

# Essentials of Life-Span Development

SEVENTH EDITION



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Hill

John W. Santrock

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SEVENTH EDITION



**John W. Santrock**

University of Texas at Dallas





## ESSENTIALS OF LIFE-SPAN DEVELOPMENT

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## Brief Contents

- 1 Introduction **1**
- 2 Biological Beginnings **37**
- 3 Physical and Cognitive Development in Infancy **77**
- 4 Socioemotional Development in Infancy **117**
- 5 Physical and Cognitive Development in Early Childhood **143**
- 5 Socioemotional Development in Early Childhood **172**
- 7 Physical and Cognitive Development in Middle and Late Childhood **202**
- 3 Socioemotional Development in Middle and Late Childhood **233**
- 9 Physical and Cognitive Development in Adolescence **264**
- 0 Socioemotional Development in Adolescence **292**
- 1 Physical and Cognitive Development in Early Adulthood **317**
- 2 Socioemotional Development in Early Adulthood **341**
- 3 Physical and Cognitive Development in Middle Adulthood **363**
- 4 Socioemotional Development in Middle Adulthood **382**
- 5 Physical and Cognitive Development in Late Adulthood **398**
- 6 Socioemotional Development in Late Adulthood **430**
- 7 Death, Dying, and Grieving **446**





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# Contents

## **Introduction 1**

*Stories of Life-Span Development: How Did Ted Kaczynski Become Ted Kaczynski and Alice Walker Become Alice Walker? 1*

## **The Life-Span Perspective 2**

### **The Importance of Studying Life-Span Development 2**

### **Characteristics of the Life-Span Perspective 3**

### **Contemporary Concerns in Life-Span Development 6**

### **Gustavo Medrano, Clinical Psychologist 7**

## **The Nature of Development 11**

### **Biological, Cognitive, and Socioemotional Processes 11**

### **Periods of Development 12**

### **Conceptions of Age 13**

### **Developmental Issues 15**

## **Theories of Development 17**

### **Psychoanalytic Theories 18**

### **Cognitive Theories 20**

### **Behavioral and Social Cognitive Theories 23**

### **Ethological Theory 25**

### **Ecological Theory 26**

### **An Eclectic Theoretical Orientation 27**

## **Research in Life-Span Development 28**

**Methods for Collecting Data 28**

**Research Designs 31**

**Time Span of Research 33**

**Conducting Ethical Research 35**

**Summary 36**

**Key Terms 36**



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## **! Biological Beginnings 37**

*Stories of Life-Span Development: The Jim and Jim Twins 37*

**The Evolutionary Perspective 38**

**Natural Selection and Adaptive Behavior 38**

**Evolutionary Psychology 39**

**Genetic Foundations of Development 41**

**Genes and Chromosomes 42**

**Genetic Principles 44**

**Chromosome and Gene-Linked Abnormalities 45**

**Jennifer Leonhard, Genetic Counselor 48**

**The Interaction of Heredity and Environment: The**



**Nature-Nurture Debate 48**

**Behavior Genetics 48**

**Heredity-Environment Correlations 49**

**The Epigenetic View and Gene  $\times$  Environment (G  $\times$  E) Interaction 49**

**Conclusions About Heredity-Environment Interaction 51**

**Prenatal Development 52**

**The Course of Prenatal Development 52**

**Prenatal Tests 56**

**Infertility and Reproductive Technology 57**

**Hazards to Prenatal Development 58**

**Prenatal Care 65**

**Normal Prenatal Development 66**

**Birth and the Postpartum Period 66**

**The Birth Process 66**

**The Transition from Fetus to Newborn 69**

**Linda Pugh, Perinatal Nurse 70**

**Low Birth Weight and Preterm Infants 70**

**Bonding 73**

**The Postpartum Period 73**

**Summary 75**

**Key Terms 76**

**Physical and Cognitive Development in Infancy 77**

**Physical Growth and Development in Infancy 78**

**Patterns of Growth 78**

**Height and Weight 79**

**The Brain 80**

**Sleep 83**

**Nutrition 85**

**Faize Mustafa-Infante, Pediatric Specialist Focusing on  
Childhood Obesity 87**

**Motor Development 87**

**Dynamic Systems Theory 87**

**Reflexes 88**

**Gross Motor Skills 89**

**Fine Motor Skills 92**

**Sensory and Perceptual Development 93**

**Exploring Sensory and Perceptual Development 93**

**Visual Perception 95**

**Other Senses 96**

**Intermodal Perception 98**

**Nature, Nurture, and Perceptual Development 99**

**Perceptual Motor Coupling 100**

**Cognitive Development 100**

**Piaget's Theory 100**

## **Learning, Remembering, and Conceptualizing 104**

**Language Development 107**

**Defining Language 108**

**How Language Develops 108**

**Biological and Environmental Influences 111**

**An Interactionist View 114**

**Summary 115**

**Key Terms 116**

## **‡ Socioemotional Development in Infancy 117**

*Stories of Life-Span Development: Darius and His Father 117*

**Emotional and Personality Development 118**

**Emotional Development 118**

**Temperament 122**

**Personality Development 126**

**Social Orientation and Attachment 128**

**Social Orientation and Understanding 128**

**Attachment 130**

**Social Contexts 134**

**The Family 135**

**Child Care 138**

**Wanda Mitchell, Child-Care Director 140**

**Summary 142**

**Key Terms 142**



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## **Physical and Cognitive Development in Early Childhood 143**

*Stories of Life-Span Development: Reggio Emilia's Children 143*

**Physical Changes 144**

**Body Growth and Change 144**

**The Brain 145**

**Motor Development 145**

**Sleep 147**

**Nutrition and Exercise 147**

**Illness and Death 149**

**Cognitive Changes 150**

**Piaget's Preoperational Stage 150**

**Vygotsky's Theory 153**

**Information Processing 157**

**Helen Hadani, Developmental Psychologist, Toy Designer,  
and Associate Director of Research for the Center for  
Childhood Creativity 162**

**Language Development 163**

**Understanding Phonology and Morphology 164**

**Changes in Syntax and Semantics 164**

**Advances in Pragmatics 165**

**Young Children's Literacy 166**

**Early Childhood Education 166**

**Variations in Early Childhood Education 166**

**Education for Young Children Who Are Disadvantaged  
168**

**Yolanda Garcia, Director of Children's Services, Head  
Start 169**

**Controversies in Early Childhood Education 170**

**Summary 171**

**Key Terms 171**

**8 Socioemotional Development in Early Childhood 172**

*Stories of Life-Span Development: Nurturing Socioemotional Development 172*

**Emotional and Personality Development 173**

**The Self 173**

**Emotional Development 175**

**Moral Development 177**

**Gender 179**

**Families 182**

**Parenting 182**

**Darla Botkin, Marriage and Family Therapist 186**

**Child Maltreatment 187**

**Sibling Relationships and Birth Order 188**

**The Changing Family in a Changing Society 190**

**Peer Relations, Play, and Media/Screen Time 196**

**Peer Relations 196**

**Play 197**

**Media and Screen Time 199**

**Summary 201**

**Key Terms 201**

**7 Physical and Cognitive Development in Middle and Late Childhood 202**

*Stories of Life-Span Development: Angie and Her Weight 202*

**Physical Changes and Health 203**

**Body Growth and Change 203**

**The Brain 203**

**Motor Development 204**

**Exercise 204**

**Health, Illness, and Disease 205**

**Sharon McLeod, Child Life Specialist 206**

**Children with Disabilities 207**

**The Scope of Disabilities 207**

**Educational Issues 211**

**Cognitive Changes 212**

**Piaget's Cognitive Developmental Theory 212**

**Information Processing 214**



**Intelligence 219**

**Language Development 227**

**Vocabulary, Grammar, and Metalinguistic Awareness 228**

**Reading 228**

**Second-Language Learning and Bilingual Education 229**

**Summary 231**

**Key Terms 232**

**Socioemotional Development in Middle and Late Childhood 233**

*Stories of Life-Span Development: Learning in Troubled Schools 233*

**Emotional and Personality Development 234**

**The Self 234**

**Emotional Development 237**

**Melissa Jackson, Child Psychiatrist 240**

**Moral Development 240**

**Gender 244**

**Families 247**

**Developmental Changes in Parent-Child Relationships 247**

**Parents as Managers 248**

**Attachment 248**

**Stepfamilies 248**

**Peers 250**

**Developmental Changes 250**

**Peer Status 250**

**Social Cognition 251**

**Bullying 252**

**Friends 253**

**Schools 254**

**Contemporary Approaches to Student Learning 254**

**Socioeconomic Status, Ethnicity, and Culture 256**

**Ahou Vaziri, Teach for America Instructor 258**

**Summary 262**

**Key Terms 263**



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**Physical and Cognitive Development in Adolescence 264**

*Stories of Life-Span Development: Annie, Arnie, and Katie 264*

**The Nature of Adolescence 265**

**Physical Changes 266**

**Puberty 266**

**The Brain 269**

**Adolescent Sexuality 271**

**Lynn Blankinship, Family and Consumer Science**

**Educator 276**

**Adolescent Health 277**

**Nutrition and Exercise 277**

**Bonnie Halpern-Felsher, University Professor in Pediatrics and Director of Community Efforts to Improve Adolescents' Health 278**

**Sleep Patterns 279**

**Leading Causes of Death in Adolescence 281**

**Substance Use and Abuse 281**

**Eating Disorders 282**

**Adolescent Cognition 284**

**Piaget's Theory 284**

**Adolescent Egocentrism 285**

**Information Processing 286**

**Schools 288**

**The Transition to Middle or Junior High School 288**

**Effective Schools for Young Adolescents 288**

**High School 289**

**Service Learning 290**

**Summary 291**

**Key Terms 291**

## **10 Socioemotional Development in Adolescence 292**

*Stories of Life-Span Development: Jewel Cash, Teen Dynamo 292*

**Identity 293**

**What Is Identity? 293**

**Erikson's View 294**

**Developmental Changes 294**

**Ethnic Identity 296**

**Families 297**

**Parental Management and Monitoring 297**

**Autonomy and Attachment 298**

**Parent-Adolescent Conflict 299**

**Peers 300**

**Friendships 300**

**Peer Groups 301**

**Dating and Romantic Relationships 303**

**Culture and Adolescent Development 305**

**Cross-Cultural Comparisons 305**

**Socioeconomic Status and Poverty 307**

**Ethnicity 307**

**Media and Screen Time 308**

**Adolescent Problems 310**

**Juvenile Delinquency 310**

**Depression and Suicide 311**

**Rodney Hammond, Health Psychologist 312**

**The Interrelation of Problems and Successful  
Prevention/Intervention Programs 314**

Summary 316

Key Terms 316

**11 Physical and Cognitive Development in Early Adulthood  
317**

*Stories of Life-Span Development: Dave Eggers, Pursuing a Career in the Face of Stress 317*

**The Transition from Adolescence to Adulthood 318**

**Becoming an Adult 318**

**The Transition from High School to College 320**

**Grace Leaf, College/Career Counselor and College  
Administrator 321**

**Physical Development 321**

**Physical Performance and Development 322**

**Health 322**

**Sexuality 326**

**Sexual Activity in Emerging Adulthood 326**

**Sexual Orientation and Behavior 327**

**Sexually Transmitted Infections 329**

**Cognitive Development 331**

**Cognitive Stages 331**

**Creativity 332**

**Achievement, Careers, and Work 333**

**Achievement 333**

**Careers 335**

**Work 336**

**Summary 340**

**Key Terms 340**



Peter Cade/Photodisc/Getty Images

## **12 Socioemotional Development in Early Adulthood 341**

*Stories of Life-Span Development: Gwenna's Pursuit and Greg's Lack of Commitment 341*

**Stability and Change from Childhood to Adulthood 342**

**Love and Close Relationships 344**

**Intimacy 344**

**Friendship 345**

**Romantic and Affectionate Love 345**

**Consummate Love 347**

**Cross-Cultural Variations in Romantic Relationships 347**

**Adult Lifestyles 348**

**Single Adults 348**

**Cohabiting Adults 349**

**Married Adults 350**

**Divorced Adults 353**



**Remarried Adults 354**

**Gay and Lesbian Adults 355**

**Challenges in Marriage, Parenting, and Divorce 356**

**Making Marriage Work 356**

**Becoming a Parent 357**

**Janis Keyser, Parent Educator 358**

**Dealing with Divorce 358**

**Gender and Communication Styles, Relationships, and Classification 359**

**Gender and Communication Styles 359**

**Gender and Relationships 360**

**Gender Classification 360**

**Summary 361**

**Key Terms 362**

**13 Physical and Cognitive Development in Middle Adulthood 363**

*Stories of Life-Span Development: Changing Perceptions of Time 363*

**The Nature of Middle Adulthood 364**

**Changing Midlife 364**

**Defining Middle Adulthood 365**

**Physical Development 366**

**Physical Changes 366**

**Chronic Disorders and Mortality Rates 369**

**Sexuality 370**

**Cognitive Development 373**

**Intelligence 373**

**Information Processing 375**

**Careers, Work, and Leisure 376**

**Work in Midlife 376**

**Career Challenges and Changes 377**

**Leisure 378**

**Religion and Meaning in Life 379**

**Religion and Adult Lives 379**

**Religion and Health 379**

**Gabriel Dy-Liacco, University Professor and Pastoral Counselor 380**

**Meaning in Life 380**

**Summary 381**

**Key Terms 381**

**14 Socioemotional Development in Middle Adulthood 382**

*Stories of Life-Span Development: Sarah and Wanda, Middle-Age Variations 382*

**Personality Theories and Development 383**

**Adult Stage Theories 383**

**The Life-Events Approach 385**

**Stress and Personal Control in Midlife 386**

**Stability and Change 387**

**Longitudinal Studies 387**

**Conclusions 390**

**Close Relationships 391**

**Love, Marriage, and Divorce at Midlife 391**

**The Empty Nest and Its Refilling 393**

**Sibling Relationships and Friendships 394**

**Grandparenting 394**

**Intergenerational Relationships 396**

**Summary 397**

**Key Terms 397**

**15 Physical and Cognitive Development in Late Adulthood  
398**

*Stories of Life-Span Development: Learning to Age Successfully 398*

**Longevity, Biological Aging, and Physical Development  
399**

**Longevity 399**

**Biological Theories of Aging 402**

**The Aging Brain 404**

**Physical Development 407**

**Sexuality 410**

**Health 411**

**Health Problems 411**

**Exercise, Nutrition, and Weight 412**

**Health Treatment 414**

**Sarah Kagan, Geriatric Nurse 416**

**Cognitive Functioning 416**  
**Multidimensionality and Multidirectionality 416**  
**Use It or Lose It 421**  
**Training Cognitive Skills 422**  
**Cognitive Neuroscience and Aging 423**  
**Work and Retirement 424**  
**Adjustment to Retirement 425**  
**Mental Health 426**  
**Dementia and Alzheimer Disease 426**  
**Parkinson Disease 428**  
**Summary 429**  
**Key Terms 429**



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## **16 Socioemotional Development in Late Adulthood 430**

*Stories of Life-Span Development: Bob Cousy, Adapting to Life as an Older Adult 430*

**Theories of Socioemotional Development 431**

**Erikson's Theory 431**

**Activity Theory 432**

**Socioemotional Selectivity Theory 432**

<b>Selective Optimization with Compensation Theory</b>	<b>434</b>
<b>Personality and Society</b>	<b>435</b>
<b>Personality</b>	<b>435</b>
<b>Older Adults in Society</b>	<b>436</b>
<b>Families and Social Relationships</b>	<b>437</b>
<b>Lifestyle Diversity</b>	<b>437</b>
<b>Attachment</b>	<b>439</b>
<b>Older Adult Parents and Their Adult Children</b>	<b>439</b>
<b>Friendship</b>	<b>440</b>
<b>Social Support and Social Integration</b>	<b>440</b>
<b>Altruism and Volunteerism</b>	<b>441</b>
<b>Ethnicity, Gender, and Culture</b>	<b>442</b>
<b>Ethnicity</b>	<b>442</b>
<b>Gender</b>	<b>442</b>
<b>Culture</b>	<b>442</b>
<b>Norma Thomas, Social Work Professor and Administrator</b>	<b>443</b>
<b>Successful Aging</b>	<b>443</b>
<b>Summary</b>	<b>445</b>
<b>Key Terms</b>	<b>445</b>
<b>17 Death, Dying, and Grieving</b>	<b>446</b>
<i>Stories of Life-Span Development: Paige Farley-Hackel and Ruth McCourt, 9/11/2001</i>	<b>446</b>
<b>Defining Death and Life/Death Issues</b>	<b>447</b>

**Determining Death 447**  
**Decisions Regarding Life, Death, and Health Care 447**  
**Kathy McLaughlin, Home Hospice Nurse 450**  
**Death and Sociohistorical, Cultural Contexts 451**  
**Changing Historical Circumstances 451**  
**Death in Different Cultures 451**  
**Facing One's Own Death 452**  
**Kübler-Ross' Stages of Dying 452**  
**Perceived Control and Denial 453**  
**Coping with the Death of Someone Else 453**  
**Communicating with a Dying Person 453**  
**Grieving 454**  
**Making Sense of the World 457**  
**Losing a Life Partner 457**  
**Forms of Mourning 458**  
**Summary 459**  
**Key Terms 460**  
**Glossary G-1**  
**References R-1**  
**Name Index NI-1**  
**Subject Index SI**



# How Would You?



## Psychology Professions

- Eye-tracking research, pg. 95
- Encouraging language development, pg. 114
- Effects of attachment in childhood, pg. 132
- Parental versus nonparental child care, pg. 142
- Universal preschool education, pg. 170
- Coparenting, pg. 186
- Autism spectrum disorders, pg. 211
- Multiple intelligences versus general intelligence, pg. 221
- Environmental influences on IQ, pg. 223
- Social media and adolescent relationships, pg. 302
- Dating in early adolescence, pg. 304
- Depression in adolescents, pg. 313
- Suicide prevention in adolescents, pg. 314
- Exploring sexual orientations, pg. 329
- Online relationships in young adulthood, pg. 346
- Cohabitation before marriage, pg. 350
- Same-sex relationships, pg. 355
- Gender identity, pg. 361
- Memory decline and training, pg. 376
- Gender differences in response to stress, pg. 387
- Personality factors and relationships, pg. 389
- Adult children returning home, pg. 393
- Neurogenesis, pg. 406
- Fitness and quality of life in older adults, pg. 414
- Executive function and healthy aging, pg. 419
- Older adults as employees, pg. 425



## **Education Professions**

- Bronfenbrenner's ecological theory, pg. 26
- Generational differences, pg. 35
- Child-care programs for infants, pg. 140
- ZPD and scaffolding, pg. 154
- Enhancing higher-level cognition, pg. 160
- Developmentally appropriate education, pg. 168
- Productive outcomes of play, pg. 199
- Exercise and academic success, pg. 205
- Learning disabilities and ADHD, pg. 207
- Improving children's metacognitive skills, pg. 217
- Programs for gifted children, pg. 226
- Improving self-esteem, pg. 236
- Moral development and gender, pg. 241
- Academic skills and gender, pg. 245
- Rejected peers, pg. 251
- Relationships among diverse students, pg. 258
- Fixed and growth mindsets in students, pg. 261
- Abstinence and contraception use, pg. 277
- Transition to middle school, pg. 288
- Ethnic identities in adolescence, pg. 297
- Post-formal thought, pg. 332
- Intrinsic and extrinsic motivation, pg. 334
- Employment and college performance, pg. 338
- Reminiscence therapy, pg. 432
- Selection, optimization, and compensation, pg. 434
- Benefits of volunteering, pg. 442
- Stages of dying, pg. 452



## Social Work Professions

- Influence of nonnormative life events, pg. 6
- Advocacy for older adults, pg. 11
- Use of forethought in counseling, pg. 24
- Risks during prenatal development, pg. 54
- Preterm and low birth weight babies, pg. 71
- Poverty and literacy, pg. 112
- Temperament and goodness of fit, pg. 126
- Nutrition for young children, pg. 148
- Effects of parental smoking on small children, pg. 150
- Head Start programs, pg. 169
- Emotion-coaching parents, pg. 176
- Authoritarian and authoritative parenting styles, pg. 182
- Post-divorce family processes, pg. 193
- Coping with a traumatic event, pg. 239
- Influence of attachment in adolescence, pg. 298
- Family dynamics, peers, and juvenile delinquency, pg. 311
- Binge drinking among college students, pg. 325
- Grit and goal-setting, pg. 335
- Fast sex and slow love, pg. 349
- Early and late midlife, pg. 365
- Religion and physical health, pg. 380
- Causes of gray divorce, pg. 392
- Grandparents as surrogate parents, pg. 395
- Walking for good health in older adulthood, pg. 407
- Dual sensory loss, pg. 409
- Socioemotional selectivity theory, pg. 433
- Loss and restoration stressors in bereavement, pg. 456
- Gender differences in widowhood, pg. 458



## Health Care Professions

- Sociocultural contexts and diversity, pg. 8
- Chromosome and gene-linked abnormalities, pg. 45
- Alcohol use during pregnancy, pg. 59
- Stress during pregnancy, pg. 64

Therapies for low birth weight babies, pg. 72  
SIDS prevention, pg. 84  
Parenting and marital satisfaction, pg. 135  
Types of child maltreatment, pg. 187  
Health risks to bullying victims, pg. 253  
Early maturation in girls, pg. 269  
Risky sexual behavior among adolescents, pg. 273  
Lack of quality sleep, pg. 279  
Understanding anorexia, pg. 283  
Low SES and adolescent development, pg. 307  
Obesity in young adulthood, pg. 324  
Hooking up and friends with benefits, pg. 326  
Health risks associated with obesity, pg. 367  
Cardiovascular health, pg. 368  
Hormone replacement therapy, pg. 371  
Low-intensity shockwave therapy for ED, pg. 372  
Life expectancies of women and men, pg. 400  
Sexual relationships in old age, pg. 411  
Personality change in late adulthood, pg. 435  
Successful aging, pg. 444  
Defining brain death, pg. 447  
Hospice care, pg. 450  
Communicating with a dying person, pg. 454



## **Human Development and Family Studies Professions**

Conceptions of age, pg. 14  
Evolution and behavior, pg. 41  
Heredity-environment interaction, pg. 51  
Postpartum adjustment, pg. 75  
Benefits of breast feeding, pg. 86  
Joint attention with infants, pg. 105  
Gesturing and autism spectrum disorders, pg. 108  
Soothing a crying baby, pg. 121  
Autonomy in toddlers, pg. 128  
Improving literacy skills, pg. 166  
Influences on gender development, pg. 180

Effects of parental employment on children, pg. 191  
Effects of too much screen time, pg. 200  
ADHD treatments and coping methods, pg. 209  
Stepparenting, pg. 249  
Social media and body dissatisfaction, pg. 268  
Parental monitoring and substance abuse, pg. 282  
Adolescents and screen time, pg. 309  
Emerging adulthood, pg. 318  
Connecting infant and adult attachment styles, pg. 343  
Premarital education, pg. 352  
Making marriage work, pg. 356  
Benefits of leisure activities, pg. 378  
Support for generativity, pg. 384  
Personality change in middle age, pg. 391  
Helicopter and lawn mower parents, pg. 394  
Sandwich or pivot generation, pg. 396  
Wisdom and old age, pg. 420  
Attachment in late adulthood, pg. 439

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## About the Author

### John W. Santrock

**John Santrock** received his Ph.D. from the University of Minnesota in 1973. He taught at the University of Charleston and the University of Georgia before joining the Program in Psychology at the University of Texas at Dallas, where he currently teaches a number of undergraduate courses and received the University's Effective Teaching Award. In 2010, he created the UT-Dallas Santrock undergraduate scholarship, an annual award that is given to outstanding undergraduate students majoring in developmental psychology to enable them to attend research conventions. In 2019, he created an endowment that will permanently provide the travel awards for students at UT-Dallas in future decades. Dr. Santrock and his wife, Mary Jo, also created a permanent endowment that will provide academic scholarships for six to ten undergraduate psychology students each year, with preference given to those majoring in developmental psychology.

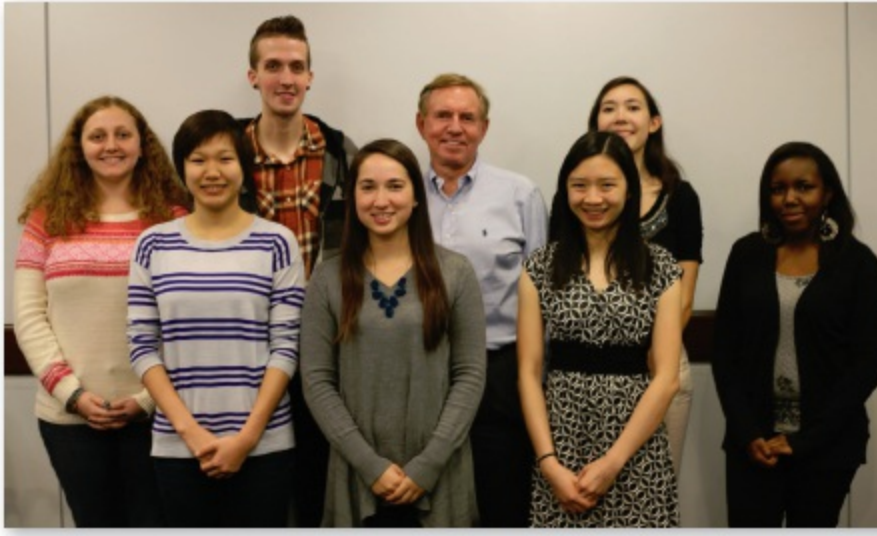
John has been a member of the editorial boards of *Child Development* and *Developmental Psychology*. His research on father custody is widely cited and used in expert witness testimony to promote flexibility and alternative considerations in custody disputes.

John also has authored these exceptional McGraw Hill texts: *Child Development* (15th edition), *Children* (15th edition), *Adolescence* (17th edition), *Life-Span Development* (18th edition), *A Topical Approach to Life-Span Development* (10th edition), and *Educational Psychology* (7th edition).

For many years, John was involved in tennis as a player, teaching professional, and coach of professional tennis players. At the University of Miami (FL), the tennis team on which he played still holds the NCAA Division I record for most consecutive wins (137) in any sport. John has been married for four decades to his wife, Mary Jo, who created and directed the first middle school program for children with learning disabilities and behavioral disorders in Clarke County Schools in Athens, Georgia, when he was a professor at the University of Georgia. More recently, Mary Jo has worked as a Realtor. John and Mary Jo have two daughters—Tracy, who worked for a number of years as a technology marketing specialist, and Jennifer, who has been a medical sales specialist. However, recently both have followed in their mother's footsteps and are now Realtors. Recently, Jennifer was inducted into the SMU sports hall of fame, only the fifth female to ever have been given this award. John and Mary Jo have one granddaughter, Jordan, age 28, who works at Ernst &



Young accounting firm, and two grandsons, Alex, age 15, and Luke, age 13. In the last two decades, John also has spent time painting divisionist and expressionist art.



**John Santrock (back row middle) with the 2015 recipients of the Santrock Travel Scholarship Award in developmental psychology. Created by Dr. Santrock, this annual award provides undergraduate students with the opportunity to attend a professional meeting. A number of the students shown here attended the Society for Research in Child Development conference.**

Courtesy of Jessica Serna

## **Dedication:**

*With special appreciation to my wife, Mary Jo.*

# Acknowledgments

The development and writing of *Essentials of Life-Span Development* has been strongly influenced by a remarkable group of consultants, reviewers, and adopters.

## Expert Consultants

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**David Moore**, *Pitzer College and Claremont University*

## Applications Contributors

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# 1 Introduction



*Ariel Skelley/Getty Images*

## CHAPTER OUTLINE

### **THE LIFE-SPAN PERSPECTIVE**

The Importance of Studying Life-Span Development  
Characteristics of the Life-Span Perspective  
Contemporary Concerns in Life-Span Development

### **THE NATURE OF DEVELOPMENT**

Biological, Cognitive, and Socioemotional Processes  
Periods of Development  
Conceptions of Age  
Developmental Issues

### **THEORIES OF DEVELOPMENT**

Psychoanalytic Theories  
Cognitive Theories  
Behavioral and Social Cognitive Theories  
Ethological Theory  
Ecological Theory  
An Eclectic Theoretical Orientation

## **RESEARCH IN LIFE-SPAN DEVELOPMENT**

Methods for Collecting Data  
Research Designs  
Time Span of Research  
Conducting Ethical Research

### **Stories of Life-Span Development: How Did Ted Kaczynski Become Ted Kaczynski and Alice Walker Become Alice Walker?**

Ted Kaczynski sprinted through high school, not bothering with his junior year and making only passing efforts at social contact. Off to Harvard at age 16, Kaczynski was a loner during his college years. One of his roommates at Harvard said that he avoided people by quickly shuffling by them and slamming the door behind him. After obtaining his Ph.D. in mathematics at the University of Michigan, Kaczynski became a professor at the University of California at Berkeley. His colleagues there remember him as hiding from social interaction—no friends, no allies, no networking.

After several years at Berkeley, Kaczynski resigned and moved to a rural area of Montana, where he lived as a hermit in a crude shack for 25 years. Town residents described him as a bearded eccentric. Kaczynski traced his own difficulties to growing up as a genius in a kid's body and sticking out like a sore thumb in his surroundings as a child. In 1996, he was arrested and charged as the notorious Unabomber, America's most wanted killer. Over the course of 17 years, Kaczynski had sent 16 mail bombs that left 23 people wounded or maimed and 3 people dead. In 1998, he pleaded guilty to the offenses and was sentenced to life in prison.

A decade before Kaczynski mailed his first bomb, Alice Walker spent her days battling racism in Mississippi. She had recently won her first writing fellowship, but rather than use the money to follow her dream of page 2

moving to Senegal, Africa, she put herself into the heart and heat of the civil rights movement. Walker had grown up knowing the brutal effects of poverty and racism. Born in 1944, she was the eighth child of Georgia sharecroppers who earned \$300 a year.



Ted Kaczynski, the convicted Unabomber, traced his difficulties to growing up as a genius in a kid's body and not fitting in when he was a child.

*(Top) Seanna O'Sullivan; (bottom) WBBM-TV/AFP/Getty Images*





Alice Walker won the Pulitzer Prize for her book *The Color Purple*. Like the characters in her book, Walker overcame pain and anger to triumph and celebrate the human spirit.

(Top) Monica Morgan/WireImage/Getty Images (bottom) Courtesy of Alice Walker

When Walker was 8, her brother accidentally shot her in the left eye with a BB gun. Since her parents had no car, it took them a week to get her to a hospital. By the time she received medical care, she was blind in that eye, and it had developed a disfiguring layer of scar tissue. Despite the counts against her, Walker overcame pain and anger and went on to win a Pulitzer Prize for her book *The Color Purple*. She became not only a novelist but also an essayist, a poet, a short-story writer, and a social activist.

What leads one individual, so full of promise, to commit brutal acts of violence and another to turn poverty and trauma into a rich literary harvest? If you have ever wondered why people turn out the way they do, you have asked yourself the central question we will explore in this edition.

*Essentials of Life-Span Development* is a window into the journey of human development—your own and that of every other member of the human species. Every life is distinct, a new biography in the world. Examining the shape of life-span development helps us to understand it better. In this chapter, we explore what it means to take a life-span

perspective on development, examine the nature of development, and outline how science helps us to understand it. ■

## The Life-Span Perspective

Each of us develops partly like all other individuals, partly like some other individuals, and partly like no other individual. Most of the time we notice the qualities in an individual that make that person unique. But as humans, we have all traveled some common paths. Each of us—Leonardo da Vinci, Joan of Arc, George Washington, Martin Luther King, Jr., and you—walked at about 1 year, engaged in fantasy play as a young child, and became more independent as a youth. Each of us, if we live long enough, will experience hearing problems and the death of family members and friends. This is the general course of our **development**, the pattern of movement or change that begins at conception and continues through the human life span.

**development** The pattern of movement or change that starts at conception and continues through the life span.

In this section we explore what is meant by the concept of development and why the study of life-span development is important. We outline the main characteristics of the life-span perspective and discuss various influences on development. In addition, we examine some contemporary concerns related to life-span development.

## The Importance of Studying Life-Span Development

How might you benefit from studying life-span development? Perhaps you are, or will be, a parent or teacher. If so, responsibility for children is, or will be, a part of your everyday life. The more you learn about them, the better you can raise them or teach them. Perhaps you hope to gain some page 3 insight about your own history—as an infant, a child, an adolescent, or a young adult. Perhaps you want to know more about what your life will be like as you grow through the adult years—as a middle-aged adult, or as an adult in old age, for example. Or perhaps you just stumbled across this course, thinking that it sounded intriguing. Whatever your reasons, you will discover that the study of life-span development addresses some provocative questions about who we are, how we came to be this way, and where our

future will take us.

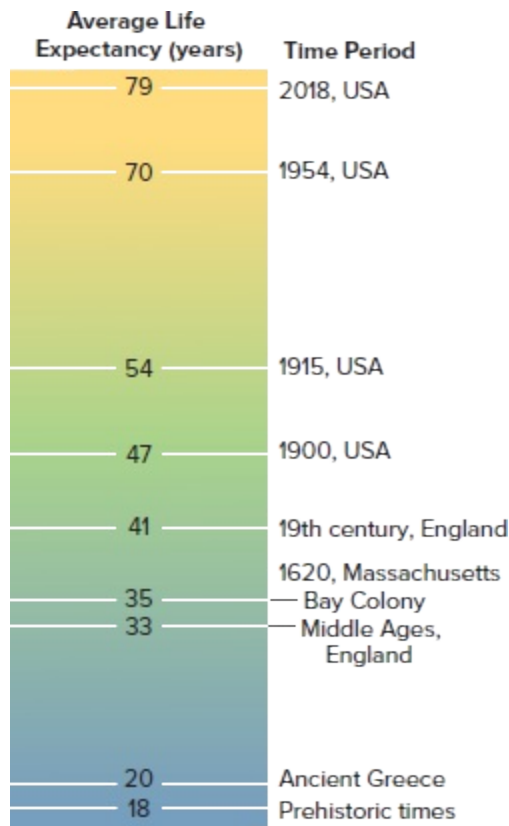
In our exploration of development, we will examine the life span from the point of conception until the time when life (at least, life as we know it) ends. You will see yourself as an infant, as a child, and as an adolescent, and you will learn about how those years influenced the kind of individual you are today. And you will see yourself as a young adult, as a middle-aged adult, and as an adult in old age, and you may be motivated to consider how your experiences will affect your development through the remainder of your adult years.

## Characteristics of the Life-Span Perspective

Growth and development are dramatic during the first two decades of life, but development is not something that happens only to children and adolescents (Leipold, 2020). The traditional approach to the study of development emphasizes extensive change from birth to adolescence (especially during infancy), little or no change in adulthood, and decline in old age. Yet a great deal of change does occur in the decades after adolescence. The life-span approach emphasizes developmental change throughout adulthood as well as childhood (Antonucci & Webster, 2019; Parra-Rizo & Sanchis-Soler, 2020).

## Life Expectancy

Recent increases in human life expectancy have contributed to greater interest in the life-span approach to development. The upper boundary of the human life span (based on the oldest age documented) is 122 years. The maximum life span of humans has not changed since the beginning of recorded history. What has changed is life expectancy, the average number of years that a person born in a particular year can expect to live. In the twentieth century alone, life expectancy increased by 30 years, thanks to improvements in sanitation, nutrition, and medicine (see [Figure 1](#)). For individuals born in 2017 in the United States, their life expectancy is 78.6 years of age (Arias & Xu, 2019). Today, for most individuals in developed countries, childhood and adolescence represent only about one-fourth of their lives.



**Figure 1 Human Life Expectancy at Birth from Prehistoric Time to Contemporary Times .**

For the first time in U.S. history, in 2019, there were more people over 60 years of age than under 18 years of age. In less than a century, more years were added to human life expectancy than in all of the prior millennia.

For the first time in U.S. history, in 2019 there were more people over 60 years of age than under 18 years of age. In less than a century, more years were added to human life expectancy than in all of the prior millennia.

Laura Carstensen (2015, 2016, 2019) recently described the challenges and opportunities involved in this dramatic increase in life expectancy. In her view, the remarkable increase in the number of people living to old age has taken place so quickly that science, technology, and behavioral changes have not kept pace. She proposes that the challenge is to transform a world constructed mainly for young people into a world that is more compatible and supportive for the increasing number of people living to 100 and older.

In further commentary, Carstensen (2015, p. 70) remarked that making this transformation would be no small feat:

. . . parks, transportation systems, staircases, and even hospitals presume that the users have both strength and stamina; suburbs across the country are built for two parents and their young children, not single people, multiple generations or elderly people who are not able to drive. Our education system serves the needs of young children and young adults and offers little more than recreation for experienced people.

page 4

Indeed, the very conception of work as a full-time endeavor ending in the early sixties is ill suited for long lives. Arguably the most troubling aspect of our current perspective on aging is that we fret about ways that older people lack the qualities of younger people rather than exploit a growing new resource right before our eyes: citizens who have deep expertise, emotional balance, and the motivation to make a difference (Carstensen, 2019).

Certainly, recent progress has been made in improving the lives of older adults. In our discussion of late adulthood, you will read about researchers who are exploring ways to modify the activity of genes related to aging, methods for improving brain functioning in older people, medical discoveries for slowing or even reversing the effects of various chronic diseases, and ways to prepare for a better quality of life when we get old, including strategies for staying cognitively sharp, maintaining our physical fitness, and becoming more satisfied with our lives as older adults. But much more remains to be accomplished, as described by Laura Carstensen and others (Lin & others, 2020; Rowe & others, 2019).

## Dimensions of the Life-Span Perspective

The belief that development occurs throughout life is central to the life-span perspective on human development, but this perspective has other characteristics as well. According to life-span development expert Paul Baltes (1939–2006), the [life-span perspective](#) views development as lifelong, multidimensional, multidirectional, plastic, multidisciplinary, and contextual, and as a process that involves growth, maintenance, and regulation of loss (Baltes, 1987, 2003; Baltes, Lindenberger, & Staudinger, 2006). In this view, it is important to understand that development is constructed through

biological, sociocultural, and individual factors working together (Baltes, Reuter-Lorenz, & Rösler, 2006). Let's look at each of these characteristics.

**life-span perspective** The perspective that development is lifelong, multidimensional, multidirectional, plastic, multidisciplinary, and contextual; that it involves growth, maintenance, and regulation; and that it is constructed through biological, sociocultural, and individual factors working together.

**Development Is Lifelong** In the life-span perspective, early adulthood is not the endpoint of development; rather, no age period dominates development. Researchers increasingly study the experiences and psychological orientations of adults at different points in their lives. Later in this chapter we describe the age periods of development and their characteristics.

**Development Is Multidimensional** Development consists of biological, cognitive, and socioemotional dimensions. Even within each of those dimensions, there are many components (Bermudez, 2020). The cognitive dimension, for example, includes attention, memory, abstract thinking, speed of processing information, and social intelligence. At every age, changes occur in every dimension. Changes in one dimension also affect development in the other dimensions.

To get an idea of how interactions occur, consider the development of Ted Kaczynski, the so-called Unabomber discussed at the beginning of the chapter. When he was 6 months old, he was hospitalized with a severe allergic reaction, and his parents were rarely allowed to visit him. According to his mother, the previously happy baby was never the same after his hospital stay. He became withdrawn and unresponsive. As Ted grew up, he had periodic “shutdowns” accompanied by rage. In his mother's view, events that occurred during her son's infancy warped the development of his mind and emotions.

**Development Is Multidirectional** Throughout life, some dimensions or components of a dimension expand and others shrink (Gazes & others, 2020). For example, when one language (such as English) is acquired early in development, the capacity for acquiring second and third languages (such as Spanish and Chinese) decreases later in development, especially page 5 after early childhood (Levitt, 1989). During adolescence, as individuals establish romantic relationships, their relationships with friends might decrease. During late adulthood, older adults might become wiser by

being able to call on experience to guide their intellectual decision making (Kunzmann, 2019), but they perform more poorly on tasks that require speed in processing information (Salthouse, 2020).

**Development Is Plastic** Even at 10 years old, Ted Kaczynski was extraordinarily shy. Was he destined to remain forever uncomfortable with people? Developmentalists debate how much plasticity people have in various dimensions at different points in their development (Cuestas Torres & Cardenas, 2020; Thomas & Ansari, 2020). Plasticity means the capacity for change. For example, can you still improve your intellectual skills when you are in your seventies or eighties? Or might these intellectual skills be fixed by the time you are in your thirties so that further improvement is impossible? Researchers have found that the cognitive skills of older adults can be improved through training and the development of better strategies (Dorrenbacher & others, 2020; Lee, Charles, & Almeida, 2020). However, possibly we possess less capacity for change when we become old (Salthouse, 2020). The exploration of plasticity and its constraints is a key element on the contemporary agenda for developmental research (Walker, 2019).

**Developmental Science Is Multidisciplinary** Psychologists, sociologists, anthropologists, neuroscientists, and medical researchers all share an interest in unlocking the mysteries of development through the life span. How do your heredity and health limit your intelligence? Do intelligence and social relationships change with age in the same way around the world? How do families and schools influence intellectual development? These are examples of research questions that cut across disciplines.

**Development Is Contextual** All development occurs within a [context](#), or setting. Contexts include families, schools, peer groups, churches, cities, neighborhoods, university laboratories, countries, and so on. Each of these settings is influenced by historical, economic, social, and cultural factors (Parke & Elder, 2020).

**context** The setting in which development occurs, which is influenced by historical, economic, social, and cultural factors.

Contexts, like individuals, change (Levy & Wright, 2020; Marks, Woolverton, & Garcia Coll, 2020). Thus, individuals are changing beings in a changing world. As a result of these changes, contexts exert three types of



influences (Baltes, 2003): (1) normative age-graded influences, (2) normative history-graded influences, and (3) nonnormative or highly individualized life events. Each of these types can have a biological or environmental impact on development.

**Normative age-graded influences** are similar for individuals in a particular age group. These influences include biological processes such as puberty and menopause. They also include sociocultural, environmental processes such as beginning formal education (usually at about age 6 in most cultures) and retirement (which takes place during the fifties and sixties in most cultures).

**normative age-graded influences** Biological and environmental influences that are similar for individuals in a particular age group.

**Normative history-graded influences** are common to people of a particular generation because of historical circumstances (Elder & Cox, 2020). For example, in their youth American baby boomers shared the experience of the Cuban missile crisis, the assassination of John F. Kennedy, and the Beatles invasion. Other examples of normative history-graded influences include economic, political, and social upheavals such as the Great Depression in the 1930s, World War II in the 1940s, the civil rights and women's rights movements of the 1960s and 1970s, the terrorist attacks of 9/11/2001, the integration of computers and cell phones into everyday life during the 1990s, and time spent on social media in the twenty-first century (Pittinsky, 2020). Long-term changes in the genetic and cultural makeup of a population (due to immigration or changes in fertility rates) are also part of normative historical change.

**normative history-graded influences** Biological and environmental influences that are associated with history. These influences are common to people of a particular generation.

**Nonnormative life events** are unusual occurrences that have a major impact on the individual's life. These events do not happen to all people, and when they do occur they can influence people in different ways page 6 (Masten, Motti-Stefanidi, & Rahl-Brigman, 2020). Examples include the death of a parent when a child is young, pregnancy in early adolescence, a fire that destroys a home, winning the lottery, or getting an unexpected career opportunity.

**nonnormative life events** Unusual occurrences that have a major impact on a person's life. The occurrence, pattern, and sequence of these events are not applicable to many individuals.





Nonnormative life events, such as Hurricane Maria in Puerto Rico in 2017, are unusual circumstances that can have a major influence on a person's development.

*Mario Tama/Staff/Getty Images*

### **Development Involves Growth, Maintenance, and Regulation of Loss**

Baltes and his colleagues (2006) assert that the mastery of life often involves conflicts and competition among three goals of human development: growth, maintenance, and regulation of loss. As individuals age into middle and late adulthood, the quest to maintain their capacities and to regulate loss takes center stage away from growth. Thus, a 75-year-old man might aim not to improve his memory or his golf swing but to maintain his independence and to continue playing golf. In other chapters, we will discuss these ideas about maintenance and regulation of loss in greater depth.

### **How Would You...?**



As a **social worker**, how would you explain the importance of asking for information about nonnormative life events when working with a new client?

**Development Is a Co-Construction of Biology, Culture, and the**

**Individual** Development comes from biological, cultural, and individual factors influencing each other (De la Fuente, 2019). For example, the brain shapes culture, but it is also shaped by culture and the experiences that individuals have or pursue. In terms of individual factors, we can go beyond what our genetic inheritance and environment give us. We can create a unique developmental path by actively choosing from the environment the things that optimize our lives (Rathunde & Csikszentmihalyi, 2006).

## Contemporary Concerns in Life-Span Development

Pick up a newspaper or magazine and you might see headlines like these: “Screen time linked to children’s obesity,” “Political Leanings May Be Written in the Genes,” “Religious Group Protests Transgender Bathrooms,” “FDA Warns About Side Effects of ADHD Drug,” “COVID-19 Deaths Higher in African American Patients,” “Test May Predict Alzheimer Disease.” Researchers using the life-span perspective explore these and many other topics of contemporary concern. The roles that health and well-being, parenting, education, sociocultural contexts, and technology play in life-span development, as well as how social policy is related to these issues, are a particular focus of this edition.

## Health and Well-Being

Health professionals today recognize the power of lifestyles and psychological states in health and well-being (Graham, Holt/Hale, & Parker, 2020; Teague, Mackenzie, & Rosenthal, 2020). Clinical psychologists are among the health professionals who help people improve their well-being. Read about one clinical psychologist who helps adolescents and adults improve their developmental outcomes in the *Careers in Life-Span Development* profile.

### Careers in life-span development

#### Gustavo Medrano, Clinical Psychologist

Gustavo Medrano specializes in helping children, adolescents, and adults of all ages improve their lives when they have problems involving depression, anxiety, emotion regulation, chronic health conditions, and life transitions. He works individually with clients and provides therapy for couples and

families. As a native Spanish speaker, he also provides bicultural and bilingual therapy for clients.

Dr. Medrano is a faculty member at the Family Institute at Northwestern University. He obtained his undergraduate degree in psychology at Northwestern and then became a teacher for Teach for America, which involves a minimum of two years spent teaching in a high-poverty area. He received his master's and doctoral degrees in clinical psychology at the University of Wisconsin–Milwaukee. As a faculty member at Northwestern, in addition to doing clinical therapy with clients, he also conducts research with a focus on how family experiences, especially parenting, influence children's and adolescents' coping and pain.



Gustavo Medrano, a clinical psychologist who often works with Spanish-speaking clients.

*Avis Mandel Pictures*

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## Parenting and Education

Can two gay men raise a healthy family? Do children suffer if they grow up in a divorced family? Are U.S. schools failing to teach children how to read

and write and calculate adequately? We hear many questions like these related to pressures on the contemporary family and the problems of U.S. schools (Ellis, Riggs, & Peel, 2020; Gonzalez-Mena, 2020). In later chapters, we analyze child care, the effects of divorce, parenting styles, intergenerational relationships, early childhood education, relationships between childhood poverty and education, children with disabilities, bilingual education, new educational efforts to improve lifelong learning, and many other issues related to parenting and education (Crosnoe, 2020; Diaz-Rico, 2020).



*Robert Maust/Photo Agora*

## **Sociocultural Contexts and Diversity**

Health, parenting, and education—like development itself—are all shaped by their sociocultural context (Marks, Woolverton, & Garcia-Coll, 2020; Walsh & Mortensen, 2020). To analyze this context, four concepts are especially useful: culture, ethnicity, socioeconomic status, and gender.

**Culture** encompasses the behavior patterns, beliefs, and all other products of a particular group of people that are passed on from generation

to generation (Li, 2020). Culture results from the interaction of people over many years (Schoon & Bynner, 2020). A cultural group can be as large as the United States or as small as an isolated Appalachian town. Whatever its size, the group's culture influences the behavior of its members.

**culture** The behavior patterns, beliefs, and all other products of a group that are passed on from generation to generation.

**Cross-cultural studies** compare aspects of two or more cultures. page 8  
The comparison provides information about the degree to which development is similar, or universal, across cultures, or is instead culture-specific (Quashie & others, 2020). For example, in a recent study of 26 countries, individuals in Chile had the highest life satisfaction, those in Bulgaria and Spain the lowest (Jang & others, 2017).

**cross-cultural studies** Comparisons of one culture with one or more other cultures. These provide information about the degree to which children's development is similar, or universal, across cultures, and the degree to which it is culture-specific.



Asian American and Latino children are the fastest-growing immigrant groups in the United States. *How diverse are the students in your life-span development class? Are their experiences in growing up likely to have been similar to or different from yours?*

*Zuma Press Inc./Alamy Stock Photo*

**Ethnicity** (the word *ethnic* comes from the Greek word for “nation”) is rooted in cultural heritage, nationality, race, religion, and language. African Americans, Latinos, Asian Americans, Native Americans, European Americans, and Arab Americans are a few examples of broad ethnic groups in the United States. Diversity exists within each ethnic group (Levy &



Wright, 2020). In 2017, 50.5 percent of children 17 years and younger were non-Latino white; by 2050, this figure is projected to decrease to 38.8 percent ([ChildStats.gov](http://ChildStats.gov), 2018). In 2017 in the United States, 25.2 percent of children were Latino, but in 2050 that figure is projected to increase to 31.9 percent. Asian Americans are expected to be the fastest-growing ethnic group of children percentage-wise: In 2017, 5.1 percent were Asian American, and that figure is expected to grow to 7.4 percent in 2050. The percentage of African American children is anticipated to decrease from 2017 to 2050 (13.6 to 13.1 percent). A special concern is the discrimination and prejudice experienced by ethnic minority children (Zeiders & others, 2020).

**ethnicity** A range of characteristics rooted in cultural heritage, including nationality, race, religion, and language.

## How Would You...?



As a **health-care professional**, what examples might you use to show that understanding culture, ethnicity, SES, and gender is essential in educating future health-care professionals?



Doly Akter, age 17, lives in a slum in Dhaka, Bangladesh, where

sewers overflow, garbage rots in the streets, and children are undernourished. Nearly two-thirds of the women in Bangladesh marry before they are 18. Doly organized a club supported by UNICEF in which girls go door-to-door to monitor the hygiene habits of households in their neighborhood, which has led to improved hygiene and health in the families. Also, her group has managed to stop several child marriages by meeting with parents and convincing them that it is not in their daughter's best interests. They emphasize the importance of staying in school and how this will improve their daughter's future. Doly says that the girls in her UNICEF group are far more aware of their rights than their mothers ever were. (UNICEF, 2007).

*Naser Siddique/UNICEF Bangladesh*

**Socioeconomic status (SES)** refers to a person's position within society based on occupational, educational, and economic characteristics. Socioeconomic status implies certain inequalities (Cambron & others, 2020; Mortimer, 2020). Differences in the ability to control resources and to participate in society's rewards produce unequal opportunities (Roos, Wall-Wieler, & Lee, 2020).

**socioeconomic status (SES)** Refers to the conceptual grouping of people with similar occupational, educational, and economic characteristics.

**Gender**, the characteristics of people as females and males, is another important aspect of sociocultural contexts. Few aspects of our development are more central to our identity and social relationships than gender (Helgeson, 2020). We discuss sociocultural contexts and diversity in each chapter.

**gender** The characteristics of people as females and males.

Recently, considerable research interest has focused on a category of gender classification called *transgender*, a broad term that refers to individuals who adopt a gender identity that differs from the one assigned to them at birth (Ellis, Riggs, & Peel, 2020). A transgender identity of being born male but identifying with being a female is much more common than the reverse (Zucker, Lawrence, & Kreukels, 2016). We will have much more to say about gender and transgender later in the text.

The conditions in which many of the world's women live are a serious concern (UNICEF, 2020). Inadequate educational opportunities, violence, and lack of political access are just some of the problems faced by many women.

In this section, you have read about such important aspects of individuals as their cultural and socioeconomic backgrounds, ethnicity, and gender. As people go through the human lifespan, these categories [page 9](#) intersect and can create systems of power and privilege as well as oppression and discrimination. For example, higher-socioeconomic status non-Latino white males have experienced considerably greater privilege and less discrimination than African American females. At various points in this text, we will further explore these category connections.

## Social Policy

**Social policy** is a government's course of action designed to promote the welfare of its citizens. Values, economics, and politics all shape a nation's social policy. Out of concern that policy makers are doing too little to protect the well-being of children and older adults, life-span researchers are increasingly undertaking studies that they hope will lead to effective social policy (Font & others, 2020; Garbarino, Governale, & Kostelny, 2019).

**social policy** A national government's course of action designed to promote the welfare of its citizens.

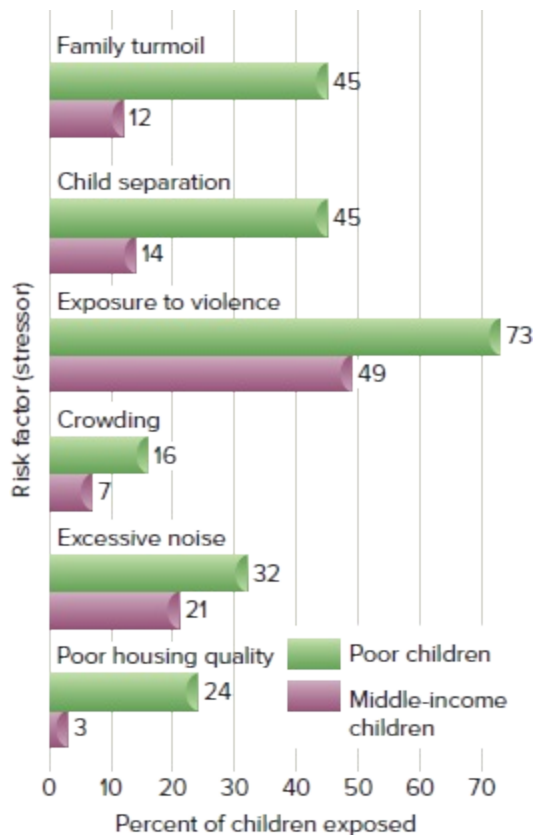
Children who grow up in poverty represent a special concern (Dreyer, 2020). In 2018, 16.2 percent of U.S. children under 18 years of age were living in families with incomes below the poverty line (Children's Defense Fund, 2020). This is a decrease from a peak of 23 percent in 1993 and also down from 19.7 percent in 2015. However, the U.S. figure of 16.2 percent of children living in poverty is much higher than the rates in other developed countries. For example, Canada has a child poverty rate of 9 percent and Sweden has a rate of 2 percent (Fontenot, Semega, & Kollar, 2018).

Compared with non-Latino white children, ethnic minority children are more likely to experience persistent poverty over many years and to live in isolated poor neighborhoods where social supports are minimal and threats to positive development are abundant (Leventhal, Anastasio, & Dupere, 2020). In 2018, African American (30.1 percent, down from 36 percent in



2015) and Latino (23.7 percent, down from 30 percent in 2015) families with children had especially high rates of poverty (Children’s Defense Fund, 2020).

What are some of the negative experiences that children in poverty encounter? As indicated in Figure 2, one study found that a higher percentage of children in poor families than in middle-income families were exposed to family turmoil, separation from a parent, violence, crowding, excessive noise, and poor housing quality (Evans & English, 2002).



**Figure 2 Exposure to Six Stressors Among Children in Poor and Middle-Income Families .**

One study analyzed exposure to six stressors among children in poor and middle-income families (Evans & English, 2002). Poor children were much more likely to face each of these stressors.

Developmental psychologists are seeking ways to help families living in poverty improve their well-being, and they have offered many suggestions

for improving government policies (Andrews & others, 2020; Armstrong, Hepworth, & Black, 2020). For example, the Minnesota Family Investment Program (MFIP) was designed in the 1990s primarily to influence the behavior of adults—specifically, to move adults off welfare rolls and into paid employment. A key element of the program was its guarantee that adults participating in the program would receive more income if they worked than if they did not. How did the increase in income affect their children? A study of the effects of MFIP found that higher incomes of working poor parents were linked with benefits for their children (Gennetian & Miller, 2002). The children’s achievement in school improved, and their behavior problems decreased.

There is increasing interest in developing two-generation educational interventions to improve the academic success of children living in poverty (Chase-Lansdale & others, 2019; Reichlin Cruse & others, 2019). For example, a recent large-scale effort to help children escape from poverty is the Ascend two-generation educational intervention being conducted by the Aspen Institute (2019). The focus of the intervention emphasizes education (increasing postsecondary education for mothers and improving the quality of their children’s early childhood education), economic support page 10 (housing, transportation, financial education, health insurance, and food assistance), and social capital (peer support, including friends and neighbors; participation in community and faith-based organizations; school and work contacts). In a recent report, the Ascend program emphasized the importance of parents’ education, economic stability, and overall health for their children’s well-being (Ascend, 2019).



This mother and her daughter are participating in the Ascend program. *What characterizes the Ascend program?*

*Studio 1One/Shutterstock*

Some children triumph over poverty or other adversities. They show *resilience*. Think back to the chapter-opening story about Alice Walker. In spite of racism, poverty, her low socioeconomic status, and a disfiguring eye injury, she went on to become a successful author and champion for equality.

Are there certain characteristics that make children like Alice Walker resilient? Are there other characteristics that influence children like Ted Kaczynski, who despite his intelligence and education, became a killer? After analyzing research on this topic, Ann Masten and her colleagues (Masten, 2006, 2014, 2019; Masten, Motti-Stefanidi, & Rahl-Brigman, 2020) have concluded that a number of individual factors, such as good intellectual functioning, influence resiliency. In addition, family and extrafamilial contexts of resilient individuals tend to share certain features. For example, resilient children are likely to have a close relationship to a caring parent figure and bonds to caring adults outside the family.

At the other end of the life span, protecting the well-being of older adults also creates policy issues (Chen & Cao, 2020; Hest, Alarcon, & Blewett, 2020). Key concerns are escalating health care costs and the access of older adults to adequate health care (Gotanda & others, 2020).

Concerns about the well-being of older adults are heightened by two

facts. First, the number of older adults in the United States is growing rapidly. Second, many of these older Americans are likely to need society's help.

Not only is the population of older adults growing in the United States, but also the world's population of people 60 years and older is projected to increase from 962 million in 2017 to 2.1 billion in 2050 (United Nations, 2017). The world's population 80 years of age and older is expected to triple or quadruple in this time frame. These significant increases in the world's older population have important implications for many sectors of society. As the percentage of a country's older population grows, governments must develop innovative policies and services that include improved housing, employment, health care, and transportation for older adults.



Ann Masten (*far right*) with a homeless mother and her child who are participating in her research on resilience. She and her colleagues have found that good parenting skills and good cognitive skills (especially attention and self-control) improve the likelihood that children in challenging circumstances will do better when they enter elementary school.

*Dawn Villella Photography*

## Technology

A final focus in our exploration of contemporary topics is the recent

dramatic, almost overwhelming increase in technology at all points in the life span (Greenfield, 2020). From the introduction of television in the mid-1950s to today's widespread access to personal computers, the Internet, smartphones, and social media, as well as the ever-expanding use of robots in medicine and industry, it is obvious that our way of life has been forever changed by technological advances.

## How Would You...?



As a **social worker**, what scholarly information might you draw on to encourage social work majors in college to learn more about the needs of older adults?

We will explore many technology topics in this edition. Later in this chapter you will read about the emerging field of developmental robotics in our discussion of information processing as well as coverage of different generations, including the extensive connection with technology of the millennial generation and generation Z. At various points in the book, we explore such topics as whether babies should be allowed to watch television and videos, and especially how these activities might impair language development; how too much screen time takes away from children's exercise and increases their risk of obesity and cardiovascular disease; whether multitasking with electronic devices is helpful or harmful to academic success; as well as the extent to which older adults are adapting to the expanding role of technology in their daily lives.

## The Nature of Development

In this section, we explore what is meant by developmental processes and periods, as well as variations in the way age is conceptualized. We examine some key developmental issues.

If you wanted to describe how and why Alice Walker or Ted Kaczynski developed during their lifetimes, how would you go about it? A chronicle of the events in any person's life can quickly become a confusing and tedious array of details. Two concepts help provide a framework for describing and understanding an individual's development: developmental processes and

periods.

## Biological, Cognitive, and Socioemotional Processes

At the beginning of this chapter, we defined development as the pattern of change that begins at conception and continues through the life span. The pattern is complex because it is the product of biological, cognitive, and socioemotional processes.

### Biological Processes

**Biological processes** produce changes in an individual's physical nature. Genes inherited from parents, the development of the brain, height and weight gains, changes in motor skills, nutrition, exercise, the hormonal changes of puberty, and cardiovascular decline are all examples of biological processes that affect development.

**biological processes** Changes in an individual's physical nature.

### Cognitive Processes

**Cognitive processes** refer to changes in an individual's thinking, intelligence, and language. Watching a colorful mobile swinging above the crib, putting together a two-word sentence, memorizing a poem, imagining what it would be like to be a movie star, and solving a crossword puzzle all involve cognitive processes.

**cognitive processes** Changes in an individual's thought, intelligence, and language.

### Socioemotional Processes

**Socioemotional processes** involve changes in an individual's relationships with other people, in emotional regulation, and in personality. An infant's smile in response to a parent's touch, a toddler's aggressive attack on [page 12](#) a playmate, a school-age child's development of assertiveness, an adolescent's joy at the senior prom, and the affection of an elderly couple all reflect the role of socioemotional processes in development.

**socioemotional processes** Changes in an individual's relationships with other people, emotions, and personality.

# Connecting Biological, Cognitive, and Socioemotional Processes

Biological, cognitive, and socioemotional processes are inextricably intertwined (Diamond, 2013). Consider a baby smiling in response to a parent's touch. This response depends on biological processes (the physical nature of touch and responsiveness to it), cognitive processes (the ability to understand intentional acts), and socioemotional processes (the act of smiling often reflects a positive emotional feeling, and smiling helps to connect us in positive ways with other human beings). Nowhere is the connection across biological, cognitive, and socioemotional processes more obvious than in two rapidly emerging fields:

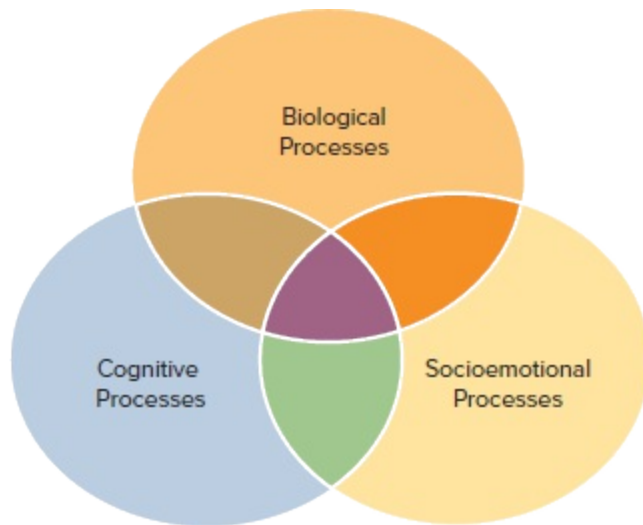
- *developmental cognitive neuroscience*, which explores links between cognitive processes, development, and the brain (Dumontheil & Mareschal, 2020)
- *developmental social neuroscience*, which examines connections between socioemotional processes, development, and the brain (Hackman & Kraemer, 2020).

In many instances, biological, cognitive, and socioemotional processes are bidirectional. For example, biological processes can influence cognitive processes and vice versa. For the most part, we will study the different processes of development (biological, cognitive, and socioemotional) in separate chapters, but the human being is an integrated individual with a mind and body that are interdependent. Thus, in many places throughout the book we will call attention to the connections between these processes.

## Periods of Development

The interplay of biological, cognitive, and socioemotional processes (see [Figure 3](#)) over time gives rise to the developmental periods of the human life span. A developmental period is a time frame in a person's life that is characterized by certain features. The most widely used classification of developmental periods involves an eight-period sequence. For the purposes of organization and understanding, this book is structured according to these developmental periods.





**Figure 3 Processes Involved in Developmental Changes .**

Biological, cognitive, and socioemotional processes interact as individuals develop.

The *prenatal period* is the time from conception to birth. It involves tremendous growth—from a single cell to a complete organism with a brain and behavioral capabilities—and takes place in approximately a nine-month period.

*Infancy* is the developmental period from birth to 18 or 24 months when humans are extremely dependent on adults. During this period, many psychological activities— language, symbolic thought, sensorimotor coordination, and social learning, for example—are just beginning.

*Early childhood* is the developmental period from the end of infancy to age 5 or 6. This period is sometimes called the “preschool years.” page 13 During this time, young children learn to become more self-sufficient and to care for themselves. They also develop school readiness skills, such as the ability to follow instructions and identify letters, and they spend many hours playing with peers. First grade typically marks the end of early childhood.

*Middle and late childhood* is the developmental period from about 6 to 11 years of age, approximately corresponding to the elementary school years. During this period, children master the fundamental skills of reading, writing, and arithmetic. They are formally exposed to the world outside the family and to the prevailing culture. Achievement becomes a more central



theme of the child's world, and self-control increases.

*Adolescence* encompasses the transition from childhood to early adulthood, entered at approximately 10 to 12 years of age and ending at 18 to 22 years of age. Adolescence begins with rapid physical changes—dramatic gains in height and weight, changes in body contour, and the development of sexual characteristics such as enlargement of the breasts, growth of pubic and facial hair, and deepening of the voice. At this point in development, the pursuit of independence and an identity are prominent themes. Thought is more logical, abstract, and idealistic. More time is spent outside the family.

Recently there has been increased interest in the transition between adolescence and adulthood, a transition that has been referred to as *emerging adulthood* (Arnett, 2016a, b). Emerging adulthood occurs approximately from 18 to 25 years of age and is a time of considerable exploration and experimentation, especially in the areas of identity, careers, and lifestyles (Arocho, 2020; Conley & others, 2020).

*Early adulthood* is the developmental period that begins in the late teens or early twenties and lasts through the thirties. For young adults, this is a time for establishing personal and economic independence, becoming proficient in a career, and for many, selecting a mate, learning to live with that person in an intimate way, starting a family, and rearing children.

*Middle adulthood* is the developmental period from approximately 40 years of age to about 60. It is a time of expanding personal and social involvement and responsibility; of assisting the next generation in becoming competent, mature individuals; and of achieving and maintaining satisfaction in a career.

*Late adulthood* is the developmental period that begins in the sixties or seventies and lasts until death. It is a time of life review, retirement from the workforce, and adjustment to new social roles involving decreasing strength and health.

Late adulthood potentially lasts longer than any other period of development. Because the number of people in this age group has been increasing dramatically, life-span developmentalists have been paying more attention to differences within late adulthood (Leipold, 2020). According to Paul Baltes and Jacqui Smith (2003), a major change takes place in older adults' lives as they become the "oldest-old," at about 85 years of age. The

“young-old” (classified as 65 through 84 years of age in this analysis) have substantial potential for physical and cognitive fitness, retain much of their cognitive capacity, and can develop strategies to cope with the gains and losses of aging. In contrast, the oldest-old (85 and older) show considerable loss in cognitive skills, experience increased rates of chronic stress, and are more frail (Baltes & Smith, 2003). Nonetheless, considerable variation exists in how much of their capabilities the oldest-old retain (Ribeiro & Araujo, 2019).

## Conceptions of Age

In our description of developmental periods, we attached an approximate age range to each period. But we also have noted that there are variations in the capabilities of individuals of the same age, and we have seen how age-related changes can be exaggerated. How important is age when we try to understand an individual?

According to some life-span experts, chronological age is not very relevant to understanding a person’s psychological development (Hoyer & Roodin, 2009). Chronological age is the number of years that have elapsed since birth. But time is a crude index of experience, and it does not cause development. Chronological age, moreover, is not the only way to measure age (Galkin & others, 2020). Just as there are different domains of development, there are different ways of thinking about age (Fernandez-Ballesteros, 2019).

## Four Types of Age

Age has been conceptualized not just as chronological age but also as biological age, psychological age, and social age (Hoyer & Roodin, 2009).

*Biological age* is a person’s age in terms of biological health.

page 14

Determining biological age involves knowing the functional capacities of a person’s vital organs. One person’s vital capacities may be better or worse than those of others of comparable chronological age. The younger the person’s biological age, the longer the person is expected to live, regardless of chronological age. A recent study involving 17-year survival rates of 20- to 93-year-old Korean adults found that death rates were higher among individuals whose biological age was greater than their chronological age (Yoo & others, 2017).



(Left) Seventy-four year old Barbara Jordan participating in the long jump competition at a Senior Games in Maine; (right) a sedentary, overweight middle-aged man. *Even though Pam McSwain’s chronological age is older, might her biological age be younger than the middle-aged man’s?*

(Left): Sandy Huffaker/The New York Times/Redux; (Right): Firehorse/E+/Getty Images

*Psychological age* is an individual’s adaptive capacities compared with those of other individuals of the same chronological age. Thus, older adults who continue to learn, remain flexible, are motivated, think clearly, and have positive personality traits are engaging in more adaptive behaviors than their chronological age-mates who do not do these things (Wettstein, Wahl, & Siebert, 2020). And a recent study found that older adults who were more conscientious and emotionally stable were less cognitively vulnerable (Duchek & others, 2020).

*Social age* refers to connectedness with others and the social roles individuals adopt. Individuals who have better social relationships with others are happier and tend to live longer than individuals who are lonely (Freedman & Nicolle, 2020).

## How Would You...?



As a **human development and family studies professional**, what examples might you use to show that an understanding of the four ages is important in evaluating older adults?

From a life-span perspective, an overall age profile of an individual involves not just chronological age but also biological age, psychological age, and social age. For example, a 70-year-old man (chronological age) might be in good physical health (biological age) but might be experiencing memory problems and having trouble coping with the demands placed on him by his wife's recent hospitalization (psychological age) and dealing with a lack of social support (social age).

## Three Developmental Patterns of Aging

K. Warner Schaie (2016) recently described three developmental patterns that provide a portrait of how aging can involve individual variations:

- *Normal aging* characterizes most individuals, for whom psychological functioning often peaks in early middle age, remains relatively stable until the late fifties to early sixties, and then shows a modest decline through the early eighties. However, marked decline can occur as individuals near death.
- *Pathological aging* characterizes individuals who show greater than average decline as they age through the adult years. In early old age, they may have mild cognitive impairment, develop Alzheimer disease later on, or have a chronic disease that impairs their daily functioning.
- *Successful aging* characterizes individuals whose positive physical, cognitive, and socioemotional development is maintained longer, declining later in old age than is the case for most people.

For too long, only the declines that occur in late adulthood were page 15 highlighted, but recently there has been increased interest in the concept of successful aging (Fernandez-Ballesteros & others, 2019; Filip & others, 2020).

## Age and Happiness

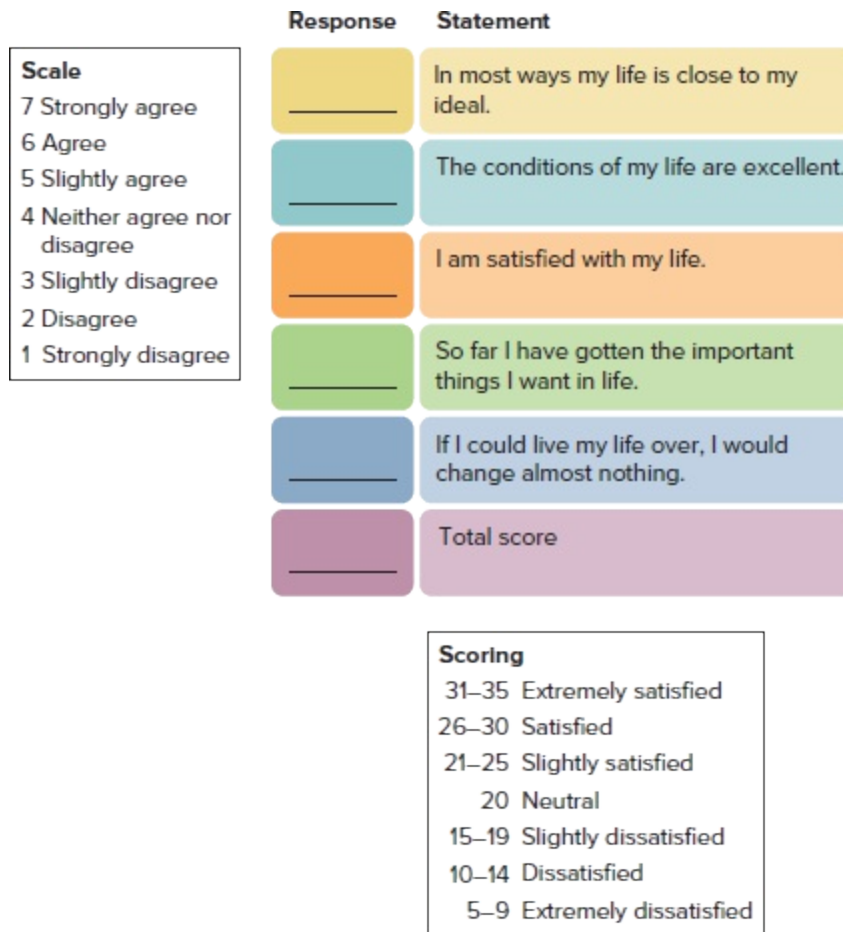
Is there a best age to be? An increasing number of studies indicate that at least in the United States adults are happier as they age (Stone & others, 2010). Consider also a U.S. study of approximately 28,000 individuals from 18 to 88 that revealed happiness increased with age (Yang, 2008). For

example, about 33 percent described themselves as very happy at 88 years of age compared with only about 24 percent in their late teens and early twenties. In a study of individuals from 22 to 93 years of age, older adults reported having more positive emotional experiences than did young adults (English & Carstensen, 2014).

Why might older people report being happier and more satisfied with their lives than younger people? Despite the increase in physical problems and losses older adults experience, they are more contented with their lives, have better relationships with the people who matter to them, are less pressured to achieve, have more time for leisurely pursuits, and have many years of experience that may help them adapt to their circumstances with greater wisdom than younger adults do (Carstensen, 2019).

Not all studies, though, have found an increase in life satisfaction with age (Steptoe, Deaton, & Stone, 2015). Some studies indicate that the lowest levels of life satisfaction are in middle age, especially from 45 to 54 years of age (OECD, 2014). Other studies have found that life satisfaction varies across some countries. For example, research participants in the former Soviet Union and Eastern Europe, as well as those from South American countries, report a decrease in life satisfaction with advancing age (Deaton, 2008). Also, a recent study across 150 countries found that health was a better predictor of life satisfaction in individuals 58 years and older than in younger age groups (Joshani & Joyanovic, 2020).

Now that you have read about age variations in life satisfaction, think about how satisfied you are with your life. To help you answer this question, complete the items in [Figure 4](#), which presents the most widely used measure in research on life satisfaction (Diener, 2020).



**Figure 4** How Satisfied Am I with My Life?

Source: E. Diener, R. A. Emmons, R. J. Larson, & S. Griffin. “The Satisfaction with Life Scale.” *Journal of Personality Assessment*, 48, 1985, 71–75.

## Developmental Issues

Was Ted Kaczynski born a killer, or did the events in his life turn him into one? Kaczynski himself thought that his childhood was the root of his troubles. He said he grew up as a genius in a boy’s body and never fit in with other children. Did his early experiences determine his later life? Is your own journey through life marked out ahead of time, or can your experiences change your path? Are the experiences you have early in your journey more important than later ones? Is your journey more like taking an elevator up a skyscraper with distinct stops along the way or more like a cruise down a river with smoother ebbs and flows? These questions

point to three issues about the nature of development: the roles played by nature and nurture, stability and change, and continuity and discontinuity.

## Nature and Nurture

The **nature-nurture issue** concerns the extent to which development is influenced by nature and by nurture. *Nature* refers to an organism's biological inheritance, *nurture* to its environmental experiences.

**nature-nurture issue** The debate about the extent to which development is influenced by nature and by nurture. Nature refers to an organism's biological inheritance, nurture to its environmental experiences.

According to those who emphasize the role of nature, just as a sunflower grows in an orderly way—unless flattened by an unfriendly environment—so too a human grows in an orderly way. An evolutionary and genetic foundation produces commonalities in growth and development (Brooker & others, 2020; Mason, Duncan, & Losos, 2021). We walk before we talk, speak one word before two words, grow rapidly in infancy and less so in early childhood, experience a rush of sex hormones in puberty, reach the peak of our physical strength in late adolescence and early adulthood, and then physically decline. Proponents of the importance of nature acknowledge that extreme environments—those that are psychologically barren or hostile—can depress development. However, they believe that basic growth tendencies are genetically programmed into humans (Hoefnagels, 2021; Willey, Sandman, & Wood, 2020).





*What are some key developmental issues?*

*Photodisc/Stockbyte/Getty Images*

By contrast, other psychologists emphasize the importance of nurture, or environmental experiences, in development (Parke & Elder, 2020). Experiences run the gamut from the individual's biological environment (nutrition, exercise, medical care, drugs, and physical accidents) to the social environment (family, peers, schools, community, media, and culture).

There has been a dramatic increase in the number of studies that reflect the *epigenetic view*, which states that development reflects an ongoing, bidirectional interchange between genes and the environment. These studies involve specific DNA sequences (Franzago & others, 2020). The epigenetic mechanisms involve the actual molecular modification of the DNA strand as a result of environmental inputs in ways that alter gene functioning (Kresovich & others, 2020). In “Biological Beginnings” we will explore the epigenetic approach in greater depth.

## **Stability and Change**

Is a shy child who hides behind the sofa when visitors arrive destined to become a wallflower at college dances, or might the child become a sociable, talkative individual? Is a fun-loving, carefree adolescent bound to have



difficulty holding down a 9-to-5 job as an adult? These questions reflect the **stability-change issue**, involving the degree to which early traits and characteristics persist or change over time.

**stability-change issue** The debate about the degree to which early traits and characteristics persist through life or change.

The roles of early and later experience are an aspect of the stability-change issue that has long been hotly debated (Farrell & others, 2019). Some argue that warm, nurturant caregiving during infancy and toddlerhood predicts optimal development later in life (Girme & others, 2020). The later-experience advocates see children as malleable throughout development and believe later sensitive caregiving is just as important as earlier sensitive caregiving (Adcock & others, 2020).

Developmentalists who emphasize change take the more optimistic view that later experiences can produce change. Recall that in the life-span perspective, plasticity, the potential for change, exists throughout the life span (Antonucci & Webster, 2019). Experts such as Paul Baltes (2003) argue that older adults often show less capacity for learning new page 17 things than younger adults do. However, many older adults continue to be good at applying what they have learned in earlier times.

## Continuity and Discontinuity

When developmental change occurs, is it gradual or abrupt? Think about your own development for a moment. Did you gradually become the person you are today? Or did you experience sudden, distinct changes in your growth? For the most part, developmentalists who emphasize nurture describe development as a gradual, continuous process. Those who emphasize nature often describe development as a series of distinct stages.

The **continuity-discontinuity issue** focuses on the degree to which development involves either gradual, cumulative change (continuity) or distinct stages (discontinuity). In terms of continuity, as the oak grows from a seedling to a giant tree, its development is continuous. Similarly, a child's first word, though seemingly an abrupt, discontinuous event, is actually the result of weeks and months of growth and practice. Puberty might seem abrupt, but it is a gradual process that occurs over several years.

**continuity-discontinuity issue** The debate about the extent to which development involves gradual, cumulative change (continuity) or distinct stages (discontinuity).

In terms of discontinuity, as an insect grows from a caterpillar to a chrysalis to a butterfly, it passes through a sequence of stages in which change is qualitatively rather than quantitatively different. Similarly, at some point a child moves from not being able to think abstractly about the world to being able to do so. This is a qualitative, discontinuous change in development rather than a quantitative, continuous change.

## Evaluating the Developmental Issues

Developmentalists generally acknowledge that development is not all nature or all nurture, not all stability or all change, and not all continuity or all discontinuity. Nature and nurture, stability and change, continuity and discontinuity characterize development throughout the life span.

Although most developmentalists do not take extreme positions on these three important issues, there is spirited debate regarding how strongly development is influenced by each of these factors (Cowan & Smith, 2021; Oakes & Rakison, 2020; Parke, 2020).

## Theories of Development

How can we answer questions about the roles of nature and nurture, stability and change, and continuity and discontinuity in development? How can we determine, for example, whether memory loss in older adults can be prevented or whether special care can repair the harm inflicted by child neglect? The scientific method is the best tool we have to answer such questions (Stanovich, 2019).

The scientific method is essentially a four-step process: (1) conceptualize a process or problem to be studied, (2) collect research information (data), (3) analyze data, and (4) draw conclusions.

In step 1, when researchers are formulating a problem to study, they often draw on theories and develop hypotheses. A **theory** is an interrelated, coherent set of ideas that helps to explain phenomena and make predictions. It may suggest **hypotheses**, which are specific assertions and predictions that can be tested. For example, a theory on mentoring might state that sustained support and guidance from an adult makes a difference in the lives of children from impoverished backgrounds because the mentor gives the children opportunities to observe and imitate the behavior and strategies of

the mentor.

**theory** A coherent set of ideas that helps to explain data and to make predictions.

**hypotheses** Assertions or predictions, often derived from theories, that can be tested.

This section outlines five theoretical orientations to development: psychoanalytic, cognitive, behavioral and social cognitive, ethological, and ecological. These theories look at development from different perspectives, and they disagree about certain aspects of development. But many of their ideas are complementary, and each contributes an important piece to page 18 the life-span development puzzle. Although the theories disagree about certain aspects of development, together they let us see the total landscape of life-span development in all its richness.

## Psychoanalytic Theories

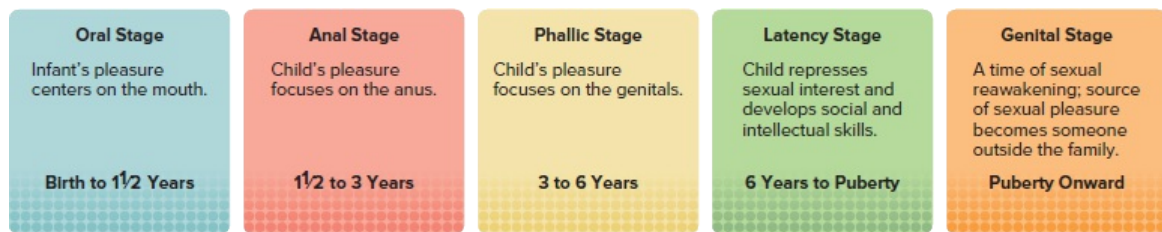
**Psychoanalytic theories** describe development primarily in terms of unconscious (beyond awareness) processes that are heavily colored by emotion. Psychoanalytic theorists emphasize that behavior is merely a surface characteristic and that a true understanding of development requires analyzing the symbolic meanings of behavior and the deep inner workings of the mind. Psychoanalytic theorists also stress that early experiences with parents extensively shape development. These characteristics are highlighted in the main psychoanalytic theory, that of Sigmund Freud (1856–1939).

**psychoanalytic theories** Theories holding that development depends primarily on the unconscious mind and is heavily couched in emotion, that behavior is merely a surface characteristic, that it is important to analyze the symbolic meanings of behavior, and that early experiences are important in development.

## Freud's Theory

Freud was a pioneer in the treatment of psychological problems. Based on his belief that patients who talked about their problems could be restored to psychological health, Freud developed a technique called psychoanalysis. As he listened to, probed, and analyzed his patients, he became convinced that their problems were the result of experiences early in life. He thought that as children grow up, their focus of pleasure and sexual impulses shifts from the mouth to the anus and eventually to the genitals. Consequently, he determined, we pass through five stages of psychosexual development: oral, anal, phallic, latency, and genital (see [Figure 5](#)). Our adult personality, Freud

(1917) claimed, is determined by the way we resolve conflicts between sources of pleasure at each stage and the demands of reality.



**Figure 5** Freudian Stages .

Because Freud emphasized sexual motivation, his stages of development are known as psychosexual stages. In his view, if the need for pleasure at any stage is either undergratified or overgratified, an individual may become fixated, or locked in, at that stage of development.

Freud's followers significantly revised his psychoanalytic theory. Many of today's psychoanalytic theorists believe that Freud overemphasized sexual instincts; they place more emphasis on cultural experiences as determinants of an individual's development. Unconscious thought remains a central theme, but conscious thought plays a greater role than Freud envisioned. Next, we will outline the ideas of an important revisionist of Freud's theory—Erik Erikson.

## Erikson's Psychosocial Theory

Erik Erikson recognized Freud's contributions but believed that Freud misjudged some important dimensions of human development. For one thing, Erikson (1950, 1968) said we develop in psychosocial stages, rather than the psychosexual stages that Freud described. According to Freud, the primary motivation for human behavior is sexual in nature; according to Erikson, motivation is social and reflects a desire to affiliate with other people. According to Freud, our basic personality is shaped in the first five years of life; according to Erikson, developmental change occurs throughout the life span. Thus, Freud viewed early experiences as far more important than later experiences, whereas Erikson emphasized the importance of both early and later experiences.

In [Erikson's theory](#), eight stages of development unfold as we go through life (see [Figure 6](#)). At each stage, a unique developmental task confronts individuals with a crisis that must be resolved. According to Erikson, this crisis is not a catastrophe but a turning point marked by both increased vulnerability and enhanced potential. The more successfully an individual resolves these crises, the healthier his or her development will be.

**Erikson's theory** A psychoanalytic theory in which eight stages of psychosocial development unfold throughout the life span. Each stage consists of a unique developmental task that confronts individuals with a crisis that must be faced.

Erikson's Stages	Developmental Period
Integrity versus despair	Late adulthood (60s onward)
Generativity versus stagnation	Middle adulthood (40s, 50s)
Intimacy versus isolation	Early adulthood (20s, 30s)
Identity versus identity confusion	Adolescence (10 to 20 years)
Industry versus inferiority	Middle and late childhood (elementary school years, 6 years to puberty)
Initiative versus guilt	Early childhood (preschool years, 3 to 5 years)
Autonomy versus shame and doubt	Infancy (1 to 3 years)
Trust versus mistrust	Infancy (first year)

**Figure 6 Erikson's Eight Life-Span Stages .**

Like Freud, Erikson proposed that individuals go through distinct, universal stages of development. In terms of the continuity-discontinuity issue, both favor the discontinuity side of the debate. Notice that the timing of Erikson's first four stages is similar to that of Freud's stages. *What are the implications of saying that people go through stages of development?*

*Trust versus mistrust* is Erikson's first psychosocial stage, which is experienced in the first year of life. Trust during infancy sets the stage for a lifelong expectation that the world will be a good and pleasant place to live.

*Autonomy versus shame and doubt* is Erikson's second stage. This stage occurs in late infancy and toddlerhood (1 to 3 years). After gaining trust in their caregivers, infants begin to discover that their behavior is their own. They start to assert their sense of independence or autonomy. They realize their will. If infants and toddlers are restrained too much or punished too harshly, they are likely to develop a sense of shame and doubt.

*Initiative versus guilt*, Erikson's third stage of development, occurs during the preschool years. As preschool children encounter a widening social world, they face new challenges that require active, purposeful, responsible behavior. Feelings of guilt may arise, though, if the child is irresponsible and is made to feel too anxious.

*Industry versus inferiority* is Erikson's fourth developmental stage, occurring approximately in the elementary school years. Children now need to direct their energy toward mastering knowledge and intellectual skills. The negative outcome is that the child may develop a sense of inferiority—feeling incompetent and unproductive.

During the adolescent years individuals face finding out who they are, what they are all about, and where they are going in life. This is Erikson's fifth developmental stage, *identity versus identity confusion*. If adolescents explore roles in a healthy manner and arrive at a positive path to follow in life, then they achieve a positive identity; if not, then identity confusion reigns.

*Intimacy versus isolation* is Erikson's sixth developmental stage, which individuals experience during early adulthood. At this time, individuals face the developmental task of forming intimate relationships. If young adults form healthy friendships and an intimate relationship with a partner, intimacy will be achieved; if not, isolation will result.

*Generativity versus stagnation*, Erikson's seventh developmental stage, occurs during middle adulthood. By generativity, Erikson means primarily a concern for helping the younger generation to develop and lead useful lives. The feeling of having done nothing to help the next generation is stagnation.

*Integrity versus despair* is Erikson's eighth and final stage of

development, which individuals experience in late adulthood. During this stage, a person reflects on the past. If the person's life review reveals a life well spent, integrity will be achieved; if not, the retrospective glances likely will yield doubt or gloom—the despair Erikson described.

## Evaluating Psychoanalytic Theories

Contributions of psychoanalytic theories like Freud's and Erikson's to life-span development include an emphasis on a developmental framework, family relationships, and unconscious aspects of the mind. These theories have been criticized for a lack of scientific support, too much emphasis on sexual underpinnings, and an image of people that is too negative.

page 20

## Cognitive Theories

Whereas psychoanalytic theories stress the unconscious, cognitive theories emphasize conscious thoughts. Three important cognitive theories are Piaget's cognitive developmental theory, Vygotsky's sociocultural cognitive theory, and information-processing theory. All three focus on the development of complex thinking skills.

## Piaget's Cognitive Developmental Theory

**Piaget's theory** states that children go through four stages of cognitive development as they actively construct their understanding of the world. Two processes underlie this cognitive construction of the world: organization and adaptation. To make sense of our world, we organize our experiences. For example, we separate important ideas from less important ideas, and we connect one idea to another. In addition to organizing our observations and experiences, we must adjust to changing environmental demands (Miller, 2015).

**Piaget's theory** The theory that children construct their understanding of the world and go through four stages of cognitive development.