

FIFTH CANADIAN EDITION

# CHILDREN

A CHRONOLOGICAL  
APPROACH



Pearson

Robert V. Kail

Theresa Zolner



# Children

## A Chronological Approach

Fifth Canadian Edition

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# Brief Contents

<b>1</b> Child Development: Theories and Themes	1	<b>10</b> Social and Emotional Development in Preschool Children	249
<b>2</b> Research in Child Development	21	<b>11</b> Physical Development in Middle Childhood	285
<b>3</b> Genetic Bases of Child Development	45	<b>12</b> Cognitive Development in Middle Childhood	302
<b>4</b> Prenatal Development and Birth	67	<b>13</b> Social and Emotional Development in Middle Childhood	341
<b>5</b> Physical Development in Infants and Toddlers	100	<b>14</b> Physical Growth in Adolescents	377
<b>6</b> Cognition in Infants and Toddlers	138	<b>15</b> Cognitive Processes in Adolescents	405
<b>7</b> Social and Emotional Development in Infants and Toddlers	164	<b>16</b> Social and Emotional Development in Adolescents	434
<b>8</b> Physical Growth in Preschool Children	193		
<b>9</b> Cognitive Development in Preschool Children	216		



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# Contents

Preface	xii	An Emphasis on Policy Implications Improves Research	41
About the Authors	xvi	Summary	42
<b>1 Child Development: Theories and Themes</b>	<b>1</b>	<b>3 Genetic Bases of Child Development</b>	<b>45</b>
1.1 Theories of Child Development	2	3.1 Mechanisms of Heredity	46
Canada's Unique Contribution	3	The Biology of Heredity	46
The Biological Perspective	3	Single Gene Inheritance	49
The Psychodynamic Perspective	5	Behavioural Genetics	52
Theory of Personality 5 • Theory of Psychosexual Development 5 • Erikson's Psychosocial Theory 7		Methods of Behavioural Genetics 53	
The Learning Perspective	7	Nonshared Environmental Influences	55
Early Learning Theories 7 • Social Cognitive Theory 8		3.2 Genetic Disorders	57
The Cognitive-Developmental Perspective	9	Inherited Disorders	57
The Contextual Perspective	10	Abnormal Chromosomes	58
Newer Approaches to Child Development	12	3.3 Heredity Is Not Destiny	60
Information-Processing Theory 12 • Evolutionary Theory 12 • Developmental Psychopathology 13		Genes, the Environment, and Behaviour	61
The Big Picture	13	Reaction Range	61
1.2 Themes in Child-Development Research	15	Changing Relations between Nature and Nurture	62
Early Development Is Related to Later Development but Not Perfectly	16	Summary	64
Development Is Always Jointly Influenced by Heredity and Environment	16	<b>4 Prenatal Development and Birth</b>	<b>67</b>
Children Help Determine Their Own Development	17	4.1 From Conception to Birth	68
Development in Different Domains Is Connected	17	Period of the Zygote (Weeks 1–2)	69
Summary	19	Period of the Embryo (Weeks 3–8)	70
<b>2 Research in Child Development</b>	<b>21</b>	Period of the Fetus (Weeks 9–38)	71
2.1 Doing Child-Development Research	22	4.2 Influences on Prenatal Development	75
Measurement in Child-Development Research	22	General Risk Factors	75
Systematic Observation 22 • Sampling Behaviour with Tasks 23 • Self-Reports 24 • Representative Sampling 26		Nutrition 75 • Stress 76 • Mother's Age 76	
General Designs for Research	26	Teratogens: Diseases, Drugs, and Environmental Hazards	77
Correlational Studies 27 • Experimental Studies 30		Diseases 78 • Drugs 78 • Environmental Hazards 79	
Methods for Studying Development	31	How Teratogens Influence Prenatal Development	81
Longitudinal Studies 31 • Cross-Sectional Studies 33		The Real World of Prenatal Risk 83	
Ethical Responsibilities	35	Prenatal Diagnosis and Treatment	83
Communicating Research Results	37	4.3 Happy Birthday!	86
2.2 Child-Development Research and Family Policy	38	Labour and Delivery	86
Background	38	Approaches to Childbirth	88
Ways to Influence Social Policy	39	Birth Complications	90
Build Understanding of Children and Their Development 39 • Serve as an Advocate for Children 39 • Evaluate Policies and Programs 40 • Develop a Model Program 40		Lack of Oxygen 90 • Prematurity and Low Birth Weight 91	
		The Newborn	92
		Newborn States 93 • Crying 93 • Sleeping 94 • Sudden Infant Death Syndrome 95	
		Postpartum Depression	95
		Summary	97



<b>5</b>	<b>Physical Development in Infants and Toddlers</b>	<b>100</b>	Memory	151	
5.1	Healthy Growth	101	Understanding the World	153	
	Features of Human Growth	101	Understanding Numbers 153 • Exploring the Environment 153		
	Variations on the Average Profile	103	Individual Differences in Ability	154	
	Mechanisms of Physical Growth	103	6.3 Language	155	
	Heredity 103 • Hormones 104 • Nutrition 104		Perceiving Speech	155	
	Challenges to Healthy Growth	106	First Steps to Speaking	157	
	Malnutrition 107 • Diseases 107 • Accidents 108		First Words	158	
5.2	The Developing Nervous System	109	Fast Mapping Meanings to Words	158	
	A Basic Nerve Cell	109	Joint Attention 159 • Constraints on Word Names 159 • Sentence Cues 160 • Naming Errors 160		
	Organization of the Mature Brain	110	Styles of Learning Language	161	
	The Developing Brain	111	Summary	162	
	Emerging Brain Structures 111 • Structure and Function 112 • The Frontal Cortex 114 • Brain Plasticity 115		<b>7</b>	<b>Social and Emotional Development in Infants and Toddlers</b>	<b>164</b>
5.3	Motor Development	116	7.1 Emotions	165	
	The Infant's Reflexes	116	Basic Emotions	166	
	Locomotion	117	Happiness 167 • Negative Emotions 167		
	Posture and Balance 119 • Stepping 120 • Perceptual Factors 120 • Coordinating Skills 120 • Beyond Walking 120		Complex Emotions	168	
	Fine-Motor Skills	120	Recognizing and Using Others' Emotions	168	
	Reaching and Grasping 121 • Handedness 122		Regulating Emotions	169	
	Maturation, Experience, and Motor Skill	122	7.2 Relationships with Others	170	
5.4	Sensory and Perceptual Processes	124	The Growth of Attachment	171	
	Smell, Taste, and Touch	124	Quality of Attachment	173	
	Hearing	125	Consequences of Quality of Attachment 175 • Factors Determining Quality of Attachment 176 • Parenting Skill, Work, and Child Care 179		
	Seeing	126	Onset of Peer Interactions	181	
	Perceptual Constancies 128 • Depth 129 • Perceiving Objects 130		7.3 Self-Concept	182	
	Integrating Sensory Information	133	Origins of Self-Recognition	182	
Summary		135	Moving beyond Self-Recognition	183	
<b>6</b>	<b>Cognition in Infants and Toddlers</b>	<b>138</b>	7.4 Temperament	184	
6.1	Piaget's Theory	139	What Is Temperament?	185	
	Basic Principles of Piaget's Theory	140	Hereditary and Environmental Contributions to Temperament	186	
	Assimilation and Accommodation 140 • Equilibration and Stages of Cognitive Development 141		Stability of Temperament	187	
	Piaget's Sensorimotor Stage	142	Temperament and Other Aspects of Development	188	
	Substage 1: Exercising Reflexes (Roughly Birth to 1 Month) 142 • Substage 2: Learning to Adapt (Roughly 1 to 4 Months) 142 • Substage 3: Making Interesting Events (Roughly 4 to 8 Months) 142 • Substage 4: Using Means to Achieve Ends (Roughly 8 to 12 Months) 143 • Substage 5: Experimenting (Roughly 12 to 18 Months) 143 • Substage 6: Mental Representation (Roughly 18 to 24 Months) 143		Summary	190	
	Evaluating Piaget's Account of Sensorimotor Thought	144	<b>8</b>	<b>Physical Growth in Preschool Children</b>	<b>193</b>
	The Child as Theorist	145	8.1 Physical Growth	194	
	Naive Physics 145 • Naive Biology 147		Body Growth	194	
6.2	Information Processing	147	Brain Development	196	
	Basic Features of the Information- Processing Approach	148	Sleep	197	
	Learning	150	8.2 Motor Development	199	
	Habituation 150 • Classical Conditioning 151 • Operant Conditioning 151 • Imitation 151		Gross-Motor Skills	199	
			Fine-Motor Skills	201	
			Handedness	202	
			Gender Differences in Motor Skills	203	

8.3 Health and Wellness	204	Parental Behaviour	263
Nutrition	205	Direct Instruction 263 • Learning by Observing 263	
Encouraging Healthy Eating	207	• Feedback 264	
Threats to Children's Development	207	Children's Contributions	265
Minor Illnesses 208 • Chronic Illnesses 208		Family Configuration	266
• Accidents 209 • Environmental Contributions to Illness		The Role of Grandparents 266 • Children of	
and Injury 210 • Impact of Hospitalization 210		Gay and Lesbian Parents 267	
Jurisdictional Authority and		10.3 Relationships with Siblings and Peers	268
Children's Health	211	Sibling Relationships	269
Summary	213	First-Born, Later-Born, and Only Children 269	
		• Qualities of Sibling Relationships 269	
<b>9 Cognitive Development</b>	<b>216</b>	Peer Relationships and Preschoolers' Play	272
<b>9.1 Cognitive Processes</b>	217	Make-Believe 273 • Solitary Play 274	
Piaget's Account	217	• Parental Influence 274	
Characteristics of Preoperational Thinking 218		10.4 Moral Development: Learning	
• Extending Piaget's Account: Children's Naive		to Control One's Behaviour	275
Theories 221		Beginnings of Self-Control	276
Information-Processing Perspectives on		Parental Influences	278
Preschool Thinking	223	Temperamental Influences on Self-Control	279
Attention 224 • Memory 225 • Counting 226		Improving Self-Control	280
Vygotsky's Theory of Cognitive Development	227	Learning about Moral Rules	281
The Zone of Proximal Development 228		Summary	282
• Scaffolding 228 • Private Speech 228			
<b>9.2 Language</b>	230	<b>11 Physical Development</b>	<b>285</b>
Encouraging Word Learning	230	<b>in Middle Childhood</b>	
From Two-Word Speech		11.1 Growth of the Body	286
to Complex Sentences	231	Physical Growth	286
How Children Acquire Grammar	234	Nutrition	288
<b>9.3 Communicating with Others</b>	237	Obesity 289	
Taking Turns	237	Tooth Development	291
Speaking Effectively	238	Vision and Hearing	292
Listening Well	239	11.2 Motor Development	293
<b>9.4 Early Childhood Education</b>	240	Development of Motor Skills	294
Varieties of Early Childhood Education	241	Gender Differences in Motor Skill 294	
Preschool Programs for Economically		Physical Fitness	295
Disadvantaged Children	243	Participating in Sports	296
Using TV to Educate Preschool Children	244	Accidents	297
Summary	246	Summary	300
<b>10 Social and Emotional</b>	<b>249</b>	<b>12 Cognitive Development</b>	<b>302</b>
<b>Development in Preschool</b>		<b>in Middle Childhood</b>	
<b>Children</b>		12.1 Cognitive Processes	303
<b>10.1 Self</b>	250	Concrete Operational Thinking	303
Gender Roles	250	Memory Skills	304
Gender Identity	252	Strategies for Remembering 304 • Knowledge	
The Socializing Influences of People and the Media 252		and Memory 306	
• Cognitive Theories of Gender Identity 255		12.2 The Nature of Intelligence	309
• Biological Influences 256		Psychometric Theories	309
Self-Esteem	257	Gardner's Theory of Multiple Intelligences	310
<b>10.2 Relationships with Parents</b>	258	Sternberg's Triarchic Theory of	
The Family as a System	259	Successful Intelligence	312
Dimensions and Styles	260	12.3 Individual Differences in Intellectual Skills	315
Cultural Differences in Warmth and Control 261		Binet and the Development of Intelligence Testing	315
• Parenting Styles 261		Do Intelligence Tests Work?	316



Hereditary and Environmental Factors	318	13.5 Families in the Early Twenty-First Century	368
Impact of Culture and Social Class	320	After-School Care	368
Gender Differences in Intellectual Abilities and Achievement	323	Divorce	370
Verbal Ability 323 • Spatial Ability 323		Family Life after Divorce 370 • Impact of Divorce on Children 371 • Adjusting to Divorce 372	
• Mathematics 324		• Blended Families 373 • Skip-Generation Families 374	
12.4 Academic Skills	326	• Foster Families 374	
Reading Skills	326	Summary	374
Prereading Skills 327 • Recognizing Words 327			
• Comprehension 329			
Writing Skills	330	<b>14 Physical Growth in Adolescents</b>	<b>377</b>
Greater Knowledge and Access to Knowledge about Topics 330 • Greater Understanding of How to Organize Writing 330 • Greater Ease in Dealing with the Mechanical Requirements of Writing 331		14.1 Pubertal Changes	378
• Greater Skill in Revising 331		Signs of Physical Maturation	378
Math Skills	332	Physical Growth 379 • Sexual Maturation 380	
International Studies of Mathematics Achievement 333		Mechanisms of Maturation	381
12.5 Effective Schools	335	Psychological Impact of Puberty	383
School-Based Influences on Student Achievement	335	Body Image 383 • Response to Menarche and Spermatarche 383 • Cognitive Control and the Developing Brain 383 • Rate of Maturation 386	
Teacher-Based Influences on Student Achievement	336	14.2 Sexuality	387
The Role of Computers 337		Sexual Behaviour	387
Summary	338	Sexually Transmitted Infections (STIs) 390	
		• Teenage Pregnancy and Contraception 391	
		Sexual Orientation	393
		Sexual Coercion	395
		A Final Remark 396	
		14.3 Health	397
		Nutrition	398
		Anorexia and Bulimia 398	
		Physical Fitness	399
		Threats to Adolescent Well-Being	401
		Summary	402
<b>13 Social and Emotional Development in Middle Childhood</b>	<b>341</b>	<b>15 Cognitive Processes in Adolescents</b>	<b>405</b>
13.1 Self-Esteem	342	15.1 Cognition	406
Measuring Self-Esteem	342	Piaget's Stage of Formal Operational Reasoning	406
Developmental Change in Self-Esteem	343	Theory of Actual Thinking or Possible Thinking 408	
Sources of Self-Esteem	344	Information Processing during Adolescence	408
Consequences of Low Self-Esteem	346	Basic Processes of Working Memory and Processing Speed 409 • Content Knowledge 409	
13.2 Relationships with Peers	347	• Strategies and Metacognitive Skill 410	
An Overview of Peer Interactions in Middle Childhood	347	15.2 Reasoning about Moral Issues	411
Friendship	349	Kohlberg's Theory	411
Quality and Consequences of Friendship 349		Support for Kohlberg's Theory 413	
Popularity and Rejection	350	Gilligan's Ethic of Caring	414
Consequences of Rejection 351		Promoting Moral Reasoning	417
• Causes of Rejection 351		15.3 The World of Work	419
Prejudice	352	Career Development	419
13.3 Helping Others	354	Personality-Type Theory 420	
Skills Underlying Prosocial Behaviour	355	Part-Time Employment	423
Situational Influences	355	15.4 Special Challenges	425
Socializing Prosocial Behaviour	356	Learning Disabilities	425
13.4 Aggression	357	Attention Deficit Hyperactivity Disorder	427
The Nature of Children's Aggressive Behaviour	358	Intellectual Delay	429
The Impact of Aggression on Children	359	Summary	431
Aggression in Families 359 • Abuse of Children 361 • Impact of Television 364			
• Cognitive Processes 365			
Victims of Peer Aggression	366		

## 16 Social and Emotional Development in Adolescents

16.1 Identity and Self-Esteem	434	16.3 The Dark Side	450
The Search for Identity	435	Alcohol and Drug Use	450
Ethnic Identity	439	Depression	452
Self-Esteem in Adolescence	441	Treating Depression 454	
16.2 Relationships with Parents and Peers	442	Delinquency	455
Parent–Child Relationships in Adolescence	442	Causes of Delinquency 456	
Relationships with Peers	444	• Treatment and Prevention 457	
Groups 444 • Group Structure 446		Summary	458
• Peer Pressure 446 • Friendship 448		Glossary	461
• Romantic Relationships 448		References	469
		Name Index	529
		Subject Index	546



# Boxes

## MAKING CHILDREN'S LIVES BETTER

Longitudinal Research Conducted on Young People  
in Canada 34  
PKU Resources for Parents through the Montreal  
Children's Hospital 59  
Five Steps toward a Healthy Baby 74  
text4baby 81  
What's the Best Food for Babies? 106  
Jordan's Principle 212

Tim Horton Children's Foundation 298  
How Can We Help Children Who Have Experienced  
Abuse? 363  
Preventing Date Rape 397  
Mental Health Services for Children 429  
Understanding the Combined Effect of Historical Events  
on Children's Lives in the Present 452

## CHILDREN AND FAMILIES AROUND THE WORLD

Why Do Persons of African Heritage Inherit Sickle-Cell  
Disease? 51  
Healthy Eating in Brazil 105  
Learning to Walk in Hopi Culture 123  
Do Babies from Different Cultures Cry the Same? 187  
Growing Up Bilingual 232  
Grandmothers in African American Families 267

New Ideas in Family Nutrition . . . or Are These Old  
Ideas? 289  
How Culture Defines What Is Intelligent 313  
Keys to Popularity 351  
Aid to Children and Adolescents at Risk 362  
How the Apache Celebrate Menarche 384  
Moral Reasoning in India 415  
The Impact of War on Children 453

## RESEARCH TO PRACTICE

The Effects of Prenatal Maternal Stress on Children's  
Cognitive Development: Project Ice Storm 56  
Infants' Knowledge of Their Bodies 146  
Temperament, Parental Influence, and Self-Control 279  
The Carolina Abecedarian Project 320

How Parents Influence Adolescents' Sexual  
Behaviour 390  
Promoting Strong Development through Strong Ethnic  
Identity 441

## CHILD DEVELOPMENT AND FAMILY POLICY

Screening for PKU 63  
Back to Sleep! Dodo sur le dos! 95  
Determining Guidelines for Infant and Toddler Child  
Care 180  
Providing Children with a Head Start for School 244

Assessing the Consequences of China's One-Child  
Policy 270  
Preventing Osteoporosis 381  
Promoting More Advanced Moral Reasoning 418

## LOOKING AHEAD

Fetal Activity Predicts Infant Fussiness 74

Self-Control during the Preschool Years Predicts Later  
Behaviour, Personality, and Achievement 277

Predicting Reading Skill 327

Adolescent Friendships Predict Quality of Relationships  
in the Midthirties 449

## REAL CHILDREN

Calming Bradley 94

A Father's Attachment 177

Very Cute 177

Christine, Egocentrism, and Animism 218



# Preface

I am especially pleased to present to you the fifth Canadian edition of *Children: A Chronological Approach*, written for those engaged in introductory learning and teaching of child development from a psychological perspective. The authentic Canadian context of the book, as well as the chronological unfolding of developmental events in childhood, will help your students to grasp child development concepts in a way that is culturally meaningful and conceptually accessible to them.

I sincerely hope that you enjoy this new edition of *Children: A Chronological Approach*. The book retains and updates useful features from the previous edition and introduces several new ones, designed to enhance the learning experience. I use this text in my own classes and have found these added features to be helpful to students; they also help me to better advise students on ways to improve their performance in the course.

## Recent Advances in Research

- Updated content on comparing variables—Chapter 2
- Updated content on how genetics affect behaviour—Chapter 3
- Updated content on nutrition for babies and toddlers in Canada and internationally—Chapter 5
- Updated content on habituation—Chapter 6
- Updated content on bilingualism in Canada—Chapter 9
- Updated content on the benefits of full-day kindergarten—Chapter 9
- Updated content on the effects of violence on children—Chapter 13
- Updated content on cultural response to menarche and spermarche—Chapter 14
- Updated content on sexual behaviour, and sexual behaviour online in older children—Chapter 14
- Updated content on STIs—Chapter 14
- Updated content on LGBTQ teens—Chapter 14

## Retained Features

As with previous editions of the text, research findings are situated and understood within Canada's unique cultural and socio-political context, which is especially relevant to students at Canadian colleges and

universities. Additional key features we retained are listed below:

- Our vignette star, Sophie, returns in **chapter-opening mini vignettes** that highlight a major developmental focus for each chapter.
- Prominently displayed on the inside front cover of the text is a developmental milestones review chart that provides an at-a-glance look at the major developmental changes that occur for each major period from prenatal through adolescence.
- Each chapter features numbered learning objectives that are reiterated in the body of the text to correlate objectives with content.
- **Marginal key terms** retained for students' quick review while studying.
- **Modular structure** maintained.
- *Ask Yourself* reflection questions added at critical junctures within each module.
- *Chapter Critical Review* is streamlined into point form that makes for easier scanning and overview of summarized information.
- *See for Yourself* pointers continue to suggest activities that allow students to observe topics in child development first-hand.
- This new edition continues to highlight the most important information in child development research for students new to the study of developmental psychology. The recurring feature presents different scenarios and asks the question "What would a \_\_\_\_ do?," offering insights to students studying in a variety of disciplines, including early childhood development, social work, education, psychology, nursing, and medicine.

## Canadian Cultural Context

Information on Canadian cultural context, previously contained in Chapter 1, now appears throughout the entire text. Therefore, consider asking your students to read the section below, titled *Culture and Terminology: A Word about This Book*, so that they understand how cultural groups in Canada tend to be labelled and the impact that Canadian social realities have on understanding research conducted both inside and outside of Canada.

## Culture and Terminology: A Word about This Book

As you begin to study child development, you should become familiar with the basic terms we use to describe infancy, childhood, and adolescence. Note that each term provided below refers to a specific range of ages.

- newborn: birth to 1 month
- infant: 1 month to 1 year
- toddler: 1 to 2 years
- preschooler: 2 to 6 years
- middle childhood: 6 to 12 years
- adolescent: 12 to 18 years
- adult: 18 years and older

For variety, we sometimes use other terms—*babies*, *youngsters*, *youth*, and *elementary school children*—that are less frequently tied to specific age ranges. When we do use these other terms, you will be able to tell from the chapter content which group of people is being discussed.

We also will use very specific terminology to describe research findings from different cultural and ethnic groups. The appropriate terms to describe different cultural, racial, and ethnic groups tend to change over time and to vary from country to country. For example, the terms Indian, Aboriginal, Indigenous, North American Indian, and First Nations all have been used to describe the First Peoples of Canada. In this book, we will use the terms First Nations, Inuit, and Métis because they are, broadly speaking, the terms used by the people from those cultural groups themselves. Part of the problem with cultural and ethnic terminology in child-development research is that, in Canada, we do not necessarily use the same terms as our American counterparts, particularly in research studies. Canada has a very different population settlement history than the United States, although some similarities exist. For example, both countries started out populated with persons of First Nations heritage, and both countries experienced major waves of immigration from Britain. Later waves of immigration came from other parts of Western and Eastern Europe and from other countries around the world. However, Canadian and American experiences of treaties, governance, immigrant settlement, the geographical patterns of settlement, and the proportions of the various cultural groups in the nation differ greatly.

Psychological researchers in the United States tend to identify five primary groups as culturally distinct: Native Americans, Hispanic Americans, Asian Americans, European Americans, and African Americans. However, the labelling of these groups for research is not wholly satisfactory, because the labels refer more to race than to culture. For example, within the Native American group, many

different cultures are represented. In Canada, we might think of Anishinabe, Lakota, Blackfoot, Assiniboine, and others, but these groups can be broken down into still smaller cultural groups. Cree, for example, includes Swampy Cree, Plains Cree, and Moose Cree. Each group tends to come from a different geographical area, and each speaks its own dialect of Cree. The same is true for all other racial groups—they can be broken down into smaller cultural groups that are quite distinct from each other.

For example, some writers use the term “European American” and others use “White.” Unfortunately, both terms are extremely broad and superficial. Included in the “European American” group, for example, are British, German, and Bulgarian immigrants to Canada, all of whom are radically different from each other in terms of their history, language, and culture. Of course, not all European Americans are “White” in terms of skin colour either. Therefore, broad labels for cultural groups might not be very effective and might account for why sometimes in research as much variability emerges within a cultural group as between cultural groups. Canadian researchers sometimes create similar problems with the terms “Anglophone” and “Francophone.” Francophones are frequently identified as people who are ethnically French and who speak French, whereas Anglophones speak English but might come from any number of non-French cultures. Therefore, the culture or characteristics that are represented by “Anglophone” are often unclear, except that these people speak English and are not French. Furthermore, as many Francophones also speak English, the distinction between the groups is blurred even further.

Over the past decade, an explosion of discussion has occurred within psychology about what researchers are really measuring when they classify research participants by race (Ota Wang & Sue, 2005; Shields et al., 2005; Sternberg, Grigorenko, & Kidd, 2005). Arguments abound about what race, as a variable, measures, given that socio-cultural groupings within races can be very distinct and that some cultures may contain people from more than one race. Nevertheless, race is important because people tend to classify each other naturally according to racial groupings (Smedley & Smedley, 2005; Wing Sue et al., 2007). However, with advances in research on human neurology and the human genome, scientists have recognized that social classifications by race are not always supported by genetic markers, which makes race a social construct (Cooper, 2005; Eberhardt, 2005; Ota Wang & Sue, 2005; Smedley & Smedley, 2005) with a complicated connection to biology (Hartigan, 2009).

Also, some researchers have objected to the use of “race” as a substitute, or “proxy variable,” for other social and environmental variables that negatively affect racial minorities, such as poverty, oppression, and racism

(Ota Wang & Sue, 2005; Shields et al., 2005). On the other hand, researchers in pharmacology and medicine have demonstrated race-based differences in disease prevalence as well as physiological processing of various medications. Therefore, discussion and research should continue to determine how the concept of race might be discussed and studied within psychology (Bonham, Warshauer-Baker, & Collins, 2005; Helms, Jernigan, & Mascher, 2005; Whitfield & McClearn, 2005).

Given the recent controversy about the merits and demerits of classifying research participants by race, reporting on research in an introductory text like this one becomes difficult when so much of the research is based on racial variables and classifications. When we report on research results in this text, we are obliged to use the terms the researchers, themselves, have used, even if those terms might be problematic. When researchers have identified subgroups in their research sample, we will use the more specific terms in describing results. When you see more general terms, such as “White” or “European,” remember that conclusions might not apply equally to all subgroups within the larger group. In future, psychological researchers will need to rise to the challenge of defining and measuring human social categories more meaningfully and accurately.

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Finally, a word of gratitude for all of our supplement authors. The instructor's manual, PowerPoint slides, and test bank are great resources that help increase the value of this book to many instructors. We especially wish to thank Michelle Edey from the Sheridan Institute of Technology and Advanced Learning for her excellent work in creating the interactive component for our REVEL edition. It is our hope that these quizzes and interactive learning widgets will help bring the concepts to life.

*Dr. Theresa Zolner, R. Psych.*



# About the Authors



**Robert V. Kail** is Professor of Psychological Sciences at Purdue University. His undergraduate degree is from Ohio Wesleyan University and his Ph.D. is from the University of Michigan. Kail is editor of the *Journal of Experimental Child Psychology* and of *Advances in Child Development and Behavior*. He received the McCandless Young Scientist

Award from the American Psychological Association, was named the Distinguished Sesquicentennial Alumnus in Psychology by Ohio Wesleyan University, and is a fellow of the Association for Psychological Science. His research focuses on cognitive development during childhood and adolescence. Away from the office, he enjoys photography and working out.



**Theresa Zolner** is a child and family clinician, researcher, and author with a primary interest in community and cultural psychology. Dr. Zolner has retained a life-long interest in working with people who have been affected by discrimination, oppression, or objectification in various forms. In particular, she has dedicated much

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## Dedication

To Chauncy  
—Robert V. Kail

To Jack  
—Theresa Zolner

## Chapter 1

# Child Development: Theories and Themes



Evasilieva/Fotolia



## MODULE

- 1.1 Theories of Child Development
- 1.2 Themes in Child-Development Research

### Connect to My Virtual Child

What kinds of theories do you have about children? What ideas inform your thoughts and beliefs about the lives of children, how they are raised, and the nature of the human person? Use your access card and follow this link [www.myvirtualchild.com](http://www.myvirtualchild.com) to learn more about the world of the child. You can even virtually try to raise your own child.

Terry and Mabel have been together for a while, and, lately, they have been thinking about starting a family. Every time they see a couple with a baby walk by, they wonder about having a child. As they discuss the beliefs their own parents taught them about children, they wonder . . . what are the most important aspects of and ideas about child development?

## 1.1 Theories of Child Development

### Learning Objectives

*After reading the module, you should be able to do the following:*

- L01** Describe Canada's unique contribution to developmental research.
- L02** State the major tenets of the biological perspective.
- L03** Explain how psychodynamic theories account for development.
- L04** Identify the focus of learning theories.
- L05** Describe how cognitive-developmental theories explain changes in children's thinking.
- L06** Name the main points of the contextual approach.
- L07** Explain recent approaches to the study of child development.
- L08** Identify where you can read more about the history of psychology.

Questions about child development have occupied the minds of some of the greatest writers and philosophers in history. For example, nearly 400 years ago, English philosopher John Locke (1632–1704) claimed that the human infant is born *tabula rasa*—as a “blank slate.” Locke believed that experience moulds the infant, child, adolescent, and adult into a unique individual. Locke's view was challenged by French philosopher Jean-Jacques Rousseau (1712–1778), who believed that newborns were endowed with an innate sense of justice and morality that unfolds naturally as children grow.

By the middle of the nineteenth century, progress in Western science had merged with growing concerns about children's welfare to bring about the first Western scientific theories of child development. In child development, a **theory** is an organized set of ideas designed to explain and make predictions about development. For example, suppose your friends have a baby daughter who cries often. You could imagine several explanations for her crying. Maybe the baby cries because she's hungry; maybe she cries to get her parents to hold her; maybe she cries because she's simply a cranky baby. Each of these explanations is a very simple theory to explain why the baby cries so much. Formal developmental theories are much more complicated than these, but their purpose is the same—to explain behaviour and make predictions about development.

In addition to proposing explanations for behaviour and development, theories are a source of predictions that can be tested through research. Think about the different explanations for the crying baby. Each one leads to unique predictions. If, for example, the baby is crying because she's hungry, we predict that feeding her should stop the crying. When results of research match a prediction based on a theory, the

#### **Theory:**

an organized set of ideas designed to explain and make predictions about development; also, any organized set of ideas designed to explain and make predictions about natural phenomena.

theory gains support. When results differ from a prediction, the theory is revised and more research done.

Many theories have guided research and thought about children’s development for the past 100 years. Researchers have embraced some theories for a period and then abandoned them when those theories were disproved or generated few testable predictions. Nevertheless, understanding historical theories is critical because they set the stage for current theories of child development.

Some theories share common assumptions and ideas about children and development, so they can be grouped together. In the next few pages, we sketch five major theoretical perspectives in child-development research: biological, psychodynamic, learning, cognitive-developmental, and contextual. As you read about each theory, think about how it differs from the others in its explanation of development.

## Canada’s Unique Contribution

**L01 Describe Canada’s unique contribution to developmental research.**

Canada’s contributions to the field of psychology extend back over 100 years to James Mark Baldwin, who came to Canada from Princeton University and was the first psychologist appointed at the University of Toronto. Baldwin’s appointment was controversial largely because he was a “materialist” interested in studying the mind empirically (experientially) and not philosophically (Hoff, 1992). Baldwin set up the very first psychological laboratory in Canada. His initial budget at the University of Toronto was \$1550 for set-up, with an annual maintenance allowance of \$300—probably a lot of money at that time (Baldwin, 1892). In fact, this was the first psychological laboratory anywhere in the British Empire (1892).

Baldwin’s theoretical influence on the field of child development was as important as his experimental lab. He strongly believed that theory must guide experimentation—that theory should come first (Baldwin, 1906). Coming from what we would now call a social psychological perspective, Baldwin insisted that children’s development occurs in stages, an idea that would later be advanced by Jean Piaget. Baldwin believed that development proceeded from simple behavioural movements gradually coordinated into more complex behaviours and leading to adult forms of abstract thought (1906). He theorized about many concepts that child-development researchers continue to investigate today, including research methodology, colour perception, handedness, movements, suggestion, imitation, adaptation, volition, attitudes and expressions, memory, consciousness, thought, and more.

Canada has a strong history of research in child development. While much of this research is conducted at Canadian universities, the Government of Canada (primarily through Statistics Canada and Health Canada) also produces a wealth of researched information about Canadian children’s development and the difficulties they face. Another of Canada’s contributions to psychology involves access to historical information about the field. In 1997, Dr. Christopher Green, at York University, set up an invaluable website that contains a large number of early works in the history of psychology (<http://psychclassics.yorku.ca>). Using this resource, you can read many of the original works written by theorists in child development whom we will be discussing next.

## The Biological Perspective

**L02 State the major tenets of the biological perspective.**

According to the biological perspective, cognitive, personality, physical, and motor development proceed according to a biological plan. The earliest researcher to





Arnold Gesell

**Natural selection:**

an ongoing process in nature that results in survival of those organisms that are best adapted to their environments.

**Maturation theory:**

a theory that views development as unfolding according to a specific and prearranged scheme or plan within the body.

**Ethological theory:**

a theory that views development from an evolutionary perspective, such that human behaviours can be adaptive and have survival value.

**Critical period:**

the time in development when a specific type of learning best takes place.

**Imprinting:**

the instinctive creation of an emotional bond between a newborn animal and the animal's mother.

**Attachment:**

the emotional bond that forms between people, particularly children and their parents.

empirically study and describe children's development was G. Stanley Hall (1846–1924). Hall studied about 100 000 children and interviewed hundreds of school personnel in an effort to describe the “normal” child (Brooks-Gunn & Johnson, 2006). His goal was to reconstruct the study of psychology to include the study of children, and he based his work on evolutionary biology rather than the physical sciences, as was more common with other researchers (2006).

Approaches to research in evolutionary biology derived, in Hall's time, primarily from the work of Charles Darwin (1809–1882), who published a theory of evolution that promoted important concepts that have had wide-ranging impact on all areas of scientific study. Most important was Darwin's concept that organisms whose individual traits are best suited, or adapted, for survival in a particular environment are the organisms most likely to survive. As a result, the strongest and fastest organisms are not necessarily the ones that survive, as survival depends on a fit between the characteristics of the organism and the environment in which it lives. If the organism survives, it

can reproduce some of its genetic traits in offspring. The best-adapted offspring then reproduce in an ongoing process of environmental adaptation that Darwin termed **natural selection**. Through this theory, Darwin proposed that current traits of animals and people can have an evolutionary history that extends back over generations of reproduction spanning eons of time. Darwin's ideas had a dramatic impact on scientists, particularly those who took a biological approach to understanding development.

One of the first biological theories, **maturation theory**, was proposed by Arnold Gesell (1880–1961). According to Gesell, child development reflects a specific and prearranged scheme or plan within the body. For Gesell, development is a natural unfolding of a biological plan; experience matters little. Like Rousseau, Gesell encouraged parents to let their children develop naturally. He claimed that, without interference from adults, behaviours like speech, play, and reasoning would emerge spontaneously according to a predetermined developmental timetable.

Other biological theorists give greater weight to experience. Ethological theorists view development from an evolutionary perspective. In **ethological theory**, many behaviours are adaptive—that is, they have survival value. For example, crying is adaptive for infants because it elicits caregiving from others. Ethological theorists assume that people inherit many of these adaptive behaviours, but they also believe that experience is important for development. However, ethologists propose that animals are biologically programmed so that some kinds of learning occur only at critical times in development. A **critical period** is the time in development when a specific type of learning can take place; before or after the critical period, the same learning is difficult or impossible.

One of the best-known examples of the concept of a critical period comes from Konrad Lorenz (1903–1989), a Nobel Prize-winning Austrian zoologist (Brigandt, 2005). Lorenz noticed that newly hatched chicks follow their mother and theorized that chicks are biologically programmed to follow the first moving object they see after hatching. Usually this was the mother, so following her was the first step in **imprinting**, creating an emotional bond with the mother. Lorenz tested his theory by showing that, if he removed the mother immediately after the chicks hatched and replaced her with another moving object, the chicks would follow that object and treat it as “mother.” In humans, this emotional bond is called **attachment**, and theories about attachment grew out of biologists' observations of animals' behaviour.

Lorenz also discovered that, for imprinting to occur, the chick had to see the moving object within about a day of hatching. In other words, the critical period for imprinting lasts about a day. When chicks experience the moving object outside of the critical period, imprinting does not take place. Therefore, even though the underlying mechanism is biological, experience is essential for triggering programmed, adaptive behaviours.

Ethological theory and maturational theory both highlight the biological bases of development. Biological theorists remind us that children's genes, which are the product of a long evolutionary history, influence virtually every aspect of children's development.



Konrad Lorenz

Nina Leen/The LIFE Picture Collection/Getty Images

## The Psychodynamic Perspective

### LO3 Explain how psychodynamic theories account for development.

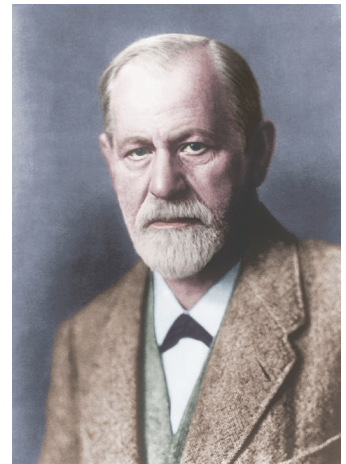
The psychodynamic perspective has its roots in Sigmund Freud's (1856–1939) late nineteenth and early twentieth century work. Freud was a physician specializing in diseases of the nervous system. Many of his patients were adults suffering from conditions that had no obvious biological cause. As Freud listened to his patients describe their problems, he theorized that early experiences establish enduring, lifelong patterns. Using his patients' case histories, Freud created **psychoanalysis**, a psychological theory proposing that development is largely determined by how well people resolve unconscious conflicts that arise during development. Freud's original theory has been highly criticized for its limited base of initial research and its controversial claims about women. However, his ideas about personality and psychosexual development have been influential in developmental research.

**THEORY OF PERSONALITY.** Freud proposed that personality includes three primary theoretical components that emerge at distinct periods of development: the **id**, **ego**, and **superego**.

The **id** is a reservoir of primitive instincts and drives. It is present at birth and presses for immediate gratification of bodily needs and wants. A hungry baby crying illustrates the **id** in action. The **ego** is the practical, rational component of personality. The **ego** begins to emerge during the first year of life, as infants learn that they cannot always have what they want. The **ego** tries to resolve conflicts that occur when the instinctive demands of the **id** encounter the obstacles of the real world. The **ego** tries to meet the **id**'s desires with realistic and socially acceptable objects and actions. Suppose, for example, a child, Billy, sees a friend playing with an attractive toy. Billy's **id** would urge him to grab the toy, but his **ego** would encourage him to play with the friend and the toy co-operatively.

The third component of personality, the **superego**, is the "moral agent" in the child's personality, a conscience. It emerges during the preschool years as children begin to internalize adult standards of right and wrong. If the friend in the previous example left the attractive toy unattended, Billy's **id** might urge him to grab it and run; his **superego** might remind him that taking another child's toy is wrong.

**THEORY OF PSYCHOSEXUAL DEVELOPMENT.** A second aspect of psychoanalysis was Freud's account of psychosexual development. Freud believed that humans, through a force called **libido**, are instinctively motivated from birth to experience physical pleasure. As children grow, **libido** shifts to different parts of the body, termed "erogenous zones." For example, in their first year, infants seek pleasure orally,



Sigmund Freud

AKG images/Newscom

### Psychoanalysis:

Freud's psychological theory and method of treatment for unresolved unconscious conflict.

### Id:

one of three Freudian components of personality; a reservoir of primitive instincts and drives.

### Ego:

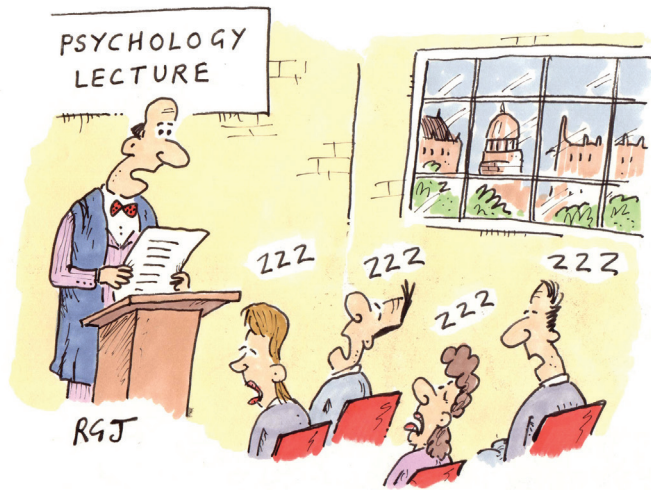
one of three Freudian components of personality; tries to realistically meet the demands of the **id**.

### Superego:

one of three Freudian components of personality; acts as the moral agent of personality.

### Libido:

an instinctive energy or force that motivates humans to experience pleasure.



"Today: The collective unconscious..."

### Environmental reactions:

a family's responses to hereditary conditions.

### Body ego:

a person's sense of the self as an individual.

### Psychic skin:

a person's capacity for protecting and containing his or her internal emotional states.

### Neuropsychanalysis:

the study of the relationship between psychoanalytic theory and biological approaches in psychology.

Modern psychoanalytic theorists understand that heredity and environment both influence children, but they also recognize that a family's responses, or **environmental reactions**, to hereditary conditions shape children's adjustment and development (Diem-Wille, 2011). An interesting concept is that of **body ego**, which develops in the early years during the process of closeness and separation between child and parent and contributes to the development of a sense of individual self (2011). Nurturing the child through physical and emotional care also helps to create a **psychic skin**, which holds this sense of self together (Diem-Wille, 2011; Feldman, 2011; Netzer-Stein, 2012). Other developments in this area include the merging of psychoanalytic theory with biological approaches in psychology to produce a new theory called **neuropsychanalysis** (Bernstein, 2011).

usually by sucking, so Freud called this the oral stage. Freud proposed several developmental stages, each characterized by gratification of needs associated with an erogenous zone (see Table 1–1 A Comparison of Freudian and Eriksonian Stage Theories).

Freud believed that development proceeds best when children's needs at each stage are met but not exceeded. If children's needs are not met adequately, children become frustrated and find moving on to more mature forms of pleasure difficult, and they become developmentally fixated at a certain stage. For example, an adult whose needs for oral stimulation were not met in infancy might try to satisfy those needs by smoking. However, if children are overindulged at one stage, they see little need to progress to more advanced stages. In Freud's view, parents have the difficult task of satisfying children's needs without spoiling them.

**Table 1–1** A Comparison of Freudian and Eriksonian Stage Theories

Age	Freud: Psychosexual Stages		Erikson: Psychosocial Stages	
	Stage	Task	Stage	Task
Birth to 1 year	Oral	Erogenous zone: mouth; gratify oral sucking urges	Basic trust vs. mistrust	To develop a sense that the world is safe, a "good place"
1 to 3 years	Anal	Erogenous zone: anus; release and withhold feces	Autonomy vs. shame and doubt	To realize that one is an independent person who can make decisions
3 to 6 years	Phallic	Erogenous zone: genitalia; learn to suppress attraction to the parent of the opposite sex and identify with the parent of the same sex	Initiative vs. guilt	To develop a willingness to try new things and to handle failure
6 years to adolescence	Latency	Erogenous zone: none; libido is repressed as children go about daily business	Industry vs. inferiority	To learn basic skills and to work with others
Adolescence	Genital	Erogenous zone: genitalia; attraction to the opposite sex (not the parent)	Identity vs. identity confusion	To develop a lasting and integrated sense of self
Young adulthood			Intimacy vs. isolation	To commit to another in a loving relationship
Middle adulthood			Generativity vs. stagnation	To contribute to younger people through child-rearing, child care, or other productive work
Later life			Integrity vs. despair	To view one's life as satisfactory and worth living



**ERIKSON'S PSYCHOSOCIAL THEORY.** Erik Erikson (1902–1994) believed that the psychological and social aspects of development are as important as the biological and sexual aspects that Freud emphasized. Erikson worked with Anna Freud, Sigmund Freud's daughter, at the Vienna Psychoanalytic Institute. Erikson's theory is an offshoot of Freudian theory; therefore, it is a **psychodynamic theory**. Although psychoanalytically trained, Erikson's ideas about lifespan development were rooted in knowledge gained from First Nations peoples in the United States, including the Lakota and Yurok (Erikson, 2000). In Erikson's **psychosocial theory**, development consists of a sequence of eight stages, each defined by a unique crisis or social challenge (see Table 1–1 A Comparison of Freudian and Eriksonian Stage Theories). The name of each stage reflects the challenge that individuals face at a particular period. For example, the challenge for young adults is to become involved in a loving relationship. Adults who establish this relationship experience intimacy; those who don't experience isolation. George Vaillant has extended and elaborated upon Erikson's original theory and added six adult developmental stages extending from early adulthood to old age: identity, intimacy, career consolidation, generativity, keeper of the meaning, and integrity (Vaillant, 2003).

Like Freud, Erikson argued that earlier stages of development provide the foundation for later stages. For example, according to Erikson, adolescents who do not meet the challenge of developing an identity will have difficulty establishing truly intimate relationships and risk becoming overly dependent on their partners as a source of identity.

Whether we use the terms “unconscious conflicts,” “challenges,” or “crises,” psychodynamic theorists emphasize that the journey to adulthood is fraught with obstacles. Outcomes of development reflect the manner and ease with which children navigate life's tasks. When children overcome early obstacles easily, they are better able to handle later ones.

## The Learning Perspective

### LO4 Identify the focus of learning theories.

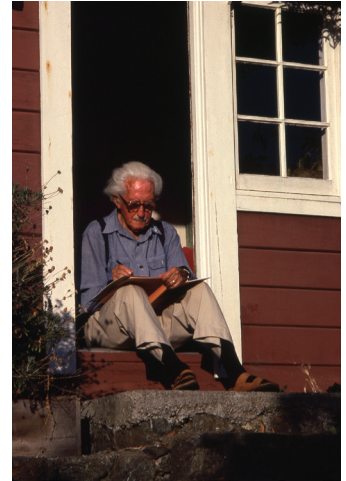
Learning theorists endorse John Locke's view that the infant's mind is a blank slate on which experience writes. John Watson (1878–1958) was the first theorist to apply this approach to child development. Watson extended the work of Russian researcher Ivan Pavlov on **classical conditioning**, which is a theory of associative learning. These theorists demonstrated that animals and people can learn to respond in a particular manner to a stimulus that normally would not elicit that type of response. For example, dogs normally salivate in response to food but not to the sound of a bell. Pavlov demonstrated that, if a tone were sounded each time a dog smelled food, the dog would begin to salivate in response to the tone without any food being present: The dog would learn to associate the tone with food and respond to it by salivating.

Watson argued that learning is the crucial factor in determining the course of a child's development and behaviour. He assumed that, with correct techniques, anything could be learned by almost anyone. Watson demonstrated his ideas by training 11-month-old “Little Albert” to fear a rat. Each time Albert reached for the animal, the experimenters struck a steel bar with a hammer, producing a loud and frightening sound. Eventually, Albert associated the sound with the rat and began to demonstrate signs of fear with the rat (Watson & Rayner, 1920).

**EARLY LEARNING THEORIES.** Following Watson, B. F. Skinner (1904–1990) studied learning through **operant conditioning**, in which the consequences of a behaviour affect whether that behaviour is repeated in the future. Skinner showed that two kinds of consequences were especially influential. A **reinforcement** is a consequence that increases the future likelihood of the behaviour it follows.

**Psychodynamic theories:** theories that are offshoots of Freudian psychoanalysis.

**Psychosocial theory:** Erik Erikson's psychoanalytic theory that development occurs in a sequence of stages defined by a unique crisis or social challenge.



Erik Erikson

**Classical conditioning:** a theory of associative learning that later gave rise to behaviourism.

**Operant conditioning:** a behavioural theory about how the consequences of a behaviour can affect future occurrences of that behaviour.

**Reinforcement:** a consequence that increases the future likelihood of the behaviour it follows.



B. F. Skinner

**Punishment:**

an aversive consequence that decreases the future likelihood of the behaviour it follows primarily when the child is in the presence of an authority figure.

**Imitation:**

behaving in the manner one sees others behaving.

**Vicarious (observational) learning:**

a method of learning in which one acquires knowledge by watching others' behaviours and the consequences or outcomes of those behaviours.

Positive reinforcement means giving a reward, such as gold stars, praise, or paycheques, to increase the likelihood that a behaviour will recur. Parents can use positive reinforcement to encourage particular behaviours in children by saying, for example, that doing a half hour of reading will be rewarded with a half hour of video game time afterward. Negative reinforcement means rewarding by taking away something unpleasant. For example, a half hour of reading before supper is rewarded with getting out of washing the dishes.

A **punishment** is an aversive consequence that decreases the future likelihood of the behaviour it follows. Punishment suppresses a behaviour either by causing something unpleasant to occur or by withholding a pleasant event. For example, if their daughter failed to clean her room, parents could punish her by making her do extra chores (adding something unpleasant) or by not allowing her to watch television (withholding a pleasant event).

Skinner's research was done primarily with animals, but developmental researchers soon showed that the principles of operant conditioning could be used to modify children's behaviour (Baer & Wolf, 1968). Applied properly, reinforcement and punishment have a powerful effect on children, but notice that thinking or cognition does not play a role in early behavioural theory.



Joseph Helfenberger/Fotolia

In behavioural theory, generating an aversive event and withholding a pleasant event are both forms of punishment for inappropriate behaviour.

**Social cognitive theory:**

a theory of personality that views the environment, behaviour, and cognitions as important in shaping development.

**Self-efficacy:**

beliefs about one's own levels of ability, skill, and talent.

see a behaviour rewarded rather than punished. Children do not automatically mimic what they see and hear; instead, they look to others for information about what behaviours are appropriate. When admired people are rewarded for their behaviour, imitation makes sense.

Bandura based his **social cognitive theory** of personality on this complex view of reward, punishment, and imitation. Bandura called his theory "cognitive" because he believed that children are actively trying to understand their world; the theory is "social" because other people are important sources of information about the world.

Bandura (1997) also argued that experience gives children a sense of **self-efficacy**, beliefs about their own levels of ability, skill, and talent to affect events having an impact on them personally. Self-efficacy beliefs help determine when children will imitate others. A child who sees herself as musically untalented, for example, will not try to imitate Celine Dion singing on stage, despite the fact that Celine is gifted and internationally famous. Thus, whether a child imitates another person depends on who the other person is, whether that person's behaviour is rewarded, and whether the child has beliefs about self-efficacy. For Bandura, the social-cognitive child actively interprets experience using cognition.

**SOCIAL COGNITIVE THEORY.** In a groundbreaking article, Alberta-born Albert Bandura (1925–) published a critique of learning theory, saying that learning theorists were ignoring the importance of social relationships and the role of imitation in learning. He proposed that people can learn without personal reinforcement simply by watching those around them, through **imitation** or **vicarious (observational) learning** (Bandura, 1962). For example, imitation occurs when a toddler throws a toy after seeing a friend do so, or when a child offers to help an elderly person carry groceries because she's seen her parents do the same.

Children are more likely to imitate a person whom they admire in some way, such as a popular, smart, or talented person, or when they want to fit into a particular group (Over & Carpenter, 2013). Children are also more likely to imitate when they



Albert Bandura

Jon Brenneis/The LIFE Images Collection/Getty Images



## The Cognitive-Developmental Perspective

**LO5** Describe how cognitive-developmental theories explain changes in children’s thinking.

The cognitive-developmental perspective focuses on how children think and how their thinking changes over time. Jean Piaget (1896–1980) proposed one of the best known of these theories. He believed that youngsters are naturally motivated to make sense of the physical and social world. For example, infants want to know about objects (What happens when I poke this toy?) and people (Who is this person who feeds me?).

Piaget argued that children act like scientists in creating theories about the physical and social worlds they are trying to understand. They try to weave all they know about objects and people into a theory that explains how their world works. When the world works the way the child expects, the child’s belief in that theory grows stronger. When events do not go as expected, the child must revise the theory, just as a scientist would. For example, a baby’s theory of objects might include the idea that, “If I let go of this rattle, it will fly up in the air.” When the baby lets go of the rattle, it falls to the floor, and the baby learns something about rattles. Eventually, babies learn that dropped objects fall to the floor—but they will have to revise that theory when they come into contact with helium balloons!

According to Piaget, at a few points in development, children realize that a theory cannot be revised. When this happens, radical changes take place, the theory must be discarded, and a completely new theory about the world develops. Piaget claimed that radical revisions occur three times in development: once at about age 2, a second time at about age 7, and a third time just before adolescence. Piaget theorized that children go through four distinct stages in cognitive development. Each stage represents a fundamental change in how children understand and organize their experiences, and each stage is characterized by more sophisticated types of reasoning. The first of these is the sensorimotor stage. As the name implies, sensorimotor thinking is closely linked to the infant’s basic sensory and motor skills (see Table 1–2 Piaget’s Four Stages of Cognitive Development).

Piagetian concepts have been debated widely in psychology, with some researchers rejecting them outright in favour of newer, information-processing approaches, which we will discuss later in this chapter. Canadian psychologist Robbie Case created what might be thought of as a theoretical hybrid, blending features of Piagetian theory with information-processing theory into what is termed neo-Piagetian theory.



Jean Piaget

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According to Piaget, children go through four stages of cognitive development, the first of which is the sensorimotor stage.

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**Table 1–2** Piaget’s Four Stages of Cognitive Development

Stage	Approximate Age	Characteristics
Sensorimotor	Birth to 2 years	Infant’s knowledge of the world is based on senses and motor skills. By the end of the period, infant uses mental representations.
Preoperational thought	2 to 6 years	Child learns how to use symbols such as words and numbers to represent aspects of the world but relates to the world only through his or her perspective.
Concrete operational thought	7 to 11 years	Child understands and applies logical operations to experiences, provided the experiences are focused on the here and now.
Formal operational thought	Adolescence and beyond	Adolescent or adult thinks abstractly, speculates on hypothetical situations, and reasons deductively about what may be possible.