

## 4

## CHAPTER



# The Developing Person

*In mid-1978, the newest astonishment in medicine . . . was the birth of an English baby nine months after conception in a dish. The older surprise, which should still be fazing us all, is that a solitary sperm and a single egg can fuse and become a human being. . . . This has been going on under our eyes for so long a time that we've gotten used to it; hence the outcries of amazement at this really minor technical modification of the general procedure—nothing much, really, beyond relocating the beginning of the process from the fallopian tube to a plastic container.*

Lewis Thomas, *The Medusa and the Snail*, 1979

The developing person is no less a wonder after birth than in the womb. As we journey through life from womb to tomb, when and how do we change? We invariably notice how we differ. However, to **developmental psychologists**, who study physical, mental, and social changes throughout the human life cycle, discerning our commonalities is just as important. Virtually all of us began walking around age 1 and talking by age 2. As children, we each engaged in social play in preparation for life's work. As adults, we all smile and cry, love and loathe, and occasionally ponder the fact that someday we will die. Psychology's developmental perspective examines how people are continually developing, from infancy through old age. Much of its research centers on three major issues:

1. *Nature/nurture*: How much do genetic inheritance (our *nature*) and experience (the *nurture* we receive) influence our development?
2. *Continuity/stages*: Is development a gradual, continuous process like riding an escalator, or does it proceed through a sequence of separate stages, like climbing rungs on a ladder?
3. *Stability/change*: Do our early personality traits persist through life, or do we become different persons as we age?

In Chapter 3, we engaged the nature/nurture issue. At this chapter's end, we will reflect on the continuity and stability issues.

*"Nature is all that a man brings with him into the world; nurture is every influence that affects him after his birth."*

Francis Galton, *English Men of Science*, 1874



“You shall conceive and bear a son. So then drink no wine or strong drink.”

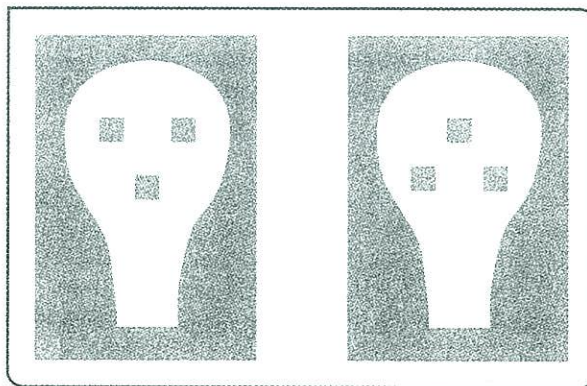
Judges 13:7

“The first lecture on psychology I ever heard was the first I ever gave.”

William James, American psychologist  
(1842–1910)

### FIGURE 4.3

**Newborns' preference for faces**  
When shown these two stimuli with the same elements, Italian newborns spent nearly twice as many seconds looking at the facelike image (Morton & Johnson, 1991). Canadian newborns—average age 53 minutes in one study—display the same apparently inborn preference to look toward faces (Mondloch & others, 1999).



■ **rooting reflex** a baby's tendency, when touched on the cheek, to open the mouth and search for the nipple.

pregnancy have babies with FAS. “If women didn't drink during pregnancy,” notes researcher Ann Streissguth (1993), “there would *never* be another baby born with fetal alcohol syndrome.”

## The Competent Newborn

Having survived prenatal hazards, we as newborns come equipped with reflexes ideally suited for our survival. We withdraw a limb to escape pain. If a cloth over our face interferes with our breathing, we turn our head from side to side and swipe at it. New parents are often in awe of the coordinated sequence of reflexes by which their baby gets food. The **rooting reflex** illustrates this: When something touches their cheek, babies open their mouth and vigorously “root” for a nipple. Finding one, they automatically close on it and begin sucking—which itself requires a coordinated sequence of tonguing, swallowing, and breathing. Failing to find satisfaction, the hungry baby may cry—a behavior parents are predisposed to find highly unpleasant and very rewarding to relieve.

The pioneering American psychologist William James presumed that the newborn experiences a “blooming, buzzing confusion.” Until the 1960s, few people disagreed. It was said that, apart from a blur of meaningless light and dark shades, newborns could not see. Then, just as new technology led to progress in neuroscience, so, too, did new investigative techniques enhance infant studies. Scientists discovered that babies can tell you a lot—if you know how to ask. To ask, you must capitalize on what the baby can do—gaze, suck, turn her head. So, equipped with eye-tracking machines and pacifiers wired to electronic gear, researchers set out to answer parents' age-old questions: What can my baby see, hear, smell, and think?

What they discovered was fascinating. We are born preferring sights and sounds that facilitate social responsiveness. As newborns, we turn our heads in the direction of human voices. We gaze longer at a drawing of a facelike image (FIGURE 4.3) than at a bull's-eye pattern; yet we gaze more at a bull's-eye pattern—which has contrasts much like that of the human eye—than at a solid disk (Fantz, 1961).

We prefer to look at objects 8 to 12 inches away, which, wonder of wonders, just happens to be the approximate distance between a nursing infant's eyes and its mother's (Maurer & Maurer, 1988).

Our perceptual abilities develop continuously during the first months of life. Within days of birth, our brain's neural networks were stamped with the smell of our mother's body. Thus, a week-old nursing baby,

placed between a gauze pad from its mother's bra and one from another nursing mother, will usually turn toward the smell of its own mother's pad (MacFarlane, 1978). At 3 weeks, if given a pacifier that sometimes turns on recordings of its mother's voice and sometimes that of a female stranger's, an infant will suck more vigorously when it hears its now-familiar mother's voice (Mills & Melhuish, 1974). Newborns can also learn to turn their heads to the left or right to receive a sugar solution when their forehead is stroked (Lancioni, 1980). So not only can we as your infants see what we need to see, and smell and hear well, but we are already using our sensory equipment to learn.