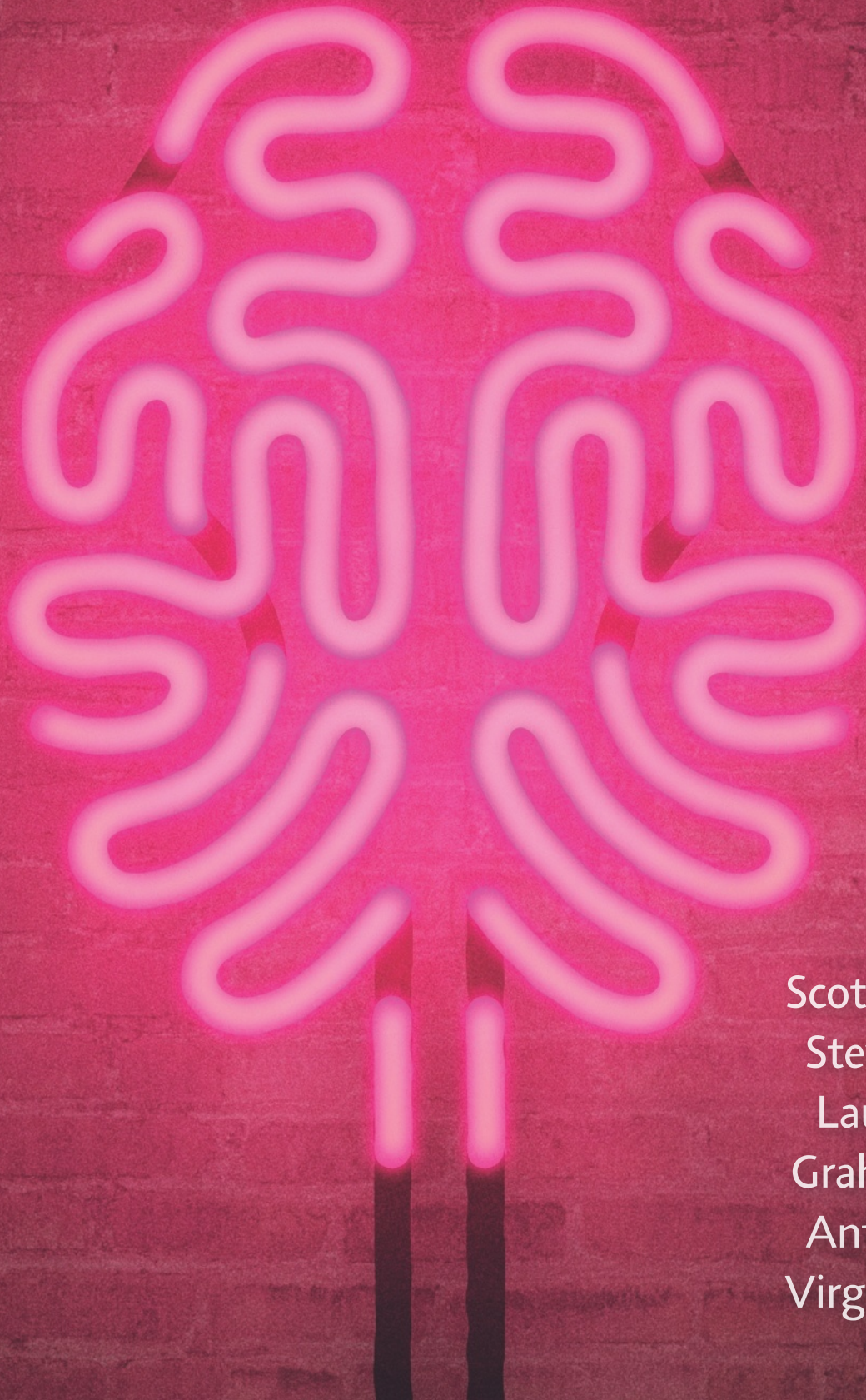


PSYCHOLOGY

FROM INQUIRY TO UNDERSTANDING



EDITION

3

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Contents

Preface xii

1 Science and pseudoscience in psychology

SKILLS FOR THINKING SCIENTIFICALLY IN EVERYDAY LIFE 1

1.1 What is psychology? Science versus intuition 2

- Psychology and levels of analysis 3
- What makes psychology distinctive—and fascinating 3
- Why we cannot always trust our commonsense 4
- Psychology as a science 5
- The boundaries of science 9
- Recognising that we might be wrong 9

1.2 Psychological pseudoscience: imposters of science 10

- The amazing growth of popular psychology 10
- What is pseudoscience? 11

mysteries of psychological science Why do we perceive patterns even when they do not exist? 14

- The dangers of pseudoscience: why should we care? 17

1.3 Scientific thinking: distinguishing fact from fiction 17

- Scientific scepticism 17
- A basic framework for scientific thinking 18

evaluating claims Remarkable dietary claims 23

1.4 Psychology's past and present: what a long, strange trip 24

- Psychology's early history 24
- The great theoretical frameworks of psychology 26
- The multifaceted world of modern psychology 30
- Great debates of psychology 30
- How psychology affects our lives 33
- Evidence-based practice 34
- Psychology and psychologists in Australia 34

Summary 36

2 Research methods

SAFEGUARDS AGAINST ERROR 41

2.1 The beauty and necessity of good research design 43

- Why we need research designs 43
- How we can be fooled: two modes of thinking 44

2.2 The scientific method: a toolbox of skills 46

- Naturalistic observation: studying humans 'in the wild' 46
- Case study designs: getting to know you 47
- Time-series design 48
- Self-report measures and surveys: asking people about themselves and others 48
- Correlational design 52
- Experimental designs 56

mysteries of psychological science How do placebos work? 60

2.3 Ethical issues in research design 63

- Ethical guidelines for human research 63

Ethical research in Aboriginal and Torres Strait Islander communities 65

Ethical issues in animal research 65

2.4 Statistics: the language of psychological research 66

- Descriptive statistics: what is what? 66
- Inferential statistics: testing hypotheses 68
- How people lie with statistics 68
- Qualitative data analysis 70

2.5 Evaluating psychological research 71

Becoming a peer reviewer of psychological research 71

evaluating claims Hair loss remedies 73

Becoming peer-reviewed: the importance of being published 73

Summary 75

3 Biological psychology

THE BRAIN–BODY COMMUNICATION SUPERHIGHWAY 79

3.1 Nerve cells: communication portals 80

- Neurons: the brain's communicators 80
- Glial cells: supporting roles 82
- Electrifying thought 83
- Chemical neurotransmission 84
- Neural plasticity: how and when the brain changes 86

3.2 The brain–behaviour network 89

- The central nervous system 90
- The peripheral nervous system 98

3.3 The endocrine system 99

- The pituitary gland and pituitary hormones 100
- The adrenal glands and adrenaline 101
- Sexual reproductive glands and sex hormones 101

3.4 Mapping the mind–brain relationship 102

- A tour of brain-mapping methods 102
- Which parts of our brain do we use for what? 105
- Which side of our brain do we use for what? 106

psychomythology Left-brained versus right-brained people 107

evaluating claims Brain scans in the courtroom 108

3.5 Nature and nurture: did your genes—or parents—make you do it? 108

How we came to be who we are 109

Behavioural genetics: how we study heritability 111

Summary 114

4 Sensation and perception

HOW WE SENSE AND CONCEPTUALISE THE WORLD 119

4.1 Two sides of the coin: sensation and perception 120

Sensation: our senses as detectives 121

The role of attention 123

The binding problem: putting the pieces together 124

mysteries of psychological science How does magic work? 125

4.2 Seeing: the visual system 125

Light: the energy of life 125

The eye: how we represent the visual realm 126

When we cannot see or perceive visually 131

4.3 Hearing: the auditory system 132

Sound: mechanical vibration 132

The structure and function of the ear 132

4.4 Smell and taste: the sensual senses 135

What are odours and flavours? 135

Sense receptors for smell and taste 136

Olfactory and gustatory perception 137

When we cannot smell or taste 138

4.5 Our body senses: touch, body position and balance 138

The somatosensory system: touch and pain 139

psychomythology Psychic healing of chronic pain 141

Proprioception and vestibular sense: body position and balance 142

Ergonomics: human engineering 142

4.6 Perception: when our senses meet our brains 143

Parallel processing: the way our brain multitasks 143

Perceptual hypotheses: guessing what is out there 143

When perception deceives us 148

Subliminal perception and persuasion 150

Extrasensory perception (ESP): fact or fiction? 150

evaluating claims Packaging subliminal persuasion for the consumer 151

Beliefs about ESP 152

Summary 156

5 Consciousness

EXPANDING THE BOUNDARIES OF PSYCHOLOGICAL INQUIRY 161

5.1 The biology of sleep 163

The circadian rhythm: the cycle of everyday life 163

Stages of sleep 164

Lucid dreaming 167

Disorders of sleep 167

5.2 Dreams 169

Freud's dream protection theory 170

Activation-synthesis theory 171

Dreaming and the forebrain 171

evaluating claims Dream interpretations 172

Neurocognitive perspectives on dreaming 173

5.3 Anomalous experiences 173

Hallucinations: experiencing what is not there 174

Out-of-body and near-death experiences 174

mysteries of psychological science Why do we experience déjà vu? 176

Meditation 177

Hypnosis 177

5.4 Drugs and consciousness 181

Substance use disorders 181

Depressants 183

Stimulants 185

Narcotics 186

Psychedelics 187

Summary 190

6 Learning

HOW NURTURE CHANGES US 197

6.1 Classical conditioning 200

Pavlov's discovery of classical conditioning 200

The basics of classical conditioning 200

Principles of classical conditioning 201

Higher-order conditioning 203

Applications of classical conditioning to daily life 203

psychomythology Are we what we eat? 206

6.2 Operant conditioning 206

Distinguishing operant conditioning from classical conditioning 207

The law of effect 207

B. F. Skinner and reinforcement 208

Terminology of operant conditioning 209

Schedules of reinforcement 212

Applications of operant conditioning 214

mysteries of psychological science Why are we superstitious? 216

Putting classical and operant conditioning together 217

evaluating claims Study skills courses 218

6.3 Cognitive models of learning 219

S-O-R psychology: throwing thinking back into the mix 219

Latent learning 220

Observational learning 221

Mirror neurons and observational learning 223
Insight learning 223

6.4 Biological influences on learning 224

Conditioned taste aversions 224
Preparedness and phobias 225

Summary 227

7 Memory

CONSTRUCTING AND RECONSTRUCTING OUR PASTS 231

7.1 How memory operates 232

The paradox of memory 232
The reconstructive nature of memory 234
The three systems of memory 234

7.2 The three processes of memory 242

Encoding: the 'call numbers' of the mind 242
Storage: filing our memories away 245

evaluating claims Memory boosters 246

Retrieval: heading for the 'stacks' 247

7.3 The biology of memory 251

The neural basis of memory storage 251
Where is memory stored? 252
The biology of memory deterioration 255

7.4 The development of memory: acquiring a personal history 256

Memory over time 257
Infants' implicit memory: talking with their feet 257

7.5 False memories: when good memory goes bad 258

False memories 258

mysteries of psychological science Why can we not remember the first few years of our lives? 259

Implanting false memories in the lab 261
Generalising from the lab to the real world 263

psychomythology The false memory controversy 265

Learning tips: getting the science of memory to work for us 266

Summary 267

8 Thinking, reasoning and language

GETTING INSIDE OUR TALKING HEADS 273

8.1 Thinking and reasoning 274

Cognitive economy: imposing order on our world 274
Heuristics and biases 275
Top-down processing 277

8.2 Decision making and problem solving 279

Decision making: choices, choices and more choices 279
Problem solving: accomplishing our goals 281
Models of the mind 283

8.3 How does language work? 284

The features of language 285
How and why did language come about? 287
How do children learn language? 288

Bilingualism 290

Critical periods for language learning 291

psychomythology Common misconceptions about sign language 292

Theoretical accounts of language acquisition 292
Non-human animal communication 294

8.4 Written communication: connecting language and reading 295

Reading: learning to recognise the written word 296
Does speed reading work? 297

evaluating claims Speed-reading courses 298

Summary 299

9 Intelligence and IQ testing

CONTROVERSY AND CONSENSUS 303

9.1 What is intelligence? Definitional confusion 304

Intelligence as sensory capacity: out of sight, out of mind 304
Intelligence as abstract thinking 305
Intelligence as general versus specific abilities 305
Fluid and crystallised intelligence 306
Multiple intelligences: different ways of being smart 307
Biological bases of intelligence 310

9.2 Intelligence testing: the good, the bad and the ugly 312

How we calculate IQ 312
The eugenics movement: misuses and abuses of IQ testing 313
IQ testing today 314
Standardised tests: what do they measure? 316

psychomythology Do standardised tests predict grades? 316

The reliability of IQ scores: is IQ forever? 317
The validity of IQ scores: predicting life outcomes 317
A tale of two tails: from intellectual disability to genius 319

9.3 Genetic and environmental influences on IQ 321

Exploring genetic influences on IQ 322
Exploring environmental influences on IQ 323

evaluating claims IQ boosters 327

9.4 Group differences in IQ: the science and the politics 328

Sex differences in IQ and mental abilities 328
Racial differences in IQ 331

9.5 The rest of the story: other dimensions of intellect 335

Creativity 335
Interests and intellect 337
Emotional intelligence: is EQ as important as IQ? 337

mysteries of psychological science Why smart people believe strange things 338

Summary 339

10 Human development

HOW AND WHY WE CHANGE 347

10.1 Special considerations in human development 348

- Clarifying the nature–nurture debate 348
- The mystique of early experience 350
- Keeping an eye on cohort effects 350
- Post hoc fallacy 351
- Bidirectional influences 352

10.2 The developing body: physical and motor development 352

- Conception and prenatal development: from zygote to baby 352
- Infant motor development: how babies get going 355
- Growth and physical development throughout childhood 357
- Physical maturation in adolescence: the power of puberty 357
- Physical development in adulthood 359

evaluating claims Anti-ageing treatments 360

10.3 The developing mind: cognitive development 361

- Theories of cognitive development 361
- Cognitive landmarks of early development 366

psychomythology Creating ‘superbabies’ one app at a time 367

- Cognitive changes in adolescence 369
- Cognitive function in adulthood 370

10.4 The developing personality: social and moral development 371

- Social development in infancy and childhood 371
- Social and emotional development in adolescence 381
- Life transitions in adulthood 385
- Social transitions in later years 387

Summary 389

11 Emotion and motivation

WHAT MOVES US 397

11.1 Theories of emotion: what causes our feelings? 398

- Discrete emotions theory: emotions as evolved expressions 399
- Cognitive theories of emotion: think first, feel later 402
- Unconscious influences on emotion 405

11.2 Nonverbal expression of emotion: the eyes, bodies and cultures have it 407

- The importance of nonverbal cues 407
- Body language and gestures 407

mysteries of psychological science Why do we cry? 408

- Personal space 409
- Lying and lie detection 409

11.3 Happiness and self-esteem: science confronts pop psychology 413

- What happiness is good for 413
- What makes us happy: the myths 414

- What makes us happy: the realities 415
- Forecasting happiness 416
- Self-esteem: important or overhyped? 417
- Positive psychology: psychology’s future or psychology’s fad? 419

11.4 Motivation: our wants and needs 420

- Motivation: a beginner’s guide 420
- Hunger, eating and eating disorders 423
- Sexual motivation 427

evaluating claims Diet and weight-loss plans 428

11.5 Attraction, love and hate: the greatest mysteries of them all 432

- Social influences on interpersonal attraction 432
- Love: science confronts the mysterious 436
- Hate: a neglected topic 437

Summary 438

12 Stress, coping and health

THE MIND–BODY INTERCONNECTION 449

12.1 What is stress? 451

- Stress in the eye of the beholder: three approaches 451
- No two stresses are created equal: measuring stress 453

12.2 How we adapt to stress: change and challenge 454

- The mechanics of stress: Selye’s general adaptation syndrome 454
- The diversity of stress responses 455
- Long-lasting stress reactions 456

12.3 Coping with stress 456

- Social support 457

psychomythology Are almost all people traumatised by highly aversive events? 457

- Gaining control 458

- Individual differences in coping: attitudes, beliefs and personality 459

12.4 How stress impacts on our health 462

- The immune system 462
- Psychoneuroimmunology: our body, our environment and our health 463
- Stress-related illnesses: a biopsychosocial view 464

12.5 Promoting good health—and less stress! 467

- Towards a healthy lifestyle 467

evaluating claims Stress reduction and relaxation techniques 472

Summary 474

13 Social psychology

HOW OTHERS AFFECT US 481

13.1 What is social psychology? 482

- Humans as a social species 483
- The fundamental attribution error: the great lesson of social psychology 486

mysteries of psychological science Why are yawns contagious? 487

13.2 Social influence: conformity and obedience 488

- Conformity: the Asch studies 488
- Deindividuation: losing our typical identities 490
- Groupthink 494
- Obedience: the psychology of following orders 496

13.3 Helping and harming others: prosocial behaviour and aggression 500

- Safety in numbers or danger in numbers? Bystander non-intervention 501
- Social loafing: with a little too much help from my friends 503

psychomythology Is brainstorming in groups a good way to generate ideas? 504

- Prosocial behaviour and altruism 504
- Aggression: why we harm others 506

13.4 Attitudes and persuasion: changing minds 508

- Attitudes and behaviour 509
- Origins of attitudes 509
- Attitude change: wait, wait, I just changed my mind 510
- Persuasion: humans as salespeople 512

13.5 Prejudice and discrimination 515

- Stereotypes 515

evaluating claims Antidepressant advertisements 516

- The nature of prejudice 518
- Discrimination 519
- Roots of prejudice: a tangled web 520
- Prejudice behind the scenes 521
- Combating prejudice: some remedies 523

Summary 525

14 Cross-cultural psychology

HOW CULTURE AFFECTS US 533

14.1 What is culture and how does it influence behaviour? 535

- Definitions of culture 535
- Transmission of culture 537

14.2 What is cross-cultural psychology and how does it operate? 539

evaluating claims Is death more likely on the fourth of the month among Chinese and Japanese? 540

- Theoretical issues 540

psychomythology Is psychology representative of human populations? 541

- Methodology in cross-cultural psychology 541
- Safeguards 542

14.3 Concepts of self 544

- Emotion 544
- Personality 545

14.4 Crossing cultures 547

- Why people move from one place to another 547
- Cultural syndromes 547
- Berry's model of acculturation 549
- Acculturation and individuals 549
- Changing concepts of acculturation 550

14.5 Multiculturalism and prejudice 553

- Multicultural societies 553
- Identity 555
- Psychological services 555
- Prejudice 556

mysteries of psychological science Where do prejudicial ideas come from? 557

14.6 Indigenous psychology 558

- Early research 559
- A new focus 559
- An Indigenous psychology 561

Summary 564

15 Personality

WHO WE ARE 569

15.1 Personality: what is it and how can we study it? 570

- Researching personality: overview of twin and adoption studies 571
- Behaviour-genetic studies: a note of caution 573

mysteries of psychological science Where is the environmental influence on personality? 574

15.2 Psychoanalytic theory: the controversial legacy of Sigmund Freud and his followers 574

- Freud's psychoanalytic theory of personality 575
- The id, ego and superego: the structure of personality 576
- Stages of psychosexual development 579
- Psychoanalytic theory evaluated scientifically 580
- Freud's followers: the neo-Freudians 582

15.3 Behavioural and social learning theories of personality 584

- Behavioural views of the causes of personality 584
- Social learning theories of personality: the causal role of thinking resurrected 585

15.4 Humanistic models of personality: the third force 587

- Rogers and Maslow: self-actualisation realised and unrealised 587
- Humanistic models evaluated scientifically 588

15.5 Trait models of personality: consistencies in our behaviour 589

- Identifying traits: factor analysis 589
- The Big Five model of personality: the geography of the psyche 590

- Basic tendencies versus characteristic adaptations 592
- Can personality traits change? 592
- Trait models evaluated scientifically 593
- 15.6 Personality assessment: measuring and mis-measuring the psyche 594**
 - Famous—and infamous—errors in personality assessment 594
 - Structured personality tests 595
 - Projective tests 598
 - Common pitfalls in personality assessment 601
- psychomythology Criminal profiling 602**
- evaluating claims Online personality tests 604**
- Summary 605**

16 Psychological disorders

WHEN ADAPTATION BREAKS DOWN 611

- 16.1 Conceptions of mental illness: yesterday and today 612**
 - What is mental illness? A deceptively complex question 612
 - Historical conceptions of mental illness: from demons to asylums 613
 - Psychiatric diagnosis across cultures 614
 - Special considerations in psychiatric classification and diagnosis 616
 - Psychiatric diagnosis today: the DSM-5 618
- evaluating claims Online tests for mental disorders 622**
- psychomythology The insanity defence: controversies and misconceptions 623**
- 16.2 Anxiety-related disorders: the many faces of worry and fear 624**
 - Generalised anxiety disorder: perpetual worry 625
 - Panic disorder: terror that comes out of the blue 625
 - Phobias: irrational fears 626
 - Post-traumatic stress disorder: the enduring effects of experiencing horror 627
 - Obsessive-compulsive and related disorders: trapped in one's thoughts and behaviours 627
 - The roots of pathological anxiety, fear and repetitive thoughts and behaviours 629
- mysteries of psychological science More than a pack rat: why do people hoard? 630**
- 16.3 Mood disorders and suicide 631**
 - Major depressive disorder: common, but not the common cold 631
 - Explanations for major depressive disorder: a tangled web 632
 - Bipolar disorder: when mood goes to extremes 635
 - Suicide: facts and fiction 635
- 16.4 Personality and dissociative disorders: the disrupted and divided self 637**
 - Personality disorders 637
 - Dissociative disorders 639
- 16.5 The enigma of schizophrenia 642**
 - Symptoms of schizophrenia: the shattered mind 642
 - Explanations for schizophrenia: the roots of a shattered mind 644
- 16.6 Childhood disorders: recent controversies 648**
 - Autism spectrum disorders 648
 - Attention-deficit/hyperactivity disorder and early-onset bipolar disorder 649
- Summary 651**

17 Psychological and biological treatments

HELPING PEOPLE CHANGE 661

- 17.1 Psychotherapy: clients and practitioners 662**
 - Who seeks and benefits from treatment? 662
 - Who practises psychotherapy? 663
- 17.2 Insight therapies: acquiring understanding 666**
 - Psychoanalytic and psychodynamic therapies: Freud's legacy 666
 - Humanistic therapies: achieving our potential 669
- 17.3 Group therapies: the more the merrier 672**
 - Alcoholics Anonymous 672
 - Family therapies: treating the dysfunctional family system 673
- 17.4 Behavioural and cognitive-behavioural approaches: changing maladaptive actions and thoughts 674**
 - Systematic desensitisation and exposure therapies: learning principles in action 675
 - Modelling in therapy: learning by watching 678
 - Operant and classical conditioning procedures 678
 - Cognitive-behavioural and third-wave therapies: learning to think differently 679
- 17.5 Is psychotherapy effective? 683**
 - The Dodo bird verdict: alive or extinct? 683
 - How different groups of people respond to psychotherapy 684
 - Nonspecific factors 685
 - Empirically supported treatments 685
- psychomythology Are self-help books always helpful? 686**
- 17.6 Biological treatments: medications, electrical stimulation and surgery 687**
 - Pharmacotherapy: targeting brain chemistry 687
- mysteries of psychological science Why can ineffective therapies appear to be helpful? How we can be fooled 688**
- evaluating claims Psychotherapies 689**
 - Electrical stimulation: conceptions and misconceptions 693
 - Psychosurgery: an absolute last resort 695
- Summary 696**

Glossary 707

Name index 717

Subject index 748

Preface

'Why don't we remember what happened to us as babies?' 'Is human intelligence purely genetic?' 'Can people actually become addicted to gambling or sex?' 'Does everyone see colours exactly same way?' 'Is the polygraph test really a "lie detector"?' 'Should we trust most self-help books?'

Psychology students, as all citizens, are bombarded daily with information—and misinformation—that shapes how they understand the world and their place in it. Whether it is from social media, movies, self-help books or advice from friends, our students encounter information and explanations—many of which are inaccurate or misleading—about sex and romance, drug use, intelligence testing, parenting, mental illness, psychotherapy and a host of other topics. Much of the time, the questions about these issues that most fascinate students are precisely those that psychologists routinely confront in their research, teaching and practice. This is both a blessing and a curse—on the one hand, we as instructors have a natural 'hook' because students find the topic inherently interesting. On the other hand, we also face the challenge of coaxing students away from their intuitions, so that they can begin to think scientifically about evidence regarding mind, brain and behaviour.

As consumers of information, we all need help evaluating the bewildering variety of claims stemming from the vast world of popular psychology. This goal is especially critical in a world in which fake news is becoming increasingly challenging to distinguish from real news. Without a framework for evaluating evidence, making sense of these often contradictory assertions can be a bewildering task for anyone. It is not surprising that the untrained student can find claims regarding topics such as memory and mood-enhancing drugs, the over-prescription of stimulants, the effectiveness of antidepressants and the genetic bases of psychiatric disorders difficult to evaluate. Moreover, it is challenging for those who have not been taught to think scientifically to resist the allure of extraordinary psychological claims that lie beyond the margin of scientific knowledge. Without a guide for distinguishing adequate from inadequate evidence, our students are left to their own devices when it comes to weighing the merits of these claims.

Our goal in this text, therefore, is to empower students to apply scientific thinking to the psychology of their everyday lives. By applying scientific thinking—thinking that helps protect us against our tendencies to make mistakes—we can better evaluate claims about both laboratory research and daily life. In the end, we hope that students will emerge with the critical-thinking skills and open-minded scepticism they need to distinguish psychological misinformation from psychological information. The text is designed to encourage students to keep an open mind to new claims, but to insist on and evaluate evidence informing these claims. Indeed, our overarching motto is that of space scientist James Oberg (sometimes referred to as 'Oberg's dictum'): *Keeping an open mind is a virtue, just so long as it is not so open that our brains fall out.*

What's new in this edition?

Psychology: From Inquiry to Understanding continues to emphasise the importance of scientific-thinking skills. This third Australian edition maintains the vision and tone students enjoyed in previous editions. We have significantly updated the content by integrating new findings, highlighting fresh debates and challenges to psychology (such as the replicability crisis) and introducing new sections on emerging areas of research.

General changes

- New colour-coded biological art orients students at both the macro and micro levels as they move through the text.
- New ‘Challenge your assumptions’ questions at the start of each chapter ask students what they believe they know about psychology. These questions also serve to preview the key topics that will be discussed in each chapter.
- Fully revised ‘Evaluating claims’ scenarios prompt students to use scientific-thinking skills to evaluate claims they are likely to encounter in various forms of media.
- New ‘Fact or fiction?’ questions challenge students’ ability to distinguish supported from unsupported claims. These self-tests are peppered throughout each chapter, with answers provided at the end of the chapter.
- New ‘Stop and think’ questions embedded throughout each chapter invite students to write short critical-thinking-based responses to questions about the chapter content.

New content and updated research

- Chapter 1 (Science and pseudoscience in psychology) features new timely coverage of the replicability crisis, as well as enhanced discussion of confirmation bias.
- Chapter 2 (Research methods) includes a new section on qualitative data analysis, a broader discussion of the role of response sets in psychological assessment and enhanced guidance on evaluating the claims made for psychological research.
- Chapter 3 (Biological psychology) includes new content regarding potential pitfalls in evaluating evidence from functional brain-imaging studies, as well as an introduction to epigenetics.
- Chapter 4 (Sensation and perception) provides expanded coverage of inattention blindness, the science of perception underlying stage magic and the study of extrasensory perception. This chapter also covers new sensory illusions created in the laboratory by perception scientists, such as the rubber hand illusion.
- Chapter 5 (Consciousness) features enhanced discussion of a variety of topics including synaesthesia, brain activity during death, the effects of recreational drugs on the brain and Hobson’s dream theory of proto-consciousness. The coverage of sleep has been significantly augmented to include expanded coverage of sleep disorders, sleep in non-human species and the amount of sleep needed on a daily basis. Discussion of meditation, hypnosis and hallucinogenic drugs has also been expanded.
- Chapter 6 (Learning) includes new coverage of Little Albert, greater discussion of the role of classical conditioning in disgust reactions and greater coverage of learning in unsupervised environments and of the role of mirror neurons in learning.
- Chapter 7 (Memory) includes new research on individual differences, context effects, false memories, overcoming memory biases and the neural basis of spatial memory in the bird, Clark’s nutcracker. The chapter offers enhanced coverage of interventions to potentially decrease the risk of dementia and memory loss that accompanies ageing, as well as cross-cultural differences in early memories.
- Chapter 8 (Thinking, reasoning and language) has been reorganised so that it now begins with thinking and reasoning. The chapter features enhanced coverage of decision making, the emerging topics of neuroeconomics and distributed cognition, a new *Psychomythology* box on myths about sign language and expanded coverage on learning to read.
- Chapter 9 (Intelligence and IQ testing) provides new coverage of molecular genetic research on intelligence, the effects (or lack thereof) of brain-training programs on intelligence and working memory, the predictive validity of IQ tests, the effects of early intervention programs on IQ, sex differences in mental abilities, stereotype threat and IQ, and the relationship between emotional intelligence and IQ.
- Chapter 10 (Human development) includes a discussion of epigenetics, new sections differentiating premature birth from low birth weight (including their causes and consequences), discussion of the research on early menarche, an updated *Psychomythology* box on apps designed to increase infant intelligence, expanded coverage of temperament and attachment, a new section on transgender development and updated citations of current evidence on the developing brain.

- Chapter 11 (Emotion and motivation) features new coverage of research on primary and secondary emotions, the facial feedback hypothesis, nonverbal behaviours and lie-detection methods, positive psychology and self-esteem. The chapter also includes new discussion of bariatric surgery, binge-eating and purging disorders, as well as enhanced coverage of intrinsic/extrinsic motivation, Maslow's hierarchy of needs, the glucostatic theory of hunger, sexual desire and similarity and attraction.
- Chapter 12 (Stress, coping and health) includes new coverage of post-traumatic growth, stress and social media, and hookah smoking and electronic cigarettes. The chapter also features expanded coverage of PTSD, the tend-and-befriend response and oxytocin, optimism, coronary heart disease and controversies related to moderate drinking.
- Chapter 13 (Social psychology) offers new coverage of the replicability crisis and its implications for social psychology, cultural differences in the fundamental attribution error, scientific controversies concerning the Milgram obedience and Zimbardo prison studies, viewpoint diversity, political polarisation, 'brainwashing', potential media influences on aggression, cyber aggression, psychological research on correcting misconceptions, stereotyping and out-group homogeneity, and implicit prejudice and prejudice-reduction interventions.
- Chapter 14 (Cross-cultural psychology) includes new coverage of cross-cultural differences in basic processes of cognition, expression of anger and its effect on health, socialisation and helping behaviours. The chapter also includes extended coverage of research on acculturation and multicultural identity.
- Chapter 15 (Personality) includes new coverage of molecular genetic research on personality, neuroscience research purportedly offering support for psychodynamic assertions, controversy regarding the efficacy of psychodynamic therapy, the ability to infer personality from social media and cross-cultural research on the five-factor model of personality.
- Chapter 16 (Psychological disorders) offers new coverage of the recent developments in diagnosis of mental disorders, including the development of the Research Domain Criteria (RDoC); discussion of inflammation as a potential trigger of depression and schizophrenia; genetics, the immune system and 'overpruning' of synapses in schizophrenia; and the role of sleep disturbances in dissociation. Coverage has also been expanded on suicide and borderline personality disorder.
- Chapter 17 (Psychological and biological treatments) includes new coverage related to meeting needs for psychological services, existential therapy, ecological momentary assessment, unified integrative psychotherapy protocols and customised psychotherapeutic interventions. The chapter also features expanded coverage of Alcoholics Anonymous, non-specific factors in psychotherapy, combining medication with psychotherapy and transcranial stimulation.

From inquiry to understanding: the framework in action

As instructors, we find that students new to psychology tend to learn best when information is presented within a clear, effective and meaningful framework—one that encourages inquiry along the path to understanding. As part of the inquiry to understanding framework, our pedagogical features and assessment tools work to empower students to develop a more critical eye in understanding the psychological world and their place in it.

1 EXTRAORDINARY CLAIMS

Is the evidence as strong as the claim?

2 TESTING PREDICTIONS

Can the claim be tested?

3 OCCAM'S RAZOR

Does a simpler explanation fit the data just as well?

4 REPLICABILITY

Can the results be duplicated in other studies?

5 RULING OUT RIVAL HYPOTHESES

Have important alternative explanations for the findings been excluded?

6 CORRELATION VS CAUSATION

Can we be sure that *A* causes *B*?

Thinking scientifically

In Chapter 1, we introduce readers to the six principles of scientific thinking, which comprise an integrated framework for lifelong learning in psychology. Coloured arrows in the margin indicate whenever the principles are referenced to reinforce these scientific-thinking principles in students' minds. In this way, students come to understand these principles as key skills for evaluating claims in scientific research and in everyday life.

Applications of scientific thinking

In keeping with the text's theme, the fully reconceived **Evaluating claims** feature prompts students to use scientific-thinking skills to evaluate claims they are likely to encounter in various forms of media.

A new feature for the third Australian edition, **Fact or fiction?** invites students to test their ability to distinguish empirically supported versus unsupported claims. These self-tests are peppered throughout the chapter and the answers are provided at the end of the chapter.

Throughout the text **Psychomythology** boxes focus in depth on a widespread psychological misconception. In this way, students will come to recognise that their commonsense intuitions about the psychological world are not always correct and that scientific-thinking methods are needed to separate accurate from inaccurate claims.

Australian cultures

Australia is truly a melting pot of different people with different experiences and interpretations, so wherever applicable we highlight noteworthy research findings bearing on cultural differences. By doing so, you will come to understand that many psychological principles have boundary conditions and that much of contemporary psychology focuses on differences as much as commonalities. Chapter 14 is dedicated to covering cross-cultural psychology and the specific issues unique to the culture of Indigenous Australians. This chapter, originally written by Associate Professor Alex Main, Honorary Fellow at Murdoch University, has been extensively revised for the third Australian edition by Dr Takeshi Hamamura, Curtin University.

A focus on meaningful pedagogy: helping students succeed in psychology

Our goal of applying scientific thinking to the psychology of everyday life is reflected in the text's pedagogical plan. The features in the text, the built-in quizzing and the print and media supplements are designed to help students achieve a mastery of the subject and succeed in the course.

Challenge your assumptions questions, located at the start of every chapter, ask students what they know about psychology. They also serve to preview the key topics that will be discussed in each chapter.

Each chapter is organised around numbered **Learning objectives**, which are listed in full at the start of the chapter and again at each major section under which they are covered. The in-chapter assessment material is also organised around these objectives. Students'

understanding of important terminology is enhanced with our on-page margin definitions, listed in full in an end-of-book **Glossary**.

Colour-coded biological art orients students at both the micro and macro levels as they move throughout the text and forge connections among concepts.

Each chapter contains relevant and interesting **Fact or fiction?** self-tests designed to challenge students' ability to distinguish supported from unsupported claims. **Stop and think** questions invite students to write short critical-thinking-based responses about the chapter content.

Putting scientific thinking to the test: innovative and integrated educator resources

Psychology: From Inquiry to Understanding is accompanied by a collection of teaching and learning supplements designed to reinforce the scientific-thinking skills from the text. These supplements 'put scientific thinking to the test' by reinforcing our framework for evaluating claims and assessing students' ability to think scientifically in a variety of psychological and real-world situations.

Test Bank

The Test Bank provides a wealth of accuracy-verified testing material. Updated for the new edition, each chapter offers a wide variety of question types, arranged by learning objective and tagged by APAC graduate attributes.

Instructor Manual

The Instructor Manual provides detailed concepts, discussion topics and activities to enrich lessons.

Digital image PowerPoint slides

All the diagrams and tables from the course content are available for lecturer use.

Acknowledging our amazing psychology community

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Reviewers

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