CHAPTER 2

THEORIES OF HUMAN DEVELOPMENT

OUTLINE

I. Nature of scientific theories
   A. Theory is a set of concepts and propositions designed to organize, describe, and explain an existing set of observations.
      1. Parsimonious - criterion for evaluating the scientific merit of theories; a parsimonious theory is one that uses relatively few explanatory principles to explain a broad set of observations.
      2. Falsifiable - criterion for evaluating the scientific merit of theories. A theory is falsifiable when it is capable of generating predictions that could be disconfirmed.
      3. Heuristic - criterion for evaluating the scientific merit of theories. A heuristic theory is one that continues to stimulate new research and new discoveries.

II. Psychoanalytic viewpoint
   A. Freud's psychosexual theory states that maturation of the sex instinct underlies stages of personality development, and that the manner in which parents manage children’s instinctual impulses determines the traits that children display.
      1. Patients’ unconscious motives are the feelings, experiences, and conflicts that influence a person’s thinking and behavior, but lie outside the person’s awareness.
         a. Repression is a type of motivated forgetting in which anxiety-provoking thoughts and conflicts are forced out of conscious awareness.
      2. Three components of personality
         a. Id is the inborn component of the personality that is driven by the instincts.
         b. Ego is the rational component of the personality.
         c. Superego is the component of the personality that consists of one’s internalized moral standards.
      3. Stages of psychosexual development
   B. Contributions and criticisms of Freud's theory
      a. Contributed ideas of unconscious motivations and the influence of early experience
      b. Criticized as difficult to falsify or confirm
   C. Erikson's theory of psychosocial development is a revision of Freud’s theory that emphasizes sociocultural (rather than sexual) determinants of development, and posits a series of eight psychosocial conflicts that people must resolve successfully to display healthy psychological adjustment.
      1. Comparing Erikson with Freud
         a. Children are active not passive reactors to biological urges
         b. Emphasis on social and cultural influences rather than sexual urges
      2. Eight life crises (or psychosocial stages)
   D. Contributions and criticisms of Erikson's theory
      1. Accepted theory that stresses our rational, adaptive nature
      2. Criticized as being vague about causes of development
E. Psychoanalytic theory beyond Freud and Erikson
1. Karen Horney
2. Alfred Adler
3. Harry Stack Sullivan

III. Learning viewpoint

A. Watson's behaviorism is a school of thinking in psychology that holds that conclusions about human development should be based on controlled observations of overt behavior, rather than speculation about unconscious motives or other unobservable phenomena; the philosophical underpinning for the early theories of learning.
1. Habits are well-learned associations between stimuli and responses that represent the stable aspects of one’s personality.

B. Skinner's operant-learning theory is a form of learning in which voluntary acts (or operants) become either more or less probable, depending on the consequences they produce.
1. Operant is the initially voluntary act that becomes more or less probable of occurring depending on the consequence that it produces.
2. Reinforcer is any consequence of an act that increases the probability that the act will recur.
3. Punisher is any consequence of an act that suppresses that act and/or decreases the probability that it will recur.

C. Bandura's social-learning theory
1. People learn by what they believe will happen more than what they actually experience.
2. Observational learning is learning that results from observing the behavior of others.

BOX 2.1 – Focus on research: An example of observational learning
3. Social learning as reciprocal determinism
   a. Early learning theory embraced environmental determinism or the notion that children are passive creatures who are molded by their environments.
   b. Reciprocal determinism is the notion that the flow of influence between children and their environments is a two-way street; the environment may affect the child, but the child’s behavior also influences the environment.

D. Contributions and criticisms of learning theories
1. Contributed precise and testable theories with practical applications
2. Criticized as oversimplification account of human development

IV. Cognitive-developmental viewpoint represent age-related changes that occur in mental activities such as attending, perceiving, learning, thinking, and remembering.

A. Piaget's view of intelligence and intellectual growth
1. Scheme - organized pattern of thought or action that a child constructs to make sense of some aspect of his or her experience; Piaget sometimes uses the term cognitive structures as a synonym for schemes.
2. Assimilation - Piaget’s term for the process by which children interpret new experiences by incorporating them into their existing schemes.
3. Disequilibriums - imbalances or contradictions between one’s thought processes and environmental events. On the other hand, equilibrium refers to a balanced, harmonious relationship between one’s cognitive structures and the environment.
4. Accommodation - Piaget’s term for the process by which children modify their existing schemes in order to incorporate or adapt to new experiences.
5. Four stages of cognitive development
   a. **Invariant developmental sequence** is a series of developments that occur in one particular order because each development in the sequence is a prerequisite for the next.

B. Contributions and criticisms of Piaget’s viewpoint
   1. Contributions to social cognition and within education
   2. Theory underestimated intellectual capabilities

C. Sociocultural influences: Lev Vygotsky’s viewpoint
   1. **Sociocultural theory** - In Vygotsky’s perspective, children acquire their culture’s values, beliefs, and problem-solving strategies through collaborative dialogues with more knowledgeable members of society.

D. **Information-processing viewpoint** - A perspective that views the human mind as a continuously developing, symbol-manipulating system, similar to a computer, into which information flows, is operated on, and is converted to output (answers, inferences, and solutions to problems).

E. Contributions and criticisms of the information-processing viewpoint
   1. Rigorous research identifies how children approach a problem and why errors occur
   2. May not represent thinking outside the laboratory

V. **Ethological (or evolutionary) viewpoint**

**Ethology** - the study of the bioevolutionary basis of behavior and development, with a focus on survival of the individual.

A. Assumptions of classical ethology
   1. All animal species are born with biologically programmed characteristics that evolved as a result of **natural selection** - an evolutionary process, proposed by Charles Darwin, stating that individuals with characteristics that promote adaptation to the environment will survive, reproduce, and pass these adaptive characteristics to offspring; those lacking these adaptive characteristics will eventually die out.

B. Ethology and human development
   1. Importance of early experiences
      a. Critical period is a limited time span during which developing organisms are biologically prepared to display adaptive patterns of development, provided they receive the appropriate input.
      b. **Sensitive period** is period of time that is optimal for the development of particular capacities, or behaviors, and in which the individual is particularly sensitive to environmental influences that would foster these attributes.

C. **Modern evolutionary theory** is the study of the bioevolutionary basis of behavior and development with a focus on survival of the genes.

D. Contributions and criticisms of the ethological viewpoint
   1. Present view of child as a biological creature
   2. Difficult to test and cultural learning may overshadow innate evolutionary mechanisms

**BOX 2.2 – Focus on research: Is altruism part of human nature?**

VI. **Ecological systems viewpoint** - Bronfenbrenner’s model emphasizing that the developing person is embedded in a series of environmental systems that interact with one another and with the person to influence development.

A. Bronfenbrenner’s contexts for development
1. **Microsystem** is the immediate settings (including role relationships and activities) that the person actually encounters; the innermost of Bronfenbrenner’s environmental layers or contexts.

2. **Mesosystem** is the interconnections among an individual’s immediate settings or microsystems; the second of Bronfenbrenner’s environmental layers or contexts.

3. **Exosystem** is social systems that children and adolescents do not directly experience but that may nonetheless influence their development; the third of Bronfenbrenner’s environmental layers or contexts.

4. ** Macrosystem** is the larger cultural or subcultural context in which development occurs; Bronfenbrenner’s outermost environmental layer or context.

5. **Chronosystem** is the changes in the individual or the environment that occur over time and influence the direction development takes.

B. **Family** is defined as two or more persons, related by birth, marriage, adoption, or choice, who have emotional ties and responsibilities to each other - from a systems view.

1. **Family social system** is the complex network of relationships, interactions, and patterns of influence that characterize a family with three or more members.
   a. **Traditional nuclear family** is a family unit consisting of a wife/mother, a husband/father, and their dependent child or children.

C. Contributions and criticisms of the ecological systems theory

1. Provide a description of the complex environmental influences
2. Does not provide a complete account of development

**VII. Themes in the study of human development**

A. **Nature/nurture issue** is the debate among developmental theorists about the relative importance of biological predispositions (nature) and environmental influences (nurture) as determinants of human development.

B. **Activity/Passivity issue** is a debate among developmental theorists about whether children are active contributors to their own development or, rather, passive recipients of environmental influence.

C. **Continuity/discontinuity issue** is a debate among theorists about whether developmental changes are quantitative and continuous, or qualitative and discontinuous (i.e., stagelike).

1. **Quantitative change** is incremental change in degree without sudden transformations.
2. **Qualitative changes** are changes in kind that make individuals fundamentally different than they were before
   a. **Developmental stages** are distinct phases within a larger sequence of development; a period characterized by a particular set of abilities, motives, behaviors, or emotions that occur together and form a coherent pattern.

D. **Holistic nature of development theme**

1. Theoretical **eclectics** are those who borrow from many theories in their attempts to predict and explain human development.

**OBJECTIVES**
(See TR Masters 2-1A to 2-1C)

By the time you have finished this chapter you should be able to:

1. Describe three characteristics of a good theory.
2. Describe the three personality structures proposed by Freud.
3. Outline the five stages in Freud’s psychosexual theory of personality development.
4. Identify three lasting contributions of Freud’s psychoanalytic theory.
5. Outline two main differences between Erikson’s and Freud’s theories of personality development.
6. Identify each of the eight stages in Erikson’s psychosocial theory of personality development and describe the significant events and influences associated with each stage.
7. Explain how neo-Freudian views differ from Freud’s original views, and identify the contributions of three prominent neo-Freudian theorists.
8. Describe the learning viewpoint of development.
9. Outline the key components of operant conditioning.
10. Explain how observational learning highlights Bandura’s emphasis on the cognitive processes involved in learning.
11. Explain what is meant by reciprocal determinism.
12. Identify the key contributions and chief criticism of the learning approach to development.
13. Describe the basic ideas in Piaget’s theory of cognitive development, focusing on the processes of assimilation and accommodation.
14. Outline the main characteristics associated with each of Piaget’s four stages of cognitive development.
15. Identify two lasting contributions of Piaget’s cognitive theory.
16. Outline the main differences between the information-processing view and Piaget’s theory of cognitive development.
17. Identify the basic assumptions that underlie the ethological approach and explain what ethologists mean by sensitive periods in development.
18. Evaluate some of the key criticisms that have been raised concerning the application of the ethological approach to understanding human development.
19. Describe the five subsystems that form the foundation of Bronfenbrenner’s ecological systems theory.
20. Identify four central themes in the study of human development.

LECTURE TOPICS

Suggestion: Reassign the Chapter 2 coverage on each theory along with the text chapter(s) that it complements best. Students can usually benefit from a second reading of this material. For example, you could reassign pages from the text as follows:

- Psychoanalytic Theory: Reassign with Part IV (Chapters 11–16)
- Learning Theories: Reassign with Chapter 5
- Ecological Systems Viewpoint: Reassign with Chapters 15–16
- Cognitive-Developmental Theory: Reassign with Chapter 7
- Evolutionary Viewpoint: Reassign with Chapter 11
- Information-Processing Theory: Reassign with Chapter 8

LECTURE 2-1 ASSUMPTIONS MADE BY THE MAJOR THEORIES

Lecture 2-1 coordinates with Activity 2-1.

Point out at the start that, for centuries, controversy has surrounded the issues of nature/nurture, activity/passivity, continuity/discontinuity, and the holistic nature of development. (TR 2-2) The controversies have been perpetuated
because there is evidence supporting each position and evidence against each position. When such a state of affairs exists, it probably points to the need to consider that there may be some intermediate viewpoint that is most "sensible" and consistent with the evidence. For example, current developmentalists now assume that heredity and environment work in an interactive way to determine behavior. The position that either heredity or environment is the sole determiner of behavior is simply not a tenable assumption.

It is useful to briefly discuss each controversy by putting the issue in everyday language, and then to discuss the implications of holding each position—for child-rearing, for education, and for understanding individual differences. This can be done effectively by saying:

"Suppose you are a parent who believes that intelligence is entirely inherited. How might this affect your child-rearing practices?"

"Suppose you are an eighth-grade science teacher who believes that each child plays an important role in his/her own learning and development. How might this affect how you structure your course?"

When appropriate, follow up with the question: "Which theorists and theoretical position hold this view?" (Refer to the TR 2-3A to 2-3G or to Table 2.4 in the text)

LECTURE 2-2 THEORIES OF DEVELOPMENT: APPLICATIONS

A possible adjunct to the material in the text on theories is to present an overview of some of the applications that have been made of some or all of the theories presented in the text.

Resources on Applications
McCarthy Gallagher, J., & Reid, D. M. (1983). The learning theory of Piaget and Inhelder. Austin, TX.: Pro-Ed. (See Chapter 8 on Piaget and Education. Two classroom applications are discussed: (1) the method of critical exploration and (2) social interaction and conflict as means to increasing understanding.)

Also, consider using one of the films or videos that illustrate the application of a theory. See the SUGGESTED VIDEOS section in this manual for Chapters 7 and 8 for some suggestions. Because of the widespread use of behavioral principles in educational settings, mental health units, drug rehabilitation units, and other applied settings, one of the films on the application of behavioral principles is particularly appropriate. The films demonstrate what the systematic applications of behavioral principles can accomplish. When an adolescent in a rehabilitation unit has to earn such things as the right to wear his or her own clothing, telephone time, outdoor privileges, and access to entertainment, behavior often "shapes up" quickly.

LECTURE 2-3 THEORIES OF DEVELOPMENT: VYGOTSKY

The work of the Russian investigator and theorist Lev Vygotsky is discussed in the Chapter 7 of the text (Cognitive Development: Piaget's Theory and Vygotsky's Sociocultural Viewpoint). In chapter 7, the views of Vygotsky on education and on the relationship between thought and language are contrasted with those of Piaget. Vygotsky's theory could be introduced with Chapter 2 and more comprehensive coverage of his theory of intellectual development presented. Consider contrasting Vygotsky's and Piaget's views on cognitive development (see text Table 7.5 or TR Master 7-6).
Vygotsky's theory is much broader in scope than thought and language. Recently, his notions of the mechanisms of cognitive change have had considerable impact on developmental psychology and on education. A key notion is that cognitive growth is set in motion when the child is given the opportunity to complete a task with guidance that he/she could not have achieved alone (See last section of Lecture 7-4 for more on Vygotsky's notions of zone of proximal development).

According to Rogoff (1990), the conditions necessary for cognitive growth include:

1. Achievement of intersubjectivity (joint focus of attention) on the task/problem—mom’s presence is of little help if she is reading a novel and the child is struggling with a difficult puzzle, but is a valuable resource if she too is focused on the puzzle and able to give hints as needed.
2. Sensitive provision of scaffolding—the guide provides tasks or structures situations so that they are manageable challenges; the guide lets the child do as much as the child can by himself or herself, stepping in to guide when necessary, and then backing off as the child's competency increases.
3. The guide serves as summarizer of experience, thereby facilitating metacognitive awareness of the strategies that were effective in carrying out the task.

Rogoff stresses the importance of the joint participation of guide and learner implied in the notion of guided participation. Learners progress faster if they are allowed to participate as fully as possible in the solution of a problem rather than simply allowed to observe someone else carrying out the task (e.g., it is difficult to learn new computer skills just through observation; being guided through the steps as you perform them is much more effective). Effective collaborative learning and effective tutoring by peers or adults is dependent on these conditions being met. A peer tutor who demonstrates how to do problems without giving the tutee a chance to actually try one is unlikely to be successful in transmitting how to do the problem. In contrast, a peer tutor who demonstrates how to do a problem and then watches as the tutee goes through one (providing hints, cues, feedback, and encouragement as needed) is more likely to successfully transmit how to do the problem.

Resources on Vygotsky

LECTURE 2-4 THEORIES OF DEVELOPMENT: BRONFENBRENNER'S ECOLOGICAL PSYCHOLOGY

Bronfenbrenner's ecological perspective is introduced in Chapter 2 of the text (Theories of Human Development). Bronfenbrenner argues that environment is a series of social systems that interact with each other in complex ways that can only be studied adequately in natural settings. To expand on the coverage of Bronfenbrenner's ecological model presented in the text (TR Master 2-3G), see Bronfenbrenner (1986, 1989) and Thomas (1992).

Also, note Thomas's critical assessment of Bronfenbrenner's theory. He points out three ambiguous features of the theory:

1. The problem of discriminating among microsystems
2. The problem of identifying roles in a given context, since any one person may simultaneously be playing more than one role.

3. The problem of assessing the relative strengths of the various components in determining behavior.

Note: The results of the Ceci and Bronfenbrenner (1988) study presented in Lecture 1-4 supports Bronfenbrenner's emphasis on the importance of context in determining behavior.

Resources on Bronfenbrenner's Ecological Psychology

LECTURE 2-5 THEORIES OF DEVELOPMENT: ERIKSON'S PSYCHOSOCIAL THEORY

Suggestion: If you choose to go into one theory in depth, consider devoting one class period to an overview of Erikson's theory (contrast other theories with it as a way of emphasizing their characteristics). Follow your presentation with all or part of the 2-hour videotape or film, Everybody Rides the Carousel. It provides a very effective portrayal of Erikson's eight stages. The film does need to be preceded or accompanied by a description of each stage (you can refer students to Table 2.2 of the text or make a handout of the table for distribution).

In your presentation on Erikson, emphasize the following important contributions made by Erikson to our understanding of development:

1. Development is a lifelong process.

2. Development results from an interplay of maturation and adult demands for more mature functioning. Erikson helps us see that the demands we make on children are natural, appropriate, and essential for normal development.

3. Erikson's view of humans is refreshingly optimistic (in contrast to Freud's, to the ethological notion of critical periods, and to the views of many earlier developmentalists who emphasized the importance of early experience). Erikson portrays humans as rational, adaptive beings who have the potential for positive change throughout their lives. His view contrasts sharply with the view that our personalities and behavior patterns are set during early childhood and that, if our experiences during that time were not conducive to optimal development, we are "doomed."

4. Erikson views the search for and evaluation of alternative values and lifestyles that occur during adolescence as a normal, healthy part of the development of a mature identity.

Resources on Erikson's Psychosocial Theory
Chapter 2

LECTURE 2-6  THE STATUS OF STAGE THEORIES

The notion of stage is introduced in Chapter 2 in the discussion of the continuity/discontinuity issue. The stage notion reappears throughout the text as the stage theories of Freud, Erikson, Piaget, Kohlberg, Selman, Eisenberg, and others are presented and critiqued. To prepare students for those critiques, it is useful to provide them with more background on the criteria for a stage theory. (TR Master 2-6 presents an overview of three criteria for a stage theory.) These may be "old hat" for instructors, but not for students. This lecture topic is particularly related to the issues raised in Chapter 7 regarding Piaget's theory of cognitive development.

Flavell on concept of stages
Flavell (1971) presents a clear overview of the criteria of stages that is a good basis for a class lecture. In a 1977 edition of the same book, Flavell again discussed the notion of stage and concluded that his own hunch was that the concept of stage would not be an important one in future theories of cognitive development. He argued instead for the notion of developmental sequences. In his third edition of Cognitive Development (1993, with Miller and Miller) Flavell and his co-authors again discuss the issue of whether development is stagelike (see pp. 145–146, 331–335). They admittedly waffle regarding the place of stage models in developmental psychology today, but the position they take is quite different from Flavell's 1977 conclusion. They have found that the stage notion cannot be easily dismissed in light of the work of several neo-Piagetian theorists such as Case, Fischer, Pascual-Leone, and others. Flavell, Miller, and Miller conclude:

. . . it is hard to believe that cognitive development does not possess some general-stage properties—some features that are mind-in-general and not just individual "mindlets" in isolation. (Flavell et al., 1993, p. 335)

Flavell et al. on question of domain specificity/generality of cognitive development
At an earlier point in their 1993 book, Flavell et al. discuss the question of whether there is some knowledge that is domain-general—mind-in-general. They side with the current thinking of Case, Siegler, and Sternberg that the most fruitful approach is not to assume an either/or answer to the question. Rather:

. . . it is more useful to try to identify in what ways representation and processing are domain-general and in what ways they are domain-specific, and how the two types of knowledge develop together during childhood and interact during problem solving. (Flavell et al., 1993, p. 146)

For an in-depth look at the question of whether cognitive development is best conceived of as domain-specific, domain-general, or both, a useful resource is the 1989 issue of Merrill-Palmer Quarterly devoted to this topic. It includes articles by Ceci, Sternberg, Siegler, and others.

A related question has to do with whether the child's mind and the adult's mind are qualitatively different or whether there is only one "mind" with different amounts of accumulated knowledge. The latter view assumes that cognitive development consists of a number of novice-to-expert shifts rather than general cognitive changes as proposed by Piaget and other stage theorists. Flavell, Miller, and Miller conclude:

Our own intuitions are that the acquisition-of-expertise model (the view that cognitive development is primarily the acquisition of knowledge in many specific domains) will not account for all of cognitive growth. As Markman (1979) points out, when adults are in a novel situation, they know a great deal more than do children about how to move quickly from novice to expert status. They are experts at becoming experts. They quickly detect what it is they do not understand, have more potential solutions in their cognitive bank from which to draw, and more easily see similarities between the current situations and other previously encountered situations. Experts know how to acquire new relevant information, and to hone their new skills. (Flavell et al., 1993; parenthetical section added)
Thomas on concept of stages
In a book on developmental theories, Thomas (1992) included a special section on the future of stage theories and concluded that the predicted demise (as implied in Flavell, 1977) of the stage theory has not occurred. In fact, the stage theory is alive and well and, he predicts, is here to stay—accurately predicting Flavell's views in the 1993 edition of Cognitive Development with Miller and Miller. Thomas briefly reviews three examples of thriving stage theories—Case's, Fisher's, and Mounoud's. The modern stage theories have attempted to incorporate features that were missing or weakly represented in Piagetian and other stage theories. In particular, they include attention to the day-to-day processes that foster development and to contextual factors.

Siegler on concept of stage (see TR Master 2-7)
Evidence showing that children at all ages tend to use a variety of strategies for problem solving rather than a single one (as a strict stage theory would maintain) has led Siegler to argue that cognitive change is best conceived as a series of overlapping waves, where one strategy may be modal, but a variety are used, rather than as a staircase with abrupt shifts from no use to exclusive use of a given strategy. (See Lecture 8-3 for more detail on this research.) Using the overlapping waves model, a child may be seen as predominately using Strategy 1 for a given problem and lesser levels of Strategies 2 and 4. For an older child, the predominant strategy on the same task may be Strategy 4, with lesser use of Strategies 1, 2, 3, and 5. A yet older child may primarily use Strategy 5, but occasionally use strategies 1, 2, 3, and 4. The overlapping wave pattern of cognitive change is evident when individual patterns of problem-solving behaviors are observed (versus averaging over children) and has been found in a wide variety of domains (e.g., arithmetic, serial recall, conservation, moral reasoning, scientific reasoning, map drawing, time telling, block stacking, reading strategies, spelling strategies, motor development, and vocabulary). What develops in part is the ability to make choices among an array of possible strategy options. As children both gain experience in carrying out a strategy (gain automaticity) and gather feedback about its effectiveness (effectiveness may become evident only gradually as efficiency in carrying out the strategy increases), they may begin to choose the more effective strategy more frequently, such that it becomes the modal response.

Siegler appeals to our logic in the following rationale for adopting the wave over the step conceptualization of cognitive change:

. . . we may unwittingly have made understanding change more difficult than it needs to be. In particular, portraying children's thinking and knowledge as conforming to one mold at one age and a different mold at a different age creates a need to explain the wide gulfs between the successive hypothesized understandings—even though such gulfs may not exist. The typical depictions make change a rare, almost exotic event that demands an exceptional explanation. If children of a given age have for several years had a particular understanding, why would they suddenly form a different understanding, and why would they regularly form it at a particular age? . . . Suppose we adopt a different set of orienting assumptions that, I believe, are both more consistent with the data and more helpful in understanding change. . . The typical situation is one where individual children know and use a variety of ways of thinking, rather than just one, and where cognition involves constant competition among alternative ways of thinking, rather than sole reliance on a single way of thinking at a given age. Rather than stepping up from Strategy 1 to Strategy 2 to Strategy 3, children would be expected to use several different strategies at any one time, with the frequency of use of each strategy ebbing and flowing at any one time, with increasing age and expertise. (Siegler, 1992, pp. 409–410)

Siegler's logical argument is well backed up by data across many domains as noted above—when individual children's performance is assessed. Siegler introduces another concept (in addition to the overlapping waves metaphor) to address the issue of how children come to limit their strategy repertoires to strategies that all basically work, but with varying degrees of efficiency. For example, he has shown that even young children (e.g., five years olds) who have not yet shown any evidence in their addition performance of using the strategy of counting from the larger addend (e.g., 5 + 2 = 5, 6, 7—ah! 7), judge it to be a better strategy than an illegitimate addition strategy such as counting the first addend twice. To capture this ability to judge before actually using a strategy, Siegler introduces the term goal sketch.
Accordiing to Siegler:

\[\ldots\text{a goal sketch specifies the hierarchy of objects that a satisfactory strategy must meet. The hierarchical structure directs searches of existing knowledge toward procedures that can meet the goals. In so doing, it directs searches away from illegitimate procedures (Siegler, 1992, p. 416).}\]

In other words, Siegler uses the term \textit{goal sketch} to capture the observation that all ages possess the ability to tell when a strategy is totally incorrect long before they can readily generate the correct or most efficient strategy. One would expect, however, that children's goal sketches would only be developed for areas where the child has had some experiential basis. Think about whether you, as an adult, could judge whether a mechanic was using a legitimate versus an illegitimate strategy in repairing your car engine. If she simply washed it off with a hose and said it was fixed, you could easily say that was not a legitimate strategy. However, if she worked on it in any one of ten ways, you might not really know which were not legitimate strategies until you were able to test the results.

Siegler strongly advocates the use of microgenic studies in this area—studies of individual performance over trials or time so that the pattern of growth in strategy use can be studied. Some findings that are common to the many microgenic studies that have been done include:

1. The halting and uneven use of newly acquired strategies (e.g., in a 1989 study, Siegler and Jenkins reported that the only two children who used a new strategy used it 7 of 84 trials and 2 of 49 trials after its discovery)
2. Innovations in strategy use followed successes as well as failures (i.e., children switched to a new possible strategy even following a trial where the previous strategy had worked)
3. Change is constrained (reiterating the point made in the paragraph above). Innovations were rarely totally incorrect, although they might not have been the most efficient approach, but only if the child initially knew enough about the task that they had tried at least one way that worked.

Based on the results of a large number of studies in diverse domains, Siegler has proposed a well-developed alternative to the stage concept of cognitive change. Siegler’s four main premises are (see Siegler, 1992, p. 427 and TR Master 2-7):

1. In all areas of cognitive development, children typically have multiple ways of thinking about most phenomena.
2. Cognitive-developmental change involves shifts in the frequency with which children rely on these ways of thinking, as well as the introduction of novel ways of thinking; change is better described as a series of overlapping waves than as a stair-step progression.
3. Significant changes are continuously occurring, rather than being limited to special transitional periods.
4. The changes that occur are not ordinarily the product of trial and error, but rather are constrained through self-regulatory mechanisms, such as goal sketches.

Summary
It is clear that the issue of how to best conceptualize children's development, particularly cognitive development, is still very much a hot topic. The fact that it is can be difficult for students. You might help put things in perspective for them by emphasizing those enduring contributions that Piaget and other major theorists have made and how the controversies surrounding his work have spawned new research directions and understanding. Students need help in seeing that controversy is not always a bad thing and that we don't need to necessarily throw out everything about a theory after concerns are raised. (This perspective can help students see why it was important to read and understand Piaget, for example, even though at the end of the section, his views are criticized.)
Resources for Status of the Concept of Stage


LECTURE 2-7 RESILIENCY

Psychologists have shown interest in children who have overcome genetic or environmental adversities and demonstrated resiliency. Masten (2001) suggests that we have moved from a perspective of looking at the resilient child as special and extraordinary to the point where we can objectively examine the ordinary process of basic adaptational systems.

Consistent with niche-picking, youths will generate opportunities that put themselves in a better context. Role-models or mentors, positive experiences within social institutions, moving away from deviant peers and connection to caring and competent adults are identified as global factors associated with resiliency. The idea of focusing on the success of the child to function is consistent with the current trend toward positive psychology.

The adaptive factors that are related to resiliency represent both the influence of heredity (intelligence, temperament) and of environment (social support, strong community). Future research on resiliency should continue to examine the adaptational systems and ways in which we can foster those systems.

STUDENT ACTIVITIES

ACTIVITY 2-1 ASSUMPTIONS MADE BY MAJOR THEORIES

This activity is most effective as a preparation to a class lecture on issues in development (see Lecture 2-1 and the text). Assign Activity 2-1 to be due the day that you present this material in class. If you do not plan to cover these theoretical issues during class time, it can be assigned as a study tool to be completed outside class and turned in for credit.

ACTIVITY 2-2 USING THE INTERNET: PSYCHOANALYTIC THEORY

Activity 2-2 asks students to use the Internet to learn more about Sigmund Freud and psychoanalytic theory. This activity is useful for encouraging more in-depth exploration of Freud’s ideas.

ACTIVITY 2-3 UNDERSTANDING MAJOR DEVELOPMENTAL ISSUES

Similar in purpose to Activity 2-1, this activity makes use of Concept Check 2.3 and Table 2.4 in the text. Before lecture coverage of issues in development, assign the section Themes in the Study of Human Development in the text and ask students to complete the exercise in Concept Check 2.1. Then, assign the remainder of the chapter to be read and ask students to compare their answers given to the Concept Check 2.1 assignment with the views of the theorists summarized in Table 2.4.

ACTIVITY 2-4 A PANEL OF THEORISTS

Ask volunteers to take on the role of each of the major theorists discussed in Chapter 2 of the text. Give them a few days to become an expert in one of the theories. Suggest that they become very familiar with the overview presented in Table 2.4. Ask students to prepare questions on the issues presented in Chapter 2. During one class period have the student experts assemble as a panel and field questions from the class and the instructor. For example: “Dr. Erikson, what is your view on the importance of early experience to later development?” or “Dr. Piaget, what is your position regarding the continuity/discontinuity controversy?” To overview the theories and the assumptions each makes about development, use TR Masters 2-2A to 2-3G.

ACTIVITY 2-5 AUTOBIOGRAPHY

Everyone in the course has the advantage of having been children themselves! Students may enter the class with some questions from their own childhood that they are interested in exploring, but they may also bring misinformation based on their individual experience. Ask students to write an autobiography of the first 12 years of their life. This should be a subjective report and should have a set length.

If the student lives at home, or close to home, they can ask if they have a baby book in which information was recorded about their development, their accomplishments and activities. Those with access to these types of documents can utilize them to develop a timetable of their early childhood.

You may suggest to the students that they consider some or all of the following questions:

- What is your first memory?
- Do you remember your favorite toy? What was it and why was it a favorite? At what age did it get “put aside?”
Theories of Human Development

Did you have a favorite story, song, movie, or television show? What was it and what do you remember about it?

What was your school experience? What was your favorite year in school? Who was your favorite teacher?

Can you relate your most inspiring educational experience? Why was it inspiring?

Did you have a lot of friends? How many names can you remember from your first grade class?

Did you have imaginary playmates?

Think about and relate the type and quality of family interactions: siblings, parents, extended family.

Were you afraid of certain things as a child? If so, what were they and how did you outgrow them?

Did you worry as a child? About what did you worry?

What do you remember about holidays, vacations, or special celebrations?

Who was the most significant person in your early childhood? In middle childhood?

These papers can be used to

- generate questions for further exploration
- examine pre-established beliefs about childhood
- identify theoretical underpinnings that the student exhibits in telling the story of their own childhood.

WEB RESOURCES

Freud Museum - http://www.freud.org.uk/
The official website for the Freud museum, located in London England, this site is a wealth of resources about Sigmund Freud, his life, his work and many of his colleagues.

Erik Erikson - http://webspace.ship.edu/cgboer/erikson.html
This page from Dr. George Boeree of Shippensburg University, Pennsylvania, presents a short biography and the theory of Erik Erikson.

Karen Horney - http://webspace.ship.edu/cgboer/horney.html
This page from George Boeree of Shippensburg University in Pennsylvania, explores the life, work and theory of Karen Horney.

Presenting all things Adlerian.

Classics in the History of Psychology - http://psychclassics.yorku.ca/Watson/views.htm
Psychology as the behaviorist views it is a class writing from John B. Watson. From the collection of classic works in psychology, presented by Christopher Green.

This serves as the official site and authorized publisher of work by and about B.F. Skinner

Albert Bandura - http://webspace.ship.edu/cgboer/bandura.html
This page from George Boeree of Shippensburg University in Pennsylvania, presents a short biography and explores the theory of Albert Bandura.

Jean Piaget Society – http://www.piaget.org/
The official site for information on Jean Piaget.
Lev Vygotsky –  http://www.muskingum.edu/~psych/psycweb/history/vygotsky.htm
This website, maintained by the psychology department at Muskingum College provides a comprehensive collection about Lev Vygotsky’s life and work.

Urie Bronfenbrenner -  http://www.psychologicalscience.org/observer/getArticle.cfm?id=1881
An article of appreciation from the APS Observer on the occasion of Bronfenbrenner’s death in 2005, this article provides a good summary of his accomplishments.

**VIDEO SUGGESTIONS**

**Everybody Rides the Carousel**  (PCR—Pyramid Films and Audio, 3-part film, color, 24 min. each part, 1975) An entertaining, artfully done film that captures the essence of each of Erikson's eight stages in pictorial form for the viewer. This powerful film leaves the viewer very much aware of the life-span nature of human development and with an appreciation of each of the crises encountered along the way. Narrative needs to be supplemented with a handout on Erikson's stages and an overview lecture if time permits (Table 2.2 in the text could be used).


**Bandura's Social Cognitive Theory: An Introduction**  (Insight Media, DVD, 30 min., 2003) Overview of Bandura’s work using archival footage and Bandura’s own narration.

**Cognitive Development**  (PCR—CRM/McGraw-Hill Films, film, 17 min., color, 1973) Presents an introduction to Piaget's four stages of intellectual development in the first part. In the second part a Piagetian approach to teaching is contrasted with a behavioral one.

**Erik Erikson: A Life's Work**  (Insight Media, DVD, 38 min., 1992) Provides an overview of Erikson’s stage theory of development. Also includes biographical information and interviews with Erikson.

**Moral Development**  (Insight Media, videotape, 30 min., color, 1979) Presents the four theories of moral development based on the work of Kohlberg, Piaget, social-learning theory, Freud, and Hogan.


**The Emerging Personality**  (Insight Media, videotape, 30 min., color, 1978) Discusses the theories of Freud, Erikson, the neobehaviorists (social-learning theory), and Mahler.

**Theories of Development**  (Insight Media, DVD, 29 min., 1997) Summarizes the major theories of developmental psychology.
TRANSPARENCY MASTERS

TR Master 2-1A to 2-1D  Chapter 2 Objectives

TR Master 2-2  Major Developmental Issues  (Activities 2-1 and 2-3)

TR Master 2-3A  Psychoanalytic Theory

TR Master 2-3B  The Learning Perspective

TR Master 2-3C  Piaget's Cognitive Developmental Theory

TR Master 2-3D  Vygotsky's Cognitive Developmental Theory

TR Master 2-3E  The Information-Processing Perspective

TR Master 2-F  The Ethological Perspective

TR Master 2-3G  The Ecological Systems Perspective

TR Master 2-4A and 2-4B  Erikson's Stages of Psychosocial Development

TR Master 2-5A and 2-5B  Piaget's Stages of Cognitive Development

TR Master 2-6  Criteria for a Stage Theory  (Lecture 2-6)

TR Master 2-7  Siegler's Conclusions about Cognitive Change  (Lecture 2-6)
CHAPTER 2 OBJECTIVES

1. Describe three characteristics of a good theory.

2. Describe the three personality structures proposed by Freud.

3. Outline the five stages in Freud’s psychosexual theory of personality development.

4. Identify three lasting contributions of Freud’s psychoanalytic theory.

5. Outline two main differences between Erikson’s and Freud’s theories of personality development.

6. Identify each of the eight stages in Erikson’s psychosocial theory of personality development and describe the significant events and influences associated with each stage.

cont.
7. Explain how neo-Freudian views differ from Freud’s original views, and identify the contributions of three prominent neo-Freudian theorists.

8. Describe the learning viewpoint of development.

9. Outline the key components of operant conditioning.

10. Explain how observational learning highlights Bandura’s emphasis on the cognitive processes involved in learning.

11. Explain what is meant by reciprocal determinism.

12. Identify the key contributions and chief criticism of the learning approach to development.
13. Describe the basic ideas in Piaget’s theory of cognitive development, focusing on the processes of assimilation and accommodation.

14. Outline the main characteristics associated with each of Piaget’s four stages of cognitive development.

15. Identify two lasting contributions of Piaget’s cognitive theory.

16. Outline the main differences between the information-processing view and Piaget’s theory of cognitive development.

17. Identify the basic assumptions that underlie the ethological approach and explain what ethologists mean by sensitive periods in development.

18. Evaluate some of the key criticisms that have been raised concerning the application of the ethological approach to understanding human development.
19. Describe the five subsystems that form the foundation of Bronfenbrenner’s ecological systems theory.

20. Identify four central issues in the study of human development.
MAJOR DEVELOPMENTAL ISSUES

NATURE/NURTURE—Development is a product of:

1. Nature (biological forces and inherited predispositions)
2. Nurture (environmental forces and life experiences)
3. The interaction of nature and nurture

ACTIVITY/PASSIVITY—Children play:

1. A passive role in their own development
2. An active role in their own development (they exert an influence on the people around them and actively select their own environment)

CONTINUITY/DISCONTINUITY—Development occurs in:

1. Small, additive steps without sudden changes (i.e., in a continuous fashion—changes are quantitative or in degree)
2. A series of abrupt changes/stages (i.e., in a discontinuous fashion—changes are qualitative or in kind)

HOLISTIC NATURE OF DEVELOPMENT—Development is:

1. Modular (different aspects of development are separate and unrelated)
2. Holistic (different aspects of development are related and interdependent)
THEORISTS' POSITIONS ON MAJOR DEVELOPMENTAL ISSUES

Psychoanalytic Theory

- **Active**—children are driven by inborn instincts that are channeled (with the assistance of others) into socially desirable outlets

- **Discontinuous**—emphasis is on stages of psychosexual development (Freud) or psychosocial development (Erikson)

- **Both Nature and Nurture**—biological forces (instincts, maturation) precipitate psychosocial stages and psychosocial crises; parental child-rearing practices influence the outcomes of these stages

- **Modular**

cont.
Learning Perspective

- **Passive**—children are molded by their environments (although Bandura claims that developing persons also influence these environments)

- **Continuous**—emphasizes the gradual addition of learned responses (habits) which make up one’s personality

- **Nurture**—environmental input, rather than biological influences, is what determines the course of development

- **Modular**

cont.
Piaget's Cognitive-Developmental Theory

- **Active**—children actively construct more sophisticated understandings of the self, others, and the environment to which they adapt

- **Discontinuous**—emphasizes an invariant sequence of qualitatively distinct cognitive stages

- **Both Nature and Nurture**—children have an inborn need to adapt to the environment, which is in turn nurtured by a stimulating environment that provides many adaptive challenges

- **Holistic**

cont.
Vygotsky's Cognitive-Developmental Theory

- **Active**—children master new skills through their interactions with more competent people in their society

- **Continuous**—development is gradual and culture specific; no universal stages

- **Both Nature and Nurture**—children gain new ways of thinking and behaving through cooperative dialogues

- **Holistic**
Information-Processing Perspective

- **Active**—children actively process environmental information to answer questions, solve problems, or otherwise master challenges.

- **Continuous**—emphasizes gradual quantitative changes in attention, perception, memory, and problem-solving skills.

- **Both Nature and Nurture**—active processing abilities that develop are heavily influenced by maturation and by social/cultural/educational influences.

- **Modular**

cont.
Ethological Perspective

- **Active**—humans are born with biologically programmed behaviors that promote adaptive developmental outcomes

- **Both Continuous and Discontinuous**—emphasizes that adaptive behaviors are added continuously, but adds that some adaptive capabilities emerge abruptly (or fail to emerge) during sensitive periods of their development

- **Nature**—Biologically programmed adaptive behaviors are stressed, although an appropriate environment is necessary for successful adaptation

- **Holistic**

cont.
Ecological Systems Perspective

- **Both Active and Passive**—humans actively influence the environmental contexts that influence their development

- **Both Continuous and Discontinuous**—emphasizes that transactions between ever-changing individuals and ever-changing environments lead to quantitative developmental changes. However, discontinuous personal or environmental events (e.g., reaching puberty or having parents divorce) can produce abrupt qualitative changes

- **Nurture**—impacts of environmental contexts on development are most clearly emphasized, although children’s biologically influenced attributes can affect their environments

- **Holistic**
ERIKNOS STAGES OF PSYCHOSOCIAL DEVELOPMENT

**Basic Trust versus Mistrust (Birth to 1 year)**
Infants must learn to trust others to care for their basic needs and to see others as reliable and trustworthy.

**Autonomy versus Shame and Doubt (1 to 3 years)**
Children must learn to be "autonomous" and to look after their own needs by feeding and dressing themselves—thus avoiding self-doubt and shame.

**Initiative versus Guilt (3 to 6 years)**
Children must learn to take initiative without going beyond their capabilities or impinging on the rights, privileges, or goals of others.

**Industry versus Inferiority (6 to 12 years)**
Children are expected to be industrious and to master important social and academic skills. Failure to acquire these important skills leads to feelings of inferiority rather than self-assurance.

cont.
ERIKSON’S STAGES 5, 6, 7, and 8
(adolescence through old age)

Identity versus Role Confusion (12 to 20 years)
Adolescents grapple with the question "Who am I?" as they attempt to establish basic social and occupational identities. Confusion persists until an identity is reached.

Intimacy versus Isolation (20 to 40 years)
The primary task of this period is to form strong relationships and to achieve a sense of love and companionship (or shared identity) with another person.

Generativity versus Stagnation (40 to 65 years)
During this phase of life the major tasks are to become productive in work, to raise a family, or otherwise be engaged in looking after the needs of young people. Failure to achieve these goals results in feelings of stagnation, meaninglessness, and/or self-centeredness.

Ego Integrity versus Despair (old age)
The adequacy of one's life experiences and accomplishments, when reviewed, will determine whether an individual feels that their life has been meaningful and productive or whether it has been disappointing or meaningless.
PIAGET'S STAGES OF COGNITIVE DEVELOPMENT

Sensorimotor (birth to 2 years)

- Reliance on sensory and motor capabilities as means of exploring and understanding the environment
- Gradual development of ability to represent reality internally/symbolically; capabilities that lie behind the development of object permanence, deferred imitation, and covert problem solving (acquisitions marking end of sensorimotor period)

Preoperational (2 to 7 years)

- Use of symbolism (language and imagery) to represent and understand the environment
- Imaginative play activities
- Reliance on how things appear to be
- Egocentrism (gradually diminishing over time)
Concrete Operational (7 to 11 years)

- Acquisition and use of cognitive operations (logical mental activities) manifest in acquisition of conservation, classification, etc.
- Decreased reliance on appearances
- Decreased egocentrism/increased perspective taking

Formal Operations (11 years and beyond)

- Reorganization of cognitive operations so as to permit thinking about thinking
- More abstract, hypothetical thinking; logical thinking not limited to the observable or previously observed
- Systematic deductive reasoning
- Interest in issues; idealism
CRITERIA FOR A STAGE THEORY

Change is QUALITATIVE (in-kind difference) as well as quantitative; changes occur ABRUPTLY (staircase analogy applies)

**Examples:** Caterpillar–Butterfly analogy, Conservation task success

**Problem:** Children's thinking is continually changing and most of those changes are gradual

Stage implies an INVARIANT SEQUENCE

**Example:** Formal thought acquisitions always follow acquisition of concrete-operational tasks

**Problem:** Children sometimes show rudimentary acquisition of formal thought before acquiring the ability to do some concrete-operational tasks

**Problem:** Experience affects order of acquisition, rate of development, and whether acquisition occurs at all more than Piaget assumed

Each stage is characterized by a set of INTERRELATED COGNITIVE STRUCTURES

**Example:** Classification requires simultaneous, coordinated use of several cognitive operations

**Problem:** Children's thinking shows coherent organization, but acquisitions requiring similar underlying concepts and operations are not as concurrent as Piaget assumed
SIEGLER'S CONCLUSIONS ABOUT COGNITIVE GROWTH
(based on microgenic studies of individual children over trials and time)

1. Children use multiple strategies for solving problems at any given age.

2. Cognitive development consists of shifts in the frequency child uses a particular strategy and in developing new strategies (change is more like overlapping waves than a staircase).

3. Change is not limited to a few transitional periods.

4. Innovations in strategies are constrained by "goal sketches" (i.e., what the child knows about the goals of the task), such that totally illegitimate strategies are rarely generated.