

Chapter 2: Theories and Contexts of Development

Outline

I. Some Views about Development Shared by Most Developmental Psychologists

- A. Development always occurs within a context (family, school, peers).
 - 1. Children and adolescents are biological creatures.
 - 2. Multiple perspectives are needed to acquire a full understanding of human development:
 - a. a proximal or more immediate one (here and now)
 - b. a distal or more remote one taking into account the:
 - i. sociohistorical context of development
 - ii. evolutionary or phylogenetic context of development
 - 3. The relationship between organism and environment is bidirectional across levels and life periods.
 - 4. A holistic view of children and adolescents must be sustained in developmental analysis.

II. Why Theorize about Development?

- A. Theories help us organize facts and distinguish the relevant from the irrelevant.
 - 1. Theories are valuable in research by helping us:
 - a. direct research
 - b. determine the types of questions that are asked
 - c. explain phenomena
 - d. make predictions
 - e. make practical decisions
 - 2. Theories are most useful when they are:
 - a. more specific than general and focus on a specific aspect of reality
 - b. kept up to date by being modified by new data
 - 3. Theories can be disproved.
 - a. They are statements about known facts that can be potentially disproved by new facts.
 - b. If a theory is found to be incorrect because of new discoveries, this does not contradict previous facts, only how they are explained.

III. Classical Theories of Development

A. Mechanistic Theories

- 1. Mechanistic theorists liken people to machines, such as the mind-as-a-computer model of information-processing approaches
 - a. They view people as composed of parts (behaviors) that can be broken down, or decomposed, into more basic parts and:
 - i. view people as being relatively passive
 - ii. view people as changing as a result of external stimulation
 - iii. fall more on the empiricist (nurture) side of the nature-nurture
 - iv. tend to view development as occurring gradually and continuously over time, rather than abruptly and discontinuously
- 2. Learning Theories of Development
 - a. Learning theories are collectively known as behaviorism, which emphasizes that psychological development is primarily the result of changes brought about by:
 - i. classical conditioning (Pavlov's dogs): the initial behavior (unconditioned response, for Pavlov's dogs, salivating) is elicited by the unconditioned stimulus (food), and once-neutral stimuli (the conditioned stimulus, here bells and buzzers) soon elicits the behavior because of their association with the unconditioned stimulus.
 - ii. operant conditioning (Skinner): based on the behaviors an animal emits and the consequences to the animal as a result of emitting those behaviors, behaviors that are reinforced by positive outcomes (or removal of negative outcomes) increase in frequency, whereas behaviors that are followed by punishment or negative outcomes decrease in frequency.

- iii. From an educational point of view, reinforcements are generally (but not always) more effective than punishments, as they orient the child to what to do instead of only what not to do.
 - iv. Learning theorists believe that real scientific psychology should focus only on the study of observable physical behaviors, not on studying things that they cannot directly observe, such as consciousness, mind, feelings, love, attitudes, etc.
 - v. Behaviorism is no longer in vogue in academic psychology, particularly not in contemporary developmental psychology.
 - vi. Still, patterns of behavioral change that behaviorism describe are useful for controlling children's behavior at home and school, for dealing with some clinical problems such as phobias, and for educating children with special needs.
- 3. Bandura's Social Learning/Social Cognitive Theory
 - a. Bandura's social learning theory is another mechanistic approach that has been influential in child-development research.
 - b. His early theorizing was based on the application of traditional learning theory to the social behavior of children.
 - c. He believed that children learn important social behaviors—both proper and improper—from observing others.
 - d. After the 1960s' cognitive revolution, behaviorism was replaced as the major paradigm of psychology with one that viewed children as thinking beings and minds that could not always be directly assessed through observation; Bandura proposed that observational learning involved a set of cognitive processes, each of which changed with age, thus affecting how well children of different ages learn. Thus, the theory was renamed social cognitive theory, which includes key cognitive abilities:
 - i. vicarious reinforcement: the ability to learn from the consequences of other's actions
 - ii. symbolization: the ability to mentally represent social behavior in words or images
 - iii. forethought: the ability to anticipate the consequences of one's actions and the actions of others
 - iv. self-regulation: the adoption of standards of acceptable behavior for oneself
 - v. self-reflection: the ability to analyze one's thoughts and actions
 - e. Social cognitive theory also includes subprocesses of observational learning:
 - i. attentional processes
 - ii. retention processes
 - iii. production processes
 - iv. motivational processes
 - f. Later, Bandura proposed the concept of reciprocal determinism, which refers to children influencing how others respond to them, just as others influence them.
- 4. Information-Processing Approaches to Development
 - a. Such approaches view children (or their minds) as developing computers, taking information in, doing something with it, and then making some response (Bandura borrowed many ideas from this theory).
 - b. Are concerned with both lower-level processes, such as how many items one can keep in mind at once, and higher-level processes, such as those involved in reasoning, language, and reading.
 - c. Assume that information flows through a limited-capacity system, one in which people can deal with only so much information at any single time.
 - d. Information flows through a series of stores, or memories:
 - i. sensory register logs information into the system
 - ii. information is then sent to short-term, or working, memory, where it may be subject to conscious awareness

- iii. information then may be acted upon, thought about, responded to or sent to long-term memory for (potentially) permanent storage
 - iv. long-term memory can be sent to the short-term store
 - e. How much of one's limited capacity is needed to execute a cognitive operation?
 - i. automatic processes that require no effort
 - ii. processes that require substantial effort
 - f. How does memory develop with age?
 - g. opposite approach of learning theories

B. Organismic Theories

1. Organismic theorists take a biologic view of development-- people are whole beings who cannot be understood by decomposing them into their constituent parts, and:
 - a. view children as playing an active role in their own development, influenced as much by internal as by external forces.
 - b. tend to view development as occurring discontinuously in stages
2. Piaget's Theory of Cognitive Development
 - a. Piaget has had the greatest lasting impact on developmental psychology of any theorist.
 - b. Children are consistent in how they interpret the world from one time and context to another.
 - c. Children's changes are abrupt and influence the whole child, not just a part of his or her thinking.
 - d. Children pass through four stages of intellectual development:
 - i. sensorimotor (0-2 years): intelligence is practical
 - ii. preoperational (2-7 years): intelligence is symbolic and intuitive
 - iii. concrete operational (7-11 years): thinking becomes logical but concrete
 - iv. formal operational (11-16 years): thinking is logical and abstract
3. Freud's and Erikson's Psychoanalytic Theories of Development
 - a. Whereas Piaget dealt with children's thinking, Freud focused on children's feelings and personalities
 - b. Freud believed that the sex drive (search for pleasure) is a primary instinct, expressed at all stages of life through erogenous zones of the body.
 - c. Freud's five stages of psychosexual development:
 - i. oral
 - ii. anal
 - iii. phallic
 - iv. latency
 - v. genital
 - d. Erikson adopted many of Freud's (his mentor's) ideas--stages of psychosexual development, the three-part structure of the mind (id, ego, and superego), and the importance of the unconscious.
 - e. Erikson recognized a flaw in Freud's theory-- the absence of a progression of psychosocial development: Erikson believed this paralleled psychosexual development.
 - f. Erikson also acknowledged the role that society plays in shaping children's personalities and behaviors.
 - g. Erikson believed that important developmental milestones extended past childhood and adolescence, so he postulated eight stages of development covering the entire life span:
 - i. first five stages correspond roughly with Freud's psychosexual stages; the final three stages describe development in adulthood
 - ii. the crisis at each stage occurs in a continuum, with positive and negative outcomes
 - h. Whereas Freud's emphasized people's control of unpleasant tensions, Erikson was concerned with how people develop a sense of identity.

IV. Contemporary Approaches to Development

A. Developmental Contextual Approaches: Development as a Dynamic System

1. Developmental contextual approaches (including dialectical, transactional, relational, contextual, and dynamic interactional approaches): to truly understand development, how biologic and environmental factors interact over time to produce any particular outcome must be considered.
2. All parts of an organism (genes, cells, tissues, and organs), as well as the whole organism, interact dynamically with “the contexts within which the organism is embedded”:
 - i. dynamic system: a set of elements that undergoes change over time as a result of interactions among the elements within the system
 - ii. new patterns of behavior are not dictated simply by genes or by environment but emerge as a result of changes in the system

B. Culture and Development

1. Whereas the traditional nature-nurture debate pitted culture against biology, modern theorists view the relationship between biology and culture very different—culture is as much a part of human nature as is upright walking.
2. Culture involves the traditions, artifacts, values, tools, and beliefs that are transmitted from one generation to the next.
3. Cultures have long histories, traditions, values, institutions, and ways of thinking that differ from other cultures--these differences surely influence child development.
4. Cultural change has been especially rapid over the last few centuries, changing substantially the world in which children develop.
5. Vygotsky's Sociocultural Theory
 - a. In contrast to behaviorists, Vygotsky thought that scientific psychology should focus primarily on processes specific to humans. He called these “higher psychological” processes, now called “cognitive” processes: perception, attention, memory, language, and thinking.
 - b. If cultural changes are sustained over many generations (e.g., reading, writing, and formal school are not about to disappear from the modern world), cognitive development, and thus how adults think, also changes.
 - c. All human behaviors and cognitions are based on neurological processes, but the way the brain eventually becomes organized depends on the social environment from birth through adulthood.
 - d. The ways in which higher psychological processes are shaped through development are social and cultural in nature; thus, the main source of development is the environment, including (as named by Vygotsky's follower Luria) tools, social origins of mental functions, and sociocultural influences, as follow:
 - i. Tools of Intellectual Adaptation:
 1. technical tools: such as hammers, screwdrivers, pencils, tractors, computers
 2. intellectual or psychological tools of adaptation—signs or symbolic systems such as language, methods of counting, mnemonic techniques, algebraic symbol systems, works of art, writing, diagrams, maps, etc.—may be more important than technical tools in affecting how children learn to think; and children growing up in different cultures with different sets of psychological tools learn to think differently:
 - ii. The Social Construction of Mental Functioning
 1. Children learn to use technical and intellectual tools in a triadic relationship: a developing child gets to know a world of objects and people through the mediation of adults and more competent peers (general genetic law of cultural development and zone of proximal development.
 2. Rogoff extended the concept of zone of proximal development to “guided participation” and “apprenticeship in thinking.”
 - iii. Sociohistorical Influences

1. The tools and people that mediate higher psychological processes in development are not the same across cultures or during different historical periods.
2. Thus, children in different cultures think differently.
- f. Vygotsky's ideas significantly influenced cognitive development, and also education, with his emphasis on collaborative learning and the relationship between language and thought.
- g. His greatest contribution was showing how biology, social interactions, culture, and history interact to influence cognitive development.
6. Bronfenbrenner's Ecological Systems Theory
 - a. Bronfenbrenner believed that variable development depends on the culture and historical period in which one grows up; thus, he was an active proponent of the Head Start Program.
 - b. He developed the ecological systems theory, which views development as occurring within embedded spheres:
 - i. microsystem: all the different social systems in which a child is an active participant (main features: activities, relationships, and roles)
 - ii. mesosystem: all possible microsystems in interaction
 - iii. exosystem: all social systems in which children are not regularly part of but still influence their lives
 - iv. macrosystem: all values, attitudes, laws, ideology, etc. of the culture in which children and adolescents live
 - v. chronosystem: the time dimension in the theory, emphasizing that both the child and his or her four levels of ecology are subject to change over time—sometimes extremely disruptive change and sometimes minor change (cohort effects)
 - c. Similarly to Vygotsky, he recognized that children cannot be studied out of context--their development must be considered within the various environments in which they live.
7. Evolutionary Developmental Psychology
 - a. Considering possible evolutionary influences on child development adds a new and important dimension to developmental psychology:
 - i. could explain patterns of behavior
 - ii. causes us to look at how aspects of development or behaviors may be adaptive, or once were adaptive
 - iii. can provide insights into the causes of some real-world problems facing children and their possible solutions (infant-mother attachment, child abuse, aggression, incest avoidance, etc.)
 - iv. does not replace traditional or alternative theories of development, but provides an overarching framework under which other more specific theoretical accounts can be applied.
 - v. adopts an explicit developmental contextualist perspective
 - b. Evolution by Natural Selection
 - i. Darwin's concept of natural selection has four core concepts:
 1. More individuals are born in a generation than will survive
 2. Not all members of a generation have the same traits
 3. Individual differences are inherited, passed from one generation to the next.
 4. Individuals with traits that fit well with the local environment are more apt to survive or have more offspring than those whose traits do not fit as well with the local environment.
 - ii. Since Darwin's groundbreaking studies, scientists have applied the theory of natural selection to the evolution of behavior.
 - c. Principles of Evolutionary Psychology
 - i. applies principles of modern evolutionary biology to explain human behavior
 - ii. How an animal behaves is based on how it processes information.

- iii. A core concept is evolved cognitive mechanisms: information-processing mechanisms shaped by natural selection during the environments of evolutionary adaptedness to deal with specific problems faced by human ancestors (getting food, avoiding predators, finding and keeping a mate).
- iv. Evolved cognitive mechanisms are domain-specific—cognitive mechanisms shaped to solve specific problems
- v. Adaptationist thinking: stresses the function of a behavior or trait
- vi. Not all aspects of modern behavior or thinking are adaptations; some universal characteristics may be by-products of adaptations
- vii. Evolved and adaptive cognitive mechanisms did not evolve to deal with problems of modern life—natural selection adapts individuals to current and local environments; it does not anticipate future ones.
- d. Principles of Evolutionary Developmental Psychology
 - i. Evolutionary developmental psychology: an examination of human development from an evolutionary perspective
 - ii. Natural selection works at all stages of development—especially during early development.
 - iii. All evolved characteristics develop via continuous and bidirectional gene—environment interactions that emerge dynamically over time.
 - iv. Development is constrained by both genetic and environmental factors.
 - v. An extended childhood is needed in which to learn the complexities of human social communities.
 - vi. Many aspects of childhood serve as preparations for adulthood and were selected over the course of evolution.
 - vii. Some characteristics of infants and children were selected to serve an adaptive function at specific times in development and not as preparations for adulthood (ontogenetic adaptations).
 - viii. Children show a high degree of plasticity, or flexibility, and the ability to adapt to different contexts.

V. Understanding the Contexts of Development

- A. Development of a whole child must be viewed within context—the physical environment of a child beginning in the womb, the social environment extending to culture, and sociohistorical and evolutionary contexts.
- B. Understanding of biological, cultural, social, cognitive, and emotional interactions can promote welfare of children in general and help people become better teachers, nurses, police officers, social workers, lawyers, psychologists, physicians, parents, etc.
- C. To achieve this understanding, a good place to start is with ethologist Tinbergen's four questions:
 - 1. What is the immediate benefit to the organism?
 - 2. What are the immediate causes?
 - 3. How does it develop within the species (ontogeny)?
 - 4. How did it evolve across species (phylogeny)?
- D. An integrative approach recognizes that human behavior is based in biology and emerges in social contexts via complex interactions between the individual and his or her environment that have evolved over geological time.

Key Terms and Concepts

sociohistorical context The values, tools, and institutions found in one's society.

mechanistic theories Theories of development that liken people to machines, such as the mind-as-a-computer model of information-processing approaches.

organismic theories Developmental theories that take a holistic (organism-like) view of development, seeing people as whole beings who cannot be understood by decomposing them into their constituent parts.

behaviorism Theory popular in the United States throughout the middle of the 20th century, holding that behavior and development are shaped by environmental influences.

applied behavioral analysis An extension of B. F. Skinner's behaviorism to practical settings.

operant (instrumental) conditioning A learning procedure whereby behavior is shaped through rewards and punishment.

social learning/social cognitive theory Bandura's theory of how individuals operate cognitively on their social experiences and how these cognitive operations influence behavior and development.

vicarious reinforcement In Bandura's social cognitive theory, learning from observing others' behaviors and their consequences, without the need to receive specific reinforcement for one's behavior.

reciprocal determinism In Bandura's theory, the belief that children have as much of an effect on their environment as their environment has on them.

sensorimotor period In Piaget's theory, the first major stage of cognitive development (birth to approximately 2 years), in which children understand their world through sensory and motor experiences.

preoperational period In Piaget's theory, the second major stage of cognitive development (approximately ages 2 to 7), characterized by prelogical, intuitive thought.

concrete operational period The third major stage of cognitive development in Piaget's theory, in which children can decenter their perception, are less egocentric, and can think logically about concrete objects.

formal operational period In Piaget's theory, the final stage of cognitive development, in which children are able to apply abstract logical rules.

developmental contextual approaches The perspective that views development as the result of bidirectional interaction among all levels of biological and experiential variables.

dynamic system A set of elements that undergoes change over time as a result of interactions among the elements. Dynamic systems theories propose that developmental differences emerge as a result of the self-organization of lower-level elements.

sociocultural theory A perspective of cognitive development that emphasizes that individual development is socially mediated, and historically and culturally conditioned. See also *guided participation* and *zone of proximal development*.

tools of intellectual adaptation Vygotsky's term for tools that a culture provides for thinking and problem solving.

general genetic law of cultural development In Vygotsky's theory, the idea that cognition occurs on two planes: first the social, between individuals, and later the psychological, as it is internalized by the child.

zone of proximal development In Vygotsky's theory, the difference between a child's actual level of ability and the level of ability that he or she can achieve when working under the guidance of a more qualified instructor (adult or older child). Contrast with *guided participation*; see *sociocultural theory*.

guided participation The process and system of involvement of individuals with others as they communicate and engage in shared activities. Contrast with *zone of proximal development*; see also *sociocultural perspective*.

apprenticeship in thinking Routine transactions between children and adults, with novice children improving their skills and understanding through participation with more skilled partners in culturally organized activities.

ecological systems theory Bronfenbrenner's theory that views development as occurring within embedded spheres: the *microsystem*, *mesosystem*, *exosystem*, *macrosystem*, and the *chronosystem*.

microsystem In Bronfenbrenner's ecological systems theory, all of the different social systems in which a child is an active participant (e.g., a child's family, school, and peer group).

mesosystem In Bronfenbrenner's ecological systems theory, all the possible *microsystems* in interaction.

exosystem In Bronfenbrenner's ecological systems theory, all of the social systems that children are *not* regularly part of, but that nonetheless influence their lives.

macrosystem In Bronfenbrenner's ecological systems theory, all the values, attitudes, laws, ideology, and so forth of the culture in which children and adolescents live.

chronosystem In Bronfenbrenner's ecological systems theory, the system that reflects the fact that the child and the other systems change with time.

natural selection The primary mechanism for species evolution described by Darwin, in which some members of a species are more fit than others and thus more likely to survive and reproduce.

evolutionary psychology The application of the principles of modern evolutionary biology to explain human behavior.

evolved cognitive mechanisms Information-processing mechanisms shaped by natural selection during the *environments of evolutionary adaptedness* to deal with specific and recurrent problems faced by our ancestors, such as getting food, avoiding predators, and finding and keeping a mate.

environments of evolutionary adaptedness Ancestral environments during which human nature was shaped.

hominids Group of animals in the line that led to *Homo sapiens*.

domain-specific mechanisms Cognitive abilities specific to one cognitive domain under control of a specific mind/brain function. Contrast with *domain-general abilities*.

domain-general mechanisms General, underlying cognitive abilities that influence performance over a wide range of situations (or domains). Contrast with *domain-specific abilities*.

adaptations In evolutionary theory, universal and reliably developing inherited features that arose as a result of natural selection and helped to solve some problem in the environment of evolutionary adaptedness.

naturalistic fallacy The idea that something is good because it is natural.

evolutionary developmental psychology The application of the principles of modern evolutionary biology to explain human development.

deferred adaptations Aspects of childhood that serve as preparations for adulthood and were selected over the course of evolution.

ontogenetic adaptations Behaviors that play a specific role in survival for an individual at one time only and then disappear when they are no longer needed.

Suggestions for Class Discussions or Projects

1. Begin a discussion by pointing out that everyone has theories about different things. Have students explain the value of all people theorizing about everyday events or things, and then about the ways in which theorizing is useful to developmental psychologists.

2. Have students each design two experiments: one that parallels Pavlov's experiment with dogs and one that parallels Skinner's. Then have them explain why their experiments do in fact parallel the experiments of Pavlov and Skinner including the hypothesis to be tested and the expected results. Make sure that they use the correct related terms, such as *classical conditioning*, *unconditioned response*, *operant conditioning*, and so on to describe the various aspects of their experiments.

3. Present students with the following scenario:

Gina and Marie are both seven years old. Their teacher gives the students in the class a vocabulary exam. Gina scores higher (10 correct out of 15 items) than Marie does (7 correct out of 15 items). After this test, a language specialist trains both Gina and Maria intensively for a month, focusing extensively on vocabulary words. Then both girls take another vocabulary exam. This time, Marie gets a better score (14 out of 15) than Gina does (12 out of 15).

Have students explain these results in terms of Vygotsky's (and Rogoff's) view of development.

4. Ask students to each design a graphic organizer that compares the differences between Piaget's preoperational and concrete operational periods. Then have students suggest the variety of different implications that these differences might have for teachers of students who are between 8 and 10 years of age.

5. Initially, Vygotsky's sociocultural theory, Bronfenbrenner's ecological systems theory, and evolutionary developmental psychology might seem to be at odds with each other. Have students form groups in which they discuss how these three approaches not only are not contradictory, but in fact share much in common, in addition to a developmental contextualist perspective.

6. Students have learned that culture is a major influence in human development. Ask pairs or groups of students to each find two or more children of the same age who have been raised with significantly different cultural influences and then have the children engage in a social activity for at least an hour. Have students observe the children's behavior and record their observations about the similarities and differences of those behaviors. Follow-up questions might include: (1) Why do you think that each child behaved in the manner that you observed? (2) What culture-specific aspects might account for any differences in behavior that you observed?

7. Ask students to brainstorm some contemporary teaching practices. Have students decide which of these practices Vygotsky might approve or disapprove of if he were alive today, and which practices Piaget might approve or disapprove of if he were alive today.

