

Contents

Preface xi

1. Cognition and Creativity

Introduction	1
Analogical Thinking and Metaphor	7
Overinclusive Thinking	12
Restructuring and Insight	13
Experience, Expertise, Information, and Insight	16
Transformational Capacity	17
Problem Solving	18
Problem Finding	20
Stage Models	23
Intuition	26
Unconscious Processes and Creative Cognition	29
Mindfulness	30
Synaesthesia	34
Conclusions	34

2. Personality and Motivation

Introduction	37
Classic Studies of Personality and Creativity	39
Longitudinal Studies	45
Personality of Artists	47
Autonomy, Independence, and Nonconformity	48
Self-control	49
Controlled Weirdness and Deviance	50
Psychoticism	51
Impulsivity and Adventurousness	52
Contrarianism	52
Childlike Tendencies, Playfulness, Daydreaming, and Paracosms	54
Perseverance and Persistence	55
Openness to Experience	56
Conscientiousness	58
Anxiety	59
Tolerance of Ambiguity	59
Sensitivity	60
Confidence	61

Self-promotion	64
Introversion	64
Competitiveness	65
Paradoxical Personalities and Antinomies	66
Self-actualization	68
Motivation	69
Values	72
Creative Personal Identity and Creative Personal Efficacy	75
Values, Risk Tolerance, and Psychological Androgyny	76
Conclusions	77

3. The Psychometrics of Creativity

Introduction	81
Reliability and Validity	84
Validity and Reliability	86
Divergent Thinking Tests	88
Criterion Measures of Creativity	91
Creative Competencies	97
Likert Scales	98
Managerial Measures	100
Ratings by Parents and Teachers	101
Expert Raters	105
Product Assessment	109
Advertising	110
Entrepreneurship	111
Domain-Specific Measures	112
Conclusions	113

4. Biological Perspectives on Creativity

Introduction	115
Hemispheric Asymmetry and the Split Brain	117
Handedness and Hemisphericity	119
Brain Waves and the Electroencephalogram	120
Prefrontal Cortex	125
Hierarchies Within the Brain	128
The Cerebellum and Creativity	130

The Emotional Brain	132
Manipulations of the Human Brain	135
The Brain of Albert Einstein	136
Altered States and Brain Function	138
Genetic Basis of Creative Potential	142
Intersections, Idiosyncrasies, and Internal Validity	146
Conclusions	149

5. Health and Clinical Perspectives

Introduction	155
Affective Disorders	157
Affect and Mood	159
Suicide	161
Stress	167
Anxiety	169
Alcoholism and Drug Abuse	171
Primary and Secondary Process	172
Psychosis and Psychoticism	177
ADHD and Creativity	183
Dyslexia and Physical Impairments	184
Adaptability and Maladaptations	184
Self-actualization and the Courage to Create	188
Some Treatment Options	190
Conclusions	190

6. Social, Attributional, and Organizational Perspectives

Introduction	193
Social Influences on Environments and Settings	194
Social Judgment	195
Concerns With Social and Attributional Perspectives	196
Bias in Social Judgment	199
Collaboration and Creativity	199
Competition and Creativity	201
Person-Environment Interactions	202
Professional Marginality	204
Organizational Climate	206
Leaders and Leadership	211
Organizational Attitude	212
Communitarianism and Creativity	214
Aggregate Creativity and Society at Large	214
Human Capital and the Creative Class	217
Conclusions	220

7. Culture and Creativity

Introduction	223
Collectivism and Creativity	224
Culture, Socialization, and Values	225
Cross-Cultural Comparison Error	226
Stop Rules, Conventions, and Cultural Inhibition	227
Tolerance, Talent, and Technology	229
Empirical Comparisons of Cultures	231
Culture, Family, and Education	233
Cultural Traditions and Creativity	234
Cultural Influences on Organizations and Business	234
Cultural Products and Processes	234
Implicit Theories	235
Cultural Metaphors For Creativity	236
Conclusions	237

8. History and Historiometry

Introduction	239
Historical Analyses	241
Prehistory	243
The Earliest Creativity?	244
Ancient History	245
Romanticism	247
Influences on History and Creativity	249
A Genius Ahead of His or Her Time?	252
Multiple Discoveries and Simultaneities	253
Serendipity	256
Tools and Creativity	258
Lamarckian Evolution and Change	260
Domain Differences and Domain-Specific Microgeister	261
Economic Changes Influencing Culture and History	262
Creativity in Portland, Oregon	265
War and Religion	266
Trigger Effects and Emergenesis	266
Matthew, Pygmalion, and Founder Effects	267
The Individual in History	268
Historiometry	275
Limitations and Disadvantages of the Historical Approach	277
Reputational Paths	278
Art History	285
Social Contexts Change Through History	288
Conclusions	288

9. Creativity and Politics

- Creative Political Products 292
- Which Specific Political Factors Influence Creativity? 294
- Individualism and Freedom 297
- Political Events 300
- Conservatism 303
- Conclusions 308

10. Developmental Trends and Influences on Creativity

- Introduction 313
- Trends and Stages of Development 314
- Watching TV or Streaming at Home 322
- Peer Status and Creativity 334
- Adult Development 337
- Conclusions 341

11. Educational Perspectives

- Introduction 343
- The Ideal Student 345
- Implicit Theories of Teachers 349
- Teaching Experience 351
- Classroom Environment and Setting 353
- Teachers and Mentors 354
- Ego Strength and Self-Efficacy 357
- Creative Attitudes 358
- Problem Finding and Education 359
- Enhancing Imagery and Artistic Skills 360
- Brainstorming 360
- Information and Creativity 363
- Explicit Instructions 365
- Learning Theories 367
- Goodbye Teacher 370
- Generalization and Maintenance 372
- Preparing Students for the Unforeseeable Future 374
- Special Populations 374
- Gifted Students 376
- Conclusions 377

12. Enhancement and the Fulfillment of Potential

- Introduction 379
- Tactical Creativity and Metacognition 382
- Shift Perspectives 384

- Turn the Situation Upside Down 384
- Find or Apply an Analogy 385
- Borrow, Adapt, or Steal Tactics 387
- Consider the Natural World 388
- Simplify 391
- Experiment 392
- Deviation Amplification 393
- Persist 395
- Travel 395
- Question Assumptions 396
- Redefine the Problem or Situation 398
- Keep an Open Mind 399
- Contrarianism 400
- Don't Be a Damn Fool 403
- Let It Happen 405
- Avoidance Tactics 406
- Flexible Use of Tactics 407
- Dreaming and Imagery 408
- Programs and Multiple Step Methods for Creative Thinking 409
- Ideal 413
- Odyssey of the Mind 415
- Tactics for Organizations 416
- Enhancement in the Classroom 420
- Creativity and Education of Older Adults 421
- Tactics Specifically for Discovery 422
- Techniques for Invention 424
- Triz 425
- Analyses of Enhancement Efforts 429
- Conclusions 432

13. Creativity and Philosophy

- Philosophy in Everyday Decision-Making 436
- Subjectivity and Objectivity 439
- Existentialism and the Creative Synthesis of Opposites 441
- Transcendence 442
- Philosophy of Science 444
- Philosophy and Art 448
- Pragmatism 451
- Conclusions 452

14. Conclusion: What Creativity Is and What It Is Not

- Introduction 455
- Creativity and Intelligence 456
- Imagination 462
- Originality 465
- Innovation and Creativity 469

Invention Versus Creativity	477
Discovery and Creativity	479
Discovery of Chaos	481
Serendipity and Intentions	484
Creativity as Irrational or Rational	486
Pseudo-Creativity	488
Adaptability and Creativity	488
Art and Mating-Display and the Reproductive Benefits	492

Flexibility	493
Distribution of Creative Talents	494
Is Creativity Only for Humans?	500
Proactive Creativity	504
Conclusions	506

References 509

Index 581