

CHAPTER 3

PSYCHOLOGICAL DEVELOPMENT



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Psychological Development

- **Psychological development** refers to the changes in an individual's physical, cognitive, emotional, intellectual, and social capabilities throughout their life, from infancy to old age. It's the subject matter of developmental psychology, which studies how individuals develop and adapt at different life stages.
- **Developmental psychology** is the scientific study of how and why humans grow, change, and adapt across the course of their lives. Originally concerned with infants and children, the field has expanded to include adolescence, adult development, aging, and the entire lifespan.
- Hence, this field examines change across three major dimensions, which are physical development, cognitive development, and social emotional development.

In this chapter we provide a general overview of psychological development and consider two central questions:

(1) How do biological factors interact with events in the child's environment to determine the course of development? and

(2) Is development best understood as a gradual, continuous process of change or as a series of abrupt, qualitatively distinct stages?

Heredity and Environment

The question of whether **heredity** ('nature') or **environment** ('nurture') is more important in determining the course of human development has been debated for centuries. The seventeenth-century British philosopher John Locke rejected the prevailing notion that babies were miniature adults who arrived in the world fully equipped with abilities and knowledge and simply had to grow for these inherited characteristics to appear. On the contrary, Locke believed that the mind of a newborn infant is a *tabula rasa* (Latin for 'blank slate'). What gets written on this slate is what the baby experiences – what he or she sees, hears, tastes, smells, and feels. **According to Locke, all knowledge comes to us through our senses. It is provided entirely by experience; there is no built-in knowledge.**

Charles Darwin's theory of evolution (1859), which emphasizes the biological basis of human development, led many theorists to emphasize heredity. With the rise of behaviorism in the twentieth century, however, the environmentalist position once again dominated. Behaviorists like John B. Watson and B. F. Skinner argued that human nature is completely malleable: Early training can turn a child into any kind of adult, regardless of his or her heredity. Watson (1930, p. 104) stated this argument in its most extreme form:

Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in, and I'll guarantee to take any one at random and train him to be any type of specialist I might select – doctor, lawyer, artist, merchant-chief, and, yes, even beggar-man and thief, regardless of his talents, penchants, tendencies, abilities, vocations, and race of his ancestors.⁵

Today most psychologists agree not only that both nature and nurture play important roles but also that they interact continuously to guide development.

- The newborn infant has an estimated 100 billion neurons in his or her brain but relatively few connections between them. The connections between neurons develop rapidly after birth, and the infant brain triples in weight in the first three years after birth (DiPietro, 2001).
- Brain development is heavily influenced both by genetic factors and by the stimulation or deprivation a child receives from the environment in the early years.

Even forms of development that seem to be determined by innate biological timetables can be affected by environmental events.

- Genes determine our sex, the color of our skin, eyes, and hair, and our overall body size, among other things. These genetically determined characteristics are expressed through the process of **maturational**– an innately determined sequence of growth and change that is relatively independent of external events. The human fetus develops according to a fairly fixed schedule, and fetal behavior, such as turning and kicking, also follows an orderly sequence that depends on the stage of growth.
- However, if the uterine environment is seriously abnormal in some way, maturational processes can be disrupted. Maternal sickness, malnutrition, smoking, and consumption of alcohol and drugs are other environmental factors that can affect the normal maturation of the fetus.

Motor development after birth also illustrates the interaction between genetically programmed maturation and environmental influences.

- In some cultures, such as the Kipsigis people of rural Kenya, parents actively teach their infants how to sit up, stand, and walk, and these babies reach these developmental milestones three to five weeks earlier than American babies.
- The Ache, a nomadic people from eastern Paraguay, children get little experience with locomotion on their own because the forest they live in is so dense. These children begin walking almost a full year later than children in the United States or Europe (although they catch up to, and probably surpass, them in motor skills by mid-childhood).

The development of speech provides another example of the interaction between genetically determined characteristics and experience.

- In the course of normal development, all human infants learn to speak, but not until they have attained a certain level of neurological development. With rare exceptions, infants less than a year old cannot speak in sentences. But children reared in an environment where people talk to them and reward them for making speech like sounds talk earlier than children who do not receive such attention.
- children in middle-class European homes begin to talk at about 1 year of age. Children reared in San Marcos, a remote village in Guatemala, have little verbal interaction with adults and do not utter their first words until they are more than 2 years old (Kagan, 1979).
- **Note** that the environment affects the rate at which children acquire the skills, not the ultimate skill level.

Stages of Development

- In explaining the sequence of development, several psychologists have proposed discrete, qualitatively distinct steps or stages of development.
- The concept of stages implies that behaviors at a given stage are organized around a dominant theme or a coherent set of characteristics, behaviors at one stage are qualitatively different from behaviors at earlier or later stages,
- And all children go through the same stages in the same order. Environmental factors may speed up or slow down development, but the order of the stages does not vary. A child cannot enter a later stage without going through an earlier one first. As we will see later in the chapter, however, not all psychologists agree that development proceeds according to a fixed sequence of qualitatively distinct stages.

Critical or sensitive periods are times during development when specific experiences must occur for psychological development to proceed normally

Closely related to the concept of stages is the idea of **critical periods** in human development – crucial time periods in a person's life when specific events occur if development is to proceed normally. Critical periods have been identified for some aspects of physical development in the human fetus. For example, the period six to seven weeks after conception is critical for normal development of the sex organs. Whether the primitive sex organ develops into a male or female sexual structure depends on the presence of male hormones, regardless of the XX or XY arrangement of chromosomes. The absence of male hormones means that female sex organs will develop in either case. If male hormones are injected later in development, they cannot reverse the changes that have already taken place.

The existence of critical periods for psychological development is less well established. It is probably more accurate to say that there are **sensitive periods** – periods that are optimal for a particular kind of development. If a certain behavior is not well established during this sensitive period, it may not develop to its full potential. For example, the first year of life appears to be a sensitive period for the formation of close interpersonal attachments (Rutter, Quinton, & Hill, 1990). The pre-school years may be especially significant for intellectual development and language acquisition (DeHart et al., 2000). Children who have not had enough exposure to language before age 6 or 7 may fail to acquire it altogether (Goldin-Meadow, 1982). The experiences of children during such sensitive periods may shape their future course of development in a manner that will be difficult to change later.

Heredity and Environment

INTERIM SUMMARY

- Two central questions in developmental psychology are (1) How do biological factors ('nature') interact with environmental experiences ('nurture') to determine the course of development? and (2) Is development best understood as a continuous process of change or as a series of qualitatively distinct stages?
- Some developmental psychologists believe that development occurs in a sequence of periods in which (1) behaviors at a given stage are organized around a dominant theme or a coherent set of characteristics, (2) behaviors at one stage are qualitatively different from behaviors at earlier or later stages, and (3) all children go through the same stages in the same order.
- An individual's genetic heritage is expressed through the process of maturation: innately determined sequences of growth or other changes in the body that are relatively independent of the environment.
- Critical or sensitive periods are times during development when specific experiences must occur for psychological development to proceed normally.

Capacities of the Newborn

At the end of the nineteenth century, psychologist William James suggested that the newborn child experiences the world as a 'buzzing, blooming confusion', an idea that was still prevalent as late as the 1960s. We now know that newborn infants enter the world with all of their sensory systems functioning and are well prepared to learn about their new environment.

Vision

- Newborns have **poor visual acuity**, their ability to change focus is limited, and they are very nearsighted. The computer-manipulated picture in Figure 3.2 shows how a mother's face may look to an infant. By seven or eight months of age, infants' visual acuity is close to that of adults (Keil, in press). Newborns spend a lot of time actively looking about. They scan the world in an organized way and pause when their eyes encounter an object or some change in their visual field, which is the full scope of what they can see. They are particularly attracted to areas of **high contrast**, such as the edges of an object. Instead of scanning the entire object, as an adult would, they keep looking at areas that have the most edges. They also prefer **complex patterns** over plain ones and patterns with curved lines over patterns with straight lines.



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Figure 3.2 Visual Acuity. *The newborn's poor visual acuity makes the mothers face look fuzzy (left) rather than clear (right) even when viewed from close up.*

Vision (continued)

- There is some evidence that newborns have a **facial preference**– an inborn, unlearned preference for faces. Newborns prefer to look at a normal face more than a scrambled or blank face, and even prefer to look at happy faces over fearful faces (Farroni et al., 2007). The brains of newborns may come prepared to orient toward faces and obtain information from faces (Johnson & Morton, 1991). Newborns do not come equipped to perceive faces exactly as older children and adults do, however, and a great deal of learning about faces happens in the early days and months of life. For example, although newborns prefer **normal faces over scrambled ones** (see Figure 3.3), they do not prefer normal faces over highly distorted ones in which the eyes are set so far apart the face appears rabbit-like. **In contrast, three-month-olds show a clear preference for normal faces over distorted ones (Bhatt et al., 2005).**



Figure 3.3 Normal versus scrambled faces. *Infants as young as 3 months show a preference for a normally configured face and a face with the features scrambled. Such preferences may be present at birth. (From Bhatt, Berling, Hayden and Reed, 2005.)*



Hearing

- Even fetuses 26 to 28 weeks old move in response to a sharp sound. Newborn infants **turn their heads toward the source of a sound**. Interestingly, the head-turning response disappears at about six weeks and does not reemerge until three or four months, at which time the infants also search with their eyes for the source of the sound.
- Newborns show a **preference for their mothers' voice** over a strangers, and even show a preference for stories their mothers read aloud in the last weeks of pregnancy over novel stories.
- It seems it is the **particular rhythms of a language** that infants are discerning. Newborns will not distinguish between their own language and other languages that are similar in rhythm, such as Dutch and English, but will distinguish between languages with different rhythms, such as Japanese and Polish (Ramus, 2002).

Hearing (continued)

- Across cultures, adults speak to young infants quite differently from how they speak to older children and adults, using a higher pitch to the voice, different contours to sentences and longer pauses between sentences. This style of speech, often referred to as **babytalk or motherese**, seems to be just what a baby wants and needs. Infants in the first months of life prefer motherese over normal speech, even when presented by a stranger, and **motherese helps infants detect the boundaries between words** (Cooper et al., 1997; Fernald, 1985; Thiessen et al., 2005).
- Infants as young as six months are also able to discriminate between intonations of voice indicating approval and disapproval, and smile more in response to approval intonations over disapproval into nations, even when presented in a language different from their own (Fernald, 1993). Thus, infants seem to be able to extract important meanings from the speech around them, and are especially attentive to the kind of speech most frequently directed at them.



Infants show their likes and dislikes for certain tastes at a very young age using universal facial expressions, such as the expression for disgust.

Taste

- Infants can discriminate between tastes shortly after birth. They prefer **sweet-tasting liquids** over liquids that are salty, bitter, sour, or bland. The characteristic response of the newborn to a sweet liquid is a relaxed expression resembling a slight smile, sometimes accompanied by lip-licking. A **sour solution** produces pursed lips and a wrinkled nose. In response to a **bitter solution**, the baby opens its mouth with the corners turned down and sticks out its tongue in what appears to be an expression of disgust.

Smell

- Newborns can also discriminate among odors. They turn their heads toward a sweet smell, and heart rate and respiration slow down; these are indicators of attention. Noxious odors, such as those of ammonia or rotten eggs, cause them to turn their heads away; their heart rate and respiration accelerate, indicating distress.

Smell (Continued)

- Infants are able to discriminate among even subtle differences in smells. After nursing for only a few days, an infant will consistently turn its head toward a pad saturated with its mother's milk in preference to one saturated with another mother's milk (Russell, 1976). Only breast-fed babies show this ability to recognize the mother's odor (Cernoch & Porter, 1985). When bottle-fed babies are given a choice between the smell of their familiar formula and that of a lactating breast, they choose the breast (Porter, Makin, Davis, & Christensen, 1992). There seems to be an innate preference for the odor of breast milk. In general, the ability to distinguish among smells has a clear adaptive value: It helps infants avoid noxious substances and thereby increases their chances of survival.

Learning and Memory

There was this experiment that showed that even very young babies (just a few hours old) can learn simple rules surprisingly fast.

Here's what happened:

1. Researchers taught babies that they could get a sweet drink by turning their head in a specific direction when they heard certain sounds:
 - When they heard a tone: turn head RIGHT to get sweet liquid
 - When they heard a buzzer: turn head LEFT to get sweet liquid
2. The babies learned this pattern quickly, making the correct head turn for each sound without mistakes.
3. Then researchers switched the rules:
 - Now when they heard a tone: turn head LEFT to get sweet liquid
 - When they heard a buzzer: turn head RIGHT to get sweet liquid
4. The babies adapted to these new, opposite rules quickly as well.

This shows that newborn babies can already learn cause-and-effect relationships (if I turn this way when I hear this sound, I get something sweet) and can adjust when the rules change. It suggests babies have more learning abilities from birth than many people might expect.

Learning and Memory

By the time they are three months old, infants have good memories. When a mobile over an infant's crib was attached to one of the baby's limbs by a ribbon, three month-old infants quickly discovered which arm or leg would move the mobile. When the infants were placed in the same situation eight days later, they remembered which arm or leg to move (Rovee-Collier, 1999) (see Figure 3.4).



Figure 3.4

Learning and Memory (continued)

- They also prefer heartbeat sounds and female voices over male voices, and they prefer their mother's voice to other women's voices. But they do not prefer their father's voice to other men's voices (Brazelton, 1978; DeCasper & Fifer, 1980; DeCasper & Prescott, 1984)
- Two or three days after the infants were born, they were permitted to suck on a special pacifier wired to record sucking rates (like the apparatus shown in Figure 3.5). Sucking on the pacifier turned on a tape recording of either their mother's voice or an unfamiliar woman's voice reading aloud either the story the infants had heard before birth or the story they had not heard previously. As in previous experiments, the infants showed by their sucking rates that **they preferred their mother's voice to the stranger's**. The startling finding, however, was that they also preferred the **familiar story over the unfamiliar one**— even when the two stories were read by the stranger (DeCasper & Spence, 1986).

In sum, the research we have described challenges the view of the newborn as experiencing the world as ‘buzzing, blooming confusion’, as well as the view that the child enters the world as a ‘blank slate’. Clearly, the infant enters the world well prepared to perceive and learn.

Capacities of the Newborn

INTERIM SUMMARY

- Early theorists believed that all sensory preferences and abilities had to be learned, but research over the past several decades has established that infants are born with their sensory systems intact and prepared to learn about the world.
- Newborns have poor vision and cannot see as well as an adult until about age 2.
- Some theorists thought infants were born with a preference for faces, but research suggests infants are not attracted to faces per se but to stimulus characteristics such as curved lines, high contrast, edges, movement, and complexity – all of which faces possess.
- Even newborns pay attention to sounds, and they seem to be born with perceptual mechanisms that are already tuned to the properties of human speech that will help them learn language.
- Infants can discriminate between different tastes and odors shortly after birth. They seem to show a preference for the taste and odor of breast milk.
- Infants can learn from the moment they are born and show good memories by three months of age.

COGNITIVE DEVELOPMENT IN CHILDHOOD

Piaget's Stage Theory

- **Psychologist Jean Piaget** viewed children as 'inquiring scientists' who experiment with objects and events in their environment to see what will happen. ('What does it feel like to suck on the teddy bear's ear?' 'What happens if I push my dish off the edge of the table?')
- The results of these 'experiments' are used to construct **schemas**—theories about how the physical and social worlds operate. Upon encountering a novel object or event, the child attempts to **assimilate** it—understand it in terms of a preexisting schema.
- Piaget argued that if the new experience does not fit the existing schema, the child, like any good scientist, will engage in **accommodation**, modifying a schema to fit new information, thereby extending the child's₂₈ theory of the world.

- For example, if a boy's **schema** for firefighter is a male adult who wears a big, bulky uniform, but he sees a picture of a woman in a firefighter's uniform, he may first refuse to believe that women can be firefighters. He may argue that the woman in the picture must be playing 'dress-up'. Upon further evidence of women firefighters, however, the boy may engage in **accommodation** of his schema for firefighters, accepting that firefighters can be women, too.
- He observed his own children closely as they played, presenting them with simple scientific and moral problems and asking them to explain how they arrived at their answers. Piaget's observations convinced him that **children's ability to think and reason progresses through a series of qualitatively distinct stages.**
- He divided cognitive development into four major stages, each of which has a number of substages. The major stages are the sensorimotor stage, the preoperational stage, the stage of concrete operations, and the stage of formal operations (see Concept Review Table)

Piaget's stages of cognitive development

The ages given are averages. They may vary considerably depending on intelligence, cultural background, and socio-economic factors, but the order of the progression is assumed to be the same for all children. Piaget has described more detailed phases within each stage; only a general characterization of each stage is given here.

<i>Stage</i>	<i>Characterization</i>
1. Sensorimotor (birth–2 years)	Differentiates self from objects Recognizes self as agent of action and begins to act intentionally; for example, pulls a string to set a mobile in motion or shakes a rattle to make a noise
2. Preoperational (2–7 years)	Learns to use language and to represent objects by images and words Thinking is still egocentric: has difficulty taking the viewpoint of others Classifies objects by a single feature; for example, groups together all the red blocks regardless of shape or all the square blocks regardless of color

3. Concrete operational (7–11 years)	Can think logically about objects and events Achieves conservation of number (age 6), mass (age 7), and weight (age 9) Classifies objects according to several features and can order them in series along a single dimension, such as size
4. Formal operational (11 years and up)	Can think logically about abstract propositions and test hypotheses systematically Becomes concerned with the hypothetical, the future, and ideological problems

1. The Sensorimotor Stage (Age 0-2)

Key Focus: Infants explore actions and consequences, learning about themselves and the external world.

Object Permanence:

- Before 8 months: Treats hidden objects as nonexistent (e.g., stops reaching if a toy is covered).
- By 10 months: Actively searches for hidden objects but may persist with old locations.
- By ~1 year: Consistently searches for objects in their last seen location.

Key Milestone: Development of object permanence—understanding objects exist even when unseen.

2. The Preoperational Stage (Ages 2–7)

Key Developments:

- Symbolic Thinking: Words and objects represent ideas (e.g., a stick becomes a "horse").
- Lack of Logical Operations: Difficulty mentally reversing actions (e.g., pouring water between glasses).
- No Conservation: Focus on appearance over quantity (e.g., longer row = "more" even if count is unchanged).
- Egocentrism: Struggles to see others' perspectives (e.g., fails the "three-mountain task")

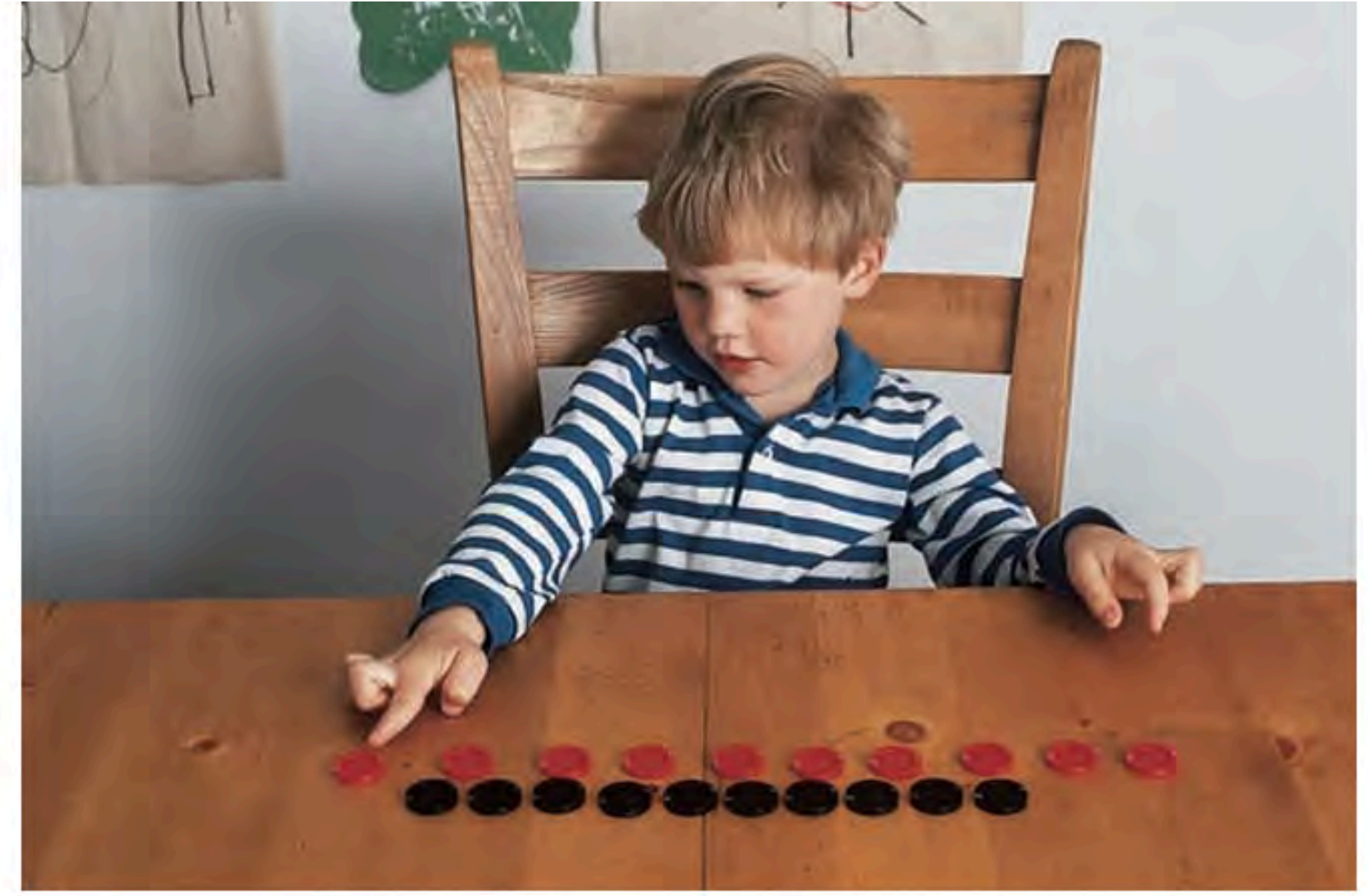


Figure 3.8 Conservation of Number. *When two rows of ten checkers are evenly spaced, most children report that they contain the same amount. When one row is then spread out into a larger space, children under age 6 or 7 say that the original row contains fewer checkers.*

Limitations:

- Rigid Thinking: Dominated by visual impressions, not logic.
- Irreversibility: Cannot mentally undo transformations.

Example: A child thinks spreading out checkers increases their number.

3. Concrete Operational Stage (Ages 7–11)

- **Logical Thinking:** Masters conservation (e.g., understands quantity stays the same despite changes in shape).
- **Mental Operations:** Can order objects (e.g., by height/weight) and create mental maps (e.g., drawing a route).
- **Limitation:** Abstract reasoning still tied to concrete objects.

Formal Operational Stage (Age 12+)

- **Abstract & Hypothetical Thinking:** Solves problems systematically (e.g., pendulum experiment).
- **Scientific Reasoning:** Tests hypotheses, controls variables, and deduces rules.
- **Key Skill:** Considers all possibilities logically.

Critiques of Piaget's Theory

1. Underestimated Children's Abilities

- Modern research shows infants grasp concepts (e.g., object permanence) earlier than Piaget proposed.
- Example: 4.5-month-olds show surprise at "impossible events" (Baillargeon, 1985), suggesting innate understanding.

2. Task Demands Overlooked

- Piaget's tests required multiple skills (memory, motor skills) beyond the target ability.
- Example: Conservation tasks fail if children focus on wording ("army" vs. "soldiers") or perceptual cues.

3. Cultural & Environmental Influences

- Schooling and cultural context affect mastery of tasks (e.g., concrete operations).
- Not all stages are universal or age-bound.

Implications:

- Development is more continuous and context-dependent than Piaget's stage theory suggests.
- Children's competence depends on how and what we test.

Alternatives to Piaget's Theory

- Piaget's theory revolutionized child development but has been challenged.
- Modern research shows children may develop skills earlier than Piaget proposed.
- Three key alternative approaches:

1. Information-Processing

2. Knowledge-Acquisition

3. Sociocultural (Vygotsky)

1. Information-Processing Approaches

Key Ideas:

- Cognitive development = mastering specific skills (memory, attention, problem-solving).

Debates:

- Some reject stages entirely (development is continuous).
- Others ("neo-Piagetians") argue for domain-specific stages (e.g., math vs. language).

Example:

- A child may solve math problems using advanced logic but struggle with social reasoning.

2. Knowledge-Acquisition Approaches

Core Argument:

- Children and adults share similar cognitive processes—differences stem from knowledge, not stages.
- **Overlapping Waves Theory (Siegler):** Children don't progress through rigid stages (à la Piaget). Instead, they use multiple strategies simultaneously for solving problems. Over time, ineffective strategies fade while efficient ones dominate through experience.

Example:

- **Chess study:** 10-year-old experts outperformed adult amateurs in recalling chess positions (domain-specific knowledge trumps age).
- **Conservation tasks:**

Typical Piaget Task: Kids think spreading out objects = "more."

Siegler's Insight: Performance improves if the task aligns with the child's domain understanding. Calling toy rows "armies" (not "soldiers") helps kids ignore perceptual tricks.

3. Sociocultural Approaches (Vygotsky)

Key Concepts:

- Learning is socially guided (apprenticeship model).
- Zone of Proximal Development (ZPD):
 - Actual level: What a child can do alone.
 - Potential level: What they can do with guidance.
- Language's Role:
 - Private speech (self-talk) guides problem-solving.
 - Cultural Influence: Skills develop based on cultural practices (e.g., Balinese dancers, Norwegian skaters).

Theory of Mind

- Understanding that others have unique thoughts/beliefs.

Development:

- Age 2: Grasp desires/perceptions.
- Age 3: Recognize false beliefs but focus on desires.
- Age 4+: Understand beliefs drive actions (e.g., "candy box" experiment).
- **Autism Link:** Difficulty with theory of mind may explain social challenges. Many autistic individuals struggle to infer others' thoughts, beliefs, or intentions.

The "Candy Box" Experiment

Setup:

- A child sees a candy box (e.g., labeled "M&M's") and is asked what's inside. They predict "candy."
- The box is opened to reveal crayons instead.
- The child is then asked: "What will another kid think is inside before opening it?"

Typical Response by Age:

- Age 3: "Crayons!" (Fails to grasp others' false beliefs—thinks everyone knows what they know).
- Age 4+: "Candy!" (Understands others can hold false beliefs separate from reality).

Why It Matters:

- Shows kids now realize beliefs drive actions (e.g., someone will search for candy, not crayons).
- Marks the emergence of theory of mind (ToM)—the ability to attribute mental states to others.

Piaget's Stages of Moral Development

Key Idea: Moral judgment evolves with cognitive development.

Four Stages:

1. Parallel Play (Preoperational, ~2–4 yrs)

- Idiosyncratic "rules" during play (e.g., sorting marbles by color).
- No shared purpose; rules change frequently.

2. Moral Absolutism (~5–7 yrs)

- Rules are sacred, unchangeable (e.g., "No moving the starting line!").
- Judges actions by consequences, not intent (e.g., "Breaking 10 cups is worse than stealing jam").

3. Social Conventions (~7–10 yrs)

- Rules are agreements; can be modified by consensus.
- Considers intentions (e.g., "He didn't mean to break the tray").

4. Ideological Reasoning (Formal Operational, 12+ yrs)

- Creates rules for novel situations (e.g., "Fairness matters more than tradition").

Kohlberg's Moral Reasoning Stages

Three Levels:

1. Preconventional (Ages <10)

- Stage 1: Avoid punishment ("I'll get in trouble").
- Stage 2: Seek rewards ("She'll owe me a favor").

2. Conventional (Ages 10–13)

- Stage 3: Social approval ("People will think I'm good").
- Stage 4: Law-and-order ("Rules keep society stable").

3. Postconventional (Adolescence/Adulthood)

- Stage 5: Social contract ("Laws should serve justice. Laws can change if they're unfair").
- Stage 6: Universal ethics ("Human dignity is more important than any law").

Stages of moral reasoning

Kohlberg believed that moral judgment develops with age according to these stages. (Kohlberg, L. (1969), 'Stages of Moral Reasoning', from 'Stage and Sequence: The Cognitive Development Approach to Socialization', in *Handbook of Socialization Theory and Research*, D. A. Goslin (ed.). Reprinted by permission of Rand McNally.)

<i>Level I</i>	<i>Preconventional morality</i>
Stage 1	Punishment orientation (Obeys rules to avoid punishment)
Stage 2	Reward orientation (Conforms to obtain rewards, to have favors returned)
<i>Level II</i>	<i>Conventional morality</i>
Stage 3	Good-boy/good-girl orientation (Conforms to avoid disapproval of others)
Stage 4	Authority orientation (Upholds laws and social rules to avoid censure of authorities and feelings of guilt about not 'doing one's duty')
<i>Level III</i>	<i>Postconventional morality</i>
Stage 5	Social-contract orientation (Actions guided by principles commonly agreed on as essential to the public welfare; principles upheld to retain respect of peers and, thus, self-respect)
Stage 6	Ethical principle orientation (Actions guided by self-chosen ethical principles, which usually value justice, dignity, and equality; principles upheld to avoid self-condemnation)

Cognitive Development in Childhood (Interim Summary)

- Piaget's theory describes stages in cognitive development. They proceed from the sensorimotor stage (in which an important discovery is object permanence), through the preoperational stage (when symbols begin to be used) and the concrete operational stage (when conservation concepts develop), to the formal operational stage (when hypotheses are tested systematically in problem solving).
- New methods of testing reveal that Piaget's theory underestimates children's abilities, and several alternative approaches have been proposed.
- Information-processing approaches view cognitive development as reflecting the gradual development of processes such as attention and memory.
- Other theorists emphasize increases in domain-specific knowledge.
- Still others, including Vygotsky, focus on the influence of the social and cultural context.
- Much of the newest research in children's cognitive development focuses on children's theory of mind, or understanding that other people have beliefs and expectations that can be different from their own and different from reality.
- Piaget believed that children's understanding of moral rules and judgments develops along with their cognitive abilities. Kohlberg extended Piaget's work to include adolescence and adulthood. He proposed three levels of moral judgment: preconventional, conventional, and postconventional.

PERSONALITY AND SOCIAL DEVELOPMENT

Temperament

Temperament refers to a baby's natural personality traits—like how fussy, calm, adaptable, or shy they are. These differences appear very early in life (even in newborns).

- **Old Belief:** People thought a baby's behavior was only shaped by parenting (e.g., "If my baby is fussy, I must be doing something wrong").
- **New Finding:** Research shows babies are born with certain temperaments, and their behavior also shapes how parents respond.

Example:

- A calm baby who stops crying when held → makes parents feel confident.
- A fussy baby who keeps crying no matter what → makes parents feel frustrated or rejected.

The Three Main Temperament Types (Thomas & Chess Study, 1950s)

Temperament Type	Traits	% of Babies
Easy (40%)	Happy, regular sleep/eating, adapts easily	40%
Difficult (10%)	Fussy, irregular routines, hates changes	10%
Slow-to-Warm-Up (15%)	Shy, cautious, needs time to adjust	15%
Mixed (35%)	Didn't fit clearly into any category	35%

Key Point: Not all babies fit neatly into these types, but many show early tendencies.

Does Temperament Stay the Same Over Time?

Early temperament (0-2 years) ≠ Later personality

- A fussy newborn might not stay fussy forever.
- But by toddler age (2+ years), temperament starts to predict later behavior.
 - Example: Shy toddlers often grow into less aggressive teens.

Genes Play a Role (Nature)

- Identical twins (same genes) have more similar temperaments than fraternal twins.
- But environment still matters—twins raised together are more alike than twins raised apart.

How Parenting Affects Temperament

"Goodness of Fit" Theory: Healthy development depends on alignment between child's temperament and environment.

A child's temperament + parenting style = Best outcomes.

- Example: A difficult baby (Carl) became well-adjusted because his dad was patient and encouraging.
- A supportive home can help a fussy baby become calmer over time.

Temperament Summary

- Babies are born with some personality tendencies (not just shaped by parenting).
- Temperament types: Easy, Difficult, Slow-to-Warm-Up.
- Early temperament changes, but by toddler age, it starts to predict later behavior.
- Both genes and parenting shape a child's personality.

Early Social Behavior

- Babies are born social (imitation, smiling).
- Stranger/separation anxiety is a developmental phase, not bad parenting.
- Memory + independence explain why fears appear and fade.
- By age 3, most kids outgrow it and enjoy playing with others.

1. Babies Are Born Ready to Connect

- **Minutes after birth:** Newborns can imitate facial expressions (like sticking out their tongue). Why? Their brains are wired for social interaction from Day 1.
- **By 2 months old:** Babies start smiling at parents' faces. This isn't just cute—it's evolutionary! Smiling makes parents bond with them more. Even blind babies smile at the same age, proving it's innate (not learned).

2. How Babies Recognize People [This happens across all cultures]

Age	Social Milestone	What Happens?
3-4 months	Recognizes familiar faces	Smiles/coos more at parents than strangers.
7-8 months	Stranger anxiety begins	May cry when unfamiliar people approach.
8-18 months	Separation anxiety peaks	Freaks out when parents leave (even with a babysitter).
By age 3	More secure	Can handle parents being gone and play with others.

3. Why Do Babies Get Scared of Strangers?

Two big reasons:

1. Memory Improves

- Before 6 months: Baby forgets quickly ("Out of sight, out of mind").
- After 8 months: They remember parents and notice when someone new appears → fear!
- Also explains why they start fearing weird things (like clowns or masks).

2. They Gain Independence

- A 1-year-old is totally dependent on parents.
- A 3-year-old can grab snacks, play alone, and say, "I miss you!" → Less anxiety.

Attachment

1. What is Attachment?

- Attachment is a baby's deep emotional bond with their primary caregivers (usually parents). It makes them feel safe and secure.
- **Old Theory:** Psychologists thought babies only loved their moms because they provided food.
- **New Understanding:** Studies show babies need comfort and closeness just as much as food!

Example (Famous Monkey Experiment):

- Baby monkeys were given two "fake moms":
- One was wire + gave milk (food source).
- One was soft cloth + gave milk (comfort source).
- **Result:** The monkeys spent almost all their time clinging to the soft mom, even when the wire mom had food! Why? Touch and comfort are essential for feeling safe.

2. How Do We Measure Attachment in Human Babies?

Psychologist Mary Ainsworth created the "Strange Situation" test to observe how babies react when:

- Mom leaves the room.
- A stranger enters.
- Mom returns.

Based on their reactions, babies are classified into 4 attachment styles:

Attachment Style	How Baby Acts When Mom Returns	% of Babies (USA)
Secure (Most Common!)	Happy to see mom, seeks comfort, then goes back to playing.	~60%
Avoidant (Insecure)	Ignores mom, acts like they don't care.	~15%
Ambivalent (Insecure)	Clings but also resists mom (e.g., cries to be held, then pushes away).	~10%
Disorganized (Rare)	Confused, scared, or freezes (common in abused/neglected kids).	~15%

3. What Creates Secure Attachment?

✓ Responsive Parenting & Secure Attachment:

- Mom/dad quickly comforts baby when crying.
- Parents follow baby's cues (e.g., feeding when hungry, stopping when full).

✗ Insecure Attachment Happens When:

- Parents ignore baby's needs or are unpredictable.
- Baby's temperament (e.g., being fussy) can also play a role.

Example:

- A "difficult" baby might cry a lot → frustrates parents → parents respond less → baby feels insecure.
- But if parents stay patient, even a fussy baby can develop secure attachment!

4. Does Attachment Last Forever?

- Usually stable, but can change if family life changes (e.g., divorce, trauma).
- Securely attached kids tend to:
 - Handle stress better.
 - Be more curious and persistent.
 - Ask for help when needed.
- Insecurely attached kids may:
 - Give up easily when frustrated.
 - Struggle with trust in relationships later.

Understanding Self-Concept, Self-Esteem, and Gender Identity in Children

1. Self-Concept: "Who Am I?"

- **Mirror Test (18 months old):**
 - If you put a red mark on a baby's forehead and show them a mirror, they'll touch their **own head** (not the mirror).
 - *This shows they recognize themselves!* Before 18 months, babies think the reflection is another child.
- **How Self-Concept Grows:**
 - **Ages 2-4:** "I am ME!" (basic identity).
 - **Ages 5-7:** "I am good at drawing!" (skills-based).
 - **Ages 8+:** "I'm shy but good at math" (complex traits).
 - **Teens:** "How do others see me?" (social comparisons).

Understanding Self-Concept, Self-Esteem, and Gender Identity in Children

Self Esteem = confidence in one's own worth or abilities; self-respect.

2. Self-Esteem: "Do I Like Myself?"

Age	Self-Esteem Traits	Example
Preschool (3-5)	Overly confident!	"I'm the fastest runner EVER!" (even if they're
Early School (6-8)	Still positive, but reality checks start.	"I'm better at reading than last year!"
Middle Childhood (9-12)	Compares self to peers.	"I'm bad at soccer but good at science."
Teens (13+)	Highly social + self-critical.	"Do people think I'm cool? Am I smart enough

Gender Identity: A person's internal sense of their own gender

Gender Typing: The process by which individuals learn and adopt behaviors, roles, and traits that society associates with a particular gender.

Gender Identity in Children

1. Social Learning Theory: Rewards & Copying

How it works:

- Kids learn gender roles like they learn other behaviors—through **rewards, punishments, and imitation**.
- **Examples:**
 - *Reward:* "You're such a good helper!" (to a girl playing house).
 - *Punishment:* "Big boys don't play with dolls!"
 - *Copying:* A boy copies his dad mowing the lawn; a girl copies her mom putting on makeup.

Problem:

- Doesn't explain why kids often **enforce stereotypes MORE than adults** (e.g., a 5-year-old boy refusing to wear pink because "it's for girls").

Gender Identity in Children

2. Cognitive-Developmental Theory: "I'm a Boy, So I Do Boy Things"

How it works:

- Kids **actively decide** how to behave based on their gender identity.
- **Key Idea:** *Gender Constancy* (around age 6–7):
 - Kids realize **gender doesn't change** even if appearances do (like how water poured into a new glass is still the same water).
 - Example: A girl knows she's still a girl even if she cuts her hair short or wears "boy" clothes.

Why it matters:

- Once kids grasp this, they **seek out "gender-appropriate" behaviors** to match their identity.

Limitation:

- Kids show gendered behavior **before** they understand constancy (e.g., a 3-year-old boy avoiding dolls).

Gender Identity in Children

3. Gender Schema Theory: The "Gender Lens"

How it works:

- Society teaches kids to **see the world through a "gender filter"**.
- From birth, kids notice:
 - **Toys:** Trucks = boys, dolls = girls.
 - **Colors:** Pink = girls, blue = boys.
 - **Jobs:** Doctors = men, nurses = women (in stereotypes).
- Kids then **organize their own identity** around these rules.

Real-Life Example:

- A teacher tries to be "fair" by always picking "one boy and one girl" for tasks.
- **Unintended effect:** Kids learn that **gender is the most important way to categorize people**, even when it's irrelevant.

Why it's powerful:

- Explains why gender stereotypes feel **so deep and automatic**—kids are taught to think this way from infancy.

Understanding Self-Concept, Self-Esteem, and Gender Identity in Children

4. How Parents & Peers Influence Gender Roles

- **Parents:**
 - Dress boys/girls differently.
 - Praise boys for blocks, girls for dolls.
 - Dads often **punish sons** for "girly" behavior more than moms.
- **Peers:**
 - Kids **police each other harshly** (e.g., "Only girls play with dolls!").

ADOLESCENT DEVELOPMENT

Psychological Effects of Puberty

Please go through the textbook

Identity Development (Erikson & Marcia)

Status	Description	Example
Identity Achievement	Crisis resolved; clear values/career path.	"I'm becoming a doctor because I love science and helping people."
Foreclosure	Adopts parents' views without questioning.	"I'm a lawyer like my dad—never considered anything else."
Moratorium	Actively exploring but undecided.	"I've tried activism and art—still figuring out what fits."
Identity Diffusion	No direction or interest in finding it.	"Meh, I'll just go with the flow. No big deal."

Thank You

Nolen-Hoeksema Fredrickson Loftus Wagenaar

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