

Contents

Preface	v
1 The Why, What, and How of Environmental Psychology	1
Introduction	1
Why Study Environmental Psychology?	1
What is Environmental Psychology?	5
Characteristics of Environmental Psychology	6
How is Research in Environmental Psychology Done?	10
<i>Research Methods in Environmental Psychology</i>	11
<i>Data Collection Methods</i>	13
Preview of the Content Areas of Environmental Psychology	15
Chapter Summary	16
Suggested Projects	16
2 Environmental Perception, Cognition, and Attitudes	18
Introduction	18
What Is Environmental Perception?	18
<i>Conventional Approaches to Perception</i>	19
<i>Environmental Perception</i>	21
Movement, Habituation, and the Perception of Change	22
<i>Perception of Movement</i>	22
<i>Habituation or Adaptation</i>	23

<i>Perception of Change</i>	23
Perception of Natural Hazards	26
Social and Cultural Influences on Environmental Perception	28
Environmental Cognition and Cognitive Mapping	29
<i>Components of Cognitive Maps</i>	30
<i>Errors in Cognitive Maps</i>	31
<i>Familiarity, Gender, and Socioeconomic Class</i>	31
<i>Functions of Cognitive Maps</i>	31
<i>Memory and Cognitive Maps</i>	32
<i>Cognitive Organization of the Environment</i>	32
<i>Summary of Cognitive Mapping</i>	32
Assessing the Scenic Environment: Landscape Assessment, Aesthetics, and Preference	33
<i>Descriptive Systems of Scenic Value</i>	33
<i>Physical-Perceptual Approaches to Scenic Value</i>	37
<i>The Psychological Approach to Scenic Value</i>	39
<i>Summary of Scenic Assessment Techniques</i>	45
Forming Attitudes toward the Environment	45
<i>Classical Conditioning of Attitudes</i>	45
<i>Instrumental Conditioning of Attitudes</i>	48
<i>Social Learning of Attitudes</i>	48
Measuring Attitudes toward the Environment: The Search for the PEQI	49
Changing Attitudes toward the Environment: A Prelude	50
<i>Do Environmental Attitudes Predict Environmental Behavior?</i>	55
Chapter Summary	56
Suggested Projects	57

3 Theories of Environment–Behavior Relationships 58

Introduction	58
The Nature and Function of Theory in Environmental Psychology	59
Environment–Behavior Theories: Fledgling Theories in a Fledgling Field	62
<i>The Arousal Approach</i>	63
<i>The Environmental Load Approach</i>	65
<i>The Understimulation Approach</i>	67
<i>Adaptation Level Theory: Optimal Stimulation</i>	68
<i>The Behavior Constraint Approach</i>	70
<i>Barker's Ecological Psychology</i>	73
<i>The Environmental Stress Approach</i>	77
Integration and Summary of Theoretical Perspectives	80
Chapter Summary	81
Suggested Projects	83

4

Environmental Stress

84

Introduction	84
Stress	85
<i>Characteristics of Stressors</i>	85
<i>Appraisal</i>	87
<i>Characteristics of the Stress Response</i>	88
Natural Disaster	90
<i>Characteristics of Natural Disasters</i>	90
<i>Effects of Natural Disasters</i>	91
Technological Catastrophe	92
<i>Characteristics of Technological Catastrophe</i>	92
Noise	97
<i>Defining, Measuring, and Perceiving Noise</i>	97
<i>Important Noise Variables</i>	101
<i>Sources of Noise</i>	102
<i>Physiological Effects of Noise</i>	103
<i>Effects of Noise on Performance</i>	107
<i>Noise and Social Behavior</i>	110
<i>Summary of Noise Effects on Behavior</i>	115
Commuting	115
<i>Impedance</i>	116
Chapter Summary	117
Suggested Projects	118

5

Weather, Air Pollution, and Behavior

119

Introduction	119
Heat and Behavior	121
<i>Perception of and Physiological Reaction to Ambient Temperatures</i>	121
<i>Heat and Performance</i>	125
<i>Heat and Social Behavior</i>	127
Cold Temperatures and Behavior	132
<i>Cold Temperatures and Health</i>	132
<i>Cold Extremes and Performance</i>	133
<i>Cold Extremes and Social Behavior</i>	133
<i>Summary of Temperature Effects on Behavior</i>	133
Wind and Behavior	134
<i>Perception of Wind</i>	135
<i>Behavioral Effects of Wind</i>	136

Barometric Pressure and Altitude	137
<i>Physiological Effects</i>	137
<i>Acclimatization to High Altitudes</i>	138
<i>Behavioral Effects of High Altitudes</i>	139
<i>High Air Pressure Effects</i>	139
<i>Medical, Emotional, and Behavioral Effects of Air Pressure Changes</i>	139
<i>Summary of Air Pressure Effects</i>	140
Air Pollution and Behavior	140
<i>Perception of Air Pollution</i>	142
<i>Air Pollution and Health</i>	144
<i>Air Pollution and Performance</i>	145
<i>Air Pollution and Social Behavior</i>	146
<i>Summary of Air Pollution Effects on Behavior</i>	147
Integrating Weather and Pollution Effects: A Final Note	148
Chapter Summary	148
Suggested Projects	148

6

Personal Space and Territoriality 149

Introduction	149
Personal Space	150
<i>Functions of Personal Space</i>	150
<i>Methods for Studying Personal Space</i>	154
<i>Situational Determinants of Personal Space: Research Evidence</i>	154
<i>Individual Difference Determinants of Personal Space: Research Evidence</i>	158
<i>Interpersonal Positioning Effects</i>	161
<i>Spatial Zones That Facilitate Goal Fulfillment</i>	162
<i>Consequences of Too Much or Too Little Personal Space</i>	164
<i>Consequences of Personal Space Invasions</i>	169
<i>Summary of Personal Space</i>	175
Territorial Behavior: Keep Off My Turf	175
<i>Functions of Territoriality</i>	178
<i>Research on Territoriality in Humans</i>	179
Chapter Summary	187
Suggested Projects	190

7

Crowding 192

Introduction	192
Effects of Population Density on Animals	193
<i>Physiological Consequences of High Density for Animals</i>	194

<i>Behavioral Consequences of High Density for Animals</i>	195
<i>Conceptual Perspectives: Attempts to Understand High Density Effects in Animals</i>	198
Effects of High Density on Humans	199
<i>Methodologies Used to Study High Density in Humans</i>	199
<i>Feeling the Effects of Density: Its Consequences for Affect, Arousal, and Illness</i>	202
<i>Effects of Density on Social Behavior</i>	204
<i>Effects of High Density on Task Performance</i>	210
<i>Putting the Pieces Together: Conceptualizations of Density Effects on Humans</i>	211
<i>Eliminating the Causes and Effects of Crowding</i>	218
A Look to the Future	223
Chapter Summary	224
Suggested Projects	225

8

The City

227

Introduction	227
Perceiving and Experiencing the City	228
<i>Relationship Between Environmental Conditions and Imagery</i>	232
<i>Socioeconomic Status and Cognitive Mapping</i>	232
<i>Race and Cognitive Mapping</i>	233
<i>Gender and Cognitive Mapping</i>	234
<i>Relevant Experience and Cognitive Mapping</i>	234
<i>Summary</i>	238
Effects of Urban Life on the City Dweller: Conceptual Efforts	238
<i>Overload Notions</i>	238
<i>Environmental Stress</i>	239
<i>Behavioral Constraint</i>	239
<i>The City as an Overmanned Environment</i>	240
<i>Integrating the Various Formulations</i>	240
Effects of Urban Life on the City Dweller: Research Evidence	243
<i>Stress</i>	243
<i>Coping</i>	246
<i>Affiliative Behavior</i>	246
<i>Prosocial Behavior</i>	247
<i>Performance</i>	248
<i>Crime</i>	249
<i>Long-Term Behavioral Effects</i>	251
<i>Health</i>	252
<i>Summary</i>	252
Environmental Solutions to Urban Problems	254
<i>Defensible Space</i>	254

<i>Land Use</i>	255
<i>Social Factors</i>	255
<i>Urban Renewal</i>	256
<i>Summary</i>	262
Escaping from the City	262
Chapter Summary	263
Suggested Projects	263

9 Architecture, Design, and Behavior 265

Introduction	265
Extent of Architectural Influence	266
<i>An Historical Overview</i>	266
<i>Architectural Determinism</i>	266
<i>Environmental Possibilism</i>	267
<i>Environmental Probabilism</i>	267
Behavior and Elements of Architectural Design	267
<i>Lighting</i>	267
<i>Windows</i>	271
<i>Color</i>	272
<i>Aesthetics</i>	272
<i>Furnishings</i>	273
<i>Privacy</i>	274
The Design Process	278
<i>Congruence</i>	278
<i>Design Alternatives</i>	278
Stages in the Design Process	278
<i>Awareness of Design Alternatives</i>	280
<i>Selection of Behavioral Criteria</i>	283
<i>Behaviorally Based Research</i>	283
<i>Implementing the Design Process: Models for the Future</i>	284
Chapter Summary	288
Suggested Projects	288

10 Design in Selected Environments 290

Introduction	290
The Residential Setting	291
<i>Preferences</i>	292
<i>Use of Space in the Home</i>	292
<i>Satisfaction with the Home Environment</i>	295

<i>Proximity: The Effect of Occupying Nearby Territories</i>	296
Learning Environments	298
<i>Classroom Environments</i>	298
<i>Libraries</i>	300
<i>Museum Environments</i>	300
Pedestrian Environments: Shopping Malls, Plazas, and Crosswalks	304
Hospital Settings	306
Residential Care Facilities for the Aged	310
<i>Noninstitutional Residences for the Aged</i>	312
Chapter Summary	315
Suggested Projects	316

11 Environments for Work, Leisure, and the Future 317

Introduction	317
Work Environments	318
<i>Why Study the Design of the Work Environment?</i>	318
<i>Designing the Office Landscape</i>	319
<i>Personalization</i>	321
<i>Territoriality and Status in the Work Environment</i>	322
<i>Summary of Design in the Work Environment</i>	322
Leisure and Recreation Environments	323
<i>Wilderness and Camping Areas</i>	324
<i>Recreation Environments Affording Exercise</i>	328
<i>Recreational Environments for Children</i>	330
<i>Summary of Leisure and Recreation Environments</i>	332
Future Environments	334
<i>Living in Space</i>	334
<i>Experimental Undersea Environments</i>	336
Chapter Summary	340
Suggested Projects	340

12 Changing Behavior To Save the Environment 343

Introduction	343
Environmental Psychology and Saving the Environment	345
Environmental Education: Teaching Us What Is Wrong and How To Respond to It	347
Prompts: Reminders of What To Do and of What Not To Do	350

Reinforcement Techniques: What You Do Determines What You Get	352
<i>Positive Reinforcement: Encouraging Good Behavior</i>	353
<i>Negative Reinforcement and Punishment: Alternatives to Positive Reinforcement</i>	355
<i>Feedback: Letting Us Know How We're Doing</i>	355
Integrating and Evaluating the Various Approaches to Eliminating Environmentally Destructive Behavior	355
Approaches to Specific Environmental Problems	357
<i>Littering</i>	357
<i>Saving Energy at Home: Residential Energy Conservation</i>	363
<i>Energy Conservation and Transportation</i>	371
<i>Vandalism</i>	374
Curbing Environmentally Destructive Acts: An Assessment of the Present and the Future	377
Chapter Summary	377
Suggested Projects	378

APPENDIX: Methodological Approaches to Environmental Psychology **by David R. Mandel**

379

Introduction	379
Evaluating the Adequacy of Environmental Research	380
<i>Internal Validity</i>	380
<i>Construct Validity</i>	381
<i>External Validity</i>	381
<i>Experiential Realism</i>	381
Research Design Methodologies	382
<i>Experimental Research: When the Researcher Creates the Conditions</i>	383
<i>Correlational Studies: Capitalizing on Naturalistic "Manipulations"</i>	386
<i>Descriptive Research: Telling It Like It Is</i>	388
The Measurement Techniques	389
<i>Self-Report Measures</i>	389
<i>Non-Self-Report Measures</i>	399
Ethical Considerations in Environmental Research	404
<i>Informed Consent</i>	405
<i>Invasion of Privacy</i>	405
<i>Supplementary Readings</i>	406
References	407
Name Index	448
Subject Index	461