1
Introduction

CHAPTER OUTLINE

GUIDING QUESTIONS

- What is the role of theory in the study of human development?
- What are some important features of a theory?
- How would you decide which theory is most appropriate for explaining behaviors that are of interest to you?

CASE VIGNETTE

Imagine the following situation. You are babysitting for Clark, who is 2½. You are getting ready to go to the park, which Clark loves, and you tell Clark that he needs to get his shoes on

before you can leave the house. Clark sits down on the floor, pulls his shoes on, and starts to tie his laces. You see that he is having trouble, so you offer to help. "No!" says Clark, "I do it." You wait a while, and then you say, "Let me get that so we can go to the park." "No!" says Clark again, and pulls away. "Don't you want to go to the park?" you ask. Clark takes his shoes off and throws one at you. He falls on the floor, kicking and crying "no shoes, no help, no park!"

As a student of human development, you might begin to try to understand this situation by reflecting on what you observed. What did Clark say and do? What did you say and do? What was the context in which this interaction took place? Once you have taken careful account of the "what" of the situation, you will probably begin asking yourself some questions in order to understand the "why" of the situation and how to cope with it. You may wonder about the meaning of the situation for you and for Clark. You might consider that since you are an adult and Clark is a young child, the meaning of the situation might be different for each of you. Why won't Clark accept your help? Does Clark understand why he has to wear shoes to the park? Why is Clark so set on tying his own shoelaces? What role did you play in this situation? Did you say or do something that made Clark reject your help? How can you intervene so that Clark puts his shoes on and gets to go to the park?

In order to answer these questions, you need to link your observation of your behavior and Clark's behavior to ideas that explain them. These ideas are your theory of why things happened as they did for you, for Clark, and for you and Clark. The theory will lead you to a decision about what you might do next.

The world of **scientific inquiry** can be divided into two related components: **observation** and **theory**. Scientific observations describe what happens; scientific theories offer explanations about "how" and "why" these things happen.

In the study of human development, theories play a powerful role by shaping our ideas about the meaning of behavior, expanding our understanding of the scope and potential of complex human functioning, opening the way to new research, and guiding **interventions**. There is no single, agreed on theory that all scholars of human development endorse. Yet, many of the theories have given us a new lens for observing and interpreting behavior.

- Jean Piaget's theory of cognitive development led to a new appreciation for the way children create meaning out of their experiences. His theory has helped parents and teachers appreciate that as children develop they use different strategies for learning and thinking. This insight has had broad application in the design of age-appropriate curricula and learning environments.
- Sigmund Freud's theory of development provided insights into the unconscious, giving us a way of thinking about the tension between strong motives or desires and the constraints against expressing those desires. His emphasis on the early and continuing maturation of sexual drives has influenced parenting practices and approaches to psychotherapy. Current biopsychosocial theory draws on his work, linking internal sexual motives with patterns of reproductive behavior and their implications for human evolution.
- Albert Bandura's theory of social learning led to widespread use of the idea of modeling to characterize the social conditions under which children learn through observation and imitation of the behavior of others. His theory stimulated greater awareness of the social nature

of learning across many contexts. His ideas about self-efficacy have pointed to the importance of confidence as a person strives to meet new and challenging standards for performance. This concept has been applied in many fields including coaching, classroom instruction, and workplace performance.

- Erik Erikson's psychosocial theory highlighted the concept of identity, a creative synthesis of a sense of self in society, that emerges in later adolescence and guides the direction of development over the life span. His theory was one of the first to provide a model of development that extends over the entire life span. His theory has been applied broadly in the field of college student development with specific links to student achievement, career exploration, ethnic identity, and gender role development.

These are a few examples of how theorists have provided frameworks for identifying unobservable processes and mechanisms that account for behavior. In doing this, they have given us a new vocabulary for understanding and studying the dynamics of development.

This book is a selective introduction to ten theories that have inspired the study of human development and produced a rich heritage of research and intervention. Each theory not only has a distinguished history, but is also important in shaping the current focus of the field and guiding approaches to both research and practice.

This introductory chapter will address the following questions:

1. What is human development?
2. What is theory?
3. What do we expect from a theory of human development?
4. What are some of the challenges to understanding human development across the life span?
5. Why are there so many theories?

The chapter closes with an overview of the organization of the text.

WHAT IS HUMAN DEVELOPMENT?

The study of human development focuses on describing patterns of **constancy** and **change** across the **life span** and identifying the underlying processes that account for these patterns (Kagan, 1991). The term **development** implies change that occurs over time and has a direction. The direction is usually from simple to more complex, from less organized and coordinated to more organized and coordinated, or from less integrated to more integrated. In order to decide whether a particular change is developmental, one must ask if there is some pattern to the change that can be observed from one individual to the next, and if this change appears to have a direction that suggests a new level of complexity or integration. Consider the behavior of walking as an example. Walking is a new form of locomotion that can be observed from one child to the next. The change from crawling or scooting to standing and walking involves new levels of coordination in balance, and new integration of sensory and motor information.

The term *human development* suggests a focus on the human species, not all life forms. This focus brings with it special considerations. First, humans have ideas and experiences that influence their outlook. Scientists and theorists are similar to other humans in this regard. Scholars of human development are humans studying their own species. They have their own thoughts and experiences that may serve as a basis for expectations about the direction and meaning of

behavior. Often, these personal thoughts and experiences serve to give focus and direction to the scholar's work. For example, Erik Erikson grew up in southern Germany with his mother and stepfather who was a Jewish pediatrician. It was not until he was older that he learned that his biological father was Danish. The experience of being an ethnically and religiously mixed child growing up in a tight knit, bourgeois community contributed to his heightened awareness of identity, self, and society which became key constructs in his theory. Each theory of human development must be understood as reflecting the education and training, historical context, and personal experiences, values, and beliefs of the human beings who invented it.

Second, humans enjoy a wonderful capacity for representational or symbolic thought. Thus, theories of human development must address more than a description of **behaviors** and explanations that account for these behaviors. They must also account for the nature of **mental activity** such as knowledge acquisition and use, imagination, aspirations and plans, emotions, problem solving, patterns of change and the direction of change in mental activity. Theories of development need to offer ideas about the mechanisms that link mental activity and behavior.

Third, humans have a comparatively long life span during which their capacities change dramatically. In contrast to many other species, humans are born in a dependent state, and their daily survival depends on the care and nurturance provided by others. This dependent state continues for quite some time. Humans may live to an advanced age of 100 years or more, achieving many new levels of complex thought and behavior, participating in a wide range of social relationships, and adapting to diverse physical and social settings. Theories of human development must address constancy and change of an organism over a long period of time.

WHAT IS A THEORY?

A theory is a logical system of concepts that helps explain **observations** and contributes to the development of a body of knowledge. We all have our informal, intuitive theories about why people behave as they do. For example, the adage "The acorn doesn't fall far from the tree," is an informal theory that predicts that children are going to grow up to behave a lot like their parents. However, a formal scientific theory is different from an informal set of beliefs. In order for a set of ideas to reach the level of a formal scientific theory, it has to be supported by extensive evidence, including systematic experimentation and observation (Zimmerman, 2009). A formal scientific theory is a set of interconnected statements, including assumptions, definitions, and hypotheses, which explain and interpret observations. The function of this set of interconnected statements is to describe unobservable structures, mechanisms, or processes and to relate them to one another in order to explain observable events. For example, in learning, the information or strategies that have been learned are not observable nor is the process of learning. The information becomes observable by asking questions, giving a test, or presenting a situation where the information must be used to solve a problem. However, the process of learning the information is not directly observable and our understanding of this process relies on theories that attempt to explain how new information is acquired, remembered, and produced when needed. Components of a theory and characteristics of a good theory are listed in Table 1.1.

In the field of human development, theory is differentiated from research and from facts. The research process may be guided by theory; however, the research process is a separate approach to building a knowledge base. For example, Piaget's cognitive developmental theory introduced the idea that through direct interaction with the physical world, infants gradually construct a scheme for the permanent object, and understanding that objects do not cease to exist when they are out

Table 1.1 What is a theory?

Components of a theory	Characteristics of a good theory
Assumptions	Logical
Domains	Internally consistent
Range of applicability	Parsimonious
Constructs	Testable
Hypotheses	Integrates previous research
	Deals with a relatively large area of science

of sight. A growing body of research, stimulated by this theory, has led to a more complex view of what infants know about objects depending on the nature of the task, the kind of response the baby is required to make, and the setting where the baby is studied.

Facts are distinct from the theories that might try to explain or account for them. For example, life expectancy at birth in the United States has increased considerably from 1900 to the present. This fact is indisputable. There may be several theories about factors that account for changes in longevity. Each theory might influence the direction of research about longevity. However, these theories do not change the facts.

Components of a Theory

Theories are like short stories with a situation, main characters, and a plot. The theory identifies a **domain** such as cognition, language, learning, motivation, or identity development that will be the focus of explanation. This is the situation or problem the theory is attempting to address. In order to understand a theory, one must be clear about which phenomena the theory is trying to explain. A theory of intellectual development may include hypotheses about the evolution of the brain, the growth of logical thinking, or the capacity to use symbolism. Such a theory is less likely to explain fears, motives, or friendship. Understanding the focus of the theory helps to identify its **range of applicability**. Although principles from one theory may have relevance to another area of knowledge, a theory is evaluated in terms of the domain it was originally intended to explain.

In reading about each theory, you will encounter certain **assumptions** about the scientific process, human behavior, or development. These assumptions may not be testable; they provide a platform upon which the theory is built. Assumptions are the guiding premises underlying the logic of a theory. In order to evaluate a theory, you must first understand what its assumptions are. Darwin assumed that lower life forms "progress" to higher forms in the process of evolution. Freud assumed that all behavior is motivated and that the unconscious is a "storehouse" of motives and wishes. The assumptions of any theory may or may not be correct. Assumptions may be influenced by the cultural context that dominates the theorist's period of history, by the sample of observations from which the theorist has drawn inferences, by the current knowledge base of the field, and by the intellectual capacities of the theorist.

Each theory is comprised of key **constructs** that refer to certain unobservable relationships or processes. You might think of these constructs as the principal characters in the story. We use constructs such as intelligence, motivation, and goals to explain human behavior, just as we use constructs such as electricity, gravity, and momentum to explain the physical world. In each case, the construct is not observable directly, although in the case of the physical world, scientists often have reached agreement on ways of measuring constructs. Developmental scholars work to measure explanatory constructs just as physical scientists do, but there is much less agreement about approaches to measurement.

Finally, theories offer *if–then* links or testable **hypotheses**. This is the plot. What does the theory predict? For example, Skinner's theory of operant conditioning offered the following testable hypothesis: "When a response is followed by a reward or reinforcement, the probability of its recurrence will increase." This means that successful actions (those that are rewarded) are more likely to be repeated than unsuccessful actions (those that are not rewarded). From this single hypothesis, one can interpret many observations about human behavior and predict others.

Requirements of a Good Theory

A formal theory should meet certain requirements. It should be logical and internally consistent, with no contradictory statements. The hypotheses can be explored through systematic research. As you read each theory, look for ways that the abstract concepts of the theory can be observed and measured. For example, a theory of learning might suggest that a behavior is more likely to occur when it is followed by a reinforcement. You can test this theory by monitoring a specific behavior, creating a specific reinforcement, and observing whether or not a person performs the behavior more often once the reinforcement has been presented.

The theory should be parsimonious, which means that the theory should be simple, relying on as few assumptions, constructs, and propositions as possible while still accurately accounting for the observations. Parsimony is relative. For example, Freud hypothesized that there were five stages of development. Erikson hypothesized that there were eight stages of development. Using the principle of parsimony, one might conclude that Freud's theory is a better one. However, Erikson's theory provides a more differentiated view of adulthood and aging, and, as a result, his theory offers more insight into the process of development over the life span. On the other hand, a theory that suggests 30 or 40 stages of life might be viewed as overly complex and less parsimonious than one that provides a smaller number of integrated periods. Finally, a theory should integrate previous research, and it should deal with a relatively large area of science (Miller, 2011).

Theories add new levels of understanding by suggesting causal relationships, by unifying diverse observations, and by identifying the importance of events that may have gone unnoticed. Once you agree to use the constructs of the theory as a way of talking about the domain, the theory takes you through a set of logical steps to predict the nature and direction of constancy and change.

Upon entering the world of a specific theory, it is easy to be caught up in its vocabulary and logic and to think of the theory as offering the truth about its domain. However, an important aspect of any scientific theory is that it is viewed as *tentative* and open to revision based on new observations. Scientific theories are different from beliefs. They are created with an understanding that new instrumentation, new observations, and new insights may result in new and better explanations. Thus, in your study of scientific theories you must realize that you are dealing with works in progress, and always treat them as providing descriptions and explanations that are useful until a more inclusive, accurate analysis is available (Bordens & Abbott, 2013).

WHAT DO WE EXPECT FROM A THEORY OF HUMAN DEVELOPMENT?

Theories of human development offer explanations regarding the origins and functions of human **behavior** and **mental activity**, and the changes that can be expected under certain conditions or from one period of life to the next. A theory of development should help to explain how people change and grow over time, as well as how they remain the same (Thomas, 1999). We expect a theory of human development to provide explanations for six questions:

1. What is the *direction* of change over the life span? We assume that there is a direction to development, that it is not random. Development is not the same as changing one's hair style or deciding one day to play tennis and the next to play soccer. Theories of development offer some big ideas about maturity, and shed light on important ways in which thought, self-understanding, the capacity for social relationships, and/or the capacity for adaptation become increasingly complex and integrated as life goes along. Theories of development provide a framework for thinking about **optimal development**, that is, age-related characteristics of social, physical, emotional and cognitive competence that can be expected when a person is highly motivated, physically healthy, and well-integrated into their social group.
2. What are the *mechanisms* that account for growth from conception through old age? Do these mechanisms vary across the life span? Theories of development suggest kinds of processes or experiences that bring about systematic change. In this book, we will present and explain the variety of mechanisms theorists offer for how growth and development occur. For example, Piaget's theory suggests that change occurs when a person encounters discrepancy between what is experienced in the world and the mental representations of that experience. He assumed that there is a natural tendency for people to resolve this discrepancy and seek equilibrium. Another theorist might offer a different kind of mechanism for explaining how change occurs. And in some instances, a theory suggests that different kinds of processes are at work at different periods of life.
3. How relevant are early experiences for later development? The theories presented in this book offer different ideas about the significance of early experiences for the psychological and behavioral organization of later periods of life. Some theories suggest that incidents from infancy and childhood play a powerful role in guiding the direction of development well into adulthood. Other theories emphasize the influence of contemporary events in guiding development by viewing the person as continuously adapting to new demands and opportunities.

   Two contrasting concepts inform this question: canalization and plasticity. **Canalization** means that responsiveness, whether at a neural or behavioral level, is shaped and narrowed as a result of repeated experiences (Gottlieb, 1991, 1997). For example, in infancy, babies are initially able to perceive sounds from a wide range of languages. However, some time between 6 and 10 months, infants are no longer able to differentiate the sounds of non-native languages, while their sensitivity to native language sounds and combinations becomes increasingly adept. Repeated exposure to early stressors, such as harsh parenting, has a similar canalizing impact at the neurological, hormonal, and cognitive levels (Blair & Raver, 2012). Children who have been repeatedly exposed to harsh, violent environments may develop neurological and hormonal responses that provide an advantage—a more rapid, sensitive awareness to threat, and the related ability to withdraw. However, this advantage comes at the cost of physical health, difficulties in concentrating, and impaired self-regulation.

   In contrast to the concept of canalization is the idea of **plasticity**, the capacity for adaptive reorganization at the neurological, psychological, and behavioral levels. The impressive ability of humans to learn from experience reflects this concept. Plasticity can be observed at the neurological level. For example, after a stroke, rehabilitation efforts allow a person to relearn many of the functions that were lost due to brain damage. Through repetition and practice, new neural networks and pathways are established. In some cases, new regions of the brain take over functions of regions that were damaged.
4. How do the *environmental* and *social contexts* affect individual development? Individuals develop in **contexts**, especially physical, cultural, family, school, work, and community contexts.

Theories of human development provide ways of conceptualizing contexts and of highlighting which aspects of context are especially important in shaping the directions of growth.

One of the most salient contexts impacting development is the culture in which a person grows up. **Culture** refers to the social, standardized ways of thinking, feeling, and acting that are shared by members of a society. Culture includes the concepts, habits, skills, arts, technologies, religions, and governments of a people. Cultures have implicit theories about the stages of life, the expectations for a person's behavior as one matures, and the nature of a person's obligations to the older and younger members of the cultural group.

Cultures exert influence directly through families as well as through networks of interacting individuals who may belong to common social organizations such as churches, clubs, schools, political and work organizations. In addition, cultures exert influence through media such as television, newspapers, magazines, online social media, music, books, and movies. Cultures provide a **worldview**, a way of making meaning of the relationships, situations, and objects people encounter in daily life. Culture is transmitted through a process of socialization whereby adults convey values and goals for themselves and their children, and structure the activities of daily life. We will analyze the salient aspects of each theory as it addresses the role of the environmental and cultural contexts in shaping development.

5. What factors are likely to place the person at risk at specific periods of the life span? Although humans have an enormous capacity for adaptation, some combination of conditions is likely to impede optimal growth. We look to theories of human development to help us understand **risk factors** that disrupt development. Each of the ten theories provides constructs that address vulnerabilities or risks and some predictions about the conditions that increase risk. Some of the theories also offer a differentiated view of risk over the life span.

   The idea of risk factors is often accompanied by a complementary concept of **protective factors** (Rutter, 1987). These are aspects of the person, the caregiving or intimate relationship, or the larger social environment that provide a positive influence on development. Protective factors may help to minimize or buffer the harm associated with threats, or contribute to the person's ability to rebound following a crisis (Ertem & Weitzman, 2011).

   Another related concept is resilience. People differ in their sensitivity to threat and their ability to recover following a crisis. **Resilience** refers to the ability to adapt successfully to events that threaten optimal functioning (Masten, 2014). Resilience may include the ability to anticipate threat, to adapt readily, and even become stronger or more competent under conditions that are otherwise known to disrupt or undermine functioning (Lerner et al., 2012). Differing environmental conditions at the cellular or behavioral levels can alter the expression of one or more genes, resulting in vulnerabilities or resilience (see Table 1.2). As illustrated, children with the same genetic profile become highly sensitive to environmental stressors if they are exposed to harsh parenting, but they can be especially resilient in the face of stress if they are exposed to warm, nurturing parenting (Caspi, Hariri, Holmes, Uher, & Moffitt, 2010). Theories differ in how they characterize risk and protective factors and how they account for individual differences in resilience.

6. What are the practical implications of the theory for prevention, intervention, or education? This is the big SO WHAT question. In what ways has the theory influenced practice? What big ideas from the theory contribute to the ways parents, caregivers, educators, counselors, social workers, health care providers, or other human service professionals engage in their work? Given the concepts and hypotheses of a theory, what guidance does the theory offer for action? What does the theory suggest that one should do to promote optimal development,

Table 1.2 Expression of the same gene in different environments

Genetic make-up	Parenting environment	Resilience
Child A: Gene A	Harsh parenting	Highly sensitive to stress
Child B: Gene A	Nurturing parenting	Resilient in the face of stress

prevent dysfunction, or promote recovery from disruptive experiences? What guidance does the theory offer about the timing of the intervention; the method of intervention; the duration of the intervention; or the intensity of the intervention? The practical implications of a theory are derived from its explanatory processes and mechanisms for change (Walton, 2014). In deciding to apply the theory in a particular context, one looks to empirical evidence of its effectiveness to determine if the guidance from that theory has been applied successfully to similar situations with similar individuals or groups.

WHAT ARE THE CHALLENGES TO UNDERSTANDING HUMAN DEVELOPMENT ACROSS THE LIFE SPAN?

Take a moment to reflect on your own development over the past ten years. Try to make an inventory of all the ways that you have changed. Include in this inventory your physical self, your interests, your plans and goals, the quality of your relationships, the settings in which you participate, the roles you play, the tasks you try to accomplish and your ability to succeed at those tasks, the way you use your time, the people with whom you spend time, and your level of self-insight.

Now, consider the ways you experience a sense of self-sameness, such as a constant sense of "I" who guides and directs your behaviors, certain continuous roles and relationships, your assessment of your underlying temperament and personality, your strengths and special talents, and a basket of early childhood memories that come along with you into each new phase of your life. Theories of human development face tremendous challenges in trying to offer scientifically based, empirically testable frameworks to account for the nature of stability and change over the life span. A few of these challenges are identified below; you may think of others.

1. Change in the person is taking place in the context of a changing environment. We do not have the luxury of placing a person in a "petri dish" and watching how he or she grows. A person develops over a long period of time, and as he or she grows, the environment changes. New siblings are born; parents get older; the society's norms for social behavior may change; opportunities for education and employment may change; new technologies and medical interventions may provide new resources; diseases, disasters, and war may place the person at risk. A challenge for each theory is to conceptualize the reality of a changing person in a changing environment (Magnusson & Cairns, 1996; Diehl et al., 2014).
2. Change is both quantitative and qualitative. Human beings grow by inches and pounds; these are **quantitative changes**. But they also grow through transitions from lying, to creeping, crawling, and walking; these are **qualitative changes**. Some changes, like a person's vocabulary, can be thought of as additive. At age 8 months, most infants typically have no real words; by 16 months most babies have about 24 words; and by 30 months most toddlers have about 570 words. In contrast to vocabulary, which grows incrementally, the creation of two-word sentences ("daddy bye-bye," "more juice") is a qualitative change in language use. At age 16 months,

few infants make these primitive sentences, but by 30 months almost all children create them (Fenson et al., 1994). Two-word expressions are an initial grammar through which children are able to convey their own complex meaning. The words "more" and "juice" each have meaning, but by putting them together, the child makes a primitive sentence that conveys an idea that is more complicated than the words alone. Two-word sentences are a qualitatively new language capacity that is a reorganization of vocabulary and meaning. Theories of human development face the challenge of accounting for both quantitative and qualitative changes and explaining how they operate together.

3. Human development is a product of the interaction of three dynamic systems: the biological, the psychological, and the societal. Each system is complex in its own right, and each has the potential for influencing the others (Erikson, 1963). The **biological system** includes all those processes necessary for the person's physical functioning, including genetic factors, physical maturation, vulnerability to disease, nutrition, exercise, sleep and rest cycles, reproductive and sexual functions. The **psychological system** includes all those mental processes needed to make meaning out of experiences, to learn, and to take action. Symbolic abilities, memory, language, the capacity for problem solving, emotion, coping strategies, and creativity are examples of components of the psychological system. The **societal system** includes all those processes through which a person becomes integrated into society. These include social roles, family, participation in social institutions such as school, work, and religion, cultural values and norms, exposure to discrimination or inter-group hostilities, and exposure to environmental toxins and hazards. Theories of human development may emphasize one or two of these systems more than the others, but without some recognition of the interaction of these systems, the analysis of human development is incomplete.
4. Human beings are conscious, reflective and goal-directed. The final challenge we want to raise in this introductory chapter is the need to recognize that humans are able to reflect upon and analyze their behavior, evaluating outcomes as successes or failures (Ellis, Carette, Anseel, & Lievens, 2014). The way people evaluate past experiences influences subsequent decisions. The capacity for conscious reflection and evaluation allows individuals to make choices that guide the direction of their own development.

   Often, the concepts of nature (a biological plan for development) and nurture (the environmental contexts of development) are presented as constructs that help account for the direction of growth. Current scholarly work emphasizes that these two factors interact with each other, so that we no longer seek a purely environmental or a purely biological explanation for human behavior. Rather, we look for evidence about how the expression of certain genetically guided patterns is mediated by environmental conditions. However, in these analyses, a third dimension, self-directed goal behavior, is often omitted.

> The great variability and flexibility of human behavior and development are advantages in terms of enhanced adaptive potential. However, the organism needs to organize his or her resource investment by making choices and focusing resources accordingly. Thus, life-span development theory inherently raises questions of how individuals decide which domains or goals to select and how they remain focused on the domains or goals they have chosen. (Heckhausen & Schulz, 1999, p. 70)

The challenge to theories of human development is to offer an explanation for the choices individuals make that ultimately contribute to the direction of their development.

WHY SO MANY THEORIES? WHICH ONE SHOULD I CHOOSE?

Given the challenges to the study of human development noted above, it is probably not surprising that there is no one agreed upon theory that accounts for all aspects of human development. The ten theories you will review in this text address different domains of development, focusing to a greater or lesser extent on physical, cognitive, social, and emotional processes. The theories differ in their emphasis on particular periods of life, some more attuned to infancy and the childhood years; others more attuned to periods of adolescence, adulthood, and aging. The theories differ in their emphasis on universal patterns as compared to unique cultural and contextual factors that influence development. The theories also differ in their level of analysis. Some theories focus on very specific moments in daily life; others focus on broad, system changes that may occur gradually over long periods of time. As you study the ten theories, you will appreciate that each one offers a unique lens for the study of development.

The decision about which theory to use depends on your purpose. Think back to the case vignette of Clark. Your choice of a theory to guide intervention will be influenced by your goals. For example, do you want to understand the developmental significance of oppositional behavior for long-term species survival? Or do you want to help Clark learn new strategies for self-regulation? Or do you want to help Clark's parents develop a new approach to childrearing? Each purpose would implicate a different theory.

Once you understand the assumptions, scope, concepts, and hypotheses, and read about the research and application of each theory, you will have a clearer notion of whether that theory can be helpful in promoting optimal development. You will want to review how the theory addresses the following key issues:

- What is the direction of development?
- What are the mechanisms that account for development?
- How do early experiences influence later development?
- What are the key contexts and how do they influence development?
- What are the key risk and protective factors that influence development?

You will want to examine the evidence that addresses the effectiveness of interventions that have been guided by the theory. But, you may also think of some possible applications of the theory that have not been considered before. That is one of the most exciting aspects of the study of human development; it is a dynamic field with many new and emerging directions for intervention.

THE ORGANIZATION OF THE BOOK

The remainder of this book focuses on ten theories divided into three families of theories. Part I includes evolutionary theory, psychoanalytic theory, and cognitive developmental theory, which place a comparatively strong emphasis on *biological factors* that guide the direction of development. Part II includes learning theories, social role theory, and life course theory, which place a comparatively strong emphasis on *environmental factors* that guide the direction of development. Part III includes psychosocial theory, cognitive social-historical theory, bioecological theory, and dynamic systems theory, which emphasize the ongoing *interaction of the person and the environment*. As an initial orientation to the book, Table 1.3 provides an overview of the emphasis of each theory, its primary domain, and the methods it uses to gather information and evaluate its claims.

Of course, this division of the theories into three families is an overgeneralization. Each theory has something to say about biological factors, environmental factors, and person–environment interactions. However, we expect that this organization will help you recognize some of the common threads among the theories, compare and contrast them, and work out your own assessment of their strengths and weaknesses.

The presentation of each family of theories begins with a brief interlude or overview in which the issues that tie the theories together are introduced. The discussion of each theory includes the following sections:

A. The historical/cultural context within which the theory was developed.
B. An overview of key concepts.
C. New directions of the theory.
D. A research example that shows how some aspect of the theory has been tested.
E. An application that shows how the theory has been used to address a practical problem.
F. A review of how the theory answers the six questions discussed above that are expected to be addressed by a theory of human development.
G. A critique of the theory, pointing out its strengths and weaknesses.

As you read each theory, we encourage you to consider its broad impact as well as its scientific merit. You will be thinking about the contributions these theories have made to research and application, and their ability to shape the worldviews of people outside the narrow circle of human development researchers and scholars.

Table 1.3 Overview of ten theories

Theory	Emphasis	Primary domain	Unique methods
Evolutionary theory	Biological evolution	Fitness; sexual reproduction	Ethology; observation of behavior in natural settings
Psychoanalytic theory	The origins and development of mental life	Personality development, emotions, motivation, morality	Free association, dream interpretation, case analysis
Cognitive developmental theory	The origins and development of cognition	The development of reasoning and logical thought	Cognitive interview, problem-solving tasks, observation
Learning theories	The establishment of relatively permanent links between stimuli and responses	Learned behaviors, expectancies, vicarious learning; changes in behavior as a result of experience	Laboratory experimentation
Social role theory	Socially constructed roles and role relationships	The development of the self in social life	Survey, interview, and case material
Life course theory	Individual life in social and historical time	Transitions and trajectories over the life course	Archival data, demographic data, longitudinal studies, intergenerational studies
Psychosocial theory	The interaction of the individual and society	Stages of ego development, identity, worldview, and social relationships	Case material, play analysis, narratives and life stories, and psychohistory
Cognitive social-historical theory	The social and cultural basis of thinking	Cognition, the relationship of speech and thinking, the nature of consciousness, learning and development	Experimental demonstrations that promote or include learning and development, double stimulation method

Theory	Emphasis	Primary domain	Unique methods
Bioecological theory	The interaction of the person and the immediate and more remote environments	Development as a product of the interaction of characteristics of the person, specific processes, contexts and time	Observation, experimentation, and cross-setting comparisons of behavior
Dynamic systems theory	The function and change of complex systems	Emergence of novel patterns (e.g. motor behavior, skills, cognition, and social interactions)	Mathematical, multidimensional modeling; observation; experimentation

CRITICAL THINKING QUESTIONS AND EXERCISES

1. What should a theory of human development explain?
2. Why are there so many different theories of human development?
3. Think back to the case of Clark. What concepts that you have studied in the past are most useful to you in explaining Clark's behavior?
4. How might a babysitter, a parent, and a preschool teacher differ in their analysis of this situation? How might their theories of development differ? Make a table that summarizes the similarities and differences in the theoretical focus of each of these three roles.
5. Given what you have read about challenges to the study of human development, what more would you need to know about Clark and the context of this situation in order to account for his behavior?
6. Identify a theoretical concept that has proven useful to you in understanding a topic in development. What are the features of that concept that make it particularly useful? Identify a theoretical concept that you believe to be incorrect or disadvantageous in your efforts to understand a problem in development. What evidence do you have that the concept is incorrect? How has it disrupted your efforts to understand the topic?

KEY TERMS

assumptions
behavior
biological system
canalization
change
constancy
constructs
context
culture
development
domains
hypotheses
intervention
life span
mental activity
observation
optimal development
plasticity
protective factors
psychological system
qualitative change
quantitative change
range of applicability
resilience
risk factors
scientific inquiry
societal system
theory
worldview

RECOMMENDED RESOURCES

**Haig, B.D. (2009). Methods: Evaluating explanatory theories. Retrieved on April 2, 2014 from www.thepsychologist.org.uk/archive/archive_home.cfm?volumeID=22&editionID=181&ArticleID=1587
This article describes a qualitative approach, Inference to the Best Explanation (IBE), for evaluating theories.

**Popper, K.R. (1963). Science as falsification. Taken from *Conjectures and Refutations*. Retrieved on April 2, 2014 at www.stephenjaygould.org/ctrl/popper_falsification.html
The essay from a distinguished philosopher of science describes his early thinking about how to evaluate theories based on the principle of falsification.

** Schermer, Michael (2006). "Why people believe weird things." Ted Talks. www.ted.com/talks/michael_shermer_on_believing_strange_things
Schermer provides an amusing and insightful presentation about how beliefs can be based on questionable evidence.

**Sutton, R.I. & Staw, B.M. (1995). What theory is not. *Administrative Science Quarterly, 40,* 371–384. Stable URL: www.jstor.org/stable/2393788
Sutton and Staw offer a perspective that critically evaluates many social science papers by clarifying the elements that are not sufficient to be considered a theory.

**Wilson, T.D. (2011). *Redirect: The surprising new science of psychological change.* New York: Little Brown.
A review of interventions that target specific psychological processes, illustrating the power of theory in helping to guide change.

REFERENCES

Blair, C. & Raver, C.C. (2012). Child development in the context of adversity: Experiential canalization of brain and behavior. *American Psychologist, 67,* 309–318.

Bordens, K.S. & Abbott, B.B. (2013). *Research design and methods: A process approach*. 9th ed. New York: McGraw-Hill.

Caspi, A., Hariri, A.R., Holmes, A., Uher, R., & Moffitt, T.E. (2010). Genetic sensitivity to the environment: The case of the serotonin gene and its implications for studying complex diseases and traits. *American Journal of Psychiatry, 167,* 509–527.

Diehl, M., Chui, H., Hay, M.A. et al. (2014). Change in coping and defense mechanisms across adulthood: Longitudinal findings in a European American sample. *Developmental Psychology, 50,* 634–648.

Ellis, S., Carette, B., Anseel, F., & Lievens, F. (2014). Systematic reflection: Implications for learning from failures and successes. *Current Directions in Psychological Science, 23,* 67–72.

Erikson, E.H. (1963). *Childhood and society.* 2nd ed. New York: Norton. (Original work published 1950)

Ertem, I.O. & Weitzman, C.C. (2011). Child development: Monitoring and supporting early childhood development. In C. Rudolph, A. Rudolph, G. Lister, L. First, & A. Gershon (Eds.), *Rudolph's pediatrics*. 22nd ed. (pp. 34–42). New York: McGraw-Hill.

Fenson, L., Dale, P.S., Reznick, J.S., Bates, E., Thal, D.J., & Pethick, S.J. (1994). Variability in early communicative development. *Monographs of the Society for Research in Child Development*, *59* (Serial No. 5).

Gottlieb, G. (1991). Experiential canalization of behavioral development: Theory. *Developmental Psychology, 27,* 4–13.

Gottlieb, G. (1997). *Synthesizing nature-nurture: Prenatal roots of instinctual behavior*. Mahwah, NJ: Erlbaum.

Heckhausen, J. & Schulz, R. (1999). Selectivity in life-span development. In J. Brandtstadter & R.M. Lerner (Eds.), *Action and self-development: Theory and research through the life span* (pp. 67–103). Thousand Oaks, CA: Sage.

Kagan, J. (1991). Continuity and discontinuity in development. In S.E. Brauth, W.S. Hall, & R.J. Dooling (Eds.), *Plasticity of development* (pp. 11–26). Cambridge, MA: MIT Press.

Lerner, R.M., Schmid, K.L., Weiner, M.B. et al. (2012). Resilience across the life span. In B. Hayslip, Jr. & G.C. Smith (Eds.), *Emerging perspectives on resilience in adulthood and later life* (pp. 275–299). New York: Springer.

Magnusson, D. & Cairns, R.B. (1996). Developmental science: Principles and illustrations. In R.B. Cairns, G.H. Elder, & E.J. Costello (Eds.), *Developmental science*. Cambridge, UK: Cambridge University Press.

Masten, A.S. (2014). Global perspectives on resilience in children and youth. *Child Development, 85,* 6–20.

Miller, P.H. (2011). *Theories of developmental psychology*. 5th ed. New York: Worth.

Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry, 57,* 316–331.

Thomas, R.M. (1999). *Human development theories: Windows on culture*. Thousand Oaks, CA: Sage.

Walton, G.M. (2014). The new science of wise psychological interventions. *Current Directions in Psychological Science, 23,* 73–82.

Zimmerman, M. (2009, Spring). Why evolution is the organizing principle for biology. *Phi Kappa Phi Forum*, 4–7.

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