CHAPTER 2

THEORIES OF DEVELOPMENT

WHAT'S NEW IN CHAPTER 2?

- Refocused contributions from the humanistic perspective
- Discussion of why Harvard University developmentalist Jack P. Shonkoff and others are helping the systems approach become more mainstream by encouraging stakeholders, ranging from policy makers to practitioners and parents to embrace a more interdisciplinary approach to human development.

Additional Material

- Canadian theory and research: Type 2 diabetes epidemic in First Nations Peoples as in the general population.
- Reciprocal determinism—Bandura
- Information processing theory—Pascual-Leone—Case—Thagard
- Evolutionary prenatal programming and adult health and disease

Special Features

- Research Report: Type 2 Diabetes Epidemic in a Remote Community
- The Real World/Parenting: Learning Principles in Real Life
- Developmental Psychology in your Career

LEARNING GOALS

After completing Chapter 2, students should be able to summarize the five key points of the following theories. They are:

I. Biology and Evolutionary Theories (page 26).

Explain how human development is rooted in biological processes that have evolved to promote adaptation and survival.

I. Psychoanalytic Theories (page 36).

Explain how developmental change happens because of the interplay of internal drives and emotions with our early life experiences.

III. Learning Theories (page 40).
Explain how human behaviour is seen as shaped by processes such as classical conditioning and operant conditioning.

IV. Cognitive Theories (page 44).
Explain the focus on the mental aspects of development such as logic and memory.

V. Systems Theory: (page 50).
Explain how development is the result of the interaction of the individual and environmental contexts.

VI. Compare the theories listed by using the assumptions about development, and compare the usefulness of each theory by using the criteria stated (page 52).

TEACHING NOTES

I. BIOLOGICAL AND EVOLUTIONARY THEORIES

A. Genetics

2.1 Learning Objective: Describe the structure and function of genes. (pages 26-27)

Molecular biological processes play an essential role in human development. Both genetic and epigenetic factors interact with environmental variable to shape our level of health and wellbeing across the lifespan.

Key Terms
- chromosomes
- deoxyribonucleic acid (DNA)
- genes
- genome
- proteins

B. Genotypes, Phenotypes, and Patterns of Inheritance

2.2 Learning Objective: Describe the ways genes influence development. (pages 27-30)

The ***genotype*** is the actual DNA material that determines each person's unique genetic blueprint. The ***phenotype*** is the individual's whole set of observable characteristics and traits. The simplest genetic rule is the dominant-recessive patters, in which single dominate genes strongly influences phenotypes

Key Terms
- genotype
- phenotype
- dominant-recessive pattern

C. Epigenetics

2. 3 Learning Objective: Describe how epigenetic mechanisms regulate genes and development. (pages 30-31)

Recent genetic research reveals that our genome accounts for only one aspect of heredity influences. Discoveries in the area of molecular biology known collectively as epigenome, has produced important answers to questions in the filed known as epigenetic. Epigenetic is the study of the gene regulation patterns that alter gene function without changing gene structure. Studies in this field have found that possessing the gene for a specific trait does not guarantee that it will be expressed. It is our unique epigenetic markers that regulate gene expression. Epigenetic markers work by signalling some genes to "turn on" (gene expression) and others to "turn off" (gene silencing).

Key Terms

- epigenome
- gene expression
- gene silencing
- epigenetics
- epigenetic factors

D. Evolutionary Theories

2.4 Learning Objective: Describe how evolutionary theories explain individual differences. (pages 31-33)

Evolutionary theories attempt to explain our differences as individuals and our commonalities as a species. These theories often focus on the genetic and environmental mechanisms that underlie development throughout the lifespan and across generations.

Ethology: emphasizes genetically determined survival behaviours that are assumed to have evolved through natural selection. Ethologists believe that emotional relationships are necessary for human infants' survival and that evolution has given us genes that cause us to form these relationships. Critics say that ethology places too much emphasis on heredity and that it is difficult to test.

> ***Classroom Activity:*** Encourage the class to speculate as to what we would be like if heredity was the only factor involved in the formation of psychological characteristics.

Behaviour genetics: focuses on individual differences. Traits are said to be influenced by genes when related people, such as children and their parents, are more similar than those who are unrelated. It has shown that heredity affects a broad range of behaviours and traits and that they are fairly stable across the lifespan.

Such studies show, however, that environments determine in what way and to what extent apparently hereditary traits affect an individual's development. Critics cite such findings to suggest that psychological characteristics are not completely determined by a person's genetic heritage. Individual behaviour is always a joint product of heredity and environment.

Theories that propose links between evolutionary physiological processes and development represent one of the most important current trends in developmental psychology.

> ***Classroom Activity:*** Encourage the class to speculate as to what we would be like if heredity was the only factor involved in the formation of psychological characteristics.

Sociobiology: emphasizes genes that aid group survival and argues that humans have the best chance for individual survival when they live in groups. They claim that evolution has provided us with genetic programming that helps us cooperate. Sociobiologists look for social rules and behaviours that exist in all cultures. It is criticized in the same way as ethology.

> ***Classroom Activity:*** Conduct a debate as to the pros and cons of the biological theories.

Evolutionary psychology: is the study of how genetically inherited cognitive and social characteristics have evolved through natural selection. Pinker, contends that, through a process of biological evolution, the mind, like the body, has been shaped by natural selection to serve adaptive functions and promote survival.

Evolutionary developmental psychology: theorists suggest the mind has been genetically programmed with a predisposition to learn and to develop in different ways over the course of a person's lifespan. For example, the cognitive abilities that help infants and children adapt and survive are different from those that adults require to adapt and survive.

> ***Classroom Activity***: Ask the class to give examples of survival skills that change over time from infancy, to childhood, adolescence, and adulthood. Include examples of motor, cognitive and social behaviours.

Evolutionary prenatal programming and adult health disease, proponents, such as, evolutionary theorists, Peter Gluckman of the University of Auckland, NZ, and Mark Hanson of the University of Southampton, UK, and their colleagues, have proposed some intriguing ideas.
They suggest that the *prenate* (i.e., the fetus) picks up cues about existing environmental conditions from its mother and is thereby able to predict what kind of environment it can expect to live in after birth. Thus, changing one's lifestyle habits later in life to reduce the risk of disease may be a case of "too little, too late." In addition to genetic and lifestyle factors, the risk of developing noncommunicable diseases such as heart disease, diabetes, and obesity may have its roots in very early life influences.

> ***Classroom Activity***: Ask the class to give examples of people in their own families who have, and who have not replicated the past habits and or health consequences compared to their mothers.

Key Terms

- ethology
- behaviour genetics
- socio-biology
- evolutionary psychology
- evolutionary developmental psychology
- predictive-adaptive responses

E. Applying Biology and Evolutionary Theories

2.5 Learning Objective: Describe how biology and evolutionary theories contribute to our understanding of disease processes and interventions. (pages 33-36)

Biological principles that underlie genetics and epigenetics are expanding our understanding of disease processes. Scientists are discovering the complex role that inheritance plays in human health and the related importance of early intervention.

Disease control advances in human genomics will likely play a vital role in predicting and preventing diseases in the 21st century. Some scientists claim that developments in relatively rare single-gene diseases, such as *hemophilia*, *Huntington's disease*, and *sickle-cell disease*, will have a limited impact on overall national health care. In total, these types of genetic diseases account for only about 5% of all human disease in developed countries. Other scientists predict that the greatest impact of advances in human genomics will likely be seen in the treatment of *multifactoral diseases*, such as heart disease and cancer. In these cases, having a genome-wide perspective will be an advantage.

Early Intervention proponents in evolutionary theory and research are making scientists more aware of the relative importance of early-life events in making accurate predictive-adaptive responses that match expected future environments. This growing awareness has focused attention on the need to promote early interventional strategies during prenatal development (e.g., to support good health and nutrition in females of reproductive age) versus those instituted later in adult life. This important element will prevent chronic disease in future generations across the globe.

Key Term

- human genomics

Research Report: Type 2 Diabetes in a Remote Community

Type 2 diabetes generally has a later life onset and carries with it serious health and social ramifications. It leads to conditions such as heart disease, blindness, kidney failure, and gangrene, and is a leading cause of death and disability among First Nations people. The Type 2 diabetes epidemic demonstrates how we can study the interaction between genes and behaviour, and suggests that a genetic susceptibility interacts with multiple environmental factors. The sudden increase in the incidence of the disease in First Nations people may be related to a significant change in lifestyle. This new understanding of the interplay between genetics and environment has led to a complex health care initiative.

II. PSYCHOANALYTIC THEORIES

Psychoanalytic theorists believe that developmental change happens because of the influence of internal drives and emotions on behaviour.

Key Term

- psychoanalytic theories

A. Freud's Psychosexual Theory

2.6 Learning Objective: Summarize the main ideas of Freud's psychosexual theory. (pages 36-37)

Freud believed that behaviour is determined not only by conscious processes, but by unconscious processes as well. The most basic of these is an instinctual sexual drive he called the ***libido***. Freud believed that it is present at birth and is the force behind almost all our behaviour.

> ***Lecture Launcher:***
> This website provides two; two-three minute videos which could introduce Sigmund Freud, and the time and world in which he lived and worked.
> These are Public domain videos from biography.
> http://www.biography.com/people/sigmund-freud-9302400/videos

Personality Development, according to Freud has a structure with three parts that develop over time. The ***id*** is the part of our personality in which the libido is centred; it is entirely in our unconscious. The ***ego*** is the thinking part of our personality. Its job is to keep the needs of the id satisfied. The ***superego*** is the moral judge of our personality that contains the norms and values of our family and of society. Once the superego develops, the ego must satisfy the id without violating the superego's rules. Freud believed that the id is present at birth; the ego develops from age two to about age four or five; and the superego begins to develop at about age six.

> ***Discussion Question***: What would the three parts of Freud's theory "say" to you about your desire for cheesecake or to see how fast your new car can go?

THE EGO is responsible for keeping the three components in balance. ***Defence mechanisms*** are created by the ego when any of the three components is in conflict with another. They are automatic, normal, unconscious strategies we use for reducing anxiety.

The five psychosexual stages, proposed by Freud, involves a determined series of events, through which the child moves in a fixed sequence. In each stage, the libido is centred in that part of the body that is most sensitive at that age.

- In a newborn, the focus is on the mouth, and Freud called this the oral stage.
- The second stage puts more focus on the anus and is called the anal stage.
- The third stage focuses on the genitals and is called the phallic stage. The Oedipus Conflict occurs in the phallic stage, around age three or four, when the genitals increase in sensitivity. Freud proposed that a boy desires his mother and is jealous of his father. To resolve the conflict, the boy uses a defensive process called identification**,** whereby he takes on the characteristics of the father. These include the father's values and moral judgments that serve as the core of the child's superego. Freud stated that a parallel process, called the Electra complex, occurs in girls and she resolves the conflict by identifying with her mother.
- The fourth stage is called the latency period because Freud believed the libido was not invested in the body during this time.
- The fifth stage, called the genital stage, again focuses on the genitals and results in mature sexual intimacy.

According to Freud, optimum development requires an environment to satisfy the unique needs of each period. An inadequate early environment will result in fixation that leaves unresolved problems

and unmet needs that shape our personality as adults. Emphasis on the formative role of the early experience is a hallmark of psychoanalytic theories.

> ***Discussion Question***: What do you think? How important are the first five or six years of life in shaping our personalities?

> ***Explore MyPsychLab.com***
> View Freud's concepts: Id, Ego, and Superego

Key Terms
- libido
- id
- ego
- superego
- defence mechanisms
- psychosexual stages

B. Erikson's Psychosocial Theory

2.7 Learning Objective: Identify the conflict associated with each of Erikson's psychosocial stages. (pages 37-38)

Erikson thought development resulted from the interaction between inner instincts and outer cultural and social demands. Therefore, he called his stages ***psychosocial*** rather than psychosexual. Erikson also believed that development occurred across the entire life span. To do so, one must move through and successfully resolve eight "crises" or "dilemmas." Each crisis is challenged by new relationships, new tasks, or new demands. The healthy resolution of each dilemma results in the development of the characteristic on the positive side of the continuum. Although encountering the negative side of the crisis is necessary for this healthy development, the end result requires a favourable ratio of positive to negative.

Four of the eight stages have been the focus of the greatest amount of theorizing and research: trust in infancy, identity in adolescence, intimacy in early adulthood, and generativity in middle adulthood.

> ***Critical-thinking Question***: In which of Erickson's psychosocial stage would you place yourself? Does Erikson's description of it correspond to the challenges and concerns you are confronting? Provide concrete life examples of those conflicts?

Erikson believed that the behaviour of the major caregiver (usually the mother) is critical to the child's resolution of the first life crisis: trust versus mistrust. The successful resolution of the task requires that the child learn to trust her caregiver to meet her needs. If the needs are met on an erratic basis then the child learns mistrust. In either case, the child carries this aspect of personality through development, affecting the resolution of later tasks.

In stage 5, identity versus role confusion, adolescents must examine their identity and the role they occupy to achieve a mature identity. If not, the risk is role confusion arising from the profusion of roles opening up to the teen at this age.

In the first of the three adult stages, the young adult builds on the identity established in adolescence to confront the crisis of intimacy versus isolation. Young adults face the task of fusing their identity with someone else's. This can be accomplished when one's own identity is well in place.

The crisis in middle adulthood is to establish and guide the next generation. Failing that, the self-absorbed, non-generative adult may feel a sense of stagnation.

The key idea of Erikson's theory is that each new crisis is thrust upon the developing person because of changes in social demands that accompany changes in age. Erikson stresses the importance of resolving the early crises in a positive way because they set the stage for the later stages.

> ***Explore MyPsychLab.com***
> View the various concepts associated with Erickson's Stages of Psychosocial Development

Key Term

- psychosocial stages

> ***Discussion Question***: Presuming we want to be on the positive side of Integrity versus Despair when we are older adults (Stage 8), what can we do, starting at whatever age we are now, to increase the likelihood of experiencing integrity rather than despair?

C. The Humanistic Alternative

2.8 Learning Objective: Describe the basic concepts of humanistic theory. (pages 38-40)

As alternatives to psychoanalytic theories, humanistic theories focus on the positive aspects of development while accepting the psychoanalytic assumption that behaviour is motivated by internal drives and emotions. They begin with the optimistic assumption that the most important internal drive is each individual's motivation to achieve his full potential. Abraham Maslow is the key figure in humanistic theory, and he uses the term self-actualization to describe the ultimate goal in human life. Maslow's greatest interest was in two subsets of human needs, deficiency motives and being motives. Deficiency motives involve drives to maintain physical or emotional homeostasis (inner balance). Being motives involves the desire to understand, to give to others, and to grow. In general, the satisfaction of deficiency motives prevents or cures illness or re-creates homeostasis. In contrast, the satisfaction of being motives produces positive health.

> ***Explore MyPsychLab.com***
> Check out figure 2.4 in the text; Maslow's hierarchy of needs, at mypsychlab.com

Maslow described these needs or motives in a needs hierarchy. He believed that we must meet each level of needs, in turn, from the bottom of the pyramid to the top.

> ***Discussion Question***: Do you know anyone you would think of as "self-actualized?" What are that person's qualities or characteristics?

Personal Growth: Carl Rogers is another well-known humanistic who focussed on the capacity of each of us to become a "fully functioning person" without guilt or seriously distorting defences. Early experience with caregivers whose acceptance of the child is conditional upon the child behaving in an approved manner can deminish the child's sense of self worth. The child begins to

think of himself as worthwhile only when he behaves in approved ways. In Carl Roger's view, it is never too late to overcome early conditioning or the residue of unresolved dilemmas. He believed people have the potential and motivation to try to do just that--a concept known as *personal growth*.

Key Terms
- esteem needs
- self-actualization
- motives

III. LEARNING THEORIES

Learning theories focus on how experiences in the environment shape the child. Human behaviour is seen as shaped by processes such as classical conditioning and operant conditioning.

Key Term
- learning theories

A. Pavlov's Classical Conditioning

2.9 Learning Objective: Explain how classical conditioning occurs. (pages 40-41)

Classical conditioning begins with an unconditional stimulus that prompts an automatic or unconditioned response. These are unlearned and naturally occurring. When a new stimulus, the conditional stimulus, is presented just before or at the same time as the unconditional stimulus, we learn to associate it with the naturally occurring unconditional stimulus and response. Eventually, we respond to the conditional stimulus the same way we responded to the unconditional stimulus, even if the unconditional stimulus is not present.

Classical conditioning plays an important role in the development of emotional responses. We learn to associate a person or an event with something pleasant or something unpleasant, and we respond to them the same way we responded to the original person or object.

> ***Classroom Activity***: Ask the students to give several examples of classical conditioning scenarios and have the students describe what is happening before conditioning, during conditioning, and after conditioning. Include examples involving fears and aversive conditioning.
> Additionally, ask students to consider the number of marketing slogans, image or "jingles" that would immediately focus them on a particular product.

Key Terms
- classical conditioning
- behaviourism

B. Skinner's Operant Conditioning

2.10 Learning Objective: Explain the process of operant conditioning. (pages 41-44)

Operant conditioning: is a term coined by B. F. Skinner, the most famous proponent of the theory. It involves learning to repeat or stop behaviours because of the consequences they bring about.

Reinforcement: happens when a behaviour is repeated because of the consequence that followed it. When a behaviour stops because of a consequence, ***punishment*** has occurred.

> ***Explore on MyPsychLab.com***
> Listen, watch, and explore the icons next to Skinner's Operant Conditioning heading.

There are two types of reinforcement: positive reinforcement and negative reinforcement. Positive reinforcement involves adding a "pleasant" consequence to an action to increase the probability of the action being continued. Negative reinforcement involves the removal of something "unpleasant" to results in the same outcome as positive reinforcement, namely the increase of the probability of the action occurring again. Reinforcement is defined by its effect; something is reinforcing only if it increases the probability of some behaviour.

> ***Critical-thinking Question***: Describe instances in your everyday life when your behaviour is affected by classical or operant conditioning or when you use these principles to affect others' behaviour.

Punishment results in the opposite outcome of reinforcement—the goal is to stop behaviour. Sometimes punishment involves removing "nice" things (like TV) and is sometimes referred to as negative punishment. However, often punishment involves adding something "unpleasant", such as scolding which is sometimes referred to as positive punishment. Like reinforcement, however, punishment is defined by its effect. Consequences that do not stop behaviour cannot properly be called punishments.

One of the problems with punishment is that it often does not cause someone to stop the behaviour. An alternative to punishment is ***extinction***, which is a decrease in the behaviour after repeated non-reinforcement. If a teacher succeeds in reducing a student's undesirable behaviour by ignoring it, extinction has occurred.

> ***Classroom Activity***: Give the class several scenarios of getting a child to comply with household chores and rules (such as cleaning their room, mowing the lawn, washing the dishes, not monopolizing the phone or computer, etc.) and have the students describe how they could use positive reinforcement, negative reinforcement, positive punishment, negative punishment, and extinction to accomplish the change in behaviour.

Operant conditioning research in a laboratory is not concerned with the social effects of behaviours or consequences. In a lab, a target behaviour can be reinforced or punished every time it occurs. Seldom in real life, however, are the consequences of our behaviours reinforced every time they occur. More often, we receive partial reinforcement in which the behaviour is reinforced some of the time. With partial reinforcement, people take longer to learn the behaviour, but the results are longer lasting.

> ***Discussion Question***: Why are the results of partial reinforcement longer lasting than continuous reinforcement? Give examples.

> ***Classroom Activity***: Children are not the only ones whose behaviour may be altered by using the principles of operant conditioning. Ask students to give examples of (positive and negative) reinforcement and punishment, and extinction in their own lives.

Shaping: happens when an individual learns a complex behaviour through the reinforcement of intermediate steps. For example, a child who is learning to ride a bicycle probably starts by riding

with training wheels. Then she learns to ride with someone balancing the bike before she successfully rides alone. Each step includes reinforcement, such as praise from a parent. When she masters a step, the reinforcement for the previous step is discontinued. For example, if Chris can ride alone, we do not continue to praise her for riding with training wheels.

> ***Lecture Recap:***
> Operant conditioning video (four minutes)
> This video demonstrates the conditioning of pigeons, described by Skinner**.**
> https://www.youtube.com/watch?v=I_ctJqjlrHA

Key Terms
- operant conditioning
- reinforcement
- punishment
- extinction
- shaping

The Real World/Parenting: Learning Principles in Real Life

Our attempts at using reinforcement and punishment often do not actually reinforce or punish. For example, if we pick up a baby only when he is crying, we are probably reinforcing the crying behaviour. If we send a child to her room as a punishment, it may not be a punishment if all her favourite toys are in her room.

> ***Classroom Activity***: Ask the class to list times when punishment did not stop their behaviour. What happened instead? Devise a plan that would have been more effective.
>
> ***Classroom Activity***: A creative alternative, is to have your students critique Robert Munsch's story, "Thomas' Snowsuit" and use learning theory to describe what went wrong and how to do it right.

IV. COGNITIVE THEORIES

Cognitive theories emphasize mental aspects of development such as logic and memory.

Key Term
- cognitive theories

A. Piaget's Cognitive-Developmental Theory

2.11 Learning Objective: Describe how cognitive development progresses, according to Piaget. (pages 44-45)

Jean Piaget's theory revolved around the question, "How does thinking develop?" He was aware of the fact that all children seem to go through the same kinds of sequential discoveries about their world at about the same age. To explain such age differences, Piaget proposed several concepts that continue to guide development research.

Schemes: describe an internal cognitive structure that provides an individual with a procedure to follow in a specific circumstance. We begin life with only few schemes, each of which involves our

senses. Examples are looking, tasting, or touching. Later, we develop mental schemes to allow us to use symbols and to think logically. Piaget believed we went from the simple to the complex by three basic processes: assimilation, accommodation, and equilibration.

> ***Classroom Activity***: Ask the class to give examples of schemes, both simple and complex. Include examples of times when a scheme did not work in a particular situation.

Assimilation: is the process of applying schemes to experiences. ***Accommodation*** is a complementary process that involves changing the scheme as a result of new information acquired by assimilation. In Piaget's theory, the process of accommodation is the key to developmental change. When we encounter new information, we use accommodation to reorganize our thoughts, improve our skills, and change our strategies. ***Equilibration*** is the process of balancing assimilation and accommodation to create schemes that fit the environment—we learn what works and what does not work in particular situations.

> ***Critical-thinking Question:*** Describe three or four examples of assimilation and accommodation in your everyday life.

> ***Classroom Activity:*** Remember that Piaget's central question was, "How does thinking develop?" Ask the class to give examples of how his theory answers that question.

Piaget's research suggested to him that logical thinking evolves across four stages.

- During the sensorimotor stage (birth to 18 months), infants use their sensory and motor schemes to act on the world around them.
- In the preoperational stage (18 months to about age six); youngsters acquire symbolic schemes, such as language and fantasy, which they use for thinking and communication.
- During the concrete operational stage (age six to about age 12), children begin to think logically and become capable of solving problems logically.
- In the formal operational stage (from age 12 onward), adolescents learn to think logically about abstract ideas and hypothetical situations.
- Piaget believed that the sequence of the stages was fixed, but not the age at which each child moved through them. Consequently, the ages associated with the stages are approximations.

> ***Explore MyPsychLab.com***
> Interact with Piaget's stages in the classroom

Key Terms

- scheme
- assimilation
- accommodation
- equilibration

B. Information-Processing Theory

> ***Explore MyPsychLab.com***
> Listen and Explore icons next to Information Processing Theory heading

2.12 Learning Objective: Describe information-processing theory processes. (pages 45-47)

The goal of ***information-processing theory*** is to explain how the mind manages information. Information-processing theorists use the computer as a model of human thinking with memory processes central to their study. Memory is broken down into sub-processes of encoding, storage, and retrieval. Encoding is organizing information to be stored in memory. Storage is keeping information, and retrieval is getting information out of memory.

Memory Component and ***Memory Research:*** assume that the memory system is made up of multiple components and that information moves through the components in an organized way. Information first enters your sensory memory. Next, it moves into short-term memory (often called working memory), the component where all information is processed. Long-term memory is the component where information is permanently stored.

Some developmentalists have used information-processing theory to explain Piaget's stages. Their theories are called ***neo-Piagetian*** because they expand on Piaget's theory rather than contradict it. They state that older children and adults can solve complex problems like those in Piaget's research because they can keep more pieces of information in their short-term memories at the same time than younger children can.

> ***Discussion Question:*** What do you think? Does information-processing theory (as described by Canadian theorist Robbie Case, for example) explain Piaget's stages?

Key Terms

- information-processing theory
- neo-Piagetian theory

C. Vygotsky's Sociocultural Theory

2.13 Learning Objective: Describe how Vygotsky's concepts of scaffolding and zone of proximal development influence cognitive development. (pages 47-48)

Vygotsky's ***sociocultural theory*** asserts that complex forms of thinking have their origins in social interactions rather than in the child's private explorations as Piaget thought. He asserted that children's learning of new cognitive skills is guided by an adult or a more skilled child who structures the child's learning experience. He called the process ***scaffolding***. To create an appropriate scaffold, the parent must gain and keep the child's attention, model the best strategy, and adapt the whole process to the child's developmental level. He used the term ***zone of proximal development*** to signify tasks that are too hard for the child to do alone, but that she can manage with guidance.

> ***Critical-thinking Question:*** How is scaffolding involved when a parent helps a child with homework?

Vygotsky's theory has educational applications. Like Piaget's ideas, he suggests the importance of opportunities for active exploration. Assisted discovery would play a more important role for Vygotsky; the teacher provides the scaffolding for children's discovery through questions, demonstrations, and explanations. To be effective, the process would have to lie within the zone of proximal development for each child.

Discussion Question: What would Vygotsky and Piaget each have to suggest about the most valuable use children can obtain while playing in a sandbox?

Explore MyPsychLab.com
Demonstrate Vygotsky's Sociocultural Theory to elicit class discussion to expand student knowledge.

Key Terms
- sociocultural theory
- scaffolding
- zone of proximal development

D. Bandura's Social-Cognitive Theory

2.14 Learning Objective: Describe Bandura's concepts of modelling, reciprocal determinism, and self-efficacy. (pages 48-50)

Albert Bandura states that learning does not always require reinforcement; sometimes we learn from watching others. This is called ***observational learning*** or ***modelling***.

What a person learns from observing others is influenced by attention, memory, and maturation. Although a 4-year-old may not learn geometry by watching his high-school-aged sister, he may learn study skills (good or bad) from her.

Classroom Activity: Ask the class to give examples of observational learning. Describe how attention, memory, and maturation may influence each.

The concept of **reciprocal determinism** states that human development is based upon the interaction of personal, behavioural and environmental factors. Not only are we affected by our circumstances, but we also exert influence over situations. In turn, situational outcomes affect our expectations about how much influence we have over future events. **Self-efficacy** is the belief in one's own capacity to cause an intended event to occur or to perform a task.

Lecture Recap:
The Brain: A Secret History - Emotions; Bandura Bobo Doll Experiment (5.18 min)
Introduces the concepts of empathy and learning through observation
http://www.youtube.com/watch?v=zerCK0lRjp8

Key Terms
- observational learning, or modelling
- reciprocal determinism
- self-efficacy

V. SYSTEMS THEORY

The ***systems approach*** to human development takes into consideration the on-going interaction of personal and external factors. A basic tenet of systems theory is that of ***holism—***the "whole" is primary and often greater than the sum of its parts. A person develops in relation to changes in any part of the whole dynamic system. From this perspective, growth is the result of a reorganization of the system as it adjusts to change. When adjustment is adaptive it promotes a high level of holistic health called **wellness**, but when it is maladaptive it can lead to disorder or dysfunction.

Key Terms
- systems approach
- holism
- wellness

A. Bronfenbrenner's Bioecological Systems Theory

2.15 Learning Objective: Describe how contexts influence development from Bronfenbrenner's bioecological perspective. (pages 50-51)

Bioecological systems theory explains the relationships between people and their environment, or contexts, as Bronfenbrenner calls them. He claims to classify all the individual and contextual variables that affect development and to specify how they interact. The contexts of development are like circles within circles.
- The outermost circle, the macrosystem (cultural context) contains the values and beliefs of the culture in which a child is growing up.
- The next level, the exosystem (socio-economic context) includes the institutions of the culture that affect children's development indirectly.
- The microsystem (immediate context) includes those variables to which people are directly exposed such as their families, schools, religious institutions, and neighbourhoods. The mesosystem contains the interconnections between these components.
- The biological context, the innermost circle, is the child's genetic make-up and her developmental stage.

Bioecological theory provides us with a way of thinking about development that captures the complexity of individual and contextual variables. It encourages research to examine interactions among these variables.

> ***Make the Connection:*** Like the learning theories you read about earlier in the chapter, Bronfenbrenner's bioecological systems theory emphasizes environmental factors. But what are some of the important differences between these two perspectives?

> ***Classroom Activity***: Have your students make a personalized Bronfenbrenner context map based on their own childhood experiences to show how social, institutional and environmental factors helped shaped who they are today. You may wish to give students an opportunity to compare their context maps.

Key Term
- bioecological systems theory

B. Ecobiodevelopmental Theory

2.16 Learning Objective: Explain why ecobiodevelopmentalists endorse early intervention strategies. (pages 51-52)

Ecobiodevelopmental proponents', such as Harvard University developmentalist Jack P. Shonkoff and others are helping the systems approach become more mainstream by encouraging stakeholders, ranging from policy makers to practitioners and parents to embrace a more interdisciplinary approach to human development. They support and endorse of an interdisciplinary, science-based approach toward national early childhood policy and practice. The interdisciplinary nature of the study of human development is reflected in this new trend as well. Today's scientists try to avoid the kind of rigid adherence to a single theoretical perspective that was characteristic of theorists such as Freud, Piaget, and Skinner.

Key Term

- ecobiodevelopmental

VI. OVERVIEW OF HUMAN DEVELOPMENT THEORIES

Weblink: Classics in the History of Psychology: http://psychclassics.yorku.ca

2.17 Learning Objective: Determine the distinguishing characteristics of human development theories. (pages 52-55)

Class Activity:
Break class into groups and assign them each a particular school of thought. Have them brainstorm the pros and cons. After, come together as a group and write a common list from each perspective. Ask them to identify what key facts stand out

After learning about theories, students usually want to know which one is right. However, developmentalists don't think of theories in terms of right or wrong but instead compare theories on the basis of their assumptions and how useful they are in promoting understanding of development. Today's developmentalists often don't adhere to a single theory but take an approach that is more integrated and taps the strengths of each of the major theoretical perspectives. Although theories provide a framework for understanding human development, they are dynamic and always changing. As new discoveries are made, theories are modified and adapted to account for new information.

Critical Question:
Which of the many theories in this chapter do you find to be most useful to your own efforts to understand development? What are the theory's assumptions that you may find helpful as a caregiver?

Developmental Psychology in your Career: Introduction

The Developmental Psychology in your Career segment, feature provides descriptions of the *essential knowledge, skills, and professional attitudes* that specific human service specialists are expected to demonstrate. Sometimes professionals focus on a relatively narrow slice of the lifespan, e.g., pre-natal development, while others require a wider focus, e.g., physical fitness throughout the lifespan. Regardless, of their particular professional focus, they need to consider the "big picture" of

development—to know how someone reached their present condition; to know how someone compares to their cohort; to know what can be done to positively influence the person's future development; and to have an idea of what a "well" person will look like in the future. Accordingly, professionals in human development need a wide breadth of knowledge about human development; to apply appropriate methods of evaluation, support and sometimes intervention; and to abide by a set of professional standards that stipulate codes for ethical decision making, conduct, and responsibilities.

FOR HYBRID COURSES

Any of the content, lecture material, learning activities or assignments can be adapted to an online format to create a blended or hybrid combination of in- person and online teaching delivery. A simple but effective online delivery method is the use of voice-over added to PowerPoint to deliver lecture material, discussion topics, assignment information, etc. On campus IT departments likely offer assistance to set-up the voice-over format. Several free online sources offer set-up instructions and tips. An example is http://www.emergingedtech.com/2012/12/add-voice-over-to-powerpoint-presentations-in-5-easy-steps/.

Features like Class Prep provide a plethora of videos, articles, activities, and assignments about specific chapter content that are readily adaptable for online use.

Online discussion board set-up instructions are available within the manual features, through servers such as Blackboard and through online sources, for example, the University of Waterloo https://uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/developing-assignments/blended-learning/online-discussions-tips-instructors.

One idea: For an on-line ***Lecture Launcher:*** Post the following four minute film to introduce the eight stages.
http://www.davidsonfilms.com/giants-of-psychology/erik-h.-erikson-lifes-work.
Ask the on-line class to create a child's **utopia,** and describe this world and how would it look? What supports, beliefs, laws, etc. would need to be in place, what would need to change? The topic would also lend itself to other mediums such as collages: a virtual scrapbook project.

LECTURE ENHANCEMENT

Theories of Human Development

The approach one takes in studying lifespan development influences the following:
- the questions one will ask
- the methods one might use to gather information for addressing those questions
- how the data that is gathered might be interpreted
- how that interpreted information is applied to understanding lifespan development

The fact that one's theoretical approach influences so much, makes it critical that we address the major assumptions of these approaches. Three of the families of theoretical approaches discussed in the textbook are as follows:
- Psychoanalytic
- Learning
- Cognitive-Developmental

Psychoanalytic Approaches

The family of theoretical approaches loosely falling under the heading "psychoanalytic" make some very clear assumptions about human behaviour. Although individual theories within this approach differ in some significant ways, they are placed together because of their commonalties. Psychoanalytic approaches to development focus primarily on the role that psyche (soul, spirit, or mind) plays in development. To the extent that one's psyche develops in a healthy fashion, the assumption is that the individual's overall development will be healthy as well. Some of these theories (such as Freud's approach) assume that human development is driven by an unconscious battle between our hedonistic instinctual urges (toward life and death) and socialized behaviours that we have been taught (to not lie or steal, for example).

Freud's Psychosexual Theory

2.6 Summarize the main ideas of Freud's psychosexual theory.

Freud assumed that humans are inherently evil. At our very core, we are hedonistic, selfish, sexual, and aggressive beings. Freud also understood that people do not always attempt to harm others, nor do they always attempt to fulfill their sexual urges. This presented Freud with a paradox. An attempt to explain this paradox is at the heart of Freud's theory about personality development. Freud felt that personality (in its complete form) is made up of three elements. These elements are: id, ego, and superego.

- We are born with id and it represents our biological urges. Freud felt that we are driven by aggressive and sexual urges-these are the biological urges that underlay the id. When we are born, this is who we are. According to Freud, id operates according to the pleasure principle by constantly striving for the instant gratification of its urges. The problem here, however, is that reality quickly teaches us that we can't always get what we want or that we can't always get what we want safely.
- It is through these contacts with reality that ego develops. It is ego's job to attempt to help id satisfy its urges but to do so in a way that will keep id safe. If id wants to rob a bank, for example, it would simply march in and take the money. But ego realizes that there are others who want to keep that money. Ego, then, might develop a plan for how to rob the bank and not get caught.
- Something is still missing. We know that individuals do not always rob banks no matter how much they would like to have the money. If everyone simply found safe ways to do the bad things they would like to do, society would not survive for long. According to Freud, it is through society (in particular socialization from parents) that we gain our sense of right versus wrong. This moralistic, socialized aspect of personality, Freud called superego. It is the superego that causes us to feel guilt and remorse when we have done something that we have been taught is wrong.

The implications of this theory of personality development are quite profound. If an individual does not learn to deal effectively with reality (if ego is not strong enough, for example), id may get what it wants but not do so safely. This could result in being put in prison, or even being killed if someone decides they really are not going to let you have their money. Likewise, a superego that is too strong may believe that rules should never be broken regardless of the circumstances. Many expectant parents have broken the speed limit on the way to the hospital which would violate one of the rules that superego has accepted.

Healthy personality development depends upon a healthy balance of these three aspects of personality. To the extent that these three are in balance, a healthy personality is possible. If they are out of balance, however, personality problems and/or disorders might result. An id that is too strong results in an individual that cannot delay his or her satisfaction, may become overly thrill-seeking, and may constantly place the individual in danger. An overly strong ego, however, might result in an individual that is cunning, conniving, and manipulative. The individual may be extremely good at getting what he or she wants, sometimes at the expense of others. If superego is overly active, the individual may be overly cynical, judgmental, reserved and inflexible.

A healthy personality can be restored to the extent that the individual is able to correct the imbalance. This could be done by squelching the strength of the aspect that is too strong, or by attempting to bolster one or more of the other aspects of personality to compensate. According to Freud, such attempts to re-establish a balance would require psychoanalytic sessions.

Erikson's Psychosocial Theory

2.7 Identify the conflict associated with each of Erikson's psychosocial stages.

Erikson's theory is important in the lifespan development literature for several reasons. First, unlike Freud's theory that assumes that most of our development will be completed by the time we are about five or six, Erikson clearly believed that development occurs throughout the lifespan. Second, Erikson's theory challenges the assumption that crisis is always bad.

Erikson believed that all individuals would progress through the stages of development systematically throughout the lifespan. In this fashion, Erikson felt it was possible to understand someone's behaviours to the extent that we understand what phase of life they are in (and, therefore, what crisis they are confronting).

Erikson's theory assumes that in order to make healthy progress in our development, we must risk at the next phase of our life, the very characteristic we struggled so hard to acquire in the current phase. The young adult, for example, is striving to develop an intimate relationship. To successfully accomplish this, however, requires that she or he be able to develop a shared identity (which requires some giving up of one's own identity). If you look at the phase prior to this, however, you will note that the crisis of adolescence is to develop a sense of identity. In this fashion, developing intimacy requires risking the identity just formed during adolescence.

Erikson believed that individuals make progress in life by confronting and resolving social crises. Rather than perceiving crisis as unhealthy or bad, then, he assumed that crises are good to the extent that we can positively resolve them. When crises are positively resolved, we mature and make progress as an individual because we are more complex than we were before. This clearly has implications for how one would approach adolescence or even such issues as the potential existence of a midlife crisis.

The Humanistic Alternative

2.8 Describe the basic concepts of humanistic theory.

Humanistic theories were generated as a specific reaction against the perceived pessimism of Freudian theory. Humanistic theorists disagreed with Freud's assumption that human beings are inherently evil. Instead, these theories assumed that human beings are motivated by a desire to

achieve their unique potential (labelled self-actualization). This actualizing tendency motivates individuals and their behaviours.

A major difference between these approaches and the stage theories of Freud or even Erikson is the assumption by these theories (namely Maslow) that the motives that drive behaviour emerge as a sequence, but are not sequential stages. Stages infer that one cannot go back and forth or ebb and flow between them. Needs or motives, however, come and go and come again. Positive progress toward self-actualization occurs only to the extent that more basic or primary needs (such as the need for food and shelter) are satisfied. For this reason, some individuals (especially those who are constantly struggling for basic survival) may never become self-actualized.

Learning Theories

2.9 Explain how classical conditioning occurs.

Learning theories of development make very different assumptions about human development. Freudian theory assumes that most of human development is driven by biological urges. The Humanistic alternative assumes that human development is driven by the quest for self-actualization. Learning theories emphasize the impact of the environment on the developing person more than any of these other theoretical viewpoints.

Pavlov's Classical Conditioning

Early research on learning focussed on how organisms associate two events. In other words, how do we learn that two events go together? Research by Ivan Pavlov in the early 1900s addressed this very issue. Pavlov was doing research on digestion in dogs, noting that they would salivate when food was placed in their mouths. This led Pavlov to conclude that saliva is an important aspect of digestion. While doing this research, however, he also noticed that the dogs would salivate to other things that could be associated with food, such as the food dish, the sight of the individual who usually fed them, etc. Pavlov became interested in how these associations are learned.

Pavlov discovered that organisms learn to associate (or connect) events together to the extent that they have been paired together in the past. Thus, the dogs have learned what the feeder looks like and will anticipate being fed when they see him. This kind of simple learning can only explain simple behaviours that get associated with other behaviours that are automatic. Dogs, for example, automatically salivate when food is placed in their mouths. It is relatively easy, then, to teach them to salivate to the sound of a ringing bell if you follow that sound by putting food in their mouths. After a few such pairings, the ringing of the bell causes the dog to anticipate getting food, and it starts to salivate.

Skinner's Operant Conditioning

2.10 Explain the process of operant conditioning.

Such learning of associations, however, seems insufficient to explain more complex behaviours like learning to drive a car, or learning to do algebra. A second type of learning is needed. This type of learning has been called operant conditioning. The most influential advocate of this type of learning was B. F. Skinner. He felt that individuals become the persons they do because of their reinforcement histories. Skinner believed that individuals learn to repeat behaviours that have been reinforced in some way and will stop engaging in behaviours that have been punished in some fashion. There are

two kinds of reinforcements—positive and negative. With both types of reinforcement, the goal is the same: to encourage the behaviour. What differs is how this is accomplished.

With positive reinforcement, the behaviour is followed by something that the individual will experience as pleasant. We may take our child to McDonalds for dinner, for example, if she cleans her room. The assumption here is that the child will become more likely to clean her room the next time because doing so this time resulted in a positive reinforcement. With negative reinforcement, the goal is also to increase the number of times a behaviour occurs. Rather than accomplishing this by administering something pleasant, however, it is accomplished by taking something unpleasant away. An instructor might, for example, remove a failing grade when an assignment is turned in. In this case, the desired behaviour (turning the assignment in) was accomplished by taking a bad thing away (a failing grade).

Punishment has the opposite goal of reinforcement. The goal is to eliminate or reduce a behaviour. A child who breaks a vase, for example, may be made to sit in the corner for time out. The idea here is that the unwanted behaviour is followed by something unpleasant to teach the child that the unwanted behaviour should not happen again. Negative reinforcement and punishment are often confused. The simplest trick to keeping the two of these clear, however, involves asking one question. What is the goal? If the goal is to increase a behaviour, it must be reinforcement. If the goal is to decrease a behaviour it requires punishment.

Bandura's Social Cognitive Learning Theory

2.14 Describe Bandura's concepts of modelling, reciprocal determinism, and self-efficacy.

Albert Bandura expanded on traditional learning theory by suggesting that learning can take place through simple observation. Even if a child is not directly reinforced for a particular behaviour, it can be learned. Anyone who has ever had a child repeat something they would have preferred not to have had repeated knows this. Bandura also suggested that not all individuals will find the same things reinforcing. Indeed, some of us will engage in behaviours not because they will be externally reinforced but because we find them intrinsically (internally) reinforcing.

Cognitive Theories

2.11 Describe how cognitive development progresses, according to Piaget.

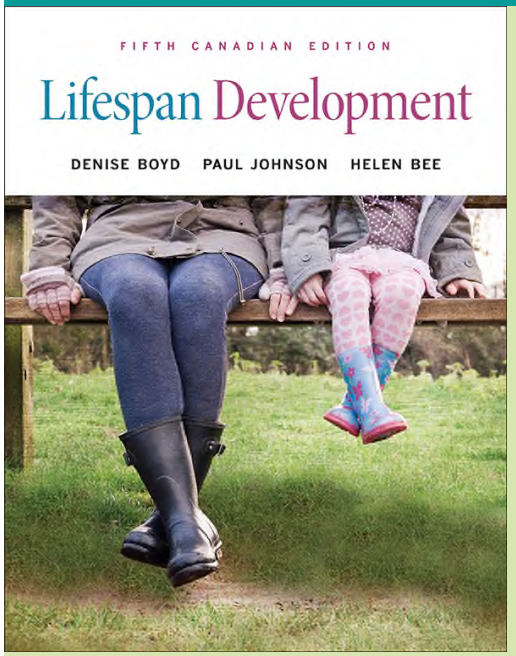
2.12 Describe information-processing theory processes.

2.13 Describe how Vygotsky's concepts of scaffolding and zone of proximal development influence cognitive development.

Cognitive theories focus on how changes in the ways individuals think bring about changes in their behaviours, their personalities, and their basic interactions with other persons. What are the implications of viewing development along cognitive lines? Piaget assumed that individuals build theories (schemes) about the world. When new information comes in, the individual compares that information with existing theories. If the information is consistent with an existing scheme, it will be included in that category (a process called assimilation). If it does not fit into that scheme, others may be searched or a new scheme may be developed (a process called accommodation). Individuals develop cognitive theories to help simplify and make sense of their world.

One major implication of a cognitive approach, then, is that the manner in which the individual processes information will have a profound impact on how that information is perceived and how the individual responds to it. This suggests that no two persons will, necessarily, respond to the same event in the same way because they may be applying different theories about the world to that information. If two individuals see a man slap another man on the back, how they interpret that event may depend on their schemes about the world or about the individuals engaging in the behaviours. If one of these observers has been told that the two men are friends, he may assume that the slap on the back was one of affection. If the other observer, however, was told that these two men were total strangers, the behaviour may seem out of place with that information.

To truly to understand individuals, we must understand how they perceive and interpret information about the world. If an individual is displaying inappropriate attitudes or behaviours, such as prejudice or discrimination, then, we can only rectify that to the extent that we force the individual to confront his or her schemes and develop new ones that are more informed. According to these approaches, if you want to change someone's attitude, you must change the way they think. The assumption is that changing the way they think will trickle down and change the way they behave.



CHAPTER TWO

THEORIES OF DEVELOPMENT

I. BIOLOGY AND EVOLUTIONARY THEORIES

- Genetic and epigenetic factors interact with the environment to shape our health and wellbeing
- Genetic and physiological processes underlie human behaviour

I. BIOLOGY AND EVOLUTIONARY THEORIES

- Human cell nuclei contain 23 pairs of **chromosomes**
- Made up of **DNA**
- Each chromosome is divided into segments, called **genes**
- Each gene influences a particular feature or developmental pattern.

I. BIOLOGY AND EVOLUTIONARY THEORIES

- A gene controlling a specific characteristic always has the same locus on the same chromosome in every individual of the same species.

- Why is this significant?

A. Genetics

- Each of the approximately 23,000 genes found in each cell nucleus in our body influences a particular feature or development pattern

- These genes direct the construction of the proteins that control all biological processes

The Human Genome

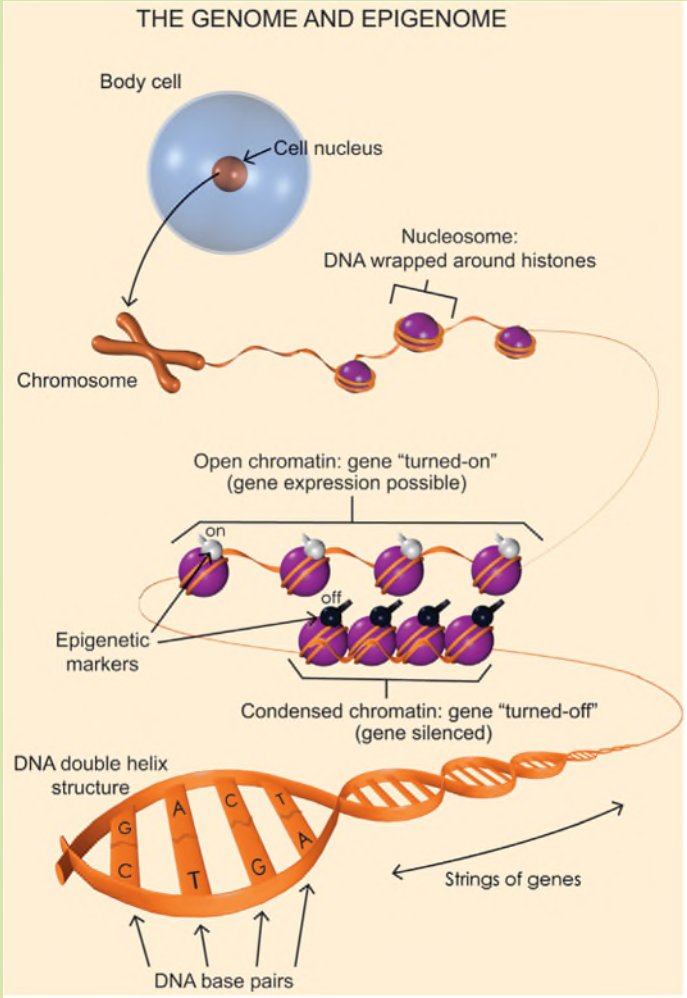


FIGURE 2.1 Four essential organic compounds, A – adenine, T – thymine, C – cytosine, and G – guanine, are organized into base pairs that form the double helix structure of DNA. The human genome—the DNA contained in the nuclei of our body cells—comprises 23 pairs of chromosomes containing strands of genes. DNA is wound around histones (a protein material) to form what resembles beads-on-a-string, called the *nucleosomes*. Deposited along the nucleosomes are epigenetic markers, which, collectively, make up the epigenome. Epigenetic markers control gene expression by either opening up or tightly packing nucleosome clusters (chromatin). When chromatin is loosely spaced, gene expression is possible, but when chromatin is tightly packed, genes are silenced. Thus, when epigenetic markers signal chromatin to open, genes (segments of DNA base pairs) are ready to be transcribed and translated into proteins.

(*Source:* Nevid, J.S., Greene, B., Johnson, P.A, & Taylor, S. (2009), *Essentials of Abnormal Psychology,* 2nd Canadian Edition. Toronto, ON: Pearson Education Canada. Figure 2.1. Artwork copyright © Alexandra Enns. Printed with permission.)

B. Genotypes, Phenotypes, and Patterns of Inheritance

- The **genotype** is the specific genetic material on an individual's chromosomes
- The **phenotype** is the observed characteristic of the individual, such as brown eyes and black hair

(continued)

Genotypes, Phenotypes, and Patterns of Inheritance (continued)

- **Dominant-recessive pattern** of inheritance—a single **dominant** gene influences a person's phenotype but two **recessive** genes are necessary to produce an associated trait
- **Polygenic inheritance**—a pattern of inheritance in which many genes influence a trait
- **Multi-factorial inheritance**—affected by both genes and the environment
- **Mitochondrial inheritance**—children inherit genes from the mother's egg and not from the father's sperm

Genotypes, Phenotypes, and Patterns of Inheritance (continued)

TABLE 2.1 Genetic Sources of Normal Traits

Dominant Genes	Recessive Genes	Polygenic (many genes)
Broad lips	Thin lips	Height
Nearsightedness	Flat feet	Eye colour
Coarse hair	Fine hair	Body type
Curly hair	Red hair	Skin colour
Dark hair	Blond hair	Personality
Types A and B blood	Type O blood	
Rh-positive blood	Rh-negative blood	
Freckles		
Dimples		

(*Source:* Tortora, G., & Grabowski, S. (1993). *Principles of anatomy and physiology*. New York, NY: HarperCollins.)

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C. Epigenetics

- **Epigenic markers** regulate gene expression (our phenotype) by signalling some genes to “turn on” and others to “turn off”
- By controlling gene expression, epigenetic mechanisms regulate bodily processes
- Some experiences can result in altered epigenetic structures at the molecular level
- Some of these changes can even be passed on to the next generation

D. Evolutionary Theories

- **Nativism** - humans possess unique genetic traits that will be manifested in all members of the species, regardless of differences in their environments
- **Ethology** - genetically determined survival behaviours that are assumed to have evolved through natural selection
- **Behaviour genetics** - traits are said to be influenced by genes when related people, such as children and their parents, are more similar than those who are unrelated
- **Sociobiology** - genes that aid group survival. Argues that humans have the best chance for individual survival when they live in groups

(continued)

Evolutionary Theories (continued)

- **Evolutionary Psychology**
  - The view that genetically inherited cognitive and social characteristics have evolved through natural selection
  - Inherited patterns of thinking and feeling affect every aspect of our lives

(continued)

Evolutionary Theories (continued)

- **Evolutionary Developmental Psychology**
  - The view that genetically inherited cognitive and social characteristics that promote survival and adaptation appear at different times across the lifespan
  - Rather than a newborn being a 'blank slate' s/he has been genetically programmed with a predisposition to learn and develop in certain ways (e.g. to learn language or recognize faces)
  - At later stages in life, we need to display different intellectual, personality and social behaviours to help us adapt and survive (e.g. adults contend with mating, then with parenting and later grand-parenting)

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Evolutionary Theories (continued)

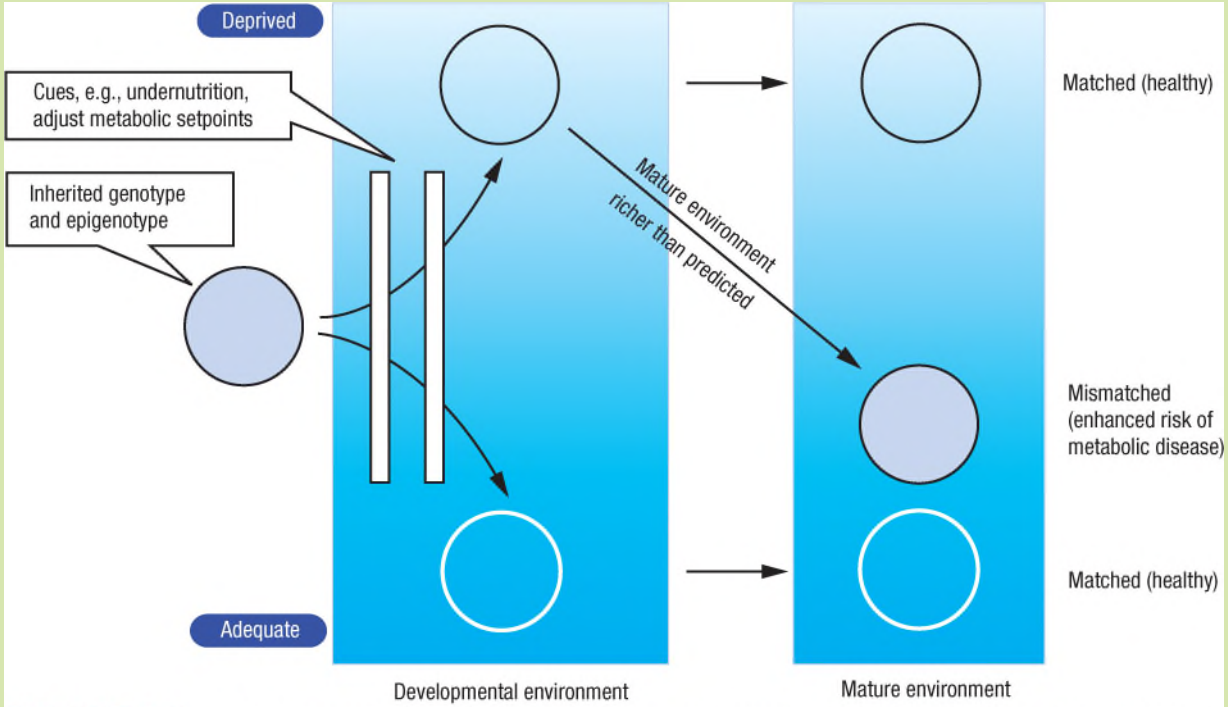

FIGURE 2.3 The developing organism senses maternally transmitted environmental cues, such as undernutrition, during prenatal and early postnatal life. Developmental flexibility in response to these cues modifies the default trajectory defined by the inherited fetal genome and epigenome according to whether the environment is perceived as adequate (dark background) or deprived (light background), resulting in metabolic adjustments. If the eventual mature environment, whether adequate or deprived, matches the prediction, then the risk of metabolic disease in later life is low. If there is a mismatch between the predicted and actual mature environments, particularly if the mature environment is richer than anticipated, then the risk of metabolic disease is enhanced.

(*Source:* Gluckman, Nansen and Beedle, 2007. American Journal of Human Biology, 19 (1), 1-19 (pg8). Reprinted with permission of Wiley–Liss, Inc., a subsidiary of John Wiley & Sons, Inc.)

E. Evaluation of Biological and Evolutionary Theories

- Genome-wide perspectives will be beneficial in the treatment of multifactorial diseases such as heart disease and cancer
- Early indications are that both external and personal factors influence epigenetic mechanisms
- Alterations in gene expression can increase the risk for developing both physical and psychological disorders, are continually modified throughout the lifespan, and can be passed down to the next generation

(continued)

Evaluation of Biological and Evolutionary Theories (continued)

- These theories may underestimate the impact of the environment, while placing too much emphasis on heredity
- Evolutionary theories are hard to prove
- Behaviours can be modified by experience and learning, even if they have a basis in evolution

II. PSYCHOANALYTIC THEORIES

- Psychoanalytic theorists believe that developmental change happens because of the influence of internal drives and emotions on behaviour

A. Freud's Psychosexual Theory

- Behaviour is determined by both conscious and unconscious processes
- Libido is an instinctual sexual drive
- Personality has a structure with three parts that develop over time
  - The id is an instinctual drive for physical pleasure present at birth and forming the motivating force behind virtually all human behaviour
  - The ego is the thinking part of our personality; its job is to keep the needs of the id satisfied
  - The superego is the moral judge of our personality that contains the norms and values of our family and of society

Freud's Stages of Psychosexual Development

Stage	Age	Erogenous Zones	Major Developmental Task	Some Adult Characteristics of Children Who Have Been Fixated at this Stage
Oral	0-1	Mouth, lips, tongue	Weaning	Oral behaviour, such as smoking, overeating, passivity, and gullibility.
Anal	2-3	Anus	Toilet training	Orderliness, parsimoniousness, obstinacy, or the opposite.

(continued)

Freud's Stages of Psychosexual Development (continued)

Phallic	4-5	Genitals	Oedipus and Electra Complexes	Vanity, recklessness, or the opposite.
Latency	6-12	No specific area	Development of defense mechanisms	None. Fixation does not normally occur at this stage.
Genital	13-18	Genitals	Mature sexual intimacy	Adults who have successfully integrated earlier stages should emerge with a sincere interest in others and mature sexually.

B. Erikson's Psychosocial Theory

- Development results from the interaction between inner instincts and cultural demands
- Development occurs across the entire lifespan in psychosocial stages
- One must move through and successfully resolve eight "crises" or "dilemmas"

Erikson's Psychosocial Stages

TABLE 2.2 Erikson's Psychosocial Stages

Approximate Ages	Stage	Positive Characteristics Gained and Typical Activities
Birth to 1 year	Trust versus mistrust	Hope; trust in primary caregiver and in one's own ability to make things happen (secure attachment to caregiver is key)
1 to 3	Autonomy versus shame and doubt	Will; new physical skills lead to demand for more choices, most often seen as saying "no" to caregivers; child learns self-care skills, such as toileting
3 to 6	Initiative versus guilt	Purpose; ability to organize activities around some goal; more assertiveness and aggressiveness (harsh parental criticism may lead to guilt)
6 to 12	Industry versus inferiority	Competence; cultural skills and norms, including school skills and tool use (failure to master these leads to sense of inferiority)

(continued)

Erikson's Psychosocial Stages (continued)

12 to 18	Identity versus role confusion	Fidelity; a unified and consistent sense of self that integrates pubertal changes into a mature sexual identity, assumes adult social and occupational roles, and establishes personal values and attitudes
18 to 30	Intimacy versus isolation	Love; person develops intimate relationships beyond adolescent love; many become parents
30 to old age	Generativity versus stagnation	Care; people rear children, focus on occupational achievement or creativity, and train the next generation; turn outward from the self toward others
Old age	Integrity versus despair	Wisdom; person conducts a life review, integrates earlier stages, and comes to terms with basic identity; develops self-acceptance

C. Evaluation of Psychoanalytic Theories

Five of the strengths of psychoanalytic theories are as follows:

1. They focus on the importance of the emotional quality of the child's earliest relationship with caregivers
2. They suggest that the child's needs change with age and the interaction pattern of the family is crucial in the development of personality
3. They provide concepts—such as the unconscious, the ego, and identity—that are part of everyday language as well as psychoanalytic theory
4. They invented psychotherapy
5. They emphasize continued development during adulthood

The greatest weakness of psychoanalytic theory is that it is hard to test and hard to measure

D. The Humanistic Alternative

- The most important internal drive is each individual's motivation to achieve one's full potential
- Abraham Maslow is the key figure in humanistic theory
- Self-actualization describes the ultimate goal in human life
- Maslow described needs or motives in a needs hierarchy; we must meet each level of needs, in turn, from the bottom of the pyramid to the top

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Maslow's Hierarchy

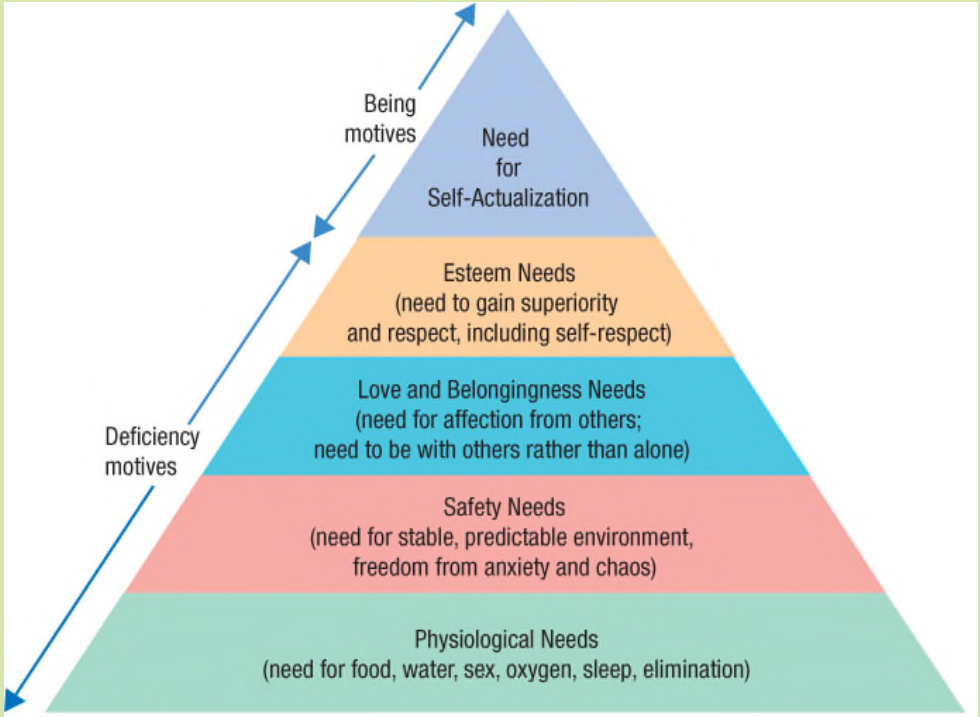

FIGURE 2.4 In Maslow's view, needs operate from the bottom up in this needs hierarchy. Until physiological needs are met, no other need will be prominent; until love needs are met, esteem needs will not emerge; and so on. Similarly, there is a developmental aspect: A baby is primarily dominated by physiological needs, a toddler by safety needs, and so forth. Only in adulthood may the need for self-actualization become central.

(*Sources:* Maslow, Abraham H., Frager, Robert D., and Fadiman, James. *Motivation and Personality*, 3rd Edition, © 1997. Adapted by permission of Pearson Education, Inc., Upper Saddle, NJ, Pearson Education.)

The Humanistic Alternative (continued)

- **Carl Rogers –** focused on the capacity of each of us to become a "fully functioning person" without guilt or seriously distorting defences
- One of the strengths of the humanistic theories is that they have an **inherent optimism**; it is never too late for adults to overcome early conditioning or resolve dilemmas if they are motivated to do so
- One of the weaknesses of humanistic theories, which they share with psychoanalytic theories, is that they are hard to test and hard to measure

III. LEARNING THEORIES

- Learning theories focus on how experiences in the environment shape the child. Human behaviour is seen as being shaped by processes such as classical conditioning and operant conditioning

A. Pavlov's Classical Conditioning

- **Classical conditioning** begins with an unconditioned stimulus that prompts an automatic or unconditioned response
- When a new stimulus is presented just before or at the same time as the *unconditioned stimulus*, we learn to associate it with the naturally occurring ***unconditioned stimulus*** *and response*
- Eventually, we respond to the "conditioned stimulus" the same way we responded to the ***unconditioned stimulus***, even if the ***unconditioned stimulus*** is not present
- Classical conditioning plays an important role in the development of emotional responses

B. Skinner's Operant Conditioning

- B.F. Skinner was the most famous proponent of the theory
- **Reinforcement** happens when a behaviour is repeated because of the consequence that followed it
- **Positive reinforcement** involves adding a "pleasant" consequence to an action to increase the probability of the action being continued
- **Negative reinforcement** involves the removal of something "unpleasant" and results in the increase of the probability of the action occurring again
- **Reinforcement** is defined by its effect; something is reinforcing only if it increases the probability of some behaviour

(continued)

Skinner's Operant Conditioning (continued)

- When a behaviour stops because of a consequence, **punishment** has occurred
- Sometimes punishment involves removing "nice" things (like TV) and is sometimes referred to as **negative punishment**
- However, often punishment involves adding something "unpleasant", such as scolding, which is sometimes referred to as **positive punishment**
- Like reinforcement, however, punishment is defined by its effect. Consequences that do not stop behaviour cannot properly be called punishments

(continued)

Skinner's Operant Conditioning (continued)

- **Extinction** is a decrease in behaviour after repeated non-reinforcement
- **Shaping** happens when an individual learns a complex behaviour through the reinforcement of intermediate steps
  - Each step includes reinforcement, such as praise from a parent
  - When a child masters a step, the reinforcement for the previous step is discontinued

C. Evaluation of Learning Theories

Implications of learning theories:

- Learning theories can explain both consistency and change in behaviour
- They tend to be optimistic about the possibility of changing behaviour
- They seem to give an accurate picture of the way many behaviours are learned
- Traditional learning theorists' approach is not really developmental; it does not tell us much about age-related changes, while Bandura's variation does

IV. COGNITIVE THEORIES

- Cognitive theories emphasize mental aspects of development, such as logic and memory

A. Piaget's Cognitive-Developmental Theory

- A **scheme** describes an internal cognitive structure that provides an individual with a procedure to follow in a specific circumstance
- **Assimilation** is the process of applying schemes to experiences
- **Accommodation** involves changing the scheme as a result of new information
- **Equilibration** is the process of balancing assimilation and accommodation to create schemes that fit the environment—we learn what works and what does not work in particular situations

Piaget's Cognitive-Developmental Stages

TABLE 2.3 Piaget's Cognitive-Developmental Stages

Approximate Ages	Stage	Description
Birth to 18 months	Sensorimotor	The baby understands the world through her senses and her motor actions; she begins to use simple symbols, such as single words and pretend play, near the end of this period.
18 months to 6 years	Preoperational	By age 2, the child can use symbols both to think and to communicate; he develops the abilities to take others' points of view, classify objects, and use simple logic by the end of this stage.
6 years to 12 years	Concrete operational	The child's logic takes a great leap forward with the development of new internal operations, such as conservation and class inclusion, but is still tied to the known world; by the end of the period, he can reason about simple "what if" questions.
12+ years	Formal operational	The child begins to manipulate ideas as well as objects; she thinks hypothetically and, by adulthood, can easily manage a variety of "what if" questions; she greatly improves her ability to organize ideas and objects mentally.

B. Information-Processing Theory

- Information-processing theorists use the **computer as a model** of human thinking with memory processes

- Memory is broken down into sub-processes of:
  - **Encoding**—organizing information to be stored in memory
  - **Storage**—keeping information
  - **Retrieval**—getting information out of memory

(continued)

Information-Processing Research

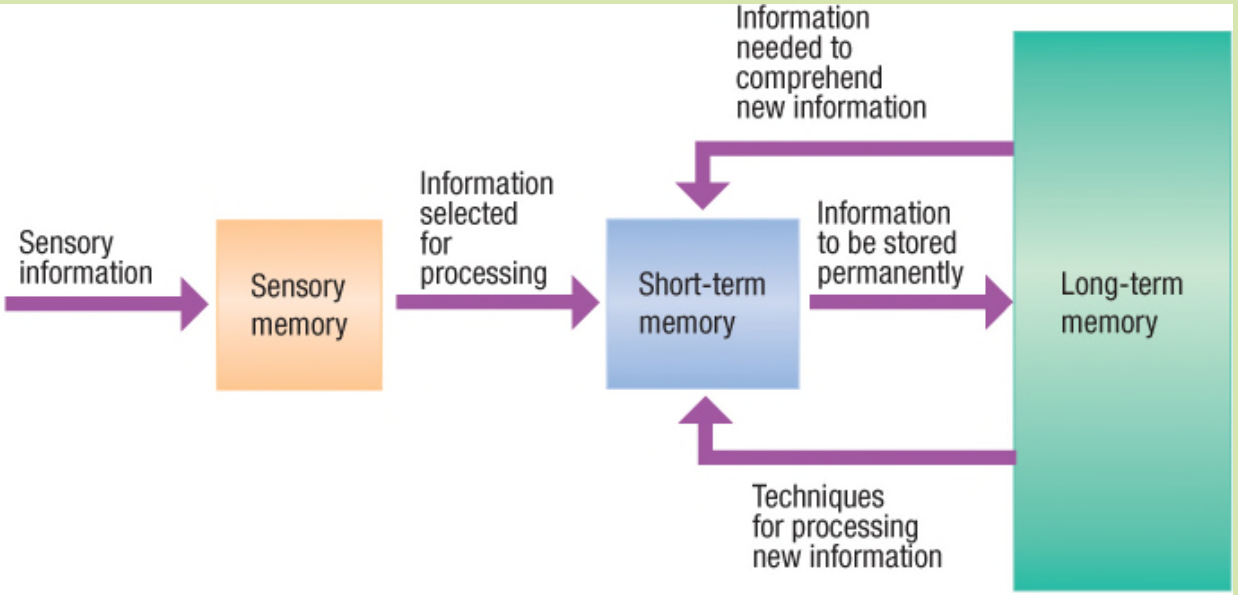

FIGURE 2.6 Information-processing research on memory is based on the assumption that information moves into, out of, and through the sensory, short-term, and long-term memories in an organized way.

C. Vygotsky's Socio-Cultural Theory

- Vygotsky's **socio-cultural theory** asserts that complex forms of thinking have their origins in social interactions
- Children's learning of new cognitive skills is guided by an adult or a more skilled child who structures the child's learning experience—a process called **scaffolding**
- To create an appropriate scaffold, the parent must gain and keep the child's attention, model the best strategy, and adapt the whole process to the child's developmental level
- The term **zone of proximal development** signifies tasks that are too hard for the child to do alone, but that he can manage with guidance

D. Bandura's Social-Cognitive Theory

- Albert Bandura states that learning does not always require reinforcement; sometimes we learn from watching others. This is called **observational learning or modelling.**
- **Reciprocal determinism:** human development is based on:
  - Personal factors
  - Behavioural factors
  - Environmental factors
- **Self-efficacy**: belief in one's own capacity to cause an intended event to occur or to perform a task

D. Bandura's Social-Cognitive Theory

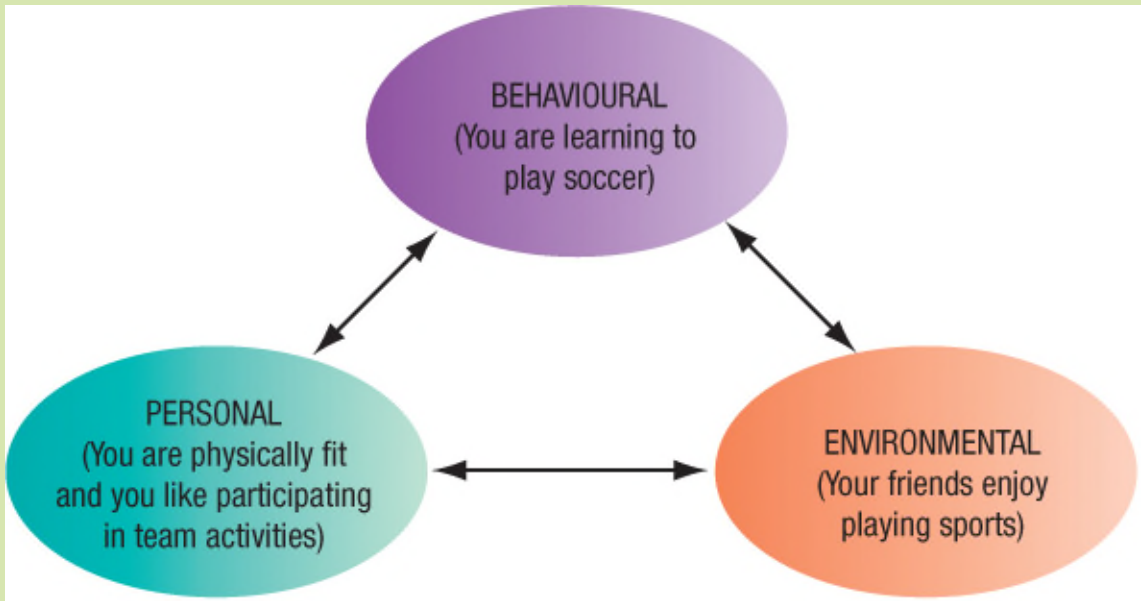

FIGURE 2.7 Bandura's social-cognitive model of human behaviour emphasizes the interaction of personal, behavioural, and environmental factors.

(*Source:* Adapted from A. Bandura, 1977a, *Social Learning Theory* (1st ed.). Upper Saddle River, NJ: Prentice-Hall. © 1977. Reprinted by permission of Pearson Education Inc., Upper Saddle River, NJ, Pearson Education.)

E. Evaluation of Cognitive Theories

- Piaget authored a theory that forced psychologists to think about child development in a new way
- He provided a set of findings that were impossible to ignore and difficult to explain
- He developed innovative methods of studying children's thinking that continue to be important today
- The whole process seems to be a great deal less stage-like than Piaget proposed

(continued)

Evaluation of Cognitive Theories
(continued)

- Most Information-processing theorists now use a continuous rather than a stage model
- Human thinking is more complex than that of a computer
- Young children whose parents provide them with scaffolding during preschool years achieve at higher levels in elementary school
- Bandura's variation tells us how cognitive development affects impressions and reactions to the environment
- Critics of cognitive theories in general say they ignore emotions, imagination and creativity, and underplay the effects of our physical and social surroundings

V. SYSTEMS THEORY

- **Systems approach:** the view that personal and external factors form a dynamic integrated system
- **Holism:** the 'whole' is primary and is often greater than the sum of its parts
  - A person develops in relation to changes in any part of the whole dynamic system (personal and external)
- **Wellness:** the result of adaptive adjustment

A. Bronfenbrenner's Bioecological Systems Theory

- **Bioecological systems theory**—development explained in terms of the relationships between people and their environment, or contexts

- Classifies all the individual and contextual variables that affect development and specifies how they interact

- Uses a model of concentric circles to describe the interrelationships

(continued)

Bronfenbrenner's Bioecological Systems Theory (continued)

- The outermost circle, the macrosystem (cultural context) contains the values and beliefs of the culture in which a child is growing up
- The next level, the exosystem (socio-economic context) includes the institutions of the culture that affect children's development indirectly
- The microsystem (immediate context) includes those variables to which people are directly exposed, such as their families, schools, religious institutions, and neighbourhoods
- The mesosystem contains the interconnections between these components
- The individual context, the innermost circle, is the child's genetic make-up and developmental stage

Bronfenbrenner's Bioecological Theory

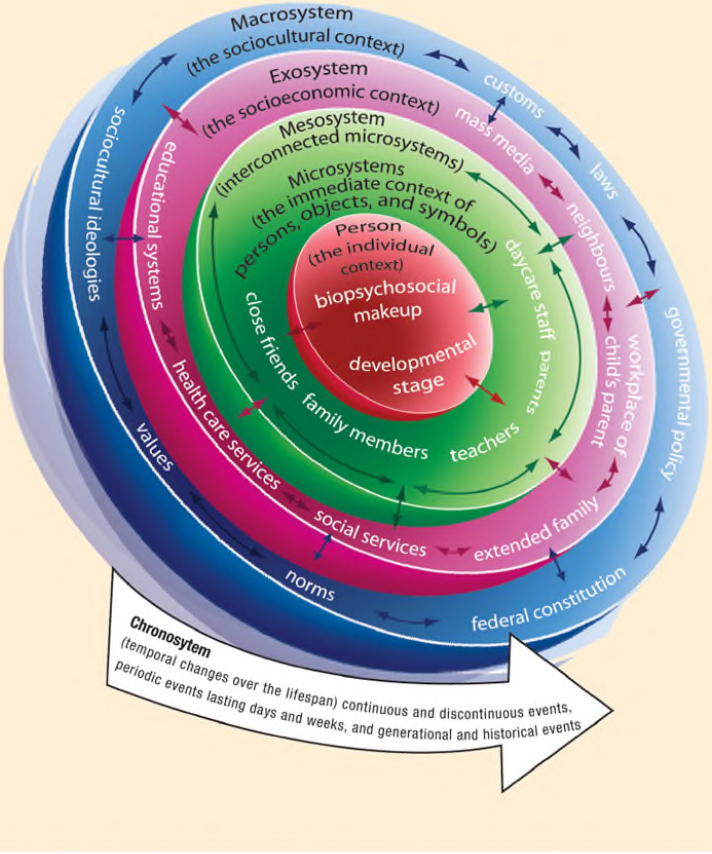

FIGURE 2.8 Bronfenbrenner's bioecological theory proposes that people are exposed to interconnected contexts that interact in complex ways over time to influence development.

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B. Eclecticism

- Uses multiple theoretical approaches to explain and study human development
- Builds on ideas from several sources
- Avoids rigid adherence to a single theory such as Freud or Skinner and instead uses an interdisciplinary approach

C. Evaluation of System Theories

- Bronfenbrenner's greatest contribution has been the emphasis on the need for research examining interactions among the complexity of individual and contextual variables
- Developmentalists using the eclectic approach can devise more comprehensive theories that may better match the behaviour of real people in real situations

COMPARING THEORIES

- Please examine Table 2.4 in textbook
- It presents an excellent summary of the strengths and weaknesses of each of the theories we have discussed.