The First Two Years: Psychosocial Development

The dynamic interaction of infants' emotions and their social contexts is the substance of this chapter. You have witnessed this interplay whenever you have seen a tiny baby smile at an engaging face or a toddler flop to the floor, kicking and screaming, after being told "no." I continue to be surprised by mothers and babies.

As I sat on a crowded subway train, a young woman boarded with an infant in one arm and a heavy shopping bag on the other. She tried to steady herself as the train started to move. I asked, "Can I help you?" Wordlessly she handed me . . . the baby. I began softly singing a children's song. The baby was very quiet, keeping her eyes on her mother. That was a psychosocial moment for all three of us.

This chapter opens with a much longer psychosocial episode, the early development of a boy named Jacob. Then we trace infant emotions over the first two years. This discussion is followed by a review of the five theories first described in Chapter 2, with an overview of what each has to say about psychosocial development in infancy. This leads us into an exploration of research on caregiver-infant interaction, particularly synchrony, attachment, and social referencing—all pivotal to psychosocial development. We then consider the pros and cons of infant day care. The chapter ends with practical suggestions regarding Jacob, whose story appears below.

A case to study

Parents on Autopilot

A father writes about his third child, Jacob:

[My wife, Rebecca, and I] were convinced that we were set. We had surpassed our quota of 2.6 children and were ready to engage parental autopilot. I had just begun a prestigious job and was working 10–11 hours a day. The children would be fine. We hired a nanny to watch Jacob during the day. As each of Jacob's early milestones passed, we felt that we had taken another step toward our goal of having three normal children. We were on our way to the perfect American family. Yet, somewhere back in our minds we had some doubts. Jacob seemed different than the girls. He had some unusual attributes. There were times when we would be holding him and he would arch his back and scream so loud that it was painful for us.

(Jacob's father, 1997, p. 59)

As an infant, Jacob did not relate to his parents (or to anyone else). His parents paid little heed to his psychosocial difficulties, focusing instead on physical development. They noted that Jacob sat up and walked on schedule, and when they "had some doubts," they found excuses, telling themselves that "boys are
different” or that Jacob’s language delays stemmed from the fact that his nanny spoke little English. As time went on, however, their excuses fell short. His father continues:

Jacob had become increasingly isolated [by age 2]. I’m not a psychologist, but I believe that he just stopped trying. It was too hard, perhaps too scary. He couldn’t figure out what was expected of him. The world had become too confusing, and so he withdrew from it. He would seek out the comfort of quiet, dark places and sit by himself. He would lose himself in the bright, colorful images of cartoons and animated movies.

[jacob’s father, 1997, p. 62]

Jacob was finally diagnosed at age 3 with “pervasive developmental disorder.” This is a catchall diagnosis that can include autism (discussed in Chapter 11). At the moment, you need to know only that Jacob’s psychosocial potential was unappreciated. His despairing parents were advised to consider residential placement because Jacob would always need special care and, with Jacob living elsewhere, they would not be constantly reminded of their “failure.” This recommendation did not take into account the commitment that Jacob’s parents, like most parents, felt toward their child.

Yet, despite their commitment, they had ignored signs of trouble, overlooking their son’s sometimes violent reaction to being held and his failure to talk. The absence of smiling, of social play, and of imitation should have raised an alarm. The father’s use of the word autopilot shows that he realized this in hindsight. Later in this chapter, you will learn the outcome.

### Emotional Development

Within the first two years, infants progress from reactive pain and pleasure to complex patterns of social awareness (see Table 7.1). This is the period of life with “high emotional responsiveness” (Izard et al., 2002, p. 767), marked by speedy, uncensored reactions—crying, startling, laughing, raging—and, by toddlerhood, complex responses, from self-satisfied grins to mournful pouts.

### Specific Emotions

At first there is pleasure and pain. Newborns look happy and relaxed when fed and drifting off to sleep. They cry when they are hurt or hungry, are tired or frightened (as by a loud noise or a sudden loss of support), or have colic, the recurrent bouts of uncontrollable crying and irritability that afflict about a third of all infants in the early months.

Soon, additional emotions become recognizable (Lavelli & Fogel, 2005). Curiosity is increasingly evident as infants distinguish the unusual from the familiar (Kagan, 2002). Happiness is expressed by the social smile in response to a human face at about 6 weeks and by laughter at about 3 or 4 months. Parents elicit laughter, and so do adept strangers. Among the Navajo, whoever brings forth that first laugh gives a feast to celebrate that the baby is becoming a person (Rogoff, 2003). Laughter builds as curiosity does, so that a typical 6-month-old not only discovers new things but also laughs loudly, with evident joy.

Anger is evident at 6 months, usually triggered by frustration. It is most apparent when infants are prevented from reaching a graspable object or moving as they wish (Plutchik, 2003). One-year-olds hate to be strapped in, caged in, closed in, or just held tight on someone’s lap when they want to explore. Anger in infancy is a healthy response to frustration, unlike sadness, which also appears in the first months. Sadness indicates withdrawal and is accompanied by an increase in the level of cortisol, a stress hormone (M. Lewis & D. Ramsay, 2005). Reliable hormone assays are more difficult with infants than with older people, so not all the hormonal changes that accompany infant emotions are known. However, the fact that sadness brings stress suggests that sorrow is not a superficial emotion for infants.
Fully formed fear in response to some person, thing, or situation (not just distress at a surprise) emerges at about 9 months and then rapidly becomes more frequent as well as more apparent (Kagan, 1998). Two fears are obvious:

- **Stranger wariness**, when an infant no longer smiles at any friendly face, and cries if an unfamiliar person moves too close, too quickly
- **Separation anxiety**, expressed in tears, dismay, or anger when a familiar caregiver leaves

Separation anxiety is normal at age 1, intensifies by age 2, and usually subsides after that. If it remains strong after age 3, it is considered an emotional disorder (Silverman & Dick-Niederhauser, 2004).

Many 1-year-olds fear not just strangers but also anything unexpected, from the flush of a toilet to the pop of a jack-in-the-box, from the sudden closing of elevator doors to the friendly approach of a dog. With repeated experiences and caregiver protection, older infants might themselves enjoy flushing the toilet (again and again) or calling the dog (crying if the dog does not come).

Many emotions that emerge in the first months of life take on new strength at about age 1 (Kagan, 2002). Throughout the second year and beyond, anger and fear typically become less frequent but more focused, targeted toward infuriating or terrifying experiences. Similarly, laughing and crying become louder and more discriminating.

New emotions appear toward the end of the second year: pride, shame, embarrassment, and guilt. These emotions require an awareness of other people. They emerge from family interactions, influenced by the culture (Eid & Diener, 2001). For example, pride is encouraged in North American toddlers (“You did it all by yourself”—even when that is

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**Stranger Wariness Becomes Santa Terror** For toddlers, even a friendly stranger is cause for alarm, especially if Mom’s protective arms are withdrawn. The most frightening strangers are men who are unusually dressed and who act as if they might take the child away. Ironically, therefore, Santa Claus remains terrifying until children are about 3 years old.
Especially for Nurses and Pediatricians
Parents come to you concerned that their 1-year-old hides her face and holds onto them tightly whenever a stranger appears. What do you tell them?

Self-awareness A person's realization that he or she is a distinct individual, with body, mind, and actions that are separate from those of other people.

untrue), but Asian families discourage pride and cultivate modesty and shame (Rogoff, 2003).

Two-year-olds have many emotional reactions. They are taught which expressions of emotion are acceptable and which are not (Saarni et al., 2006). For example, if a toddler holds on tightly to his mother's skirt and hides his face when a friendly but strange dog approaches, the mother could pick the child up or bend down to pet the dog. The mother's response encourages fear or happiness when a dog next appears.

Self-Awareness
In addition to social interactions, another foundation for emotional growth is self-awareness, the infant's realization that his or her body, mind, and actions are separate from those of other people (R. A. Thompson, 2006). At about age 1, an emerging sense of "me" and "mine" leads to a new consciousness of others. As one developmentalist explains:

With the emergence of consciousness in the second year of life, we see vast changes in both children's emotional life and the nature of their social relationships... The child can feel... self-conscious emotions, like pride at a job well done or shame over a failure.

[M. Lewis, 1997, p. 132]

Very young infants have no sense of self—at least, of self as some people define it. In fact, a prominent psychoanalyst, Margaret Mahler, theorized that for the first 4 months of life infants see themselves as part of their mothers. They "hatch" at about 5 months and spend the next several months developing a sense of themselves as separate from their mothers (Mahler et al., 1975). The period from 15 to 18 months "is noteworthy for the emergence of the Me-self, the sense of self as the object of one's knowledge" (Harter, 1998, p. 562).

In a classic experiment (M. Lewis & J. Brooks, 1978), babies aged 9–24 months looked into a mirror after a dot of rouge had been surreptitiously put on their noses. If the babies reacted by touching their noses, that meant they knew the mirror showed their own faces. None of the babies less than 12 months old reacted as if they knew the mark was on them (they sometimes smiled and touched the dot on the "other" baby in the mirror). However, those between 15 and 24 months usually showed self-awareness, touching their own noses with curiosity and puzzlement.

Self-recognition usually emerges at about 18 months, at the same time as two other advances: pretending and using first-person pronouns (I, me, mine, myself, my). Some developmentalists connect self-recognition with self-understanding (e.g., Gallup et al., 2002), although "the interpretation of this seemingly simple task is plagued by controversy" (Nielsen et al., 2006, p. 166).

Pride and shame seem to be, at this phase, linked to the maturing self-concept, not necessarily to other people's opinions. If someone tells a toddler, "You're very smart," the child may smile but usually already feels smart—and thus is already pleased and proud. Telling toddlers that they are smart, strong, or beautiful may even be unhelpful.

One longitudinal study found that positive comments from mothers to 2-year-olds did not lead to more pride or less shame by age 3 (Kelley et al., 2000). However, certain negative comments (such as "You're doing it all wrong") diminished effort and increased shame. Neutral suggestions fostered a willingness to try new challenges. Toddlers' self-esteem seems to result more from accomplishments than from praise.

She Knows Herself This 18-month-old is happy to see herself in her firefighter's helmet. She is adjusting the helmet with her hands on it, and that's evidence that she understands what a mirror is. Note, however, that she is not yet aware that a hat has a front and a back.
SUMMING UP

Newborns seem to have only two simple emotions, distress and contentment, which are expressed by crying or looking happy. Very soon curiosity and obvious joy, with social smiles and laughter, appear. By the second half of the first year, anger and fear are increasingly evident, especially in reaction to social experiences, such as encountering a stranger. In the second year, as infants become self-aware, they express emotions connected to themselves, including pride, shame, and embarrassment, and emotions about other people. Universal maturation makes these emotions possible at around 18 months, but context and learning affect their timing, frequency, and intensity.

Theories About Infant Psychosocial Development

The five major theories described in Chapter 2 have somewhat different perspectives on the origin and significance of infants’ emotions.

Psychoanalytic Theory

Psychoanalytic theory connects biosocial and psychosocial development, emphasizing the need for responsive maternal care. Both major psychoanalytic theorists, Sigmund Freud and Erik Erikson, described two distinct early stages. Freud (1935, 1940/1964) wrote about the oral stage and the anal stage. Erikson (1963) called his first stages trust versus mistrust and autonomy versus shame and doubt.

Freud: Oral and Anal Stages

According to Freud (1935), psychological development in the first year of life is in the oral stage, so named because the mouth is the young infant’s primary source of gratification. In the second year, with the anal stage, the infant’s main pleasure comes from the anus—particularly from the sensual pleasure of bowel movements and, eventually, the psychological pleasure of controlling them.

Freud believed that both the oral and anal stages are fraught with potential conflicts that have long-term consequences. If a mother frustrates her infant’s urge to suck—weaning the infant too early, for example, or preventing the child from sucking on fingers or toes—the child may become distressed and anxious, eventually becoming an adult with an oral fixation. Such a person is stuck (fixed) at the oral stage and therefore eats, drinks, chews, bites, or talks excessively, in quest of the mouth-related pleasure denied in infancy.

Similarly, if toilet training is overly strict or if it begins before the infant is mature enough, parent–infant interaction may become locked into a conflict over the toddler’s refusal, or inability, to comply. The child becomes fixedated and develops an anal personality—as an adult, seeking self-control with an unusually strong need for regularity in all aspects of life.

Erikson: Trust and Autonomy

According to Erikson, the first crisis of life is trust versus mistrust, when infants learn whether the world can be trusted to satisfy basic needs. Babies feel secure when food and comfort are provided with “consistency, continuity, and sameness of experience” (Erikson, 1963, p. 247). If social interaction inspires trust and security, the child (and later the adult) will confidently explore the social world.

Especially for Nursing Mothers

You have heard that if you wean your child too early, he or she will overeat or become an alcoholic. Is it true?

trust versus mistrust: Erikson's first psychosocial crisis. Infants learn basic trust if the world is a secure place where their basic needs (for food, comfort, attention, etc.) are met.
The next crisis is called autonomy versus shame and doubt. Toddlers want autonomy (self-rule) over their own actions and bodies. If they fail to gain it, they feel ashamed of their actions and doubtful about their abilities.

Some cultures encourage independence and autonomy (as in the United States); in others (for example, China) “shame is a normative emotion that develops as parents use explicit shaming techniques” to encourage children’s loyalty and harmony within their families (Mascoco et al., 2003, p. 402). Westerners expect toddlers to go through the stubborn and defiant “terrible twos”; parents in many non-Western societies expect the opposite.

Like Freud, Erikson believed that problems arising in early infancy could last a lifetime, creating an adult who is suspicious and pessimistic (mistrusting) or who is easily shamed (insufficient autonomy). These traits could be destructive or not, depending on the norms and expectations of the culture.

**Behaviorism**

From the perspective of behaviorism, emotions and personality are molded as parents reinforce or punish the child’s spontaneous behaviors. For example, if parents smile and pick up their infant at every glimmer of a grin, he or she will become a child—and later an adult—with a sunny disposition. The opposite is also true. Early behaviorists, especially John Watson, expressed this idea in very strong terms:

> Failure to bring up a happy child, a well-adjusted child—assuming bodily health—falls squarely upon the parents’ shoulders. [By the time the child is 3] parents have already determined . . . [whether the child] is to grow into a happy person, wholesome and good-natured, whether he is to be a whining, complaining neurotic, an anger-driven, vindictive, over-bearing slave driver, or one whose every move in life is definitely controlled by fear.

(Watson, 1928, pp. 7, 45)

Later behaviorists noted that infants also experience social learning, which is learning by observing others, as in Albert Bandura’s experiment in which young children who had seen an adult punching a rubber Bobo clown treated the doll the same way (Bandura, 1977). Social learning is apparent in many families, when toddlers express emotions—from giggling to cursing—in much the same way their parents or older siblings do. A boy might develop a hot temper, for instance, if his father’s outbursts seem to win respect from his mother.

Both psychoanalytic and behaviorist theories emphasize parents. Freud thought that the mother was the young child’s first and most enduring “love object,” and behaviorists stress the power of a mother over her children. In retrospect, this focus seems too narrow. The other three theories reflect more recent research and the changing historical context.

**Cognitive Theory**

Cognitive theory holds that thoughts and values determine a person’s perspective. Early experiences are important because beliefs, perceptions, and memories make them so, not because they are buried in the unconscious (psychoanalytic theory) or burned into the brain’s patterns (behaviorism).

Infants use their early relationships to develop a working model, a set of assumptions that become a frame of reference that can be called on later in life (Bretherton & Munholland, 1999; R. A. Thompson & Raikes, 2003). It is called a
“model” because these early relationships form a prototype, or blueprint, for later relationships; it is called “working” because, while usable, it is not necessarily fixed or final.

For example, a 1-year-old girl might develop a working model, based on her parents’ inconsistent responses to her, that people are unpredictable. All her life she will apply that model whenever she meets a new person. Her childhood relationships will be insecure, and in adulthood she might be on guard against further disappointment. To use Piaget's terminology, she has developed a cognitive schema to organize her perceptions. According to cognitive theory, a child's interpretation of early experiences is crucial, not necessarily the experiences themselves (Schaffer, 2000).

The hopeful message of cognitive theory is that people can rethink and reorganize their thoughts, developing new working models that are more positive than their original ones. Our mistrustful girl can learn to trust if her later experiences—such as marriage to a faithful and loving husband—provide a new model.

Epigenetic Theory

As you remember from Chapter 2, epigenetic theory holds that every human characteristic is strongly influenced by each person’s unique genotype. Thus, a child might be happy or anxious not because of early experiences (the three grand theories) but because of inborn predispositions. DNA remains the same from conception on, no matter how emotions are blocked (psychoanalytic theory), reinforced (behaviorism), or interpreted (cognitive theory).

Temperament

Among each person’s genetic predispositions are the traits of temperament, defined as “constitutionally based individual differences” in emotions, activity, and self-regulation (Rothbart & Bates, 2006, p. 100). “Constitutionally based” means that these traits originate with nature (genes) more than nurture.

The concept of temperament is similar to that of personality. Some researchers believe that the line between temperament and personality is unclear (e.g., Caspi & Shiner, 2006). Generally, however, personality traits (e.g., honesty and humility) are considered to be primarily learned, whereas temperamental traits (e.g., shyness and aggression) are considered to be primarily genetic. Although temperamental traits originate with the genes, the way these traits are expressed can be modified by experiences.

>Response for Nursing Mothers (from page 183): Freud thought so, but there is no experimental evidence that weaning, even when ill timed, has such dire long-term effects.

Twins They were born on the same day and now are experiencing a wading pool for the first time.

Observation Quiz (see answer, page 186): Are these babies monozygotic or dizygotic twins?
In laboratory studies of temperament, some infants have experiences that might be frightening. Four-month-olds might see spinning mobiles or hear unusual sounds. Older babies might confront a noisy, moving robot or a clown who quickly moves close. At such experiences, some children laugh (and are classified as “easy”), some cry (“difficult”), and some are quiet (“slow to warm up”) (Fox et al., 2001; Kagan & Snidman, 2004).

The categories of “easy,” “difficult,” and “slow to warm up” come from a classic study called the New York Longitudinal Study (NYLS). Begun in the 1960s, the NYLS was the first among many studies to recognize that each newborn has distinct inborn traits. Although temperament begins in the brain, it is difficult to detect via brain scans, so most of the research uses parents’ reports and direct observation. In order to avoid merely reflecting the parents’ hopes and biases, researchers ask for specifics. As the NYLS researchers explain:

If a mother said that her child did not like his first solid food, we . . . were satisfied only when she gave a description such as “When I put the food into his mouth he cried loudly, twisted his head away, and let it drool out.”

[Chess et al., 1965, p. 26]

According to the NYLS, by 3 months, infants manifest nine temperamental traits that can be clustered into the three categories described above, with a fourth category of “hard to classify” infants:

- Easy (40 percent)
- Difficult (10 percent)
- Slow to warm up (15 percent)
- Hard to classify (35 percent)

Other researchers began by studying adult personality traits and came up with the “Big Five” (whose first letters form the easy-to-remember acronym OCEAN):

- Openness: imaginative, curious, welcoming new experiences
- Conscientiousness: organized, deliberate, conforming
- Extroversion: outgoing, assertive, active
- Agreeableness: kind, helpful, easygoing
- Neuroticism: anxious, moody, self-critical

As is further explained in Chapter 22, the Big Five traits are found in many cultures, among people of all ages (McCrae & Costa, 2003). This universality adds to the evidence that some basic temperamental differences are innate, preceding child-rearing practices and cultural values (Rothbart et al., 2000). The Big Five are more complex than the easy/difficult/slow-to-warm-up classifications; but an infant high in agreeableness might be classified as easy, one high in neuroticism would be difficult, and one low in openness would be slow to warm up.

The Parents’ Role

Studies of temperament find that the traits found in the NYLS or described by the Big Five correspond to clusters of behaviors that appear early in life. Easy babies are happy and outgoing most of the time, adjusting quickly to almost any change. Difficult babies are the opposite: irregular, intense, unhappy, disturbed by every noise, and hard to distract—quite a handful. Slow-to-warm-up babies take their time to adapt to new people and experiences.
One longitudinal study (Fox et al., 2001) identified three distinct groups—positive (exuberant), negative, and inhibited (fearful)—at 4 months. (Many infants fit into none of these groups.) The researchers followed the children in each group, with laboratory measures, mothers’ reports, and brain scans at 9, 14, 24, and 48 months. Half were very stable in temperament, reacting the same way and having similar brain-wave patterns when confronted with frightening experiences all four times they were tested.

The other half changed their reaction to frightening experiences on at least one later assessment. Those who had been fearful at 4 months were most likely to change, and the exuberant infants were least likely to change (see Figure 7.1). That speaks to the influence of child rearing, since parents and other adults are likely to coax frightened children to be braver but usually encourage happy children to stay positive.

In response to such adult guidance, infant temperament often changes. In general, however, the interaction between cultural influences and inherited traits tends to shape behavior by early childhood (Rothbart & Bates, 2006). Traits that are present at age 3 often are still evident at age 26 (Caspi et al., 2003).

Whatever their child’s temperament, parents need to find a goodnesst of fit—that is, a temperamental adjustment that allows smooth infant-caregiver interaction. With a good fit, parents of difficult children are able to build a close relationship; parents of exuberant, curious children learn to protect them from harm; parents of slow-to-warm-up children give them time to adjust.

In general, stubborn and anxious children (i.e., high in neuroticism) are more affected by their mother’s responsiveness than positive children are (Pauli-Pott et al., 2004). Ineffective or harsh parenting combined with a negative temperament creates antisocial, destructive children (Caspi et al., 2002). Some children naturally cope easily with life’s challenges, whereas “a shy child must control his or her fear and approach a stranger, and an impulsive child must constrain his or her desire and resist a temptation” (Derryberry et al., 2003, p. 1061).

The epigenetic perspective emphasizes that inherited differences in temperament are affected by parental behavior (Kagan & Fox, 2006). Parents must first
ming to Worship. This boy in Borneo has
read that Allah is to be shown respect with
waved head and bare feet. He already prays
times a day as part of an ethnotheory that
udes concepts of life and death, male and
male, good and evil—just like everyone else
in the world, although the specifics vary
dly.

response for Nurses and Pediatricians
page 187: It's too soon to tell. Tempera-
ture is not truly "fixed" but variable, especially
t he first few months. Many "difficult" infants
remain happy, successful adolescents and
lts.

Answer to Observation Quiz (from
page 187): Out of 100 4-month-olds, 20 are
ful at least occasionally later in childhood,
only 5 are consistently fearful.

Ethnotheory. A theory that underlies the
rules and practices of a culture and that
becomes apparent through analysis and
comparison of those practices, although it
is not usually apparent to the people
within the culture.

Sociocultural Theory

No one doubts that "human development occurs in a cultural context" (Kagitcibasi,
2003, p. 166). The crucial question is how much influence culture has. Sociocul-
tural theorists argue that the influence is substantial, that the entire social and
cultural context has a major impact on infant–caregiver relationships and thus on
infant development.

Ethnotheories

An ethnotheory is a theory that is embedded in a particular culture or ethnic
group (Dassen, 2003). Usually the group members are unaware that their theories
underlie their customs. However, as you have already seen with breast-feeding
and co-sleeping, many child-rearing practices are connected to ethnotheories
(Greenfield et al., 2003).

This is true for emotional development as well. For example, if a culture's ethno-
theory includes the idea that ancestors are reincarnated in the younger genera-
tion, then "children are not expected to show respect for adults, but adults [are expected
to show respect] for their reborn ancestors." Such cultures favor indulgent child-
rearing practices, with no harsh punishments. "Western people perceive [these
cultures] as extremely lenient" (Dassen, 2003, pp. 149-150).

For example, we noted earlier that infants become angry when they are re-
strained. Nonetheless, many European American parents force their protesting
toddlers to sit in strollers, to ride in car seats, to stay in cribs and playpens or
behind gates. If toddlers do not lie down quietly to allow diapers to be changed (and few do), some parents simply hold the protesting child still while diapering. Compare this to the approach used by Roberto's parents, below.

## a case to study

**“Let’s Go to Grandma’s”**

The ethnotheory of Mayan parents includes the belief that children should never be forced to comply with their parents' wishes. When 18-month-old Roberto did not want to wear a diaper, his mother used a false promise, and then a distraction.

> "Let's put on your diaper... Let's go to Grandma's... We're going to do an errand." This did not work, and the mother invited Roberto to nurse, as she swiftly slipped the diaper on him with the father's assistance. The father announced, "It's over."

[Rogoff, 2003, p. 204]

Lack of compliance by toddlers is a problem for many Western parents because their ethnotheory values independence, as Erikson recognized in the name he gave his second stage, autonomy versus shame and doubt. Many Western parents battle with their autonomy-seeking 1-year-olds when the child's self-will manifests itself in stubborn behavior. Yet the parents value independence, so they inadvertently encourage that emotion.

For instance, if a child refuses to get dressed, parents sometimes force compliance by holding the child tight and pulling on clothes as the child cries and kicks. Or, if the room is warm and the child will stay inside, parents might give up and let the child remain half-dressed. Note that, in both cases, one person wins and the other loses, setting the emotional stage for another battle. Roberto's mother chose neither option, even with increasing exasperation that the child was wiggling and not standing to facilitate putting on his pants. Her voice softened as Roberto became interested in the ball, and she increased the stakes: "Do you want another toy?" They [father and mother] continued to try to talk Roberto into cooperating, and handed him various objects, which Roberto enjoyed. But still he stubbornly refused to cooperate with dressing. They left him alone for a while. When his father asked if he was ready, Roberto pouted "nono!"

After a bit, the mother told Roberto that she was leaving and waved goodbye. "Are you going with me?" Roberto sat quietly with a worried look. "Then put on your pants, put on your pants to go up the hill." Roberto stared into space, seemingly to consider the alternatives. His mother started to walk away, "OK then, I'm going. Goodbye." Roberto started to cry, and his father persuaded, "Put on your pants then!" and his mother asked, "Are you going with me?"

Roberto looked down worriedly, one arm outstretched in half a take-me gesture. "Come on, then," his mother offered the pants and Roberto let his father lift him to a stand and cooperated in putting his legs into the pants and in standing to have them fastened. His mother did not intend to leave; instead she suggested that Roberto dance for the audience. Roberto did a baby version of a traditional dance.

[Rogoff, 2003, p. 204]

This is an example of an ethnotheory that "elders protect and guide rather than giving orders or dominating" (Rogoff, 2003, p. 205). A second ethnotheory is apparent as well. Not only did the parents avoid dominating, they also used deception.

If a European American mother threatened to leave and then her child submitted, she probably would take him or her somewhere, because North American ethnotheory holds that false threats lead children to doubt their parents. The bogeyman and Santa Claus are less often invoked by today's educated parents than they were a few generations ago, more because of changed ethnotheory than because of new science.

## Proximal and Distal Parenting

Another example of ethnotheory involves how much parents should hold their infants. **Proximal parenting** involves being physically close to a baby, often holding and touching. **Distal parenting** involves keeping one's distance, providing toys, feeding by putting finger food within reach, and talking face to face instead of handling. Those who are convinced that one of these is right are expressing an ethnotheory.

A longitudinal study comparing child rearing among the Nso people of Cameroon, West Africa, and among Greeks in Athens found marked differences in proximal and distal parenting (H. Keller et al., 2004). The researchers videotaped 78 mothers as they played with their 3-month-old infants. Coders (who did not know the study's hypothesis) rated the play as either proximal (e.g., carrying, proximal parenting Parenting practices that involve close physical contact with the child's entire body, such as cradling and swinging.

distal parenting Parenting practices that focus on the intellect more than the body, such as talking with the baby and playing with an object.
Research Design

Scientists: A team of six from three nations (Germany, Greece, Costa Rica).
Participants: A total of 90 mothers participated when their babies were 3 months old and again when they were 18 months old (32 from Cameroon, 46 from Greece, 12 from Costa Rica).
In Greece and Costa Rica, researchers recruited mothers in hospitals. In Cameroon, permission was first sought from the local leaders, and then announcements were made among local people.

Design: First, mothers played with their 3-month-olds, and that play was videotaped and coded for particular behaviors. Fifteen months later, the toddlers' self-recognition was assessed with the rouge test, and compliance with preset maternal commands was measured. The mother's frequency of eye contact and body contact with the infant at 3 months was compared with the toddler's self-awareness and compliance at 18 months.

Major conclusion: Toddlers with proximal mothers were more obedient but less self-aware; toddlers with distal mothers tended to show the opposite pattern.

Comment: This is one of the best comparison studies of child-rearing practices in various cultures. Families differed in income and urbanization; these variables need to be explored in other research.

<table>
<thead>
<tr>
<th>Age of Babies</th>
<th>Type of Play</th>
<th>Amount of Time Spent in Play (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 months</td>
<td>Held by mother</td>
<td>Nso, Cameroon 100</td>
</tr>
<tr>
<td>3 months</td>
<td>Object play</td>
<td>Athens, Greece 31</td>
</tr>
<tr>
<td>18 months</td>
<td>Toddler Behavior Measured</td>
<td></td>
</tr>
<tr>
<td>18 months</td>
<td>Self-recognition</td>
<td>3</td>
</tr>
<tr>
<td>18 months</td>
<td>Compliance (without prompting)</td>
<td>68</td>
</tr>
</tbody>
</table>

Source: Adapted from Keller et al., 2004.

swinging, caressing, exercising the child's body) or distal (e.g., face-to-face talking) (see Table 7.2 and Research Design).

The Nso mothers were proximal parents, holding their babies all the time and almost never using objects. The Greek mothers were distal parents, using objects almost half the time and holding their babies less.

The researchers hypothesized that proximal parenting would result in toddlers who were less self-aware but more compliant—traits needed in an interdependent and cooperative society such as rural Cameroon. By contrast, distal parenting might result in toddlers who are self-aware but less obedient—traits needed in modern Athens, where independence, self-reliance, and competition are highly valued.

The predictions were accurate. At 18 months these children were tested on self-awareness (the rouge test) and compliance. The African toddlers didn't recognize themselves in the mirror but obeyed; the opposite was true of the Greek children.

Replicating their own work, these researchers studied a dozen mother–infant pairs in Costa Rica, where play patterns and later toddler behavior were midway between those of the Nso and the Greeks. They then reanalyzed their original longitudinal data, child by child. They found that proximal or distal play at 3 months was highly predictive of toddler behavior, even apart from culture. In other words, Greek mothers who, unlike most of their peers, were proximal parents had more obedient toddlers (H. Keller et al., 2004).

As this study suggested, every aspect of early emotional development interacts with cultural ideas of what is appropriate. For example, other research has found that separation anxiety is more evident in Japan than in Germany, because Japanese infants "have very few experiences with separation from the mother," whereas in Germany "infants are frequently left alone outside of stores or supermarkets" while the mother shops (Saarni et al., 2006, p. 237). From the beginning of life, some emotions are dampened and others are fueled by family responses.

SUMMING UP

The five major theories differ in their explanations of the origins of early emotions and personality. Psychoanalytic theory stresses the mother's responses to the infant's needs for food and elimination (Freud) or for security and independence (Erikson). Behaviorism also stresses caregiving—especially as parents reinforce the behaviors they want their baby to learn or as they thoughtlessly teach unwanted behaviors.

Learning is also crucial in cognitive theory—not the moment-by-moment learning of behaviorism, but the infant's self-constructed concept, or working model. Epigenetic

Especially for Parents of Toddlers

Your child refuses to stay in the car seat, spits out disliked foods, and almost never does what you say. What can you do?

Response for Parents of Young Adults

(from page 188) The implication is that human mothers are like sad birds, bereft of their fledglings, who have flown away. Chapter 22 details the accuracy of this ethnotheory.
The Development of Social Bonds

All the theories of development agree that healthy human development depends on social connections, as you have already seen in the abnormal behavior of emotionally deprived Romanian orphans (Chapter 5), in the social exchanges required for language learning (Chapter 6), and in dozens of other examples. All the emotions already described elicit social reactions, and infants are happier and healthier when others (especially their mothers) are nearby (Plutchik, 2003). Now we look closely at infant–caregiver bonds.

Synchrony

Synchrony is a coordinated interaction between caregiver and infant, an exchange in which they respond to each other with split-second timing. Synchrony has been described as the meshing of a finely tuned machine (Snow, 1984), an emotional "attunement" of an improvised musical duet (Stern, 1985), and a smoothly flowing "waltz" (Barnard & Martell, 1995).

Detailed research reveals the mutuality of the interaction: Adults rarely smile at newborns until the infant smiles at them, at which point adults grin broadly and talk animatedly (Lavelli & Fogal, 2005). Since each baby has a unique temperament, parents must be sensitive to their particular infant (Feldman & Eidelman, 2005). Via synchrony, infants learn to read other emotions and to develop the skills of social interaction, such as taking turns and paying attention.

Although infants imitate adults, synchrony usually begins with parents imitating infants (Lavelli & Fogal, 2005). If parents detect an emotion from an infant’s expression (easy to do, because infant facial expressions and body motions reflect universally recognizable emotions), and if an infant sees a familiar face expressing that emotion, the infant learns to connect an internal state with an external expression (Rochat, 2001).

For example, suppose an infant is unhappy. An adult who mirrors the distress, and then tries to solve the problem, will teach the infant that although unhappiness is a negative emotion, it is a valid one, and it can be relieved. Obviously, if the adult’s reaction to unhappiness is always to feed the infant, that might teach a destructive lesson (food equals comfort regardless of the cause of the distress). But if an adult’s response is more nuanced (by differentiating hunger, pain, boredom, or fear, for instance, and by responding differently to each), then the infant will learn to perceive the varied reasons for unhappiness and the varied ways of responding to it.

One of the important discoveries regarding synchrony is that adults do not merely echo infant emotions; they try to make them more positive. Thus, when their babies seem angry, mothers tend to react not with anger but with surprise (Malatesta et al., 1989).
Synchrony is experience-expectant, developing connections within the brain (Schore, 2001). For example, parents of triplets spend less time in synchrony with each of them than parents of single infants spend with their child (Feldman et al., 2004); perhaps for that reason, triplet cognition tends to be slightly delayed. Some mothers rarely play with their infants, and that slows down those children’s development (Huston & Aronson, 2005). Apparently, infant brains need social interaction to develop to their fullest. Babies usually elicit such interaction (as you have seen when a stranger makes faces to a baby in a public place), but some adults are too overwhelmed to play. In that case, the brain lacks an essential, expected stimulant.

Synchrony becomes more frequent and more elaborate as time goes on; a 6-month-old is a more responsive social partner than a 3-month-old. Parents and infants average about an hour a day in face-to-face play, although variations are apparent from baby to baby, from time period to time period, and from culture to culture (Baildam et al., 2000; Lee, 2000).

Thinking like a Scientist

The Still-Face Technique

Is synchrony needed for normal development? If no one plays with an infant, how will that infant develop? Experiments using the still-face technique have addressed these questions (Tronick, 1989; Tronick et al., 1978). An infant is placed facing an adult, who plays with the baby while a video camera records each partner’s reactions. Frame-by-frame comparison of the two videotapes reveals the sequence. Typically, mothers synchronize their responses to the infants’ movements, usually with exaggerated tone and expression, and babies reciprocate with smiles and arm waving.

Then, on cue, the adult freezes all facial expression and stares with a “still face” for a minute or two. Not usually at 2 months, but clearly at 6 months, babies are very upset by the still face, especially from their parents (less so for strangers). Babies frown, fuss, drool, look away, kick, cry, or suck their fingers.

Interestingly, babies are much more upset when parents show a still face than when parents leave the room for a minute or two (Roos, 2001). From a psychological perspective, this is healthy: It shows that “by 2 to 3 months of age, infants have begun to expect that people will respond positively to their initiatives” (R. A. Thompson, 2006, p. 29). In one set of experiments, infants became upset if someone had a still face for any reason—to look at a wall, to look at someone else, or merely to look away (Sriiano, 2004).

In another study, infants experienced not just one but two episodes of a parent’s still face. The infants quickly readjusted when their parent became responsive again if synchrony characterized the parent–infant relationship. If the parent was typically unresponsive, however, infants stayed upset (with faster heart rate and more fussing) even after the second still-face episode ended (Haley & Stamsbury, 2003).

Many research studies lead to the same conclusion: A parent’s responsiveness to an infant aids development, measured not only psychosocially but also biologically (with heart rate, weight gain, and brain maturation) (Moore & Calkins, 2004). If a mother is unresponsive to her infant (as usually happens with postpartum depression; see Chapter 4), the father or another caregiver should establish synchrony to help ensure normal development (Tronick & Weinberg, 1997).

Still-Face Technique

An experimental practice in which an adult keeps his or her face unmoving and expressionless in face-to-face interaction with an infant.

Attachment

According to Ainsworth, “an affectional tie” that an infant forms with the caregiver—a tie that binds them together in space and endures over time.

Attachment

Toward the end of the first year, face-to-face play almost disappears. Once infants can move around and explore, they are no longer content to stay in one spot and follow an adult’s facial expressions and vocalizations. Remember that, at about 12 months, most infants can walk and talk, which changes the rhythms of their social interaction (Jaffee et al., 2001). At this time a new type of connection, called attachment, replaces synchrony.

Attachment is a lasting emotional bond that one person has with another. Attachments form in infancy. According to attachment theory, new close relationships that arise later in life are influenced by these first attachments (R. A.
The Development of Social Bonds

Thompson & Raikes, 2003). In fact, adults’ attachment to their own parents, formed decades earlier, affects their relationships with their children. Humans learn in childhood how to relate to people, and those lessons echo lifelong (Grossman et al., 2005; Sroufe et al., 2005).

When two people are attached, they respond to each other in particular ways. Infants show their attachment through proximity-seeking behaviors, such as approaching and following their caregivers, and through contact-maintaining behaviors, such as touching, snuggling, and holding. A securely attached toddler is curious and eager to explore but maintains contact by looking back at the caregiver.

Caregivers show attachment as well. They keep a watchful eye on their baby and respond sensitively to vocalizations, expressions, and gestures. For example, many mothers or fathers, awakening in the middle of the night, tiptoe to the crib to gaze fondly at their sleeping infant. During the day, many parents instinctively smooth their toddler’s hair or caress their child’s hand or cheek.

Over humanity’s evolutionary history, proximity-seeking and contact-maintaining behaviors contributed to the survival of the species (R. A. Thompson, 2006). Attachment keeps infants near their caregivers and keeps caregivers vigilant.

Secure and Insecure Attachment

The concept of attachment was originally developed by John Bowlby (1969, 1973, 1988), a British developmentalist influenced by both psychoanalytic theory and ethology. Inspired by Bowlby’s work, Mary Ainsworth, then a young American graduate student, studied the relationship between parents and infants in Uganda (Ainsworth, 1973).

Ainsworth discovered that virtually all infants develop special attachments to their caregivers. Some infants are more securely attached than others—an observation later confirmed by hundreds of other researchers studying in dozens of nations and cultures (Cassidy & Shaver, 1999; Grossman et al., 2005; Sroufe, 2005; R. A. Thompson, 2006).

Attachment is classified into four types, labeled A–D (see Table 7.3). Infants with secure attachment (type B) feel comfortable and confident. The infant derives comfort from being close to the caregiver, and that provides him or her the confidence to explore. The caregiver becomes a base for exploration, giving the child the assurance to venture forth. A toddler might, for example,
Patterns of Infant Attachment

<table>
<thead>
<tr>
<th>Type</th>
<th>Name of Pattern</th>
<th>In Play Room</th>
<th>Mother Leaves</th>
<th>Mother Returns</th>
<th>Toddlers in Category (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Insecure-avoidant</td>
<td>Child plays happily</td>
<td>Child continues playing</td>
<td>Child ignores her</td>
<td>10–20</td>
</tr>
<tr>
<td>B</td>
<td>Secure</td>
<td>Child plays happily</td>
<td>Child pauses, is not as happy</td>
<td>Child welcomes her, returns to play</td>
<td>50–70</td>
</tr>
<tr>
<td>C</td>
<td>Insecure-resistant/ambivalent</td>
<td>Child clings, is preoccupied with mother</td>
<td>Child is unhappy, may stop playing</td>
<td>Child is angry, may cry, hit mother, cling</td>
<td>10–20</td>
</tr>
<tr>
<td>D</td>
<td>Disorganized</td>
<td>Child is cautious</td>
<td>Child may stare or yell, looks scared, confused</td>
<td>Child acts oddly—may freeze, scream, hit self, throw things</td>
<td>5–10</td>
</tr>
</tbody>
</table>

insecure-avoidant attachment A pattern of attachment in which an infant avoids connection with the caregiver, as when the infant seems not to care about the caregiver’s presence, departure, or return.

insecure-resistant/ambivalent attachment A pattern of attachment in which anxiety and uncertainty are evident, as when an infant is very upset at separation from the caregiver and both resists and seeks contact on reunion.

disorganized attachment A type of attachment that is marked by an infant’s inconsistent reactions to the caregiver’s departure and return.

Strange Situation A laboratory procedure for measuring attachment by evoking infants’ reactions to stress.

Answer to Observation Quiz (from page 193): The father uses his legs and feet to support his son at just the right distance for a great fatherly game of foot-kissing.

scramble down from the caregiver’s lap to play with a toy but periodically look back, vocalize a few syllables, and return for a hug.

By contrast, insecure attachment (types A and C) is characterized by fear, anxiety, anger, or indifference. Insecurely attached children have less confidence. Some play without maintaining contact with the caregiver; this is insecure-avoidant attachment (type A). An insecurely attached child might instead be unwilling to leave the caregiver’s lap; this is insecure-resistant/ambivalent attachment (type C).

The fourth category (type D) is called disorganized attachment; it may have some elements of any of the other types, but it is clearly different from them. Type D infants may shift from hugging to kissing their mothers, from staring blankly to crying hysterically, from pinching themselves to freezing in place.

About two-thirds of all infants are securely attached (type B). Their mother’s presence gives them courage to explore. The father’s presence makes some infants even more confident. The caregiver’s departure may cause distress; the caregiver’s return elicits positive social contact (such as smiling or hugging) and then more playing. A balanced reaction—being concerned about the caregiver’s departure but not overwhelmed by it—reflects secure attachment.

Almost a third of all infants are insecure, appearing either indifferent (type A) or unduly anxious (type C). The remaining infants fit into none of these categories and are classified as disorganized (type D).

Measuring Attachment

Ainsworth (1973) developed a now-classic laboratory procedure, called the Strange Situation, to measure attachment. In a well-equipped playroom, an infant is closely observed for eight episodes, during which the infant is with the caregiver (usually the mother), with a stranger, with both, or alone.

First, the caregiver and child are together. Then every three minutes the stranger or the caregiver enters or leaves the playroom. Infants’ responses to the stress of caregiver departure and stranger presence indicate which type of attachment they have formed to their caregivers. For research purposes, observers are carefully trained and are certified when they are able to accurately differentiate types A, B, C, and D. The key aspects to focus on are the following:

- Exploration of the toys. A securely attached toddler plays happily.
- Reaction to the caregiver’s departure. A secure toddler misses the caregiver.
- Reaction to the caregiver’s return. A secure toddler welcomes the caregiver.
[It is reactions to the caregiver that indicate attachment; reactions to strangers (whether tears or signs of interest) are a matter of temperament more than of affectional bond.]

Attachment is not always measured via the Strange Situation, which requires that infants be assessed one by one in a laboratory by carefully trained researchers. Sometimes attachment is measured via 90 questions to be sorted by parents about their children or via an extensive interview with parents about their relationships with their own parents. All these measures find a correlation between secure attachment and desirable personality traits and cognitive development. All also find that the type of attachment changes when circumstances (such as the responsiveness of the mother) change. Many aspects of good parenting correlate with secure attachment (see Table 7.4).

<table>
<thead>
<tr>
<th>Predictors of Attachment Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure attachment (type B) is more likely if:</td>
</tr>
<tr>
<td>- The parent is usually sensitive and responsive to the infant’s needs.</td>
</tr>
<tr>
<td>- The infant–parent relationship is high in synchrony.</td>
</tr>
<tr>
<td>- The infant’s temperament is “easy.”</td>
</tr>
<tr>
<td>- The parents are not stressed about income, other children, or their marriage.</td>
</tr>
<tr>
<td>- The parents have a working model of secure attachment to their own parents.</td>
</tr>
<tr>
<td>Insecure attachment is more likely if:</td>
</tr>
<tr>
<td>- The parent mistreats the child. (Neglect increases type A; abuse increases C and D.)</td>
</tr>
<tr>
<td>- The mother is mentally ill. (Paranoia increases type D; depression increases type C.)</td>
</tr>
<tr>
<td>- The parents are highly stressed about income, other children, or their marriage. (Parental stress increases types A and D.)</td>
</tr>
<tr>
<td>- The parents are intrusive and controlling. (Parental domination increases type A.)</td>
</tr>
<tr>
<td>- The parents are alcoholic. (Alcoholic father increases type A; alcoholic mother increases type D.)</td>
</tr>
<tr>
<td>- The child’s temperament is “difficult.” (Difficult children tend to be type C.)</td>
</tr>
<tr>
<td>- The child’s temperament is “slow to warm up.” (This correlates with type A.)</td>
</tr>
</tbody>
</table>

The Attachment Experiment In this episode of the Strange Situation, Brian shows every sign of secure attachment. (a) He explores the playroom happily when his mother is present; (b) he cries when she leaves; and (c) he is readily comforted when she returns.

These family and infant characteristics influence a child’s attachment status in the ways stated here, but none fully determine it. For example, parental sensitivity predicts only a modest amount of the variation between secure and insecure children. All these correlations have been found in several studies, but none appear in every study, because infant temperaments, contexts, and cultures vary too much.
Insecure Attachment and Social Setting

Early researchers expected secure attachment to “predict all the outcomes reasonably expected from a well-functioning personality” (R. A. Thompson & Raiskis, 2003, p. 708). But this turned out not to be the case. Securely attached infants are more likely to become secure toddlers, socially competent preschoolers, academically skilled schoolchildren, and better parents (R. A. Thompson, 2006). However, the correlations are not large, and that makes prediction very tentative. Many children shift in attachment status between one age and another (NICHD, 2001; Seifer et al., 2004).

The most troubled children may be those classified as type D. If their disorganization makes them unable to develop an effective strategy for dealing with other people (even an avoidant or resistant strategy, type A or C), they may lash out. Sometimes they become hostile and aggressive, difficult for anyone else to relate to (Lyons-Ruth et al., 1999). (An unusually high percentage of the Romanian children who were adopted after age 2 were type D.)

Social Referencing

Infants seek to understand caregivers’ emotions. At about age 1, social referencing becomes evident when an infant looks to another person for clarification or information, much as someone might consult a dictionary or other “reference” work. A glance of reassurance or words of caution, an expression of alarm, pleasure, or dismay—each becomes a social guide, telling an infant how to react to an unfamiliar situation.

After age 1, when infants reach the stage of active exploration (Piaget) and the crisis of autonomy versus shame and doubt (Erikson), the need to consult caregivers becomes urgent. Toddlers search for cues in gaze and facial expressions, pay close attention to adults’ expressed emotions, and watch carefully to detect intentions behind other people’s actions (Baldwin, 2000).

Social referencing has many practical applications. Consider mealtime. Caregivers the world over smack their lips, pretend to taste, and say “yum-yum,” encouraging toddlers to eat and enjoy their first beets, liver, or spinach. For their part, toddlers become astute at reading expressions, insisting on the foods that the adults really like. Through this process, children in some cultures develop a taste for raw fish or curried goat or smelly cheese—foods that children in other cultures refuse.

Referencing Mothers

Most everyday instances of social referencing occur with mothers. Infants usually heed their mother’s wishes, expressed in tone and facial expression. This does not mean that infants are always obedient, especially in cultures where parents and children value independence. Not surprisingly, compliance has been the focus of study in the United States, where it often conflicts with independence.

For example, in one experiment, 4-year-olds obeyed their mother’s request (required by the researchers) to pick up dozens of toys that they had not scattered (Kochanska et al., 2001). Their refusal indicates some emotional maturity. Self-awareness had led to pride and autonomy. The body language and expressions of some of the mothers implied that they did not really expect their children to obey.

These same toddlers were quite obedient when their mothers told them not to touch an attractive toy. The mothers used tone, expression, and words to make this prohibition clear. Because of social referencing, toddlers understood the
message. Even when the mothers were out of sight, half of the 14-month-olds and virtually all of the 22-month-olds obeyed. Most (80 percent) of the older toddlers seemed to agree with the mothers' judgment (Kochanska et al., 2001).

Referencing Fathers

In North America, increases in maternal employment have expanded the social references available to infants. Fathers—once thought to be uninvolved with their infants (as was the case with Uncle Henry)—now spend considerable time with their children.

For example, the stereotype is that Latino fathers leave caregiving to their wives. However, a study of more than 1,000 Latino 9-month-olds found “fathers with moderate to high levels of engagement” (Cabrera et al., 2006, p. 1203). Although many possible correlates of father involvement (income, education, age) were analyzed, only one significant predictor of the level of engagement was found: how happy the father was with the infant's mother. Happier husbands tend to be more involved fathers.

The social information that infants get from their fathers tends to be more encouraging than that from mothers, who are more cautious and protective. When toddlers are about to explore, they often seek their father's approval, expecting fun from their fathers and comfort from their mothers (Lamb, 2000; Parke, 1996).

In this, infants show social intelligence, because fathers play imaginative and exciting games. They move their infant's legs and arms in imitation of walking, kicking, or climbing; or play “airplane,” zooming the baby through the air; or tap and tickle the baby's stomach. Mothers caress, murmur, read, or sing soothingly; combine play with caretaking; and use standard sequences such as peek-a-boo and patty-cake. In short, fathers are generally more proximal, engaging in play that involves the infant's whole body.

Infant Day Care

You have seen that social bonds are crucial for infants. How is this need affected by time spent with paid caregivers? More than half of all 1-year-olds in the United States are in “regularly scheduled” nonmaternal care, sometimes by relatives (usually the father or grandmother) but often not (Loeb et al., 2004). Mothers usually prefer care by a relative because it is the least expensive, often free. However, family care varies in quality and availability. (If a mother is employed, chances are her husband and mother are as well.)

Family day care (children of various ages cared for in someone else’s home) is more often used for infants, and older children are more often in center day care (several paid caregivers in a place designed for young children). Quality varies in such places, with standards varying markedly from state to state as well as from nation to nation.

In the United States, most parents encounter a “mix of quality, price, type of care, and government subsidies” (Haskins, 2005, p. 168). Some center care is excellent (see Table 7.5), with adequate space, equipment, and trained providers (the ratio of adults to infants should be about 2:5), but it is hard to find. Households with higher incomes are more likely to use center care. In other nations, people of all incomes use center care, funded by the government.

The evidence is overwhelming that good preschool education (reviewed in Chapter 9) is beneficial for young children. Infant day care is more controversial (Waldfogel, 2006), but most developmentalists find that infants are not likely to be harmed by—and, in fact, can benefit from—professional day care (Brooks-Gunn et al., 2002, Lamb, 1998).
Research Design

Scientists: NICHD Early Child Care Research Network, 30 developmentalists cooperating in a study sponsored by the National Institute of Child Health and Human Development (NICHD).

Publication: Hundreds of research articles in every major child development journal and a book, *Child Care and Child Development* (2006), have been published analyzing these data.

Participants: Total of 1,364 mother-infant pairs, from 25 hospitals at 10 sites throughout the United States. Participants were recruited within days after birth. Participating mothers had to be over 18, English-speaking, and healthy.

Design: Ongoing longitudinal study, with many repeated measures from birth to age 10, looking especially at child-care arrangements and at social, emotional, and cognitive development. The data from this study have been used for many purposes; here we focus on correlations between infant care and later development.

Major conclusions: Quality of maternal care is more important than specifics of care. Poor-quality day care, especially in infancy, has some long-term negative effects. Some researchers have found that nonmaternal care for 40 or more hours per week increases the risk of later aggression.

Comment: This study is large, diverse, and ongoing, and it continues to provide fascinating results. One strength is that many regions within the United States were sampled; one weakness is that only one nation was studied. The main drawback is that low-SES and immigrant mothers are not adequately represented.

High-Quality Day Care

High-quality day care during infancy has five essential characteristics:

1. **Adequate attention to each infant.** This means a low caregiver-to-infant ratio and, probably even more important, a small group of infants. The ideal situation might be two reliable caregivers for five infants. Infants need familiar, loving caregivers; continuity of care is very important.

2. **Encouragement of language and sensorimotor development.** Infants should receive extensive language exposure through games, songs, conversations, and positive talk of all kinds, along with easily manipulated toys.

3. **Attention to health and safety.** Cleanliness routines (e.g., handwashing before meals), accident prevention (e.g., no small objects that could be swallowed), and safe areas for exploration (e.g., a clean, padded area for crawling and climbing) are good signs.

4. **Well-trained and professional caregivers.** Ideally, every caregiver should have a degree or certificate in early-childhood education and should have worked with children for several years. Turnover should be low, morale high, and enthusiasm evident. Good caregivers love their children and their work.

5. **Warm and responsive caregivers.** Providers should engage the children in problem solving and discussions, rather than giving instructions. Quiet, obedient children may be an indication of unresponsive care.

For a more detailed evaluation of day care, see the checklist in NICHD, 2005.

A longitudinal study has followed the development of more than 1,300 children from birth to age 11 (NICHD, 2005). The effects of various types of infant care on attachment was a major concern of the researchers, but most analyses of the data found that attachment to the mother is as secure among infants in center care as among infants cared for at home. Like other, smaller studies, this NICHD study confirms that infant day care, even for 40 hours a week before age 1, has much less influence on child development than does the warmth of the mother-infant relationship. Infant and child cognition, especially language learning, advance with center care (NICHD, 2005; see Research Design).

Good infant day care is expensive and scarce, however, because infants need individualized and affectionate attention, which are likely to be in short supply if a caregiver has many infants to care for and limited experience and training (Waldogel, 2006). Probably for this reason, "disagreements about the wisdom (indeed, the morality) of nonmaternal child care for the very young remain" (NICHD, 2005, p. xiv).

No study finds that children of employed mothers suffer solely because their mothers are working. Many employed mothers make infant care their top priority. For example, time-use research finds that mothers who work full time outside the home spend almost as much time playing with their babies (14½ hours a week) as do mothers without outside jobs (16 hours a week) (Huston & Aronson, 2005). Employed mothers spend half as much time on housework and almost no time on leisure. The study concludes:

> There was no evidence that mothers' time at work interfered with the quality of their relationship with their infants, the quality of the home environment, or children's development. In fact, the results suggest the opposite. Mothers who spent more time at work provided slightly higher quality home environments.

[Huston & Aronson, 2005, p. 479]

Other research confirms that much depends on the quality of care, wherever it occurs and whoever provides it. According to the NICHD Early Child Care Research Network, early day care seems detrimental only when the mother is in-
sensitive and the infant spends more than 20 hours a week in a poor-quality program in which there are too few caregivers, with too little training) (NICHD, 2005).

Although the mother's sensitivity is the best predictor of a child's social skills, day care can have a significant effect, too. Some children, especially boys, who receive extensive nonmaternal care are more quarrelsome and have more conflicts with their teachers than does the average student (NICHD, 2003).

The negative effects of poor care have also been found in a study in Israel of 758 infants. Those cared for at home by an attentive father or grandmother seemed to do very well, as did those in a high-quality day-care center. However, those cared for in a center with untrained caregivers and only one adult for five infants fared poorly (Sagi et al., 2002). Other studies also find that a 5:1 ratio of infants to adults is too high; 5:2 not only allows caregivers to provide better instruction and support but also makes children more cooperative (de Schipper et al., 2006).

Regarding home care, children whose primary caregiver is depressed fare worse than they would in center care (Loeb et al., 2004). Many studies find that out-of-home day care is better than in-home care if an infant's family does not provide adequate stimulation and attention (Ramey et al., 2002; Votruba-Drzal et al., 2004).

Among the benefits of day care is the opportunity to learn to express emotions. When a toddler is temperamentally very shy or aggressive, he or she is less likely to remain so if caregivers and other children are available as social references (Fox et al., 2001; Zagler & Styfco, 2001). But no expert would say that all infants are better off either in day care or at home.

**SUMMING UP**

Infants seek social bonds, which they develop with one or several people. Synchrony begins in the early months. Infants and caregivers interact face to face, making split-second adjustments in their emotional responses to each other. Synchrony evolves into attachment, an emotional bond with adult caregivers. Secure attachment allows learning to progress; insecure infants are less confident and may develop emotional impairments. As infants become more curious and as they encounter new toys, people, and events, they use social referencing to learn whether such new things are fearsome or fun.

The emotional connections evident in synchrony, attachment, and social referencing may occur with mothers, fathers, other relatives, and day-care providers. Instead of harming infants, as was once feared, nonmaternal care sometimes enhances infants' psychosocial development. The quality and continuity of child care matter more than who provides it.

**Conclusions in Theory and Practice**

You have seen in this chapter that the first two years are filled with psychosocial interactions, all of which result from genes, maturation, culture, and caregivers. Each of the five major theories seems plausible. No single theory stands out as the best.

All theorists agree that the first two years are crucial, with early emotional and social development influenced by the parents’ behavior, the quality of day care, cultural patterns, and inborn traits. It has not been proven whether one influence, such as a good day-care center, compensates for another, such as a depressed mother (although parental influence is always significant). Multicultural research
## Table 7.6

**At About This Time: Infancy**

<table>
<thead>
<tr>
<th>Approximate Age</th>
<th>Characteristic or Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 months</td>
<td>Rolls over</td>
</tr>
<tr>
<td></td>
<td>Stays half-upright in stroller</td>
</tr>
<tr>
<td></td>
<td>Uses two eyes together</td>
</tr>
<tr>
<td></td>
<td>Grabs for object; if rattle in hand, can shake it</td>
</tr>
<tr>
<td></td>
<td>Makes cooing noises</td>
</tr>
<tr>
<td></td>
<td>Joyous recognition of familiar people</td>
</tr>
<tr>
<td>6 months</td>
<td>Sits up, without adult support (but sometimes using arms)</td>
</tr>
<tr>
<td></td>
<td>Grabs and can grasp objects with whole hand</td>
</tr>
<tr>
<td></td>
<td>Smiles and laughs</td>
</tr>
<tr>
<td></td>
<td>Babbles, listens, and responds with facial expression</td>
</tr>
<tr>
<td></td>
<td>Tries to crawl (on belly, not yet on all fours)</td>
</tr>
<tr>
<td></td>
<td>Stands and bounces with support</td>
</tr>
<tr>
<td></td>
<td>(on someone’s lap, in a bouncer)</td>
</tr>
<tr>
<td></td>
<td>Begins to shows signs of anger, fear, attachment</td>
</tr>
<tr>
<td>12 months</td>
<td>Stands without holding on</td>
</tr>
<tr>
<td></td>
<td>Crawls well</td>
</tr>
<tr>
<td></td>
<td>Takes a few unsteady steps</td>
</tr>
<tr>
<td></td>
<td>Uses fingers, including pincer grasp (thumb and forefingers)</td>
</tr>
<tr>
<td></td>
<td>Can feed self with fingers</td>
</tr>
<tr>
<td></td>
<td>Speaks a few words (mama, dada, baba)</td>
</tr>
<tr>
<td></td>
<td>Strong attachment to familiar caregivers</td>
</tr>
<tr>
<td></td>
<td>Apparent fear of strangers, of unexpected noises and events</td>
</tr>
<tr>
<td>18 months</td>
<td>Walks well</td>
</tr>
<tr>
<td></td>
<td>Runs, but also falls</td>
</tr>
<tr>
<td></td>
<td>Tries to climb on furniture</td>
</tr>
<tr>
<td></td>
<td>Speaks 50-100 words; most are nouns</td>
</tr>
<tr>
<td></td>
<td>Begins toilet training</td>
</tr>
<tr>
<td></td>
<td>Likes to drop things, throw things, take things apart</td>
</tr>
<tr>
<td></td>
<td>Recognizes self in mirror</td>
</tr>
<tr>
<td>24 months</td>
<td>Runs well</td>
</tr>
<tr>
<td></td>
<td>Climbs up (down is harder)</td>
</tr>
<tr>
<td></td>
<td>Uses simple tools (spoon, large marker)</td>
</tr>
<tr>
<td></td>
<td>Combines words (usually noun/verb, sometimes noun/verb/noun)</td>
</tr>
<tr>
<td></td>
<td>Can use fingers to unscrew tops, open doors</td>
</tr>
<tr>
<td></td>
<td>Vary interested in new experiences and new children</td>
</tr>
</tbody>
</table>

### An Eventful Time

This table lists aspects of development that have been discussed in Chapters 5, 6, and 7. Throughout infancy, temperament and experience affect when and how babies display the characteristics and achievements listed here. The list is meant as a rough guideline, not as a yardstick for indicating a child’s progress in intelligence or any other trait.

The father reports:

We rebuilt Jacob’s connection to us and to the world—but on his terms. We were drilled to always follow his lead, to always build on his initiative. In a sense, we could only ask Jacob to join our world if we were willing to enter his. . . . He would drop rocks and we would catch them. He would want to put pennies in a bank and we would block the slot. He would want to run in a circle and we would let him.

I remember a cold fall day when I was putting lime on our lawn. He dipped his hand in the powder and let it slip through his fingers. He loved the way it has identified a wide variety of practices in different societies. These discoveries imply that no one event (such as toilet training, in Freud’s theory) determines emotional health.

On the basis of what you have learned, you could safely advise parents to play with their infants; respond to their physical and emotional needs; let them explore; maintain a relationship; pay attention to them; and expect every toddler to be sometimes angry, sometimes proud, sometimes fearful. Parental actions and attitudes may or may not have a powerful impact on later development, but they certainly can make infants happier or sadder. Parental attentiveness leads to synchrony, attachment, and social referencing, which are crucial to infant and toddler development.

Such generalities are not good enough for Jacob, or for all the other infants who show signs of maltreatment, delayed language, poor social skills, abnormal emotional development, insecure or disorganized attachment, or other deficits. In dealing with individual children who have problems, we need to be more specific.

Jacob was 3 years old but not talking. Even in his first year, his psychosocial development was impaired. Looking at Table 7.6 on infant development, you can see that even at 3 months he was unusual in his reaction to familiar people. All infants need one or two people who are emotionally invested in them from the first days of life, and it is not clear that Jacob had anyone, including his nanny, who did not speak English, or his parents. There is no indication of synchrony or attachment.

Something had to be done, as the parents eventually realized. They took Jacob for evaluation at a major teaching hospital. He was seen by at least 10 experts, none of whom said anything encouraging. The diagnosis was “pervasive developmental disorder,” which suggests serious brain abnormality.

Fortunately, Jacob’s parents then consulted a psychiatrist who specialized in children with psychosocial problems (Greenspan & Wieder, 2003). He showed them how to relate to Jacob, saying, “I am going to teach you how to play with your son.” They learned about “floor time,” four hours a day set aside to get on their son’s level and interact: Imitate him, act as if they are part of the game, put their faces and bodies in front of his, create synchrony even though Jacob did not initiate it.
felt. I took the lawn spreader and ran to the other part of our yard. He ran after me. I let him have one dip and ran across the yard again. He dipped, I ran, he dipped, I ran. We did this until I could no longer move my arms.

(Jacob's father, 1997, p. 62)

Jacob's case is obviously extreme, but many infants and parents have difficulty establishing synchrony. From the perspective of early psychosocial development, nothing could be more important than a connection like the one Jacob and his parents established.

In Jacob's case it worked. He said his first word at age 3, and by age 5 . . . he speaks for days at a time. He talks from the moment he wakes up to the moment he falls asleep, as if he is making up for lost time. He wants to know everything. "How does a live chicken become an eating chicken? Why are microbes so small? Why do policemen wear badges? Why are dinosaurs extinct? What is French? [A question I often ask myself.] Why do ghosts glow in the dark?" He is not satisfied with answers that do not ring true or that do not satisfy his standards of clarity. He will keep on asking until he gets it. Rebecca and I have become expert definition providers. Just last week, we were faced with the ultimate challenge: "Dad," he asked: "Is God real or not?" And then, just to make it a bit more challenging, he added: "How do miracles happen?"

(Jacob's father, 1997, p. 63)

Miracles do not always happen. Children with pervasive developmental disorder usually require special care throughout childhood; Jacob may continue to need extra attention. Nevertheless, almost all infants, almost all the time, develop strong relationships with their close family members. The power of early psychosocial development is obvious to every developmentalist and, it is hoped, to every reader of this text.

Response for Day-Care Providers
(from page 198): Reassure the mother that you will keep her baby safe and will help to develop the baby's mind and social skills by fostering synchrony and attachment. Also tell her that the quality of mother-infant interaction at home is more important than anything else for psychosocial development; mothers who are employed full time usually have wonderful, secure relationships with their infants. If the mother wishes, you can discuss ways she can be a more responsive mother.

Response for Potential Day-Care Providers (from page 199): A high-quality day-care center needs trained and responsive adults and a clean, safe space—all of which can be expensive and may mean that you will have to charge higher fees than many families can afford to pay. The main benefit for you is knowing that you can make a major contribution to the well-being of infants and their families.

SUMMARY

Emotional Development

1. Two emotions, contentment and distress, appear as soon as an infant is born. Anger emerges with restriction and frustration, between 4 and 8 months of age, and becomes stronger by age 1.

2. Reflexive fear is apparent in very young infants. However, fear of something specific, including fear of strangers and fear of separation, does not appear until toward the end of the first year.

3. In the second year, social awareness produces more selective fear, anger, and joy. As infants become increasingly self-aware at about 18 months, emotions—specifically, pride, shame, and affection—emerge that encourage an interface between the self and others.

Theories About Infant Psychosocial Development

4. According to all five major theories, caregiver behavior is especially influential in the first two years. Freud stressed the mother's impact on oral and anal pleasure; Erikson emphasized trust and autonomy.

5. Behaviorists focus on learning; parents teach their babies many things, including when to be fearful or joyful. Cognitive theory holds that infants develop working models based on their experiences.

6. Epigenetic theory emphasizes temperament, a set of genetic traits whose expression is influenced by the environment. Parental practices inhibit and guide a child's temperament, but they do not create it. Ideally, a good fit develops between the parents' actions and the child's personality.

7. The sociocultural approach notes the impact of social and cultural factors on the parent-infant relationship. Ethnotheories shape infant emotions and traits so that they fit well within the culture. Some cultures emphasize proximal parenting (more physical touch); others promote distal parenting (more talk and object play).

The Development of Social Bonds

8. By 3 months, infants become more responsive and social, and synchrony begins. Synchrony involves moment-by-moment interaction. Caregivers need to be responsive and sensitive. Infants are disturbed by a still face because they expect and need social interaction.
9. Attachment, measured by the baby's reaction to the caregiver's presence, departure, and return in the Strange Situation, is crucial. Some infants seem indifferent (type A—insecure-avoidant) or overly dependent (type C—insecure-resistant/ambivalent), instead of secure (type B). Disorganized attachment (type D) is the most worrisome form.

10. Secure attachment provides encouragement for infant exploration. As they play, toddlers engage in social referencing, looking to other people's facial expressions to detect what is fearsome and what is enjoyable.

11. Fathers are wonderful playmates for infants, who frequently consult them, as well as their mothers, as social references.

12. Day care for infants seems, on the whole, to be a positive experience, especially for cognitive development. Psychosocial characteristics, including secure attachment, are influenced more by the mother's warmth than by the number of hours spent in nonmaternal care. Quality of care is crucial, no matter who provides that care.

Conclusions in Theory and Practice

13. Experts debate exactly how critical early psychosocial development may be. Is it the essential foundation for all later growth or just one of many steps along the way? However, all infants need caregivers who are committed to them and are dedicated to encouraging each aspect of early development.

KEY TERMS

- Attachment (p. 192)
- Secure attachment (p. 193)
- Insecure-avoidant attachment (p. 194)
- Insecure-resistant/ambivalent attachment (p. 194)
- Strange Situation (p. 194)
- Social referencing (p. 196)
- Family day care (p. 197)
- Center day care (p. 197)

- Social smile (p. 180)
- Stranger wariness (p. 181)
- Separation anxiety (p. 181)
- Self-awareness (p. 182)
- Trust versus mistrust (p. 183)
- Autonomy versus shame and doubt (p. 184)
- Social learning (p. 184)
- Working model (p. 184)
- Temperament (p. 185)
- Goodness of fit (p. 187)
- Ethnotheory (p. 188)
- Proximal parenting (p. 189)
- Distal parenting (p. 189)
- Synchrony (p. 191)
- Still-face technique (p. 192)

KEY QUESTIONS

1. How would a sensitive parent respond to an infant's distress?
2. How do emotions in the second year of life differ from emotions in the first year?
3. What are similarities and differences in the two psychoanalytic theories of infancy?
4. How might synchrony affect the development of emotions in the first year?
5. What is an example of an ethnotheory of your culture that differs from those of other cultures?
6. What are the similarities between epigenetic and sociocultural theories of infant emotions?
7. Why would a mother and father choose not to care for their infant themselves, 24/7?
8. What are the advantages and disadvantages of three kinds of nonmaternal infant care: relatives, family day care, and center day care?
9. Attachments are said to be lifelong. Describe an adult who is insecurely attached.
10. How would psychosocial development be affected if an infant spent every day in a crowded day-care center—for example, a center with eight infants for every caregiver?
11. In terms of infant development, what are the differences between employed and unemployed mothers?

APPLICATIONS

1. One cultural factor influencing infant development is how infants are carried from place to place. Ask four mothers whose infants were born in each of the past four decades how they transported them—front or back carriers, facing out or in, strollers or carriages, car seats or on mother's laps, and so on. Why did they choose the mode(s) they chose? What are their opinions and yours on how that cultural practice might affect infants' development?

2. Observe synchrony for three minutes. Ideally, ask the parent of an infant under 8 months of age to play with the infant. If no infant is available, observe a pair of lovers as they converse. Note the sequence and timing of every facial expression, sound, and gesture of both partners.

3. Telephone several day-care centers to try to assess the quality of care they provide. Ask about such factors as adult–child ratio, group size, and training for caregivers of children of various ages. Is there a minimum age? If so, why was that age chosen? Analyze the answers, using Table 7.5 as a guide.