

Chapter 8

Human Development

Outline

I. Prenatal Development

- A. The period of development from conception to birth is the **prenatal period**.
- B. The process of prenatal development begins with fertilization, when a single sperm produced by the father unites with the egg provided by the mother.
- C. During the **germinal stage** of prenatal development, the **zygote**, the one-cell product of the union of sperm and ovum, begins to move down the fallopian tube toward the uterus.
 - 1. It is undergoing rapid cell growth at this time, and forms into a hollow ball called the *blastocyst*.
 - 2. This stage lasts from the time of fertilization until the blastocyst implants itself into the wall of the uterus, around two weeks.
 - a. The outer layer of cells is programmed to develop into the placenta, the amniotic sac, and umbilical cord.
 - b. The inner layer of cells is programmed to become the fetus.
- D. The **embryonic stage** (the stage of the embryo) lasts about six weeks.
 - 1. All of the organ systems of the body are laid in place.
 - 2. During this vulnerable period, the central nervous system is at risk, and the unborn is most sensitive to external or environmental influences.
- E. The **fetal stage** includes months 3 through 9.
 - 1. The organs of the body continue to increase in complexity and size and begin to function.
 - 2. During the seventh month, most fetuses have reached the point of viability, meaning that they could survive without interference or medical intervention if born.
 - 3. After nearly 270 days, the fetus is ready to enter the world as a newborn.

II. Environmental Influences on Prenatal Development

- A. Maternal malnutrition often leads to increases in miscarriages, stillbirths, and premature births.
- B. Newborns with low birth weight (4 pounds or less) who do survive have a greater risk of cognitive deficits—even as they approach adolescence.
- C. Using vitamin and mineral supplements is generally a good idea, but these can be overdone as well.
- D. A balanced, sensible diet works best for mother and fetus.
- E. Smoking by pregnant women has harmful effects on their unborn children.
 - 1. Smoking during pregnancy is associated with low birth weight and premature birth.
 - 2. Children whose mothers smoked a pack of cigarettes a day during pregnancy have a 75 percent increase in risk for mental retardation, even when other risk factors were controlled.
 - 3. Smoking during and after pregnancy is associated with an increased risk of sudden infant death syndrome.
- F. **Fetal alcohol syndrome (FAS)** refers to a cluster of symptoms (for example, low birth weight, poor muscle tone, and intellectual retardation) associated with a child born to a mother who was a heavy drinker of alcohol during pregnancy.

1. Heavy drinking is defined as drinking three or more alcoholic drinks per day or binge drinking during vulnerable periods of organ development.
 2. Lower doses of alcohol consumption during critical periods of pregnancy can produce a condition known as fetal alcohol effects.
 3. The highest rate of fetal alcohol syndrome is among the Native American population of the Southwest.
 4. Children whose mothers drank even small amounts of alcohol during pregnancy are at increased risk for behavior problems later in life.
 5. Experts agree that the best advice for a pregnant mother is total abstinence.
- G. Mothers who use or abuse psychoactive drugs during pregnancy cause considerable complications for their unborn child.
1. Even common drugs such as caffeine and aspirin have been associated with low birth weights.
 2. It is wise to avoid harmful substances, get good prenatal care, eat a healthy diet and follow the advice of a physician.

III. What About Dad?

- A. Researchers are looking at the role of the father in determining the quality of life of the prenatal child.
- B. The main issue revolves around factors affecting the quality of the father's sperm at the moment of conception.
 1. Sperm from fathers beyond the age of 35 or 40 may be partly the source of the genetic problems of Down syndrome.
 2. The father's possible role in the transmission of STDs also is clear.

IV. Sensory and Perceptual Development

- A. To some degree, all human senses are functioning at birth.
 1. The **neonate**—the newborn—can focus well on objects held one to two feet away, but everything nearer or farther appears out of focus until the child is about four months old.
 2. Neonates can hear nearly as well as adults.
 3. Newborns can respond to differences in taste and smell.
 4. Neonates can detect touch and temperature stimulation, and can feel pain.
- B. A wide range of perceptual abilities develops during the first year.
 1. Infants prefer patterned over unpatterned stimuli, and moving over stationary stimuli.
 2. There is also a preference for patterns that look like human faces over patterns that do not.
 3. Young infants can discriminate among facial expressions of emotions and within a few hours after birth can recognize a picture of their own mother..

V. Cognitive Development

- A. **Cognitive development** refers to the age-related changes in learning, memory, perception, attention, thinking, and problem solving.
- B. Developmental psychologists look at cognitive development from two perspectives.
 1. The **structural-functional approach**, developed by Jean Piaget, says that structures (schemas) change with development, while functions remain fixed. Cognitive development is seen as a series of qualitative changes in intelligence.
 2. The **information processing approach** focuses on quantitative changes in basic information processing systems like memory, attention, and learning.

VI. Piaget's Stages of Development

- A. A **schema** is an organized mental representation of the world that is adaptive and formed by experience.
- B. Piaget proposed that there are two basic functions or mechanisms that help a child adapt to the environment.

1. **Organization** refers to one of the functions in Piaget's theory and involves a predisposition to integrate individual schemas into organized units.
 2. **Adaptation** involves a child adapting cognitive abilities to the demands of the environment, and comprises two complementary processes.
 - a. **Assimilation** occurs when a child incorporates new information into an existing scheme.
 - b. **Accommodation** allows the infant to modify its schemas to account for new experiences.
- C. In the **sensorimotor stage** (birth to two years), children discover by sensing (sensori-) and doing (motor).
1. Children learn about causality in this stage.
 2. Children learn about **object permanence**, an appreciation that an object no longer in view can still exist and reappear later.
 3. Imitation also develops during this stage.
- D. In the **preoperational stage** (two to six years), a child's thinking is self-centered or egocentric.
- E. In the **concrete operations stage** (seven to eleven years) children begin to develop many concepts and show that they can manipulate those concepts.
1. Rule-governed behavior begins in this stage.
 2. **Conservation** involves the awareness that changing the form or the appearance of something does not change what it really is.
- F. In the **formal operations stage** (twelve years and up), the logical manipulation of abstract, symbolic concepts appears.

VII. Reactions to Piaget

- A. Considerable research has supported many of Piaget's insights about children.
- B. There are two major criticisms of Piaget's theory.
 1. The borderlines between his proposed stages are much less clear-cut than his theory suggests.
 2. Piaget underestimated the cognitive talents of preschool children.
- C. Further criticisms suggest that object permanence appears earlier than age 2, and that Piaget's theory gives little attention to the impact of language development and the gradual increase in the capacity of a child's memory.
- D. Piaget's theory was so detailed and thought provoking that it will challenge researchers for years to come.

VIII. The Information-Processing Approach

- A. The Development of Learning
 1. Classical conditioning and operant conditioning can be demonstrated with neonates.
 2. Imitation can be observed in infants as young as one week old.
- B. The Development of Memory
 1. Memory can be demonstrated in very young infants.
 2. Children as young as three can understand the temporal nature of events and form scripts of those events in memory.
 3. The most impressive gains take place between three and 12 years of age, both in short-term memory and long-term memory.
 4. Elaboration is a sophisticated memory strategy that is "discovered" late in childhood and is rarely used before adolescence.

IX. Moral Development

- A. Piaget believed that children are unable to make moral judgments until they are at least three or four years old.
- B. Lawrence Kohlberg proposed three levels of moral development.
 1. **Preconventional morality** in which the prime interest of the child is simply with the punishment that comes from breaking a rule.

2. **Conventional morality** is based on an accepted social convention, where approval matters as much or more than anything else.
 3. **Postconventional morality** is the highest level of moral reasoning in Kohlberg's theory in which moral reasoning reflects complex, internalized standards.
- C. The basic thrust of Kohlberg's theory has merit and cross-cultural applications.
 - D. Problems with the theory exist because few people operate at the higher stages, particularly in cultures that emphasize communal or group membership.
 - E. *Collectivism* and *individualism* illustrate that what is true for one culture may not be for another, and neither is better or more moral.
 - F. There may be a "disconnect" between what people may *believe* is the right and moral thing to do, and what they actual do in their behaviors.
 - G. Carol Gilligan believes that the moral reasoning of females is different from that of males.
 1. Women, Gilligan argues, are more likely to focus on caring, personal responsibility and relationships, while males focus on rules, justice, and individual rights.
 2. Gilligan does not suggest that one approach to moral reasoning is any better or worse than the other.
- X. Erikson's Psychosocial Theory of Development
- A. Erik Erikson proposed an eight-stage theory of life-span development that has a cross-cultural basis.
 - B. The first four stages are relevant for children:
 1. *Trust vs. mistrust*, during the first year of life, when the child either develops a basic sense of safety or insecurity and anxiety.
 2. *Autonomy vs. self-doubt*, from ages one and one-half to three years, when a child learns independence or experiences inadequacy.
 3. *Initiative vs. guilt*, from three to six years of age, when confidence is developed, or feelings of a lack of self-worth result.
 4. *Competence vs. inferiority*, from six years to puberty, adequacy in basic social and intellectual skills occurs, or a lack of self-confidence and feelings of inferiority may develop.
- XI. Developing Gender Identity
- A. **Gender** refers to one's maleness or femaleness; socially ascribed characteristics of males and females, as opposed to their biological characteristics.
 - B. Cognitive psychologists believe that once children can discriminate between the sexes, they develop schemas for gender-related information.
 1. Encouraged by parents, children at an early age (1-year-old) have defined preferences for choices of toys.
 2. By the age of 3 or 4 children tend to gravitate toward same-sex play groups.
 - C. **Gender identity** is the sense or self-awareness of one's own maleness or femaleness.
 1. Most children develop gender identity by the age of 2 or 3.
 2. Once gender identity is established, it is very resistant to change.
 3. By late childhood and early adolescence, peer pressure intensifies gender differences.
- XII. Developing Social Attachments
- A. **Attachment** is a strong emotional relationship between a child and his or her mother or primary caregiver.
 - B. Strong attachments are most likely to be formed if the parent is optimally sensitive and responsive to the needs of the child.
 1. Attachment formation is a two-way process.
 2. It is more than simply a matter of spending time with a child
 3. Secure attachments need not be with the mother only; they may involve the father or some other significant caregiver.
 4. Attachment patterns may have life-long ramifications.
 - C. There are many benefits that result from secure attachment.
 - D. High-quality daycare facilities can foster both cognitive and social development.

1. The quality of attachment in a daycare situation depends entirely on the quality of care provided.
2. Both quality maternal care and daycare can work together to form secure attachments in infants and children.

XIII. SPOTLIGHT: Parenting Styles

- A. Parenting styles are the overarching, general strategies that parents use to influence their children.
- B. The classic model of parenting styles is that of Diana Baumrind, and describes three styles
 1. The **indulgent** (or permissive) style stressed acceptance, love, relationship-building, and tended to set few if any limits.
 2. The **authoritarian** parenting style imposes rules (usually without explanation), expects strict obedience and often uses punishment as a means of control.
 3. The **authoritative** style calls for clear rules, consistently enforced, often worked out in consort with children in the decision-making, and has high expectations.
- C. By-and-large, most American parents (at least of the middle class and European background) use or try to use the authoritative parenting style.
 1. Differences across ethnic groups tend to be small.
 2. African American parents may tend toward the authoritarian style.
 3. Asian American families also tend toward the authoritarian style, and seek strong attachments between children and parents.
- D. Judith Harris has argued that many parents put too much pressure on themselves, forgetting that socialization also depends on peers, classmates, and teachers—no matter what parents may do to influence their children.

IX. Adolescent Development

- A. **Adolescence** is the period between childhood and adulthood, often begun at puberty and ending with full physical growth, generally between the ages of 12 and 20.
- B. Adolescence can be described from a biological, psychological, or social perspective.
 1. In biological terms, adolescence begins with **puberty**, the stage of physical development at which one becomes capable of sexual reproduction.
 2. A psychological perspective emphasizes the development of cognitions, feelings, and behaviors that characterize adolescence.
 3. A social perspective defines adolescence in terms of being “in between,” not yet an adult, but no longer a child.
- C. G. Stanley Hall and Anna Freud believed that adolescence was a time of turmoil and stress.
- D. Many studies indicate that adolescents typically make adjustments in psychologically healthy ways.

X. The Challenge of Puberty

- A. The growth spurt is signified by a marked increase in height and weight, and usually occurs at an earlier age in girls than boys.
- B. Puberty occurs when one becomes physically capable of sexual reproduction.
 1. In females, this is indicated by the first menstrual period, called **menarche**.
 2. Boys seldom know when their puberty begins.
- C. Boys and girls who reach puberty before or after most of their peers are referred to as early or late bloomers.
 1. The consequences of reaching puberty early are more positive for males than for females.
 2. Being a late bloomer has negative implications for both males and females, although few consequences are lasting.

XI. The Challenge of Identity Formation

- A. One of the major tasks of adolescence is the resolution of an **identity crisis**, where there is a struggle to define a sense of self, what to do in life, and what one’s attitudes, beliefs, and values should be.

1. The search for identity is the fifth stage of psychosocial development in Erikson's hierarchy.
 2. According to Erikson, there may be role confusion at this time.
- B. Most of the conflicts between adolescents and their parents occur early in adolescence and generally are resolved by the end of adolescence.
 - C. Marcia has identified four ways that identity issues can be resolved during adolescence: identity achievement, foreclosure, identity diffusion, and moratorium.
 - D. In eight cross-cultural studies, Waterman found evidence of Marcia's groupings.

XII. Development During Early Adulthood

- A. The transition from adolescence to adulthood is marked by choices and commitments.
- B. Levinson has called it the "era of greatest energy and abundance and of greatest contradiction and stress."

XIII. Marriage and Family

- A. Erikson claims that early adulthood revolves around the choice of intimacy or isolation.
 1. Eighty-five percent of Americans marry at least once.
 2. Mate selection is a complex process that involves availability, eligibility, and attractiveness (physical and psychological).
- B. David Buss believes that a person is likely to marry someone who is similar in almost every variable.
- C. Approximately 50 percent of all first marriages end in divorce.
- D. One of the best predictors of a successful marriage is the extent to which partners were able to maintain close relationships before marriage.

XIV. The Transition to Parenthood

- A. **Generativity** reflects a concern for family and for one's impact on future generations.
- B. As parents, men and women take on the responsibilities of new social roles of mother and father.
- C. There is overwhelming evidence that marital satisfaction tends to drop during the child rearing years of a marriage.
- D. Marital satisfaction increases again once the children leave the nest.
 1. The U-shaped curve representing marital satisfaction before, during, and after the child rearing years is one of the most reliable in the social sciences.
 2. Other research confirms that indicators of marital satisfaction tend to go down in the months immediately following the birth of a first child.
- E. The most common explanation as to why dissatisfaction increases after the birth of a child is due to role conflict and role strain.

XV. Career Choice

- A. One's choice and satisfaction of occupation affect self-esteem and identity.
- B. Dual-career families are quite common.
- C. Women make up about half of the professional workforce in the United States..
- D. Career selection is driven by family influence and the potential for earning money.
- E. Choosing a career involves exploration, crystallization, choice, career clarification, induction, reformation, and integration.
- F. If a poor choice is made, one can work through the process again.

XVI. Development During Middle Adulthood

- A. One must adjust to the physiological changes of middle age.
- B. Middle-aged persons face a major set of challenges in learning to deal with family members.
 1. Dealing with teens and elderly parents places some middle-aged adults in what has been called the sandwich generation.

2. Family members provide 80 percent of all day-to-day health care for the elderly.
- C. Another task of this age is determining how to leave a mark on future generations.
- D. Relating to one's spouse and developing leisure-time activities can be a challenge for those who have previously been devoted to children and career.

XVII. Development During Late Adulthood

- A. The transition to late adulthood generally occurs in the early to mid-sixties.
- B. By 2050, the number of people 65 and older will be nearly 78.9 million with an average life span of 82.1 years, the majority being women.

XVIII. What It Means to Be Old

- A. **Ageism** is the name given to discrimination and prejudice against a group on the basis of age.
- B. Adults over 65 can be divided into young-old and old-old groups.
 1. The distinction is based on the psychological, social and health characteristics rather than actual age.
 2. This distinction reinforces the notion that aging is not some sort of disease.
- C. Adult children are more capable of caring for their parents in their old age.
 1. Fewer than 15% of Americans over the age of 65 live in nursing homes.
 2. Nursing home residence increases to about 25% by age 85.
- D. Not all people retire successfully.
 1. Availability of economic resources matters.
 2. Social relationships help retirement succeed.
 3. One's personal health, education, and self-esteem also matter.
- E. With increased age often come increased physical problems.
 1. But, only 28% of the elderly report their health as fair or poor.
 2. Chronic illnesses (such as arthritis and osteoporosis) are more common in the elderly.
 3. The average 85-year old takes 8-10 prescription medications.
- F. Close family relationships and involvement in effective exercise programs predict successful aging.

XIX. Death and Dying

- A. Dealing with death is the last major crisis all must face.
- B. Although Kübler-Ross posited five stages in dealing with death, the descriptions may be idealized.
- C. Each person must face death in his or her own way.
 1. There is no "best" way to go about dying.
 2. The elderly are less morbid about dying than are adolescents.
 3. They may fear the process but do not fear the fact of their own death.

Practice Test Questions

Multiple Choice

- Which of these developmental periods lasts the longest?
 a. embryonic period c. prenatal period
 b. germinal period d. fetal period
- At which stage, or at what time, is the developing human at greatest risk of a physical defect?
 a. as a zygote c. as a growing fetus
 b. during the embryonic stage d. during the birth process
- Which of these typically has the most adverse effect on the developing human organism?
 a. the mother's inability to gain weight during pregnancy
 b. inadequate calcium intake during pregnancy
 c. having to take antibiotics, such as penicillin, during pregnancy
 d. alcohol use or abuse during pregnancy
- Which of these senses is least well developed in the neonate?
 a. vision c. hearing
 b. smell d. taste
- On what basis were Piaget's stages of development determined?
 a. the actual, chronological age of the child
 b. whether the child uses accommodation or assimilation
 c. the extent to which the child is egocentric or social
 d. how schemas are formed or modified with experience
- Of the several criticisms of Piaget's theory of development, which is LEAST reasonable?
 a. It lacks attention to cognitive processing.
 b. The divisions between stages are not as clear as Piaget asserted.
 c. Piaget underestimated to abilities of preschool children.
 d. It lacks a significant concern for cross-cultural differences.
- The memory strategy of elaboration is generally first put in use
 a. within days after birth.
 b. by the time the frontal lobe has developed (about age 2).
 c. only after children have begun school (even kindergarten).
 d. early in adolescence.
- Melanie is 9 years old. She can easily get to school and back, a distance of six city blocks. On the other hand, she has great difficulty telling you how she manages the trip to school and back each day. Melanie is in Piaget's _____ stage of cognitive development.
 a. sensorimotor c. concrete operations
 b. preoperational d. formal operations
- Kohlberg's theory of development focuses mainly on the development of
 a. cognitive representations, called schemas.
 b. strategies that children use to learn.
 c. morality and a sense of right and wrong.
 d. how children and adolescents interact with each other.

10. Of these, which is the largest difference between Piaget's theory and Erikson's theory of development?
Erikson's theory
- a. relies less on the notion of stages.
 - b. was based on experiments, not observations.
 - c. is more relevant for boys than for girls.
 - d. describes development through the lifespan.
11. Which observation about the development of gender identity is most supported by cross-cultural evidence?
- a. Girls relate better with their mothers, while girls relate better with their fathers.
 - b. Children show no particular preferences for toys; they prefer to play with whatever their parents want them to.
 - c. Right from birth, there are significant differences in temperament or "difficulty" between boys and girls.
 - d. By the age of three or four years and throughout their early school years, children prefer same-sex playmates.
12. If secure attachment is going to occur, it will occur for most children (nearly two-thirds) when they are
- a. born.
 - b. one year old.
 - c. five years old.
 - d. about to become teenagers.
13. Everything else being equal, of course, which parenting style is most likely to foster academic achievement, self-esteem, and self-reliance?
- a. permissive
 - b. authoritative
 - c. indulgent
 - d. authoritarian
14. Which of these observations about adolescence is most valid?
- a. It is a developmental stage through which many individuals will not pass successfully.
 - b. It is a developmental stage defined in terms of stress, turmoil, and abnormality.
 - c. It is a developmental stage through which most pass in psychologically adaptive ways.
 - d. It is a developmental period—the only one—defined in biological terms.
15. Which "biological" phenomenon is LEAST associated with the onset of adolescence?
- a. penile erections and nocturnal emissions in boys
 - b. a growth spurt in both boys and girls
 - c. menarche in girls
 - d. the appearance of secondary sex characteristics
16. Which observation concerning menarche is TRUE?
- a. It is found more commonly in boys than in girls.
 - b. It occurs, on average, at a younger age than it did 100 years ago.
 - c. It generally occurs two to three years before puberty begins.
 - d. It is produced, or triggered, by an increased level of androgens.
17. At the time of their puberty, or in their early adolescence, who seems to benefit the MOST?
- a. early-blooming males
 - b. early-blooming females
 - c. late-blooming males
 - d. late-blooming females
18. Which of Piaget's stages of development is best associated with adolescence?
- a. identity formation
 - b. postconventional reasoning
 - c. identity achieved
 - d. formal operations
19. What two concepts, taken together, best characterize the beginning of adulthood?
- a. independence and interdependence
 - b. death and dying
 - c. growth and development
 - d. assimilation and accommodation

20. For Erikson, early adulthood is best characterized in terms of
___ a. competence vs. inferiority. ___ c. intimacy vs. isolation.
___ b. ego-identity vs. despair. ___ d. generativity vs. stagnation.
21. The evidence suggests that—in general, of course—a woman is most likely to choose to marry someone who
___ a. she believes to be most like herself.
___ b. she believes will earn the most money in his lifetime.
___ c. is physically most attractive.
___ d. is most unlike, or opposite from, her father.
22. Of all the concerns that one might have about the characteristics of a mate, the one trait that varies most widely from culture to culture seems to be
___ a. chastity. ___ c. earning potential.
___ b. intelligence or wisdom. ___ d. kindness.
23. Which of the following best characterizes the elderly in the United States?
___ a. Most of them (more than 50%) require supervision of the sort found in nursing homes.
___ b. Most of them (more than 50%) are preoccupied with thoughts of their own deaths.
___ c. Most (more than 75%) are vigorous and healthy.
___ d. Most (nearly 65%) list their health as a serious problem.
24. According to Kubler-Ross, the final stage in facing one's own death is the stage of
___ a. anger. ___ c. acceptance.
___ b. denial. ___ d. joy.

True/False

1. ___ True ___ False Fetal alcohol syndrome includes the likelihood of intellectual retardation.
2. ___ True ___ False because of its beneficial effects on cardiovascular functioning, pregnant women are now being advised to drink at least 1, but no more than 3 glasses of red wine each day.
3. ___ True ___ False In humans, the sense of smell does not begin to develop until at least two to three months after birth.
4. ___ True ___ False In developing his theories of cognitive development, Piaget seems to have underestimated the cognitive skills of very young, preschool children.
5. ___ True ___ False Carol Gilligan has argued that with regard to moral development, there are no sex differences in morality, but that males and females approach moral dilemmas differently.
6. ___ True ___ False Whether a child will become securely attached depends on the behaviors of the child as well as the behaviors of the care-giver.
7. ___ True ___ False Most adolescents are seriously troubled, rebellious, and uncooperative.
8. ___ True ___ False Boys profit from early maturity more than girls do, and they suffer more from late maturity.
9. ___ True ___ False Any sort of experimentation with drugs by adolescents will have long-term negative consequences.
10. ___ True ___ False Most young adults are unhappy or dissatisfied with their first career choice.
11. ___ True ___ False Most Americans (male and female) experience a real mid-life crisis, accompanied by the realization that “time is running out,” and that they may not get to do all that they wanted to do.

Key Terms and Concepts

prenatal period _____

zygote _____

germinal stage _____

embryonic stage _____

fetal stage _____

point of viability _____

fetal alcohol syndrome _____

neonate _____

cognitive development _____

schemas _____

adaptation _____

assimilation _____

accommodation _____

sensorimotor stage _____

object permanence _____

preoperational stage _____

concrete operations stage _____

conservation _____

formal operations stage _____

preconventional morality _____

conventional morality _____

postconventional morality _____

gender _____

gender identity _____

attachment _____

adolescence _____

puberty _____

menarche _____

identity crisis _____

generativity _____

ageism _____

Answers to Practice Test Questions

Multiple Choice

1. **c** Be careful here. The germinal period and periods of the embryo and the fetus all taken together make up the prenatal period. Within that period, the fetal period is the longest.
2. **b** It is when the organism is in the form of an embryo that it is most sensitive to the formation of physical defects.
3. **d** Alcohol abuse is certainly the most devastating factor leading to birth defects of these listed, but even moderate alcohol consumption is generally discouraged.
4. **a** The newborn, or neonate, has sensory capacities that are much greater than was once thought, but they are all not equally developed. Of these, vision is the last to become fully functioning.
5. **d** The different stages of Piaget's theory are defined in terms of how the child goes about forming or modifying schemas on the basis of his or her interaction with the environment.
6. **a** Actually, such a "criticism" would be absurd. Piaget's is, after all, a theory of cognitive development.
7. **d** memory strategies in general do not appear until the school years. Using elaboration techniques is a strategy that does not really get put into use until very late in childhood or, more commonly, at the beginning of adolescence.
8. **c** Melanie is probably in Piaget's stage of concrete operations, which would be typical for a nine-year-old. (Did it bother you that this item is "out of order"? This is something for which you need to be alert.)
9. **c** Kohlberg's is referred to as a theory of moral development.
10. **d** Erikson's stages of development are equally relevant for boys and girls and were based on observation. What makes his stages different is that they extend through adolescence and adulthood, whereas Piaget's do not.
11. **d** There is virtually no evidence to be found—in any culture—for the first three observations, whereas the fourth choice has considerable support, even across many cultures.
12. **b** About 65 percent of children in the United States (and around the world) will form attachments during their first year.
13. **b** Of course you know to be careful with glittering generalities such as this one, but in most cases—and regardless of ethnic group membership—the authoritative style fosters self-esteem, self-reliance, and academic achievement to a greater extent than the other styles.
14. **c** Although some (including G. Stanley Hall and Anna Freud) would claim that alternative **b** is correct, current thinking would make alternative **c** your best choice. Alternatives **a** and **d** are almost silly.
15. **a** Penile erections and nocturnal emissions typically occur for some time before puberty in boys, which is indicated by the presence of live sperm cells.
16. **b** Menarche occurs in girls, not boys; defines the beginning of puberty; is triggered by estrogens, not androgens, and—for reasons not fully understood—seems to be occurring at a younger age than ever before in history.
17. **a** At least at the time of their adolescence, early-maturing boys seem to experience an "advantage" over the other named groups.
18. **d** The first three alternatives are not even associated with Piaget.
19. **a** Although at first they may appear contradictory, independence and interdependence characterize early adulthood.
20. **c** Here again, this item hinges on your knowledge of Erikson's stages. Early adulthood is associated with conflicts between intimacy and isolation.
21. **a** Aren't some of these alternatives funny? What I am getting at here is the observation that mate selection is most often based on similarities, not that "opposites attract."
22. **a** And the range of concern is very wide from one culture to another.
23. **c** There is no doubt that the only alternative here that is even close to being true is the third one.

24. **c** Not everyone “buys” Kubler-Ross’s scheme, of course, but her stages are, in order: denial, anger, bargaining, depression, and acceptance.

True/False

1. **T** There are many signs and symptoms associated with fetal alcohol syndrome (retarded physical growth, poor coordination, poor muscle tone, etc.). By definition, one sign is mental retardation.
2. **F** Hardly! Pregnant women are being advised to abstain from any and all alcoholic beverages.
3. **F** Not only does it begin to develop long before birth, but at birth, the neonate’s sense of smell is rather well developed.
4. **T** Yes, this is one of the most common criticisms of Piaget’s theory.
5. **T** Most of Kohlberg’s theory of moral development was based on the study of males. Gilligan suggests that females may have a different style of morality than do males.
6. **T** There is simply no doubting that attachment formation is a two-way process.
7. **F** To some of us (and to parents of adolescents in particular) this may appear to be true, but it isn’t. It reflects more of an incorrect stereotype than reality.
8. **T** This is about as nice a summary statement about early and late maturation as I can muster.
9. **F** Again, some of us may want to think of this statement as true, but the evidence suggests that it is, in fact, false. What matters here, of course, is largely a matter of degree.
10. **T** This true statement is lifted nearly verbatim from the text.
11. **F** We often hear this used as an “excuse” for some pretty silly behaviors by middle-aged adults, but there is little hard evidence for a general period or stage of development that we can characterize as a mid-life crisis.

EXPERIENCING PSYCHOLOGY

An Ageism Survey

Ageism is a discriminatory practice or negative stereotype formed solely on the basis of age. Although ageism can occur with regard to persons of any age, it is most often directed at the elderly. Here is a simple, 10-item, true/false quiz about the elderly. Use it to see if you can detect any signs of ageism in the responses.

Indicate whether each of the following statements is “true” or “false.” Consider “younger” to refer to persons under 65 years of age and “older” to refer to those over 65 years of age.

- Older people are more likely than younger people to attend church.
- Older people are more cautious and less likely to make risky decisions than are younger people.
- As people age, they tend to become more like each other.
- Older people have more difficulty than do younger people in adapting to a changing environment.
- A decrease in life satisfaction is usually experienced by older persons.
- The majority of persons over 65 live in nursing home or assisted-living institutions.
- Mental disorders occur more frequently among older people than among younger people.
- Depression is more common in older people than in younger people.
- Decreasing intelligence as measured by IQ tests, and other measures of cognitive functioning, is one of the inevitable changes that occurs with increasing age.
- Aging of the brain leads the way for the deterioration of other bodily systems and functions.

Scoring this “quiz” is very easy as each item is worded so that it is false.

Using the Internet to Expand Your Appreciation of Psychology

1. DEVELOPMENT THROUGHOUT CHILDHOOD (pp. 274-296)

This is such a rich, full chapter, I thought we'd try something a little different. Rather than small, specific websites, those listed below are large mega-sites. At first glance, of course, most are very broad and general in their coverage. But what makes them mega-sites is that they provide many links to get you where you want to go. Interestingly, many sites on child development are very practical in their orientation, offering advice (and materials for sale) to parents of children of all ages. Getting around these sites may take a little more pointing and clicking, but it will be worth it.

<http://www.childdevelopmentinfo.com>

(Difficult to argue with this address isn't it? It is the home page of the "Child Development Institute," founded and is operated by Robert F. Meyers, Ph.D., a clinical child psychologist, and has the recommendation of the American Psychological Association)

<http://www.babycenter.com>

(This is a very general site, crammed with useful information for parents and parents-to-be—you also might try: <http://www.parentcenter.com> website.)

<http://www.nacd.org>

(the site of the National Association for Child Development—largely aimed at "children with learning inefficiencies" – Navigation can be difficult; be patient; start with colored boxes, upper left)

<http://www.nichd.nih.gov>

(the website for the National Institute of Child Health and & Human Development of the U.S. National Institutes of Health—very much research-based, with an eye toward advising on national policy issues)

<http://www.srcd.org>

(the website for the Society for Research in Child Development, a multi-disciplinary professional organization with an international membership of about 5,000 researchers, practitioners, and human development specialists. It provides many useful links, particularly one to their list of publications.)

<http://www.nbcdi.org>

(the website for the National Black Child Development Institute—for over 30 years its mission has been “to improve and protect the lives of children.”)

<http://www.unicef-icdc.org>

(the website of UNICEF and the “Innocenti Research Centre,” providing a view of child development from an international perspective.)

<http://www.piaget.org>

(“The Jean Piaget Society” may be excused for being a little less than totally objective about Piaget. It is difficult to imagine what you might want to learn about Piaget that you couldn’t find here.)

<http://www.attachmentparenting.org>

(a comprehensive site on attachment)

2. ADOLESCENT DEVELOPMENT (pp. 297-300)

The challenge in searching for useful websites about this topic is to avoid those sites that are too broad, aimed mostly at providing advice to a general audience. After all, “adolescence” is a concept that covers a large range of issues. As you can imagine, for many of these issues there is a fine line between explanation (“These are the challenges of puberty.”) and advice-giving (“Here is how to deal with the challenges of puberty.”) Here are a few sites that are related to—or at least resonate with—adolescence.

<http://www.teenpuberty.com>

(a rather strange website, purporting to be “your complete resource for teen-health issues.” It has major links to “Female Puberty,” “Male Puberty,” “Drugs,” “General Health,” “Psychological,” and “STDs.” The links were well done, informative, and largely aimed at a teenage audience.)

<http://www.puberty101.com>

(founded by a therapist specializing adolescence, this site provides many useful links—to puberty, STDs, drug abuse, and mental health concerns)

<http://www.aap.org/family/puberty.htm>

(an authoritative piece on puberty from the website of the American Academy of Pediatrics—it is regularly updated)

<http://www.med.umich.edu/1libr/yourchild/puberty.htm>

(The University of Michigan Health Systems maintains this very useful site on early puberty. It is well written, referenced, brief, and provides an excellent summary.)

<http://anglefire.com/journal2/njca/Gender.pdf>

(another interesting article in pdf format—on “Gender and ethnicity in identity formation”)

<http://monitoringthefuture.org>

(The subtitle of this huge website is “a continuing study of American youth”. This is the main source of survey data and information on teenage drug use and abuse, with a link to <http://www.nida.nih.gov>)

<http://www.teenpregnancy.org>

(the goal of this website is to provide information and advice to reduce teen pregnancies. It is a bit heavy-handed in places, but there are excellent links available here. Check out “Research, Resources, and Information.”)

3. DEVELOPMENT DURING EARLY, MIDDLE, AND LATE ADULTHOOD (pp. 301-309)

Psychologists may talk about three different sub-stages of adulthood—early, middle, and late—but the Internet seldom makes such distinctions. For ease of reading, I have simply put websites on adulthood together here.

http://www.mc.maricopa.edu/dept/d46/psy/dev/early_adult

(This website offers little new information. What it does do is provide organized links to several very useful sites/resources.)

<http://www.hewlett.org/Archives/Publications>

(a great 76-page article, “A Portrait of Well-Being in Early Adulthood,” in pdf format, and being as long as it is, it does take awhile to download. This is one excellent review article.

<http://www.successfulaging.ca>

(here is a very pleasant, positive little website—there are links to serious issues, but I will admit to spending altogether too much time on the links “Humor” and “Recipes”)

<http://hdcs.fullerton.edu/csa>

(Compared to the previous site on the same topic, this one is much more academic. It comes from the Center for Successful Aging at California State University Fullerton. If noting else, visit “Related Links.”)

<http://www.nlm.nih.gov/medlineplus/deathanddying.html>

(There are many websites on the Internet devoted to the topics of death and dying. I would put this one at the top of the list. For one thing, it professes no one particular point of view on the matter. It is kept current and has scores of links to matters statistical, legal, practical, and so much more.)

<http://www.hospicenet.org>

(For practical advice on how to prepare for and cope with the reality of death and dying, it is difficult to imagine a better, more experienced group than the folks at Hospice. This site is labeled, “For patients and families facing life-threatening illness ...”)