CliffsQuickReview

Developmental Psychology

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Most developmentalists divide childhood into **infancy** (birth to age 1), **toddlerhood** (ages 1 to 2), **early childhood** (ages 2 to 6), **middle childhood** (ages 7 to 11), and **adolescence** (ages 12 to 19).

Physical Development in Infancy and Toddlerhood

Infants and toddlers grow quickly; bodily changes are rapid and profound. **Physical development** refers to biological changes that children undergo as they age. Important aspects that determine the progress of physical development in infancy and toddlerhood include physical and brain changes; development of reflexes, motor skills, sensations, perceptions, and learning skills; and health issues.

The first 4 weeks of life are termed the **neonatal period.** Most babies weigh between 5 1/2 and 10 pounds, and are between 18 and 22 inches long. Male babies are generally slightly heavier and longer than female babies. Neonates born weighing less than 5 1/2 pounds are of **low birthweight.** Infants who arrive before their due date are **preterm** or **premature,** and these babies may or may not have a low birthweight. Babies who arrive on or shortly after their due date are **full-term.** Infants who arrive 2 or more weeks after their due date are **postmature.** Both premature and postmature babies are at higher risk of complications such as sickness, brain damage, or death, than are full-term babies.

Physical growth is especially rapid during the first 2 years. An infant's birthweight generally doubles by 6 months and triples by the infant's first birthday. Similarly, a baby grows between 10 and 12 inches in length (or height), and the baby's proportions change during the first 2 years. The size of an infant's head decreases in proportion from 1/3 of the entire body at birth, to 1/4 at age 2, to 1/8 by adulthood.

Fetal and neonatal brain developments are also rapid. The lower, or **subcortical,** areas of the brain (responsible for basic life functions, like breathing) develop first, followed by the higher areas, or **cortical** areas (responsible for thinking and planning). Most brain changes occur prenatally and soon after birth. At birth, the neonate's brain weighs only 25 percent of that of an adult brain. By the end of the second year, the brain weighs about 80 percent; by puberty, it weighs nearly 100 percent of that of an adult brain.

Reflexes and motor skills

Because infants cannot endure on their own, newborns have specific built-in or prewired abilities for survival and adaptive purposes. **Reflexes** are automatic reactions to stimulation that enable infants to respond to the environment before any learning has taken place. For instance, babies automatically suck when presented with a nipple, turn their heads when a parent speaks, grasp at a finger that is pressed into their hand, and startle when exposed to loud noises. Some reflexes, such as blinking, are permanent. Others, such as grasping, disappear after several months and eventually become voluntary responses. Common infant motor reflexes appear in Table 4-1.

Table 4-1: Common Infant Motor Reflexes

Reflex	*Stimulus/Action*
Blinking	In response to a puff of air, the infant closes both eyes.
Babinski	In response to stroking the side of its foot, the infant twists its foot inward and fans out its toes.
Grasping	In response to an object pressed against its palm, the infant attempts to grasp the object.
Moro	In response to a shock or loud noise, the infant arches its back and throws its arms outward.

Reflex	*Stimulus/Action*
Rooting	In response to stroking its cheek, the infant turns its head toward the touch and attempts to suck.
Stepping	In response to holding the infant so that its feet barely touch a surface, the infant "walks."
Sucking	In response to inserting a finger or nipple into its mouth, the infant begins rhythmically sucking.
Babkin	In response to stroking its forehead, the infant turns its head and opens its mouth.
Plantar	In response to touching the ball of the foot, the infant curls its toes under.

Motor skills, or behavioral abilities, develop in conjunction with physical growth. In other words, infants must learn to engage in motor activities within the context of their changing bodies. At about 1 month, infants may lift their chins while lying flat on their stomachs. Within another month, infants may raise their chests from the same position. By the fourth month, infants may grasp rattles, as well as sit with support. By the fifth month, infants may roll over, and by the eighth month, infants may be able to sit without assistance. At about 10 months, toddlers may stand while holding onto an object for support. At about 14 months, toddlers may stand alone and perhaps even walk. Of course, these ages for each motor-skill milestone are averages; the rates of physical and motor developments differ among children depending on a variety of factors, including heredity, the amount of activity the child participates in, and the amount of attention the child receives.

Motor development follows **cephalocaudal** (center and upper body) and **proximodistal** (extremities and lower body) patterns, so that motor skills become refined first from the center and upper body and later from the extremities and lower body. For example, swallowing is refined before walking, and arm movements are refined before hand movements.

Sensation and perception

Normal infants are capable of **sensation,** or the ability to respond to sensory information in the external world. These infants are born with functioning **sensory organs,** specialized structures of the body containing sensory receptors, which receive stimuli from the environment. **Sensory receptors** convert environmental energy into nervous system signals that the brain can understand and interpret. For example, the sensory receptors can convert light waves into visual images. The human senses include seeing, hearing, smelling, touching, and tasting.

Newborns are very nearsighted, but visual **acuity,** or ability, develops quickly. Although infant vision is not as good as adult vision, babies may respond visually to their surroundings from birth. Infants are particularly attracted to objects of light-and-dark contrasts, such as the human face. Depth perception also comes within a few months. Newborns may also respond to tastes, smells, and sounds, especially the sound of the human voice. In fact, newborns may almost immediately distinguish between the primary caregiver and others on the basis of sight, sound, and smell. Infant sensory abilities improve considerably during the first year.

Perception is the psychological process by which the human brain processes the sensory data collected by the sensory organs. Visually, infants are aware of **depth** (the relationship between foreground and background) and **size and shape constancy** (the consistent size and shape of objects). This latter ability is necessary for infants to learn about events and objects.

Learning

Learning is the process that results in relatively permanent change in behavior based on experience. Infants learn in a variety of ways. In **classical conditioning (Pavlovian),** learning occurs by association when a stimulus that evokes a certain response becomes associated with a different stimulus that originally did not cause that response. After the two stimuli associate in the subject's brain, the new stimulus then elicits the same response as the original. For instance, in psychologist John B. Watson's experiments with 11-month-old "Little Albert" in the 1920s, Watson classically conditioned Albert to fear a small white rat by pairing *the sight of* the rat with a loud, frightening noise. The once-neutral white rat then became a feared stimulus through associative learning. Babies younger than age 3 months generally do not learn well through classical conditioning.

In **operant conditioning (Skinnerian)**, learning occurs through the application of rewards and/or punishments. Reinforcements increase behaviors, while punishments decrease behaviors. **Positive reinforcements** are pleasant stimuli that are added to increase behavior; **negative reinforcements** are unpleasant stimuli that are removed to increase behavior. Because reinforcements always increase behavior, negative reinforcement is not the same as punishment. For example, a parent who spanks a child to make him stop misbehaving is using punishment, while a parent who takes away a child's privileges to make him study harder is using negative reinforcement. **Shaping** is the gradual application of operant conditioning. For example, an infant who learns that smiling elicits positive parental attention will smile at its parents more. Babies generally respond well to operant conditioning.

In **observational learning,** learning is achieved by observing and imitating others, as in the case of an infant who learns to clap by watching and imitating an older sibling. This form of learning is perhaps the fastest and most natural means by which infants and toddlers acquire new skills.

Health

Normal functioning of the newborn's various body systems is vital to its short-term and long-term health. Less than 1 percent of babies experience **birth trauma,** or injury incurred during birth. Longitudinal studies have shown that birth trauma, low birth weight, and early sickness can affect later physical and mental health but usually only if these children grow up in impoverished environments. Most babies tend to be rather hardy and are able to compensate for less-than-ideal situations early in life.

Nevertheless, some children are born with or are exposed to conditions that pose greater challenges. For example, **phenylketonuria (PKU)** is an inherited metabolic disorder in which a child lacks phenylalanine hydroxylase, the enzyme necessary to eliminate excess **phynelalanine,** an essential amino acid, from the body. Failure to feed a special diet to a child with PKU in the first 3 to 6 weeks of life will result in mentally retardation. Currently, all 50 states require PKU screening for newborns.

Poor nutrition, hygiene, and medical care also expose a child to unnecessary health risks. Parents need to ensure that their infant eats well, is clean, and receives adequate medical attention. For instance, proper immunization is critical in preventing such contagious diseases as diptheria, measles, mumps, Rubella, and polio. A licensed health-care specialist can provide parents with charts detailing recommended childhood immunizations.

Infant mortality refers to the percentage of babies that die within the first year of life. In the United States today, about 9 babies out of every 1,000 live births die within the first year — a significantly smaller percentage than was reported only 50 years ago. This decrease in infant mortality is due to improvements in prenatal care and medicine in general. However, minority infants tend to be at a higher risk of dying, as are low birthweight, premature, and postmature babies. The leading causes of infant death are congenital birth defects, such as heart valve problems or pregnancy complications, and **sudden infant death syndrome (SIDS).**

SIDS is the unexpected and unexplained death of an apparently healthy infant. Postmortem autopsies of the SIDS infant usually provide no clues as to the cause of death. As far as authorities know, choking, vomiting, or suffocating does not cause SIDS. Two suspected causes include infant brain dysfunction and parental smoking, both prenatally and postnatally. In the United States, between 1 and 2 out of every 1,000 infants under age 1 die of SIDS each year.

Cognitive Development in Infancy and Toddlerhood

Much of modern cognitive developmental theory stems from the work of the Swiss psychologist, Jean Piaget. In the 1920s, Piaget observed that children's reasoning and understanding capabilities differed depending on their age. Piaget proposed that all children progress through a series of cognitive stages of development, just as they progress through a series of physical stages of development. According to Piaget, the rate at which children pass through these cognitive stages may vary, but boys and girls eventually pass through all the stages, in the same order.

Piaget's sensorimotor stage

During Piaget's **sensorimotor stage** (birth to age 2), infants and toddlers learn by doing: looking, hearing, touching, grasping, and sucking. The learning process appears to begin with coordinating movements of the body with incoming sensory data. As infants intentionally attempt to interact with the environment, infants learn that certain actions lead to specific consequences. These experiences are the beginning of the infants' understanding of cause-and-effect relationships.

Piaget divided the sensorimotor stage into six substages. In stage 1 (birth through month 1), infants exclusively use their reflexes, and their cognitive capabilities are limited. In stage 2 (months 1 through 4), infants engage in behaviors that accidentally produce specific effects.

Infants then repeat the behavior to obtain the same effect. An example is the infant's learning to suck on a pacifier following a series of trial-and-error attempts to use the new object. In stage 3 (months 4 through 8), infants begin to explore the impact of their behaviors on the environment. In stage 4 (months 8 through 12), infants purposefully carry out goal-directed behaviors.

Object permanence, or the knowledge that out-of-sight objects still exist, may begin to appear at about month 9 as infants search for objects that are hidden from view. In stage 5 (months 12 through 18), toddlers explore cause-and-effect relationships by intentionally manipulating causes to produce novel effects. For example, a toddler may attempt to make her parents smile by waving her hands at them. In stage 6 (months 18 through 24), toddlers begin to exhibit **representational** (symbolic) thought, demonstrating that they have started to internalize symbols as objects, such as people, places, and things. The child at this stage, for instance, uses words to refer to specific items, such as milk, dog, papa, or mama.

Other Piagetian concepts

Piaget's model introduces several other important concepts. Piaget termed the infant's innate thinking processes as **schemas.** In the sensorimotor period, these mental processes coordinate sensory, perceptual, and motor information so that infants eventually develop mental representations. In other words, reflexes provide the basis for schemas, which in turn provide the basis for representational thinking. For example, a child repeatedly touches and sees its rattle and thus learns to identify the rattle by forming an internalized image of it.

According to Piaget, cognitive development occurs from two processes: adaptation and equilibrium.

Adaptation involves children changing their behavior to meet situational demands and consists of two subprocesses: assimilation and accommodation.

- **Assimilation** is the application of previous concepts to new concepts, such as a child who refers to a whale as a fish.
- **Accommodation** is the altering of previous concepts in the face of new information, such as a child who discovers that some creatures living in the ocean are not fish and then correctly refers to a whale as a mammal.

Equilibrium is Piaget's term for the basic process underlying the human ability to adapt—is the search for balance between self and the world. Equilibrium involves the matching of children's adaptive functioning to situational demands, such as when a child realizes that he is one member of a family and not the center of the world. Equilibrium, which helps remove inconsistencies between reality and personal perspectives, keeps children moving along the developmental pathway, allowing them to make increasingly effective adaptations and decisions.

Evaluating Piagetian theory

The majority of researchers today accept Piaget's primary tenet: New cognitive skills build upon previous cognitive skills. Researchers see infants and toddlers as active learners who purposefully see, touch, and do, and who consequently develop additional cognitive skills. Developmentalists see cognitive development as involving both advancement and limitation. Devlopmentalists also applaud Piaget's role in stimulating professional interest in the cognitive world of children.

Piaget's research and theories are not unchallenged, however. Some of the more prominent critics of Piaget include Robbie Case, Pierr Dasen, Kurt Fischer, and Elizabeth Spelke. These critics and others maintain that the stages of development described by Piaget are not so distinct and clearly defined as Piaget originally indicated. These detractors also note that all children do not necessarily pass through Piaget's stages in precisely the same way or order. Piaget was aware of this phenomenon, which he termed **decalage,** but he never adequately explained decalage in light of the rest of his model.

Critics also suggest that toddlers and preschoolers are not as egocentric or as easily deceived as Piaget believed. Preschoolers may empathize with others, or put themselves into another person's shoes, and young children may make inferences and use logic. Preschoolers also develop cognitive abilities in relation to particular social and cultural contexts. These abilities may develop differently within enriched or deprived cultural environments. In other words, children who grow up in middle and upper-class families may have more opportunities to develop cognitive skills than those who grow up in lower-class families.

Children appear to employ and more deeply understand symbols at an earlier age than was previously thought. In as early as the first 3 months, infants display a basic understanding of how the world works. For example, infants pay closer attention to objects that seem to defy physical laws, such as balls that appear to roll through walls or rattles that appear to hang in mid-air as opposed to stationary objects.

Memory

Central to early cognitive development is memory development. **Memory** is the ability to encode, retain, and recall information over time. Researchers generally refer to **sensory** (less than 1 second), **short-term** (less than 30 seconds), and **long-term** (indefinite) memory stores. Children are not able to habituate or learn if they are unable to encode objects, people, and places and eventually recall them from long-term memory.

Researchers are unclear about the exact nature of infantile memory, however. The unclear facts about infantile memory include how long such memories last, as well as how easily memories are retrieved from long-term stores. Evidence suggests that babies begin forming long-term memories during the first 6 months. Infants may recognize and remember primary caretakers, as well as familiar surroundings. Early memory experiences help infants and toddlers to understand basic concepts and categories, all of which are central to more completely understanding the world around them.

Language

Language skills begin to emerge during the first 2 years. **Psycholinguists,** specialists in the study of language, indicate that language is an outgrowth of children's ability to use symbols. Physical development determines the timing of language development. As the brains develop, preschoolers acquire the capacity for representational thinking, which lays the foundation for language. In this way, cognitive development also determines the timing of language development. **Observational learning** (imitation) and **operant conditioning** (reinforcement) play important roles in the early acquisition of language. Children are reinforced to speak meaningfully and reasonably by imitating the language of their caregivers; in turn caregivers are prompted to respond meaningfully and reasonably to the children.

Psycholinguists are especially interested in three elements of language: **content** (what is meant), **form** (what is actually said), and **use** (how and to whom it is said). Psycholinguists claim that all members of the human race use these three elements in some combination to communicate with each other. Noam Chomsky suggested that the learning of a language is rooted in an inborn capacity to comprehend and structure language, which he defined as the language acquisition device.

According to psycholinguists, acquisition of language also occurs within a social and cultural context. Socializing agents—family members, peers, teachers, and the media—teach children how to think and act in socially acceptable ways. Children learn about the world and society as they learn to use language.

Infants and toddlers understand language before actually speaking language; children have **receptive language,** or an understanding of the spoken and written word, before acquiring **productive language,** or an ability to use the spoken or written word. Before saying their first words, infants babble. That is, babies make meaningless sounds while learning to control their vocalizations. By the end of the first year, most babies are uttering single words. Soon infants begin to use **holophrastic speech,** or single words that convey complete ideas. "Mama" (meaning

"Mama, come here!") and "Milk!" (meaning "Give me some milk!") are examples of holophrastic speech. When starting to put words together to form sentences, children first use **telegraphic speech,** in which words that are the most meaningful are used, such as "Want milk!"

CHAPTER 5
INFANCY AND TODDLERHOOD: PSYCHOSOCIAL DEVELOPMENT

During **infancy** and **toddlerhood,** children easily attach to others. Youngsters normally form their initial primary relationships with their parents and other family members. Because infants are utterly dependent on caregivers for food, clothing, warmth, and nurturing, Erik Erikson determined that children's primary task during this first **psychosocial** stage of life is to learn to trust their caregivers. As they form relationships and develop an organized sense of self, children's first few years set the stage for both immediate and later psychosocial development, including the emergence of **prosocial behavior,** or the capacity to help, cooperate, and share with others.

Personality Development in Infancy and Toddlerhood

Personality includes those stable psychological characteristics that make each human being unique. Both children and adults evidence personality **traits** (long-term characteristics, such as temperament) and **states** (changeable characteristics, such as moodiness). While considerable debate continues over the origin and development of personality, most experts agree that personality traits and states form early in life. A combination of hereditary, psychological, and social influences is most likely responsible for the formation of personality.

Infants are typically **egocentric,** or self-centered, and are primarily concerned with satisfying physical desires, such as hunger. Sigmund Freud viewed this focus on physical gratification as a form of self-pleasuring. Because infants are particularly interested in activities involving the mouth (sucking and biting, for example), Freud labeled the first year of life as the **oral stage** of psychosexual development.

According to Freud too little or too much stimulation of a particular **erogenous zone** (sensitive area of the body) at a particular psychosexual stage of development leads to **fixation** (literally, being stuck) at that stage. Multiple fixations are possible at multiple stages. In the case of infants, fixation at the oral stage gives rise to adult personality traits centered on the mouth. Adult oral-focused habits may take the form of overeating, drinking, and smoking. Adults are especially prone to regressing to such childhood fixation behaviors during times of stress and upset.

Theorists, after Freud, have offered additional perspectives on infant personality development. Perhaps the most important of these developments is Melanie Klein's **object-relations theory.** According to Klein, the inner core of personality stems from the early relationship with the mother. While Freud speculated that the child's fear of a powerful father determines personality, Klein theorized that the child's need for a powerful mother is more important. In other words, the child's fundamental human drive is to be in relationships with others, and the first relationship the child establishes is usually with the mother.

Why the phrase "object-relations"? Why did Klein use the word "object" rather than "human"? Following intensive observation and the study of many children, Klein surmised that the infant bonds to an object rather than a person, because the infant is unable to understand fully what a person is. The infant's limited perspective may process only an evolving perception of what a person is.

In this object-relations theory, the infant interacts with the mother, mostly during times of eye contact and breast-feeding. The infant then internalizes an image of the mother—good or bad—that may or may not be representative of how the mother truly is. Eventually, during a complex psychological process of adjusting to loss and separation, the child learns to distinguish between self and object at a very basic level. If all goes well, the psychologically

healthy child is then able to separate good and bad, and self and object. If all does not go well, the child is then unable to accept the good and bad sides of the self and of the mother; the child may be unable to separate the concept of a bad mother from a good self.

In object-relations theory, girls are better adjusted psychosocially than boys. Girls become extensions of their mothers; as a result, girls do not need to separate from their mothers. Boys, on the other, must separate from their mothers to become independent. This perspective is in contrast to Freudian theory, in which boys develop a stronger **superego** (conscience) than girls, because boys have penises and girls do not. According to Freud, his superego theory supported why boys more easily resolve their **Oedipal conflict** (a male's childhood sexual interest in his mother with accompanying aggression toward his father) than girls do their **Electra conflict** (a female's childhood sexual interest in her father with accompanying aggression toward her mother).

Some psychologists theorize that errors in early bonding and separating experiences may be responsible for later psychological problems. These problems include **borderline personality disorder,** which is characterized by rapid shifts in the liking and hating of self and others.

Family Relationships in Infancy and Toddlerhood

The baby's first relationship is generally with family members, to whom the infant expresses a range of emotions (and vice versa). If the social and emotional bonding between infant and family is faulty in some way, the child may never develop the trust, self-control, or emotional reasoning necessary to function effectively in the world. The quality of the relationship between child and parents—especially when the child is between the ages of 6 and 18 months—seems to determine the quality of the child's later relationships.

If physical contact between infant and parents is so vital to the emotional health of the infant, and important to the parents as well, most experts recommend that physical contact occur as soon after delivery as possible. Babies who are the recipients of immediate maternal contact seem to cry less and are happier and more secure than babies who do not receive immediate maternal contact. Fortunately, babies who are separated from their parents at birth are not necessarily doomed to a life of mental disorders. Immediate bonding is optimal, but infants and parents may later make up for an initial separation.

Attachment

Attachment is the process whereby one individual seeks nearness to another individual. In parent-child interactions, attachment is generally mutual and reciprocal. The infant looks and smiles at the parents, who look and smile at the infant. Indeed, communication between child and parents is basic at this level, but it is also profound. Psychologist John Bowlby suggests that infants are born preprogrammed for certain behaviors that guarantee bonding with their caregivers. Infants' crying, clinging, smiling, and cooing are designed to prompt parental feeding, holding, cuddling, and vocalizing. Parents may help instill trust in their infants as their infant children form attachments. Eye contact, touching, and timely feedings are perhaps the most important ways. These actions, of course, are also expressions of the love and affection parents have for their children.

Attachment is central to human existence, but so are separation and loss. Ultimately, relationships are eventually interrupted or dissolved on their own. Children must learn that nothing human is permanent, although learning this concept is not easy. Children between 7 and 24 months of age experience **separation anxiety,** or distress at the prospect of being left alone in an unfamiliar place. Related to separation anxiety is **stranger anxiety,** or distress in the presence of unfamiliar people. Separation and stranger anxieties are strong indicators of the attachment process, as the child may now distinguish

between familiar and unfamiliar stimuli. Children without **multiple attachments** (lacking relationships with people other than the primary caregivers) seem more likely to develop separation and stranger anxieties.

According to Bowlby, children who are separated from their parents progress through three stages: protest, despair, and detachment. After first refusing to accept the separation, and then losing hope, the child finally accepts the separation and begins to respond to the attention of new caregivers.

Social deprivation, or the absence of attachment, has profoundly negative effects on children. For instance, children who have been institutionalized without close or continuous attachments for long periods of time display pathological levels of depression, withdrawal, apathy, and anxiety.

Parenting

Cultural and community standards, the social environment, and their children's behaviors determine parents' child-raising practices. Hence, different parents have different ideas regarding the raising of their children; the differences are seen in their communication methods or even in their decisions about the placement of their children in daycare.

Responding to an infant's needs through playing, vocalizing, feeding, and touching is certainly important to the child's psychosocial development. In fact, children who display strong attachments tend to have highly responsive mothers. But this important display of strong attachments does not always mean that caregivers should respond to everything infants do. Children must learn that all needs cannot be completely met all the time. The majority of caregivers respond to their infants most of, but not 100 percent of, the time. Problems seem to arise only when primary caregivers respond to infants less than 25 percent of the time. The children of nonresponsive mothers tend to be insecurely attached, which may simultaneously lead to overdependence upon and rejection of authority figures later in adulthood.

Strong communication between parents and children leads to strong attachments and relationships. **Mutuality,** or synchronous (back and forth) interaction, particularly during the first few months, predicts a secure relationship between parents and infants. Mutual behaviors include taking turns approaching and withdrawing, looking and touching, and "talking" with each other. However, infants may resist mutuality when overstimulated. Resistant behaviors in such instances include turning away, closing the eyes, wiggling, and crying. In the second year, mutual behaviors such as taking turns, give-and-take, and imitating predict later prosocial behaviors. Soon afterward, children learn more complex rules of social interactions—how to invite others to play games, how to follow rules, how to cooperate, and how to share toys.

Because the first few months and years of life are so critical to children's future psychosocial development, some parents worry about having to place their infants and toddlers in daycares and preschools. Research suggests, however, that children who attend daycares are not at a disadvantage regarding development of self, prosocial behavior, or cognitive functioning. In fact, daycares and preschools offer children enriched social environments, with structured opportunities to interact with diverse groups of youngsters. Many authorities argue that daycare placement, coupled with quality time with the parents whenever possible, provides for better and earlier socialization than may otherwise occur.

Sexuality in Infancy and Toddlerhood

The word **sexuality** conjures up many diverse images, but childhood sexuality is rarely among these images. When pondering the sexuality of youth, adults invariably think of teenagers and young adults. These thoughts are oftentimes in terms of negatives and social problems, including sexually transmitted diseases and teenage pregnancy. Many Americans do not acknowledge the sexual nature of infants and toddlers. Rather than accepting children as sexual beings in process,

they categorize them as **asexual,** or not having sexual interests or abilities. The misconceptions of most Americans do little to create an accurate picture of human sexuality in general. As scientists, philosophers, and other experts have established, human sexuality is an essential aspect of human experience at all ages. Human sexuality is a lifelong process that begins at birth and ends with death.

With respect to infants specifically, physical contact between infant and parents is a source of pleasure. Maternal contact coupled with the infant's biting and sucking seems to stimulate pleasurable reflexes. Babies are actually sexual in the sense of physical responsiveness. Female babies produce vaginal lubrication, and male babies have penile erections. Ultrasounds have even shown developing male fetuses with erections months before birth. But infants are not aware of their sexual experiences as sources of eroticism. Infants are unaware of the sexual significance of their relationship with the parents, but babies are aware of pleasurable sensations associated with physical contact with the parents. As infants acquire **motor skills** (the ability to move with intention) and begin to explore their own bodies, babies learn to handle their genitals. This deliberate genital touching quickly becomes associated with pleasure.

Co-sleeping

A common concern among family members is the issue of **co-sleeping,** or children sleeping in the same bed as their parents. Does co-sleeping lead to blurred sexual boundaries? Are children who sleep in the same bed as their parents more prone to later emotional problems than those children who do not? Does co-sleeping lead to a higher occurrence of sexual abuse of children? While classical Freudians have traditionally argued against co-sleeping on the grounds that it interferes with the resolution of the Oedipal and Electra conflicts, the answer to all these questions seems to be *no.* Current research indicates that children who co-sleep with their parents are just as physically and emotionally healthy as those who do not. The age at which children stop sleeping with their parents is not predetermined; the age depends on when the parents believe the right time has come.

Gender Development

Gender refers to an individual's anatomical sex, or **sexual assignment,** and the cultural and social aspects of being male or female. An individual's personal sense of maleness or femaleness is his or her **gender identity.** Outward expression of gender identity, according to cultural and social expectations, is a **gender role.** Either gender may live out a gender role (a man or a woman, for instance, can be a homemaker) but not a **sex role,** which is anatomically limited to one gender (only a woman can gestate and give birth).

Gender identity

Gender identity appears to form very early in life and is most likely irreversible by age 4. Although the exact cause of gender identity remains unknown, biological, psychological, and social variables clearly influence the process. Genetics, prenatal and postnatal hormones, differences in the brain and the reproductive organs, and socialization all interact to mold a toddler's gender identity. The differences brought about by physiological processes ultimately interact with social-learning influences to establish clear gender identity.

Psychological and social influences on gender identity

Gender identity is ultimately derived from chromosomal makeup and physical appearance, but this derivation of gender identity does not mean that psychosocial influences are missing. **Gender socialization,** or the process whereby a child learns the norms and roles that society has created for his or her gender, plays a significant role in the establishment of her or his sense of femaleness or maleness. If a child learns she is a female and is raised as a female, the child believes she is a female; if a child is told he is a male and is raised as a male, the child believes he is male.

Beginning at birth, most parents treat their children according to the appearance of their genitals. Parents even handle their baby girls less aggressively than their baby boys. Children quickly develop a clear understanding that they are either female or male, as well as a strong desire to adopt gender-appropriate mannerisms and behaviors. This understanding normally occurs within 2 years of age, according to many authorities. In short, biology sets the stage, but children's interactions with social environments actually determine the nature of gender identity.

Gender roles

Gender roles are both cultural and personal. These roles determine how males and females think, speak, dress, and interact within the context of society. Learning plays a role in this process of shaping gender roles. These **gender schemas** are deeply embedded cognitive frameworks regarding what defines masculine and feminine. While various **socializing agents**—educators, peers, movies, television, music, books, and religion—teach and reinforce gender roles throughout a child's life span, parents probably exert the greatest influence, especially when their children are very young.

Developmentalists indicate that adults perceive and treat female and male infants differently. Parents probably do this in response to having been recipients of gender expectations as young children themselves. Traditionally, fathers teach boys how to fix and build things; mothers teach girls how to cook, sew, and keep house. Children then receive parental approval when they conform to gender expectations and adopt culturally accepted and conventional roles. All of these lessons are reinforced by additional socializing agents, such as the media. In other words, learning gender roles always occurs within a social context, with the values of the parents and society being passed along to the children of successive generations.