
  - 2.2a Neuron Structure 55
  - 2.2b Neural Transmission 57
  - 2.2c Neuron Electrical Activity 57
  - 2.2d Neurotransmitters and the Synapse

<ul> <li>2.3 The Peripheral Nervous System 65</li> <li>2.3a The Somatic Nervous System 65</li> <li>2.3b The Autonomic Nervous System 65</li> <li>2.4 The Central Nervous System: The Brain and Spinal Cord 67 2.4a The Spinal Cord 68</li> </ul>	Chapter
2.4b The Medulla 69 2.4c The Pons 70	Sensation and Perception 107
2.4c The Fons 70 2.4d The Cerebellum 70 2.4e The Reticular Formation 71  2.5 The Limbic System 71 2.5a The Amygdala 72 2.5b The Hippocampus 73 2.5c The Septum 73 2.5d The Hypothalamus 74 2.5e The Thalamus 74	<ul> <li>3.1 Principles of Sensation and Perception 107 3.1a Transduction 107 3.1b What Do We Perceive? 108 3.1c Psychophysics 108</li> <li>3.2 Vision 115 3.2a Light: The Stimulus for Vision 116 3.2b Structure and Function of the Eye 116</li> </ul>
2.6 The Basal Ganglia 75	3.2c Color Vision 123
<ul> <li>2.7 The Cerebral Cortex 75</li> <li>2.7a Localization of</li></ul>	3.3 Audition 128 3.3a Sound: The Stimulus for Audition 128 3.3b Structure and Function of the Ear 130 3.3c Theories of Audition 133 3.3d Auditory Localization 134 3.3e Hearing Loss 135 3.4 Gustation and Olfaction 136 3.4a Gustation 137 3.4b Olfaction 138
2.8d The Gonads 90  2.9 Drugs and Behavior 90  2.9a Depressants: Sedatives, Opiates, and Alcohol 91  2.9b Stimulants: Caffeine, Nicotine, Amphetamines, and Cocaine 93  2.9c Hallucinogens: LSD and Ecstasy 95  2.9d Marijuana 96	3.5 The Skin Senses 140 3.5a Pressure 140 3.5b Temperature 141 3.5c Pain 142 3.6 Kinesthesis and Equilibrium 144 3.7 Synesthesia 146 3.8 Perceiving the World 146 3.8a Perceptual Organization 147
Chapter Review 98 Terms and Concepts 102 Pop Quiz 104	3.8a Perceptual Organization 147 3.8b Spatial Perception 151 3.8c Visual Illusions 158 3.8d Perceptual Sets 163 Chapter Review 166 Terms and Concepts 170 Pop Quiz 172



### Sleep, Dreaming, and Consciousness 175

4.1	Biological Rhythms 175	
	4.1a Circadian Rhythms 175	
4.2	The Science of Sleep and Dreaming	177
	4.2a Stages of Sleep 177	
	4.2b The Sleep Cycle 181	
	4.2c Change in Sleep Patterns with Age	182

- 4.2d Brain Mechanisms of Sleep 182
- 4.2e The Function of Sleep 185
- 4.2f Theories of Sleep Function 187
- 4.2g Dreaming 188

#### 4.3 Disorders of Sleep 190

- 4.3a Insomnia 190
- 4.3b Sleep Apnea 191
- 4.3c Narcolepsy 192
- 4.3d Nightmares 192
- 4.3e Sleepwalking 193
- 4.3f Sleep Talking 194

#### 4.4 Hypnosis 194

4.4a Theories of Hypnosis 195

#### 4.5 Consciousness 196

4.5a Neurobiology of Consciousness 197

#### Health, Psychology, and Life:

#### Suggested Remedies for Insomnia 198

Chapter Review 199 Terms and Concepts 201 Pop Quiz 202

#### PART 3: Learning, Memory, Cognition, Motivation, and Emotion

## Chapter \_\_\_\_



#### Learning and Behavior 205

<b>5.1</b>	Defining Learning 205		
	5.1a How Learning Takes	Place	206
5.2	<b>Pavlovian Conditioning</b>	207	

- 5.2a Pavlov's Discovery 207
  - 5.2b Acquisition of Pavlovian Conditioning 211
  - 5.2c Stimulus Contingency and Conditioning 211
  - 5.2d CS-UCS Timing and Conditioning 213
  - 5.2e Extinction and Reinstatement 215
  - 5.2f Stimulus Generalization and Discrimination 215

#### 5.3 Operant Conditioning 216

- 5.3a Operant Conditioning in a Skinner Box 217
- 5.3b Reinforcement 219
- 5.3c Reinforcing the Initial Operant Response 223
- 5.3d Punishment and Operant Behavior 226

#### 5.4 Comparing Pavlovian and Operant Conditioning 226

- 5.4a Two-Factor Theory of Avoidance Learning 227
- 5.5 Cognitive Influences on Learning 227
  - 5.5a Cognitive Processes in Learning 228 5.5b Observational Learning 229
- 5.6 Biological Bases of Learning 230
  - 5.6a Pavlovian Conditioning of the Aplysia 231

#### Health, Psychology, and Life:

Pavlovian Conditioning 233

Chapter Review 235 Terms and Concepts 238 Pop Quiz 239





#### Memory 243

6.1 What Is Memory? 243

6.1a Information Processing and Memory 243

6.1b Memory Processes 244

6.2 A Model of Memory 245

6.2a Memory Systems 245

6.2b Sensory Memory 247

6.2c Short-Term or Working Memory 248

6.2d Long-Term Memory 251

6.2e Explicit and Implicit Memory 254

6.3 Memory as a Dynamic Process 256

6.3a Constructive Memory 256

6.3b False Memories 257

6.3c Schemas 258

6.3d Eyewitness Testimony 259

6.3e State Dependency 262

6.3f Extreme Emotion 262

6.4 Forgetting 263

6.4a Decay of the Memory Trace 263

6.4b Interference 264

6.4c Retrieval Failure 265

6.4d Motivated Forgetting 266

6.4e Diseases That Cause Forgetting 266

6.4f Daniel Schacter's Seven Sins of Memory 267

6.5 The Biology of Memory 268

6.5a The Hebbian Rule 268

6.5b Long-Term Potentiation 269

6.5c Neural Structures for
Long-Term Memory 269
6.5d Where Are Short-Term,
Working Memories Processed? 271
Chapter Review 273
Terms and Concepts 276
Pop Quiz 277

## Chapter



#### Motivation 281

7.1 The Nature of Motivation 281

7.1a Defining Motivation 282

7.2 Motivational Explanations of Behavior 282

7.2a Instinct Theory 283

7.2b Drive-Reduction Theory 284

7.2c Cognitive Theories of Motivation 285

7.2d Biological Bases of Motivation 288

7.2e Hormones Controlling Hunger 291

7.2f Obesity 292

7.3 Sensation-Seeking Motivation 295

7.3a Optimum Level of Arousal 295

7.4 Sexual Motivation and Behavior 296

7.4a Biological Bases of Sexual Behavior 297

7.4b Psychosocial Factors in Sexual Behavior 298

7.4c Sexual Orientation:

Homosexuality 299

Chapter Review 303

Terms and Concepts 305

Pop Quiz 306



#### Emotion and Stress 309

8.1	The Components of Emotion 309
	8.1a Physiological Arousal 309
	8.1b Cognitive Processes 310
	8.1c Behavioral Responses 310
	8.1d Feelings 310
8.2	The Range of Human Emotion 311
	8.2a Plutchik's Emotional Wheel 311
8.3	Theories of Emotion 311
	8.3a The James-Lange Theory 311
	8.3b The Cannon-Bard Theory 314
	8.3c The Schachter-Singer Theory 315
	8.3d The Function of
	Emotional Expression 316
	8.3e Facial Feedback and Emotions 316
	8.3f The Neurobiology of Emotions 319
	8.3g Opponent-Processes and
	Motivation 321
8.4	Stress 322
	8.4a The Stress Response 322
	8.4b Physiological Responses to Stress 324
	8.4c Stressors 327
	8.4d Stress and Disease 328

# Chapter S

## Cognition: Thinking and Language 339

Language 333
<b>9.1 Thinking</b> <i>339</i>
9.1a Components of Thinking 340
9.1b Prototypes and Exemplars 344
9.2 Problem Solving 344
9.2a Stages of Problem Solving 346
9.2b Strategies for Problem Solving 348
9.2c Characteristics of Difficult
Problems 351
9.3 Reasoning and Decision Making 355
9.3a Logical Reasoning for Decisions 355
9.3b Some Common Causes of
Reasoning Errors 356
9.3c Subjective Probability and
Reasoning for Decisions 358
9.3d The Role of Emotion in
Decision Making 362
<b>9.4 Language</b> <i>363</i>
9.4a Psycholinguistics 363
,
9.4b Theories of Language Acquisition 365
9.4c Stages of Language Acquisition 366
9.4d Brain Mechanisms for Language 368
Chapter Review 371

Terms and Concepts 374

Pop Quiz 375

Chapter Review 333

Pop Quiz 336

Terms and Concepts 335

PART 4: Developmental 10.6	6 Cognitive Development 401
Processes and	10.6a Piaget's Theory of
Individual Differences	Cognitive Development 401
	Psychosocial Development 407
	10.7a Attachment 407
	10.7b Parenting Styles and Social-
	Emotional Development 412
Chapter	10.7c Erikson's Theory of
Chapter	Psychosocial Development 413
10.8	Adolescence 416
	10.8a Physical Development
<b>Development: Conception</b>	During Adolescence 417
Through the End of Life 379	10.8b Cognitive Development
Through the End of Ene 313	During Adolescence 418
10.1 Developmental Issues 379	10.8c Moral Development
10.1a Heredity and Environment 379	During Adolescence 419
10.1b Continuous Versus	10.8d Psychological Development
Stage Development 380	During Adolescence 422
10.1c Critical Periods in Development 381 10.9	Adulthood 426
10.2 Developmental Research 382	10.9a Physical Development in Early
10.2a The Cross-Sectional Design 383	and Middle Adulthood 427

10.2b The Longitudinal Design 383

10.3 The Beginning of Life 384

10.4 Prenatal Development 393

10.4b Embryonic Stage

10.4c Fetal Stage 395

10.5 Physical Development 396

10.5b Physical Growth

10.4a Germinal Stage 393

10.4d The Effects of Alcohol and

10.5c Motor Development 399

Drugs on Development 395

10.5a Development of the Brain 396

10.3a Genes and Chromosomes10.3b Genetic Abnormalities

10.2c The Cross-Sequential Design 384

the Older Years 434
10.10d Psychological Development
in the Older Years 436
Chapter Review 438
Terms and Concepts 444
Pop Quiz 445
,

10.10a The Graying of America

10.10b Physical Development in

10.10c Cognitive Changes in

the Older Years 433

10.9b Cognitive Development in Early

10.10 The Older Years 432

and Middle Adulthood 428 10.9c Psychosocial Development in Early

and Middle Adulthood 429

# Chapter

#### Intelligence 451

11.1	Defining Intelligence 451	
11.2	Measuring Intelligence 453	
	11.2a Binet and Intelligence Testing	453
	11.2b The Stanford-Binet	
	Intelligence Scale 454	
	11.2c The Wechsler Adult	
	Intelligence Scale 455	

### 11.3 Evaluating Intelligence Tests 455 11.3a How Intelligence Tests

Are Developed 455
11.3b Test Reliability and Validity 458
11.3c Achievement and Aptitude Tests 460

#### 11.4 Theories of Intelligence 461 11.4a Factorial Theories 461 11.4b Process Theories 463

#### 11.5 Hereditary and Environmental Influences on Intelligence 466 11.5a Isolating Contributions to Intelligence 466 11.5b Twin Studies 468

# 11.6 Racial Differences in Intelligence 469 11.6a Within- and Between-Group Differences and Intelligence 469 Chapter Review 472 Terms and Concepts 475 Pop Quiz 476

### Personality: Theories and Assessment 479

Chapter

12.1	Defining Personality 479
12.2	Theories of Personality 480
	12.2a Trait Theories 480
12.3	Psychoanalytic Theory 484
	12.3a The Historical Context of
	Freud's Theory 484
	12.3b Personality and the Unconscious 485
	12.3c The Structure of Personality 486
	12.3d Personality Dynamics 488
	12.3e Freud's View of
	Personality Development 492
	12.3f Other Psychodynamic Theorists:
	The Neo-Freudians 493
12.4	Humanistic Theories of

## 12.4 Humanistic Theories of Personality 496 12.4a Rogers: The Concept of Self 496 12.4b Maslow: Self-Actualization 497

- 12.5 Behavioral and Social-Learning
  Theories of Personality 499
  12.5a The Behavioral Perspective 499
  12.5b The Social-Learning Perspective 500
- 12.6 The Assessment of Personality 502
  12.6a Behavioral Observation 503
  12.6b Interviews 503
  12.6c Questionnaires 504
  12.6d Projective Tests 506
  Chapter Review 510
  Terms and Concepts 514
  Pop Quiz 515

PART 5: The Nature and Treatment of Behavioral Disorders	13.8c Positive and Negative Symptoms of Schizophrenia 544 13.8d Theoretical Perspectives on Schizophrenia 545 13.9 Personality Disorders 548
Chapter 5	13.9a Antisocial Personality Disorder 549 13.9b Theoretical Perspectives on Antisocial Personality Disorder 550  13.10 The Treatment of Psychological Disorders 551 13.10a Psychoanalysis 551
Behavioral Disorders 519	13.10b Techniques of Psychoanalysis 552
<ul> <li>13.1 Defining Abnormal Behavior 519</li> <li>13.2 Classifying Behavioral Disorders 522</li> <li>13.3 Attention Deficit Hyperactivity Disorder 522</li> <li>13.4 Anxiety Disorders 523  13.4a Panic Disorder 523  13.4b Agoraphobia 524  13.4c Social Anxiety Disorder 524  13.4d Specific Phobia 525  13.4e Generalized Anxiety Disorder 526</li> <li>13.5 Obsessive-Compulsive and Related Disorders 526  13.5a Obsessive-Compulsive Disorder 526</li> <li>13.6 Trauma- and Stressor-Related</li> </ul>	13.10c The Present Status of Psychoanalysis 554  13.10d Cognitive Therapies 555 13.10e Behavioral Therapies 558  13.11 Biologically Based Therapies 564 13.11a Psychosurgery 565 13.11b Electroconvulsive Therapy and Magnetic Seizure Therapy 567 13.11c Deep Brain Stimulation 568 13.11d Psychoactive Drugs 569 13.11e Summary of Psychoactive Drugs 573  Chapter Review 574  Terms and Concepts 580  Pop Quiz 581
Disorders 528  13.6a Post-Traumatic Stress Disorder 528  13.6b Theoretical Perspectives on Anxiety, Post-Traumatic Stress, and Obsessive-Compulsive Disorders 528  13.7 Depressive Disorders 533  13.7a Major Depressive Disorder 533  13.7b Bipolar Disorder 535  13.7c Theoretical Perspectives on Depressive Disorders 537	Chapter Social Psychology 587
13.8 Schizophrenia 541  13.8a Primary Symptoms of Schizophrenia 543  13.8b The Development of Schizophrenia 544	14.1 Social Perception 588  14.1a First Impressions 588  14.1b Person Schemas 589  14.1c Implicit Personality Theories 589

14.2 Attribution Theories 590	Appendix 631
14.2a The Correspondent Inference Theory 590 14.2b Covariation Principle 592 14.2c Attribution Errors 593 14.3 Attitudes 596	A.1 Descriptive Statistics 631  A.1a Measures of Central Tendency 631  A.1b Measures of Variability 634  A.1c Normal Frequency Distributions 638
14.3a Acquiring Attitudes 596 14.3b The Function of Attitudes 597 14.3c Do Attitudes Predict Behavior? 599 14.3d Changing Attitudes 602	A.1d Correlation 642 A.1e Linear Regression 646 A.2 Inferential Statistics 648 A.2a Estimation 648 A.2b Hypothesis Testing 649
14.4 Prejudice 604 14.4a Outgroups, Ingroups, and the Causes of Prejudice 605	A.3 Advanced Statistical Techniques 653  A.3a Analysis of Variance 653
14.5 Implicit Attitudes 606 14.5a The Implicit Association Test 606	A.3b Factor Analysis 653 Terms and Concepts 654
14.6 Social Influences on Behavior 607 14.6a Conformity 607 14.6b Compliance 611 14.6c Obedience 612 14.6d Groupthink 613	Pop Quiz 655
14.7 Interpersonal Behavior: Attraction	Glossary 657
and Aggression 614 14.7a Attraction 614 14.7b Aggression 618	References 681
Chapter Review 624	Index 709
Terms and Concepts 628	
Pop Quiz 629	