6 Early Childhood

It is midmorning in a day care center in Aalborg, Denmark, and Lars Olsen, age 4, is playing a game with his friend Pelle (*pell-uh*). "Look out!" he shouts to Pelle, holding up a toy airplane with a little pilot in it. "There's gonna be a crash!" Pelle, with no airplane of his own, has taken a plastic banana from the kitchen play area and straddled a small stuffed bear on it. "You can't catch me! I'm too fast!" he exclaims, and dashes away with Lars in pursuit. Lars catches up to him and hits his toy plane against Pelle's banana airplane, and the airplanes crash to the ground along with the laughing boys.

"Come, children!" calls the boys' preschool teacher, Birgitte. "It's story time." The children, familiar with this daily ritual, sit on the floor in a semicircle in front of Birgitte as she begins to read the story of the day. Lars enjoys the story, and the "Letter Learning Time" that comes after it. He has learned most of his letters already, and looks forward to being able to read.

In the afternoon his mother picks him up on the way from her job at an accounting firm, and the two of them go home. Soon his father arrives home from work, too, and Lars watches television while his parents prepare dinner.

After dinner, Lars watches more TV as his parents clean up, then he and his father play a board game. Bedtime comes at 8 P.M. sharp. His mother puts him to bed, reading him a story before giving him a kiss and wishing him good night.

Meanwhile, an ocean away in a Mayan village in Guatemala, 5-year-old Maricela helps her mother make the day's tortillas. Mari flattens a ball of dough into a tortilla as her mother cooks. When her brother Roberto toddles over to join them, Mari jumps up to hold him away from the fire. He is not yet 2 years old, and she is responsible for keeping him away from danger. She carries him outside, where they play a chasing game for awhile. They notice their father coming home from the fields for the midday meal, and they run to greet him. Soon Mari's older brother and sister will be coming home from school to join them.

In the afternoon and evening, Mari continues to work alongside her mother and take care of her little brother. There is water to be fetched and firewood to be gathered, and Roberto must be watched constantly. Her aunt and her cousin Gina come by, and she and Gina play with their dolls, pretending that the dolls are taking tortillas into the village square to sell. Mari's older sister is currently the one who sells the tortillas in town, but Mari knows that within a few years this duty will fall to her.

In the evening the family gathers around the ever-smoldering fire, and Mari sits on her father's lap. Before long Mari is asleep, and the next morning she will have no memory of being passed from her father to her older sister, or of falling asleep by her sister's side next to the fire.

> " *the materials of their fantasy games are drawn from their cultural environment* "

As we have seen in the previous two chapters, from birth onward children's development can be very different depending on their culture. In early childhood the cultural contexts of development expand in several important ways, as the stories of Lars and Mari show. Children begin to learn culturally specific skills, through participation in daily tasks with their parents and siblings in some cultures, as in Mari's case, or through participation in group care and preschool in other cultures, as for Lars. Their play comes to include pretend play, and the materials of their fantasy games are drawn from their cultural environment—airplanes for Lars, tortillas for Mari. They become increasingly aware of their culture's differential gender expectations for boys and girls. And they develop an awareness of their culture's values and moral order. By sleeping alone in his bedroom, Lars is learning the cultural value of individualism; by sleeping alongside others, Mari is learning that she is always intertwined with others in bonds of mutual support and obligation.

We will explore all of these areas in the course of this chapter. First, we examine the changes in physical and motor development that occur in early childhood.

LEARNING OBJECTIVES

6.1   Describe the physical growth and change that takes place during early childhood.

6.2   Describe the changes in brain development that take place during early childhood and the aspects of brain development that explain "infantile" amnesia.

6.3   Identify the main nutritional deficiencies and the primary sources of injury, illness, and mortality during early childhood in developed and developing countries.

6.4   Describe changes in gross and fine motor abilities during early childhood, and explain how these changes may have a cultural basis.

6.5   Describe the development of handedness and identify the consequences and cultural views of left-handedness.

Growth from Age 3 to 6

The pace of bodily growth continues to decline in the period from toddlerhood to early childhood, as it did from infancy to toddlerhood. A variety of parts of the brain make crucial strides forward, although brain development still has a long way to go. Optimal growth in the body and the brain require adequate health and nutrition, which are lacking in much of the world during early childhood.

Bodily Growth

Describe the physical growth and change that takes place during early childhood.   **LEARNING OBJECTIVE   6.1**

From ages 3 to 6 the typical American child grows 2–3 inches per year and adds 5 to 7 pounds. The typical 3-year-old is about 35 inches tall and weighs about 30 pounds; the typical 6-year-old is about 45 inches tall and weighs about 45 pounds. Throughout this period, boys are slightly taller and heavier than girls, although the average differences are small. Both boys and girls gain more in weight than in height during early childhood, but most add more muscle than fat. From toddlerhood to early childhood, most children lose their remaining "baby fat" and their bodily proportions become similar to those of adults.

In developing countries, average heights and weights in early childhood are considerably lower, due to lower nutrition and higher likelihood of childhood diseases. For example, the average 6-year-old in Bangladesh is only as tall as the average 4-year-old in Sweden (Leathers & Foster, 2004).

Within developing countries, too, differences in socioeconomic status influence gains in height and weight in early childhood. As noted in earlier chapters, economic differences tend to be large in developing countries; most have a relatively small middle- and upper-class and a large population of low-income people. Wealthier people have more access to nutritional foods, so their children are taller and weigh more than poorer children of the same age (Ogden et al., 2002). Given roughly equal levels of nutrition and health care, individual differences in height and weight gains during childhood are due to genetics (Chambers et al., 2001).

By their third birthday, most children have a full set of 20 teeth (Eisenberg et al., 1996). These are their *primary* or "baby" teeth that will be replaced by 32 permanent teeth in the course of childhood, beginning at about age 6. However, this replacement process takes place slowly, lasting until about age 14, so children use their baby teeth for up to

By age 5, about 40% of North American children have at least one cavity.

10 years and have to learn how to take care of them to prevent tooth decay.

In developed countries, children usually have their first visit to the dentist around age 3 (Bottenberg et al., 2008; Chi et al., 2011). Most children learn how to brush their teeth in early childhood, and in developed countries it is increasingly common for children's dental care to include fluoride rinses and sealants (plastic tooth coatings). Some countries and local areas also add fluoride to the water system, which greatly reduces children's rates of cavities. Nevertheless, about 40% of North American children have at least one dental cavity by age 5 (World Health Organization [WHO], 2008), primarily due to inconsistent dental care and to diets that are heavy in sugars and starches that cause cavities. Children in developing countries are less likely to have diets loaded with sugars and starches, but they are also less likely to have fluoride in their water systems and less likely to have access to regular dental care that would provide fluoride rinses and sealants. Overall, children in most developing countries have more tooth decay in early and middle childhood than children in developed countries do (WHO, 2008).

Brain Development and "Infantile" Amnesia

6.2   **LEARNING OBJECTIVE**   Describe the changes in brain development that take place during early childhood and the aspects of brain development that explain "infantile" amnesia.

The size of the brain continues to increase gradually during early childhood. At age 3 the brain is about 70% of its adult weight, and at age 6, about 90% (Bauer et al., 2009). In contrast, the average 6-year-old's body weight is less than 30% what it will be in adulthood, so the growth of the brain outpaces the rest of the body (Nihart, 1993).

The frontal lobes grow faster than the rest of the cerebral cortex during early childhood (Anderson et al., 2008; Blumenthal et al., 1999). Growth in the frontal lobes underlies the advances in emotional regulation, foresight, and organizing that take place during the preschool years (Diamond, 2004). Throughout the cerebral cortex, growth from age 3 to 15 takes place not gradually but in spurts within the different lobes, followed by periods of vigorous synaptic pruning (Thompson et al., 2000).

During early childhood the number of neurons continues the decline that began in toddlerhood via synaptic pruning. The increase in brain size and weight during early childhood is due to an increase in dendritic connections between neurons and to myelination (see Chapter 4 p. 131, if you need to refresh your memory about myelination). Four parts of the brain are especially notable for their myelination during early childhood (see **Figure 6.1**).

In the **corpus callosum**, the band of neural fibers connecting the right and left hemispheres of the cerebral cortex, myelination peaks during early childhood, although it continues at a slower pace through adolescence. The corpus callosum allows for coordination of activity between the two hemispheres, so increased myelination of this area of the brain enhances the speed of functioning throughout the cerebral cortex.

Substantial myelination also takes place in early childhood in the **cerebellum**, a structure at the base of the brain involved in balance and motor movements. Increased myelination enhances connections between the cerebellum and the cerebral cortex. This change underlies the child's increasing abilities to jump, run, climb, and throw a ball.

In the **reticular formation**, a part of the brain involved in attention, myelination is completed by age 5, which helps explain the increase in attention span that takes place in

corpus callosum band of neural fibers connecting the two hemispheres of the brain

cerebellum structure at the base of the brain involved in balance and motor movements

reticular formation part of the lower brain, involved in attention

the course of early childhood. For example, by age 4 or 5 most children could easily sit through a 10–15 minute period in preschool while a story is read aloud, whereas most toddlers would be unable to sit still and pay attention for so long.

Similarly, myelination in the **hippocampus** is completed by age 5. The hippocampus is involved in the transfer of information from short-term to long-term memory, so the completion of myelination by age 5 may explain why *autobiographical memory* (memory for personal events and experiences) is limited prior to this age (Rolls, 2000). However, myelination in the hippocampus is gradual, and most adults can remember some autobiographical events that happened before age 5 (Howe et al., 2009). For example, in one study children who had been hospitalized for a medical emergency at age 2–13 were interviewed 5 years later (Peterson & Whalen, 2001). Even the children who were only 2 years-old at the time of the injury recalled the main features of their injury experience accurately 5 years later, although memory for details of the experience improved with age.

Other studies have found that many children and adults have autobiographical memories for events and experiences that happened as early as age 2, but remember little or nothing prior to this age (Courage & Cowan, 2009). The inability to remember anything prior to age 2 is known as **infantile amnesia**. One recent theory proposes that autobiographical memory before age 2 is limited because the awareness of self becomes stable at about 2 years of age and serves as a new organizer around which events can be encoded, stored, and retrieved in memory as personal, that is, as having happened "to me" (Howe et al., 2009). Another perspective proposes that encoding memories is promoted by language development, because language allows us to tell ourselves a narrative of events and experiences; consequently, most autobiographical memory is encoded only after language development accelerates at age 2 (Newcombe et al., 2007). ✳

Autobiographical memory may also be partly cultural. In a study comparing adults' autobiographical memories, British and (White) American adults remembered more events prior to age 5 than Chinese adults did, and their earliest memory was 6 months earlier on average (Wang et al., 2009). The interpretation proposed by the authors was that the greater individualism of British and American cultures promotes greater attention to individual experiences and consequently more and earlier autobiographical memories.

Corpus callosum
Connects left and right hemispheres of the brain

Cerebellum
Controls balance and motor movements

Hippocampus
Involved in transfer of information from short-term to long-term memory

Reticular formation
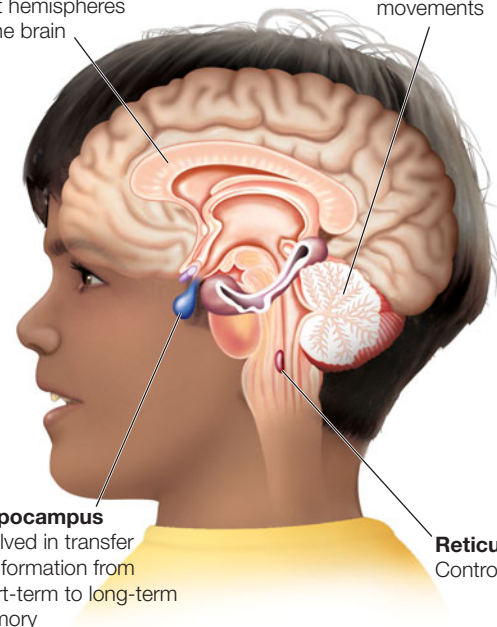Controls attention

Figure 6.1 • **Four Brain Structures with High Myelination in Early Childhood** In which structures is myelination completed by age 5?

✳ **Explore** the **Concept** Virtual Brain: Learning and Memory at **MyDevelopmentLab**

APPLYING YOUR KNOWLEDGE

What is your earliest memory? Is there any way for you to tell if it really happened or how accurate it is?

Health and Safety in Early Childhood

Identify the main nutritional deficiencies and the primary sources of injury, illness, and mortality during early childhood in developed and developing countries.

LEARNING OBJECTIVE 6.3

By early childhood, children are not as vulnerable to health threats as they were in infancy and toddlerhood (UNICEF, 2008). Nevertheless, there are many health and safety concerns associated with this period. Proper nutrition is essential to a child's healthy development, yet in developing countries the rates of malnutrition are alarmingly high. Children in developing countries remain vulnerable to some illnesses and diseases, and children worldwide are subject to high rates of injuries compared to other periods of the life course.

NUTRITION AND MALNUTRITION As the rate of physical growth slows down in early childhood, food consumption diminishes as well. Children may have some meals, or even some whole days, where they eat little. This can be alarming to parents, but it is nothing to worry

hippocampus stucture involved in transfer of information from short-term to long-term memory

infantile amnesia inability to remember anything that happened prior to age 2

anemia dietary deficiency of iron that causes problems such as fatigue, irritability, and attention difficulties

about as long as it does not happen over an extended period and is not accompanied by symptoms that may indicate illness or disease. Appetites vary a lot from day to day in early childhood, and the 5-year-old who barely touched dinner one night may eat nearly as much as Mom and Dad the next night (Hursti, 1999).

Children generally learn to like whatever foods the adults in their environment like and provide for them. In India kids eat rice with spicy sauces, in Japan kids eat sushi, in Mexico kids eat chili peppers. Nevertheless, a myth persists among many North American parents that kids in early childhood will only eat a small range of foods high in fat and sugar content, such as hamburgers, hot dogs, fried chicken, and macaroni and cheese (Zehle et al., 2007). This false belief then becomes a self-fulfilling prophecy, as children who eat foods high in sugar and fat lose their taste for healthier foods (Black et al., 2002). The assumption that young children like only high fat and sugar foods also leads parents to bribe their children to eat healthier foods—"If you eat three more bites of carrots, then you can have some pudding"—which leads the children to view healthy foods as a trial and unhealthy foods as a reward (Birch et al., 2003). These cultural practices contribute to high rates of childhood obesity in many developed countries, as we will see in more detail in Chapter 7. 👁

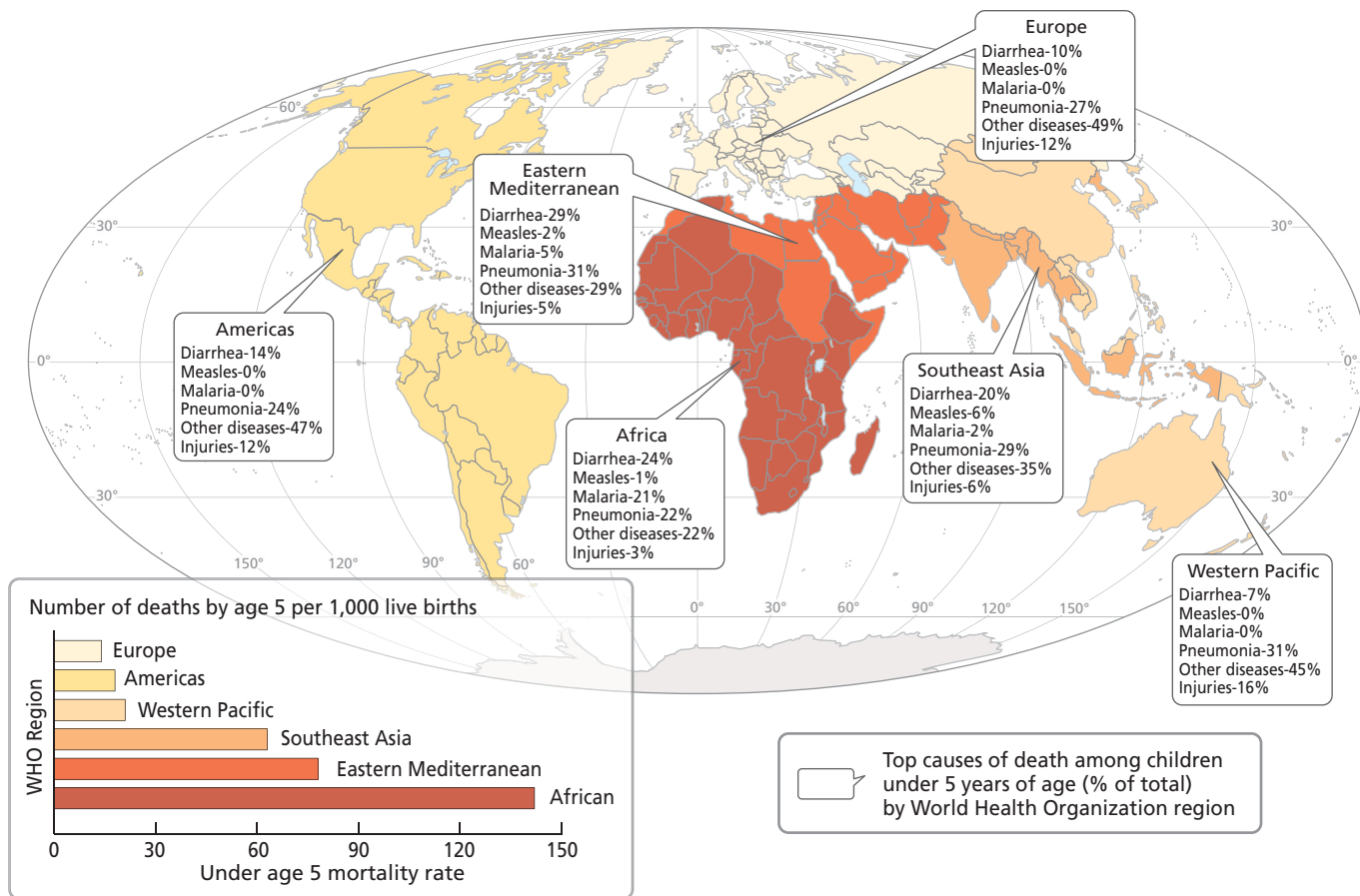**👁 Watch** the **Video** Kids and Food at **MyDevelopmentLab**

Because young children in developed countries often eat too much of unhealthy foods and too little of healthy foods, many of them have specific nutritional deficiencies despite living in cultures where food is abundant. Calcium is the most common nutritional deficiency in the United States, with one-third of American 3-year-olds consuming less than the amount recommended by health authorities (Wagner & Greer, 2008). Calcium is especially important for the growth of bones and teeth, and is found in foods such beans, peas, broccoli, and dairy products such as milk and cheese. Over the past 30 years, as children have consumed less milk and more soft drinks, calcium deficiencies in early childhood have become more common (Fox et al., 2004).

In developing countries, malnutrition is the norm rather than the exception. The World Health Organization estimates that about 80% of children in developing countries lack sufficient food or essential nutrients (Van de Poel et al., 2008). The two most common types of malnutrition are lack of protein and lack of iron. Lack of protein is experienced by about 25% of children under age 5 worldwide, and can result in two fatal diseases described in Chapters 4 and 5, marasmus (in infancy) and kwashiorkor (in toddlerhood and early childhood). Iron deficiency, known as **anemia**, is experienced by the majority of children under age 5 in developing countries (WHO, 2002). Anemia causes fatigue, irritability, and difficulty sustaining attention, which in turn lead to problems in cognitive and social development (Kaplan et al., 2007; Rao & Georgieff, 2001). Foods rich in iron include most meats, as well as vegetables such as potatoes, peas, and beets, and grains such as oatmeal and brown rice. As noted in Chapter 5, young children in developed countries may also experience anemia if they do not eat enough healthy foods (Brotanek et al., 2007).

APPLYING YOUR KNOWLEDGE
. . . as a Nurse

How would you respond to a parent of an overweight 5-year-old who claimed that hot dogs, macaroni and cheese, and other high-fat foods are "the only things he'll eat"?

Many children in developed countries have nutritional deficiencies despite an abundance of food. Here, a child in London eats a fast food meal that is high in fat and sugar.

ILLNESS AND DISEASE In developing countries, the causes of death in early childhood are usually illnesses and diseases, especially pneumonia, malaria, and measles (UNICEF, 2008). Malnutrition is believed to be indirectly responsible for about half of early childhood deaths, because lack of sufficient food reduces the effectiveness of the body's immune system. **Map 6.1** highlights global mortality rates and major causes of death in children under age 5.

However, remarkable progress has been made in recent decades in reducing mortality in children under age 5. From 1960 to 2006, the number of deaths worldwide of children under age 5 declined from 20 million to under 10 million, even though the world's population more than doubled during that time (UNICEF, 2008). The decline is due to a variety of factors, especially improved food production in developing countries and increased prevalence of childhood vaccinations.

Europe
Diarrhea-10%
Measles-0%
Malaria-0%
Pneumonia-27%
Other diseases-49%
Injuries-12%

Eastern Mediterranean
Diarrhea-29%
Measles-2%
Malaria-5%
Pneumonia-31%
Other diseases-29%
Injuries-5%

Americas
Diarrhea-14%
Measles-0%
Malaria-0%
Pneumonia-24%
Other diseases-47%
Injuries-12%

Africa
Diarrhea-24%
Measles-1%
Malaria-21%
Pneumonia-22%
Other diseases-22%
Injuries-3%

Southeast Asia
Diarrhea-20%
Measles-6%
Malaria-2%
Pneumonia-29%
Other diseases-35%
Injuries-6%

Western Pacific
Diarrhea-7%
Measles-0%
Malaria-0%
Pneumonia-31%
Other diseases-45%
Injuries-16%

Top causes of death among children under 5 years of age (% of total) by World Health Organization region

Number of deaths by age 5 per 1,000 live births

WHO Region: Europe, Americas, Western Pacific, Southeast Asia, Eastern Mediterranean, African

Under age 5 mortality rate (0, 30, 60, 90, 120, 150)

Map 6.1 • **Worldwide Mortality Rates and Causes of Death in Children Under Age 5** Which regions of the world have the lowest and highest rates of childhood deaths? How do the causes of death vary by region?

In developed countries, where most children receive vaccinations and have access to adequate food and medical care, minor illnesses are common in early childhood, with most children experiencing 7–10 per year (Kesson, 2007). Minor illnesses help build up the immune system, so that children typically experience them less frequently with age.

INJURIES Do you remember becoming injured at all in early childhood? If you do, you are in good company. Most young children—and their parents—can count on spending a portion of their childhood nursing an injury; a minor "boo-boo" if they're lucky, but in some cases something more serious.

Children in early childhood have high activity levels and their motor development is advanced enough for them to be able to run, jump, and climb, but their cognitive development is not yet advanced enough for them to anticipate situations that might be dangerous. This combination leads to high rates of injuries in early childhood. In the United States each year, one-third of children under 10 become injured badly enough to receive medical attention (Field & Behrman, 2003). Boys are more likely than girls to become injured in early childhood, because their play tends to be rougher and more physically active. However, in developing countries, most of the injuries and deaths that take place in early childhood occur not due to high activity levels but as a consequence of the prevalence of automobile travel. In developed countries, the most common cause of injury and death in early childhood is motor

THINKING CULTURALLY

Consider the foods that you typically see on the "Kid's Menu" in restaurants. How do these menus reflect cultural beliefs about food?

Deaths worldwide among children age 5 and under have declined by half in the past 50 years, largely due to increased childhood vaccinations. Here, a Red Cross volunteer in El Salvador gives an oral vaccination to a 6-year-old boy.

vehicle accidents (National Highway Traffic Safety Administration [NHTSA], 2011; Safe Kids Worldwide, 2002). Other common causes of injury and death in early childhood are drowning, falls, fire, and choking (Overpeck et al., 1999).

You might think that rates of injury and death due to accidents in early childhood would be lower in developing countries than in developed countries, since people in developing countries are less likely to own the cars that are the predominant source of early child-hood injury and death in developed countries. However, rates of early childhood injury and death due to accidents are actually higher in developing countries. For example, rates of unintentional injury among 1- to 14-year-olds in South Africa are 5 times higher than in developed countries; in Vietnam, rates are 4 times higher, and in China 3 times higher (Safe Kids Worldwide, 2002). This is due to more stringent safety codes in developed countries, such as requiring child seats in cars, strict building codes to prevent fires, and lifeguards in public swimming areas where drowning is a potential danger. An organization called Safe Kids Worldwide (2009) is working to advocate safety measures for young children in both developed and developing countries. It currently has chapters in 16 countries, including China, Brazil, India, and Canada, and is expanding steadily.

Despite the high rates of accidental injury among young children in developing countries, disease is a far greater danger. Only 3% of deaths of children under 5 in developing countries are due to injuries, and virtually all the other 97% are due to illness and disease (UNICEF, 2008). In contrast, even though rates of accidental injuries are much lower in developed countries than in developing countries, accidental injuries are the leading cause of death for young children in developed countries because so few of them die from illness or disease.

WHAT HAVE YOU LEARNED?

1. What are the average differences in height and weight between children in developed and developing countries? What accounts for these differences?
2. What parts of the brain experience the most notable changes in early childhood?
3. What is the main nutritional deficiency among young children in the United States? How can this deficiency be explained in an environment where food is available in abundance?
4. How has mortality for children age 5 and under changed in the past century worldwide?

Motor Development

One thing for certain about motor activity in early childhood is that there is a lot of it. Children of this age are frequently on the move, enjoying and extending the development of their new motor abilities.

Gross and Fine Motor Skills
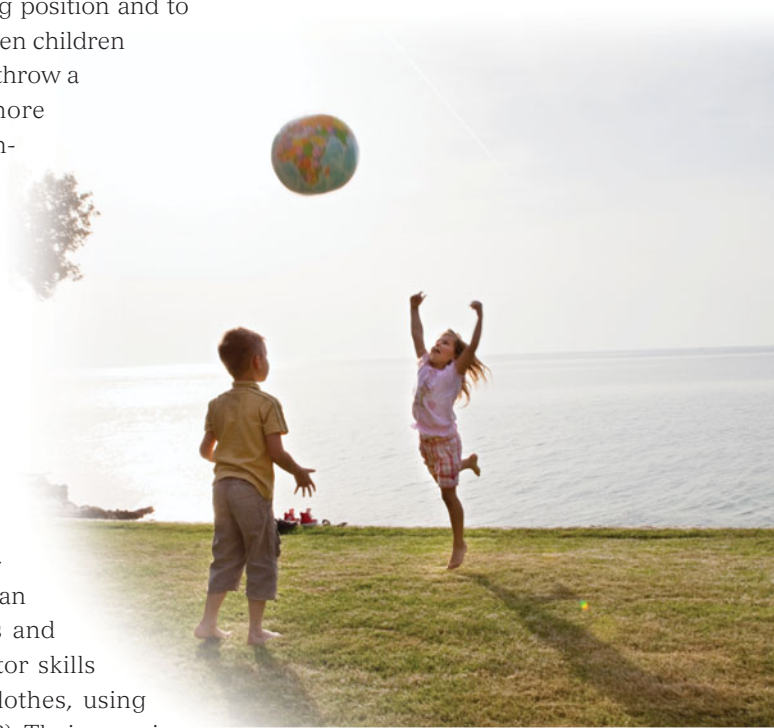
6.4   **LEARNING OBJECTIVE**   Describe changes in gross and fine motor abilities during early childhood, and explain how these changes may have a cultural basis.

In many ways, gross motor development in early childhood extends abilities that first appeared in toddlerhood. Toddlers can hop a step or two with both feet, but from age 3 to 6 young children learn to make more hops in a row and to hop on one foot. Toddlers can

APPLYING YOUR KNOWLEDGE . . . *as a Nurse*

Six-year-old Rosy from Mexico injured herself playing soccer. Her parents take this as evidence that girls should not play soccer, because it is too dangerous and they did not play soccer in the rural village they came from. What might you say to Rosy's parents?

jump, but from age 3 to 6 children learn to jump farther from a standing position and to make a running jump. Toddlers begin to climb stairs, but age 3 to 6 is when children learn to climb stairs without support, alternating their feet. Toddlers can throw a ball, but from age 3 to 6, children learn to throw a ball farther and more accurately, and they become better at catching a ball, too. They also increase their running speed and their ability to stop suddenly or change direction. Gender differences in gross motor development appear in early childhood, with boys generally becoming better at skills emphasizing strength or size, such as jumping and throwing a ball, and girls becoming better at body-coordination skills, such as balancing on one foot (Cratty, 1986; Lung et al., 2011).

 Fine motor development in early childhood involves a similar extension of skills that arose in toddlerhood, along with some new skills. As toddlers they could already pick up a small object using two fingers, but now they learn to do it more quickly and precisely. They could already hold a crayon and scribble on a piece of paper, but in early childhood they learn to draw something that is recognizable to others, such as a person, animal, or building. By age 6 they can even draw shapes such as a circle or triangle, and their first letters and some short words, perhaps including their own name. New fine motor skills learned in early childhood include putting on and removing their clothes, using scissors, and using a knife to cut soft food (Cratty, 1986; Piek et al., 2008). Their growing fine motor abilities allow children to learn to do many things their parents had been doing for them, such as using utensils to feed themselves, putting on a coat or shoes, and brushing their teeth.

Gross motor skills advance from toddlerhood to early childhood.

 Of course, nearly all the research on this topic has been done in the West, and to some extent the gross and fine motor skills just described are culturally specific. How can using scissors be a milestone of motor development in a culture where people do not use scissors? In one interesting example of this, researchers asked 10- to 15-year-olds in a New Guinea tribe to draw a person (Martlew & Connolly, 1996). Because they had never tried to draw anything before—their tribe has no written language and no tools to write with or materials to write on—their drawings were very simple and unelaborated. But this does not mean their fine motor skills were less developed than those of much younger children in developed countries who are used to drawing from toddlerhood onward. It could be simply that the task was unfamiliar to them, and that there are fine-motor skills specific to their own culture that they excel in. Recently, efforts have been made to develop assessments of gross and fine motor development that are culturally relevant, by basing the norms for motor milestones on local cultural patterns (Schertzer, 2009).

Handedness

Describe the development of handedness and identify the consequences and cultural views of left-handedness.	LEARNING OBJECTIVE **6.5**

Once children begin drawing or writing in early childhood, they show a clear preference for using their right or left hand, but **handedness** appears long before early childhood. In fact, even prenatally, fetuses show a definite preference for sucking the thumb of their right or left hand, with 90% preferring the right thumb (Hepper et al., 2005). The same 90% proportion of right-handers continues into childhood and throughout adulthood in most cultures (Hinojosa et al., 2003).

 If handedness appears so early, that must mean it is determined genetically, right? Actually, the evidence is mixed on this issue. Adopted children are more likely to resemble

handedness preference for using either the right or left hand in gross and fine motor activities

their biological parents than their adoptive parents in their handedness, suggesting a genetic origin (Carter-Salzman, 1980). On the other hand (pun intended), identical twins are more likely than ordinary siblings to *differ* in handedness, even though identical twins share 100% of their genotype and other siblings only about 50% (Derom et al., 1996). This appears to be due to the fact that twins usually lie in opposite ways within the uterus, whereas most singletons lie toward the left. Lying toward one side allows for greater movement and hence greater development of the hand on the other side, so most twins end up with one being right-handed and one being left-handed while most singletons end up right-handed.

Nevertheless, as usual, culture is also a big part of the picture. Historically, many cultures have viewed left-handedness as dangerous and evil and have suppressed its development in children (Schacter & Ransil, 1996). In Western languages, the word *sinister* is derived from a Latin word meaning "on the left," and many paintings in Western art depict the devil as left-handed. In many Asian and Middle Eastern cultures, only the left hand is supposed to be used for wiping up after defecation, and all other activities are supposed to be done mainly with the right hand. In Africa, even today, using the left hand is suppressed in many cultures from childhood onward, and the prevalence of left-handedness in some African countries is as low as 1%, far lower than the 10% figure in cultures where left-handedness is tolerated (Provins, 1997).

Why do so many cultures regard left-handedness with such fear and contempt? Perhaps negative cultural beliefs about left-handedness developed because people noticed that left-handedness was associated with a greater likelihood of various problems. Left-handed infants are more likely to be born prematurely or to experience an unusually difficult birth, and there is evidence that brain damage prenatally or during birth can contribute to left-handedness (Powls et al., 1996). In early and middle childhood, left-handers are more likely to have problems learning to read and to have other verbal learning disabilities (Natsopoulos et al., 1998). This may have something to do with the fact about one-fourth of left-handers process language in both hemispheres rather than primarily in the left hemisphere (Knecht et al., 2000). In adulthood, people who are left-handed have lower life expectancy and are more likely to die in accidents (Martin & Freitas, 2002).

APPLYING YOUR KNOWLEDGE . . . *as a Nurse*

At their son Brahim's 3 year checkup, his parents complain that he uses his left hand to eat and worry that he may develop left-handedness. They have tried to get him to use his right hand by restricting his left hand at meal times, but, when left to his own devices, he goes back to using his left hand. What can you tell them to help them not worry about this?

Why have so many cultures regarded being left-handed as evil or dangerous?

However, this explanation is not entirely convincing because left-handedness is associated not only with greater likelihood of some types of problems but with excellence and even genius in certain fields. Left-handed children are more likely to show exceptional verbal and math abilities (Bower, 1985; Flannery & Leiderman, 1995). Left-handers are especially likely to have strong visual–spatial abilities, and consequently they are more likely than right-handers to become architects or artists (Holtzen, 2000). Some of the greatest artists in the Western tradition have been left-handed, including Leonardo da Vinci, Michaelangelo, and Pablo Picasso (Schacter & Ransil, 1996). It is worth keeping in mind that the majority of left-handers are in the normal range in their cognitive development, and show neither unusual problems nor unusual gifts. Hence the widespread cultural prejudice against left-handers remains mysterious.

WHAT HAVE YOU LEARNED?

Study and **Review**
at **MyDevelopmentLab**

1. What kinds of changes in the ability to climb stairs occur in children between the ages of 3 and 6?

2. What gender differences in gross motor development appear in early childhood?

3. What new self-care skills accompany improvements in fine motor development in early childhood?

4. What are some genetic and environmental explanations for handedness?

Section 1 VIDEO GUIDE The Growing Child (Length: 1:13)

This video explains many aspects of physical development in the early childhood years, including concepts such as lateralization, automaticity, and rates of growth.

1. In this video, the narrator mentions skills that children are better able to complete due to automaticity. Explain automaticity and list at least three activities that children are better able to perform.

2. What are some benefits of children gaining hand preference?

3. The narrator of this video tells us that the rate of physical growth slows in the early childhood years. What impact would this have on the food and nutritional requirements of children in this age group?

Watch the **Video** The Growing Child at **MyDevelopmentLab**

LEARNING OBJECTIVES

6.6 Explain the features of Piaget's preoperational stage of cognitive development.

6.7 Explain what "theory of mind" is and the evidence for how it develops during early childhood.

6.8 Identify the ways that cultural learning takes place in early childhood.

6.9 Identify the features that are most important in preschool quality.

6.10 Describe the distinctive practices of Japanese preschools and how they reflect cultural values.

6.11 Describe early intervention programs and their outcomes.

6.12 Explain how advances in vocabulary and grammar occur in early childhood.

6.13 Describe how children learn pragmatics in early childhood and identify to what extent these social rules are culturally based.

Theories of Cognitive Development

In the course of early childhood, children make many remarkable advances in their cognitive development. Several theories shed light on these developments, including Piaget's preoperational stage; "theory of mind," which examines how children think about the thoughts of others; and theories of cultural learning that emphasize the ways that young children gain the knowledge and skills of their culture. These theories complement each other to provide a comprehensive picture of cognitive development in early childhood.

Piaget's Preoperational Stage of Cognitive Development

6.6 | **LEARNING OBJECTIVE** | Explain the features of Piaget's preoperational stage of cognitive development.

In Piaget's theory, early childhood is a crucial turning point in children's cognitive development because this is when thinking becomes *representational* (Piaget, 1952). During the first 2 years of life, the sensorimotor stage, thinking takes place primarily in association with sensorimotor activities such as reaching and grasping. Gradually toward the end of the sensorimotor period, in the second half of the second year, children begin to internalize the images of their sensorimotor activities, marking the beginning of representational thought.

However, it is during the latter part of toddlerhood and especially in early childhood that we become truly representational thinkers. Language requires the ability to represent the world symbolically, through words, and this is when language skills develop most dramatically. Once we can represent the world through language, we are freed from our momentary sensorimotor experience. With language we can represent not only the present but the past and the future, not only the world as we see it before us but the world as we previously experienced it and the world as it will be—the coming cold (or warm) season, a decline in the availability of food or water, and so on. We can even represent the world as it has never been, through mentally combining ideas—flying monkeys, talking trees, and people who have superhuman powers.

These are marvelous cognitive achievements, and yet early childhood fascinated Piaget not only for what children of this age are able to do cognitively but also for the kinds of mistakes they make. In fact, Piaget termed the age period from 2 to 7 the **preoperational stage**, emphasizing that children of this age were not yet able to perform mental *operations,* that is, cognitive procedures that follow certain logical rules. Piaget specified a number

preoperational stage cognitive stage from age 2 to 7 during which the child becomes capable of representing the world symbolically—for example, through the use of language—but is still very limited in ability to use mental operations

of areas of preoperational cognitive mistakes that are characteristic of early childhood, including conservation, egocentrism, and animism, and classification. ◉

CONSERVATION According to Piaget, children in early childhood lack the ability to understand **conservation**, the principle that the amount of a physical substance remains the same even if its physical appearance changes. In his best known demonstration of this mistake, Piaget showed young children two identical glasses holding equal amounts of water and asked them if the two amounts of water were equal. The children typically answered "yes"—they were capable of understanding that much. Then Piaget poured the contents from one of the glasses into a taller, thinner glass, and asked the children again if the two amounts of water were equal. Now most of the children answered "no," failing to understand that the *amount* of water remained the same even though the *appearance* of the water changed. Piaget also demonstrated that children made this error with other substances besides water, as shown in **Figure 6.2**. ◉

Piaget interpreted children's mistakes on conservation tasks as indicating two kinds of cognitive deficiencies. The first is **centration**, meaning that young children's thinking is *centered* or focused on one noticeable aspect of a cognitive problem to the exclusion of other important aspects. In the conservation of liquid task, they notice the change in height

conservation mental ability to understand that the quantity of a substance or material remains the same even if its appearance changes

centration Piaget's term for young children's thinking as being *centered* or focused on one noticeable aspect of a cognitive problem to the exclusion of other important aspects

◉—[**Watch** the **Video** The Preoperational and Concrete Operational Stage at **MyDevelopmentLab**

◉—[**Watch** the **Video** Conservation Tasks at **MyDevelopmentLab**
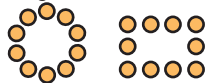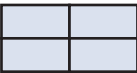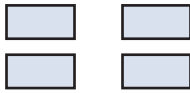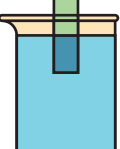
Type of Conservation	Modality	Change in Physical Appearance	Average Age Conservation Is Grasped
Number	Number of elements in a collection	Rearranging or dislocating elements	6–7 years
Substance (mass)	Amount of a malleable substance (e.g., clay or liquid)	Altering shape	7–8 years
Length	Length of a line or object	Altering shape or configuration	7–8 years
Area	Amount of surface covered by a set of plane figures	Rearranging the figures	8–9 years
Weight	Weight of an object	Altering shape	9–10 years
Volume	Volume of an object (in terms of water displacement)	Altering shape	14–15 years

Figure 6.2 • **Various Substances Used in Piaget's Conservation Task** What cognitive limitations in young children lead to mistakes in these tasks?

as the water is poured into the taller glass but neglect to observe the change in width that takes place simultaneously.

Second, young children lack **reversibility**, the ability to reverse an action mentally. When the water is poured from the original glass to the taller glass in the conservation task, anyone who can reverse that action mentally can see that the amount of water would be the same. Young children cannot perform the mental operation of reversibility, so they mistakenly believe the amount of water has changed.

EGOCENTRISM Another cognitive limitation of the preoperational stage, in Piaget's view, is **egocentrism**, the inability to distinguish between your own perspective and another person's perspective. To demonstrate egocentrism, Piaget and his colleague Barbel Inhelder (1969) devised what they called the "three mountains task" (see **Figure 6.3**). In this task a child is shown a clay model of three different mountains of varying sizes, one with snow on top, one with a red cross, and one with a house. The child walks around the table to see what the mountain looks like from each side, then sits down while the experimenter moves a doll to different points around the table. At each of the doll's locations, the child is shown a series of photographs and asked which one indicates the doll's point of view. In the early years of the preoperational stage, children tend to pick the photo that matches their own perspective, not the doll's. 👁

One aspect of egocentrism is **animism**, the tendency to attribute human thoughts and feelings to inanimate objects and forces. According to Piaget, when young children believe that the thunder is angry or the moon is following them, it reflects their animistic thinking. It also reflects their egocentrism, in that they are attributing the thoughts and feelings that they might have themselves to things that are inanimate.

Children's play with stuffed animals and dolls is a good example of animistic thinking. When they play with these toys, children frequently attribute human thoughts and feelings to them, often the thoughts and feelings they might have themselves. This is play, but it is a kind of play they take seriously. At age 5, my daughter Paris would sometimes "find" a stuffed puppy or kitten on our porch that she would treat as if it were a live animal that would now be her pet. If you humorously suggested that this might be an especially easy pet to care for, being stuffed—as I made the mistake of doing one day—she took great offense and insisted it was a real animal. To her, at that moment, it was.

CLASSIFICATION Preoperational children also lack the capacity for **classification**, according to Piaget, meaning that they have difficulty understanding that objects can be simultaneously part of more than one "class" or group. He demonstrated this by showing children a drawing of 4 blue flowers and 12 yellow flowers and asking them, "Are there more yellow flowers, or more flowers?" In early childhood, children would typically answer "More yellow flowers," because they did not understand that yellow flowers could be part of the class "yellow flowers" and simultaneously part of the class "flowers."

Here, as with conservation, the cognitive limitations of centration and lack of reversibility are at the root of the error, in Piaget's view. Young children center on the fact that the yellow flowers are yellow, which leads them to overlook that the yellow flowers are also flowers. They also lack reversibility in that they cannot perform the mental operation of placing the yellow and blue flowers together into the "flowers" class and then moving them back into the "yellow flowers" and "blue flowers" classes, respectively.

PREOPERATIONAL SUBSTAGES: SYMBOLIC FUNCTION AND INTUITIVE THOUGHT Age 2 to 7 is a long period with many changes in a child's cognitive development. Although Piaget called this age span the preoperational stage, he also separated it into two substages. The **symbolic function substage** is the first substage, lasting from about age 2 to 4. This is when the child first becomes capable of representational thought and of using symbols to represent the world. As mentioned above, language is the most important indicator of the capacity to

View 1   View 2

Figure 6.3 • **Piaget's Three Mountains Task**
How does performance on this task indicate egocentrism?

👁— **Watch** the **Video** Egocentrism Task
    at **MyDevelopmentLab**

reversibility ability to reverse an action mentally

egocentrism cognitive inability to distinguish between one's own perspective and another person's perspective

animism tendency to attribute human thoughts and feelings to inanimate objects and forces

classification ability to understand that objects can be part of more than one cognitive group, for example an object can be classified with red objects as well as with round objects

symbolic function substage first substage of the preoperational stage, lasting from about age 2 to age 4, when the child first becomes capable of representational thought and of using symbols to represent the world

think in terms of symbols, because words are symbols. Play is another area where symbolic functions are evident early in the preoperational stage. Children of this age can use a stick to represent a magic wand, or dirt and water to represent chocolate pudding.

The second substage of the preoperational stage is the **intuitive thought substage**, lasting from age 4 to 7. During this period children become highly curious about the world, frequently asking "Why?" when others provide them with information. This shows that they have begun to think logically, because their questions indicate that they are wondering about how one event leads to another event. Through their questions they learn more about the nature of the world, and they expand their knowledge. However, they are unable to explain how they know what they know. This is why Piaget called this substage *intuitive;* children in this substage do not know why they know something, they just know it. For example, even if they happen to state the correct answer when faced with a conservation or classification problem, they have difficulty explaining why their answer is correct. Here, too, the preoperational child's cognitive functioning is framed by Piaget primarily in terms of what is yet to be learned.

EVALUATING PIAGET'S THEORY Piaget's theory of preoperational thought in early childhood has been challenged in the decades since he proposed it. The criticisms focus on two issues: claims that he underestimated children's cognitive capabilities, and claims that development is more continuous and less stagelike than he proposed.

Many studies over the past several decades have shown that children ages 2–7 are cognitively capable of more than Piaget recognized. With regard to conservation tasks, it has been shown that even 3-year-old children can give correct answers in conservation of number tasks, as long as only two or three items are used (Gelman, 1969; Vilette, 2002). By the time children learn to count to 10 or more, usually by age 4 or 5, they can use counting to solve conservation of number tasks involving larger numbers of items. By age 6—still in the preoperational stage, according to Piaget—they do not even need to count to solve the task, because they understand that the number of items remains the same if no items are added or removed (Klahr & MacWhinney, 1998).

In other ways, too, children ages 2–7 are less prone to cognitive errors than Piaget proposed. Regarding egocentrism, when the Three Mountains task is modified so that familiar objects are used instead of the three-mountain model, children give less egocentric responses (Newcombe & Huttenlocher, 1992). Studies using other methods also show that 2- to 7-year-old children are less egocentric than Piaget thought. As described in Chapter 5, even toddlers show the beginnings of an ability to take others' perspectives, when they discern what they can do to annoy a sibling (Dunn, 1988). By age 4, children switch to shorter, simpler sentences when talking to toddlers or babies, showing a distinctly unegocentric ability to take the perspective of the younger children (Bryant & Barrett, 2007).

Regarding Piaget's stage claims, research has shown that the development of cognitive skills in childhood is less stagelike and more continuous than Piaget believed (Bibok et al., 2009). Remember, Piaget's stage theory asserts that movement from one stage to another represents a wholesale cognitive shift, a change not just in specific cognitive skills but in how children think. In this view, children ages 2–7 are incapable of performing mental operations, and then in the next stage they become able to do so. However, as we have just seen, research has generally shown that the ability to perform mental operations changes gradually over the course of childhood (Case, 1999).

How does animism reflect young children's egocentrism?

intuitive thought substage second substage of the preoperational stage, lasting from age 4 to 7, during which children begin to understand how one event leads to another event but cannot say why they know what they know

theory of mind ability to understand thinking processes in one's self and others

Understanding Thinking: The Development of "Theory of Mind"

Explain what "theory of mind" is and the evidence for how it develops during early childhood.   **LEARNING OBJECTIVE** **6.7**

Current research on cognitive development in early childhood has moved beyond Piaget's theories. One popular area of research in recent years is **theory of mind**, the ability to understand thinking processes in one's self and others. 👁

Watch the **Video** Theory of Mind at **MyDevelopmentLab**

Understanding how others think is a challenge even for adults, but the beginnings of theory of mind appear very early, in infancy. Through behavior such as joint attention and the use of prelanguage vocalizations, infants show that they understand that others have mental states such as intentionality (Tomasello & Rakoczy, 2003). By age 2, as they begin to use language more, children show increasing recognition that others have thoughts and emotions that can be contrasted with their own (e.g., "That man is mad!" or "I like apple-sauce. Brother no like applesauce."). At age 2, children begin to use words that refer to mental processes, such as "think," "remember," and "pretend" (Flavell et al., 2002). By age 3, children know it is possible for them and others to imagine something that is not physi-cally present (such as an ice cream cone). They can respond to an imaginary event as if it has really happened, and they realize that others can do the same (Andrews et al., 2003). This understanding becomes the basis of pretend play for many years to come.

However, there are limits to 3-year-olds' theory of mind, and crucial changes take place in the course of early childhood. They are better than 2-year-olds at understanding that others have thoughts and feelings that are different than their own, but they find it difficult to take others' perspectives. Perspective-taking ability advances considerably from age 3 to 6 (Callahan et al., 2005).

This change is vividly demonstrated in recent research involving *false-belief tasks*. In one experiment testing understanding of false beliefs, children are shown a doll named Maxi who places chocolate in a cabinet and then leaves the room (Amsterlaw & Wellman, 2006). Next another doll, his mother, enters the room and moves the chocolate to a different place. Children are then asked, where will Maxi look for the chocolate when he returns? Most 3-year-old children answer erroneously that Maxi will look for the chocolate in the new place, where his mother stored it. In contrast, by age 4 most children recognize that Maxi will believe falsely that the chocolate is in the cabinet where he left it. The proportion of children who understand this correctly rises even higher by age 5. ⊙

In another well-known test of theory of mind, children are shown a box that appears to contain a kind of candy called "Smarties" and asked what they think is in the box (Gopnik & Astington, 1988). After they answer "candy" or "Smarties" they are shown that the box in fact contains pencils. Then they are asked what another person, who has not been shown the contents, will think is in the box. "Candy" or "Smarties" is the correct answer, showing theory of mind; "pencils" is incorrect. Most children pass the test by the time they are 4 or 5 years old.

By age 6, nearly all children solve false-belief tasks easily. Notice the similarity to Piag-et's description of the developmental course of egocentrism. Poor understanding of theory of mind can be seen as a kind of egocentrism, and with Piaget's egocentrism tasks as well as false-belief tasks, children make great advances in the course of early childhood.

Some theory of mind research has now been done in other cultures, enough to show that the development of theory of mind depends strongly on cultural context and lan-guage. For example, Chinese languages have several different forms of the word *belief,* some of which signify that the belief is false; the use of these forms of *belief* in false-belief tasks make it easy for Chinese children to solve them (Tardif et al., 2004). Also, not all lan-guages have words to signify mental states. Among the Quechua people of Peru studied by Penelope Vinden (1996), their language has no terms for mental states. Perhaps for this rea-son, children there do poorly on false-belief tasks not just in early childhood but through middle childhood as well.

Cultural Learning in Early Childhood

6.8   **LEARNING OBJECTIVE**   Identify the ways that cultural learning takes place in early childhood.

In Piaget's depiction of cognitive development, the young child is like a solitary little sci-entist gradually mastering the concepts of conservation and classification and overcoming the errors of egocentrism and animism. Vygotsky's sociocultural theory of learning takes

a much different approach, viewing cognitive development as a social and cultural process (see Chapter 5). Children learn not through their individual interactions with the environment but through the social process of guided participation, as they interact with a more knowledgeable member of the culture (often an older sibling or parent) in the course of daily activities.

Early childhood is a period when this kind of cultural learning comes to the fore. More than in toddlerhood, young children have the capacity for learning culturally specific skills. The Mayan example that began this chapter provides one illustration. A 5-year-old can readily learn the skills involved in making tortillas, whereas a 2-year-old would not have the necessary learning abilities, motor skills, or impulse control (Rogoff, 2003). In many cultures, the end of early childhood, ages 5–6, is the time when children are first given important responsibilities in the family for food preparation, child care, and animal care (LeVine & New, 2008). During early childhood they acquire the cultural learning necessary for these duties, sometimes through direct instruction but more often through observing and participating in adults' activities.

It is not only in traditional cultures that cultural learning takes place via guided participation. For example, a child in an economically developed country might help his parents prepare a grocery shopping list, and in the course of this process learn culturally valued skills such as reading, using lists as tools for organization and planning, and calculating sums of money (Rogoff, 2003). Children in Western countries are also encouraged to speak up and hold conversations. For example, over dinner American parents often ask their young children a series of questions ("What songs did you sing at preschool? What did you have for a snack?"), thereby preparing them for the question-and-answer structure of formal schooling they will enter in middle childhood (Martini, 1996). This is in contrast to cultures from Asia to northern Canada in which silence is valued, especially in children, and children who talk frequently are viewed as immature and low in intelligence (Rogoff, 2003).

Two factors make cultural learning in developed countries different from cultural learning in traditional cultures. One is that children in developed countries are often apart from their families for a substantial part of the day, in a preschool or another group-care setting. Cultural learning takes place in the preschool setting, of course—recall the example of Lars that began this chapter—but it is mostly a more direct kind of instruction (e.g., learning letters) rather than the cultural learning that takes place through guided participation in daily activities within the family. Second, the activities of adults in a complex economy are less accessible to children's learning than the activities that children learn through guided participation in traditional cultures, such as child care, tending animals, and food preparation. Most jobs in a complex economy require advanced skills of reading, analyzing information, and using technology, so there is a limit to which children can learn these skills through guided participation, especially in early childhood.

How is cultural learning taking place here?

WHAT HAVE YOU LEARNED?

1. According to Piaget, what two kinds of cognitive deficiencies are evident in children's mistakes on conservation tasks?

2. What are the two main issues raised by critics of Piaget's theory of preoperational thought?

3. What advances in theory of mind take place between the ages of 2 and 3?

4. What two factors make cultural learning in developed countries different from cultural learning in traditional cultures?

Early Childhood Education

Traditionally in many cultures, formal schooling has started at about age 7. This is the age at which children have been viewed as first capable of learning the skills of reading, writing, and math. However, because the need to learn how to use words and numbers is so strong in the modern information-based economy, in many countries school now begins earlier than ever. In developed countries about three-fourths of 3- to 5-year-old children are enrolled in group child care, preschool, or kindergarten (UNESCO, 2006, p. 20). In developing countries, the percentages are lower but rising. In the United States, about half of American states now fund some preschool programs for 4-year-old children, usually focusing on children from low-income families. 👁

The Importance of Preschool Quality

6.9 **LEARNING OBJECTIVE** Identify the features that are most important in preschool quality.

What are the cognitive and social effects of attending preschool? For the most part, attending preschool is beneficial for young children (Campbell et al., 2002). Cognitive benefits of attending preschool include higher verbal skills and stronger performance on measures of memory and listening comprehension (Clarke-Steward & Allhusen, 2002). Children from low-income families especially benefit cognitively from preschool (Loeb et al., 2004; Vandell, 2004). They perform better on tests of school-readiness than children of similar backgrounds who did not attend preschool. 👁

There are also social benefits to attending preschool. Children who attend preschool are generally more independent and socially confident than children who remain home (National Institute of Child Health and Human Development [NICHD] Early Child Care Research Network, 2006). However, there appear to be social costs as well. Children attending preschool have been observed to be less compliant, less respectful toward adults, and more aggressive than other children (Belsky et al., 2006). Furthermore, these negative social effects may endure long past preschool age. In one large national (U.S.) longitudinal study, children who attended preschool for more than 10 hours per week were more disruptive in class once they entered school, in follow-ups extending through sixth grade (NICHD Early Child Care Research Network, 2006).

Yet these findings concerning the overall positive or negative outcomes associated with preschool can be misleading. Preschool programs vary vastly in quality, and many studies have found that the quality of preschool child care is more important than simply the fact of whether children are in preschool or not (Clarke-Stewart & Allhusen, 2002; Maccoby & Lewis, 2003; NICHD Early Child Care Research Network, 2006).

What factors should parents consider when searching for a high-quality preschool experience for their children? There is a broad consensus among scholars of early childhood development that the most important features include the following (Lavzer & Goodson, 2006; National Association for the Education of Young Children [NAEYC], 2010; Vandell et al, 2005):

- *Education and training of teachers.* Unlike teachers at higher grade levels, preschool teachers often are not required to have education or credentials specific to early childhood education. Preschool teachers who have training in early childhood education provide a better social and cognitive environment.
- *Class size and child–teacher ratio.* Experts recommend no more than 20 children in a classroom, and a ratio of children to preschool teachers no higher than five to ten 3-year-olds per teacher or seven to ten 4-year-olds per teacher.
- *Age-appropriate materials and activities.* In early childhood, children learn more through active engagement with materials rather than through formal lessons or rote learning.

- *Teacher–child interactions.* Teachers should spend most of their time in interactions with the children rather than with each other. They should circulate among the children, asking questions, offering suggestions, and assisting them when necessary.

Notice that the criteria for high-quality preschools do not include intense academic instruction. Here again there is a broad consensus among early childhood scholars that preschool teaching should be based on *developmentally appropriate educational practice* (NAEYC, 2010). At the preschool age, this means that learning should involve exploring and discovering through relatively unstructured, hands-on experiences—learning about the physical world through playing in a water or sand area, for example, or learning new words through songs and nursery rhymes, as you will see in the **Research Focus: The Montessori Preschool Program** feature. In contrast, structured academic learning, with worksheets and memorization tasks, mostly in large groups, is discouraged as developmentally inappropriate for preschool children. Several studies have shown the benefits of developmentally appropriate educational practice for preschool children, both cognitively and socially (Hart et al., 1998; Huffman & Speer, 2000).

> **APPLYING YOUR KNOWLEDGE**
> *. . . as a Preschool Teacher*
>
> *The parent of one of your students questions why you spend so much time letting the children play with sand and sing songs rather than teaching them academic skills. How do you respond?*

RESEARCH FOCUS   The Montessori Preschool Program

About a century ago, an Italian doctor named Maria Montessori developed a new approach to enhancing the cognitive development of young children. She had observed that children from poor families were often well behind their peers by the time they entered school, and she sought to find a way to assist them in preschool so that they would have a better chance of school success.

Montessori (1964) was focused on making her approach appropriate for the developmental stage of early childhood. She believed that young children should not be subjected to tests and grades. In her view, children have a natural desire to learn about the world that should be encouraged and enhanced. The program she developed emphasizes learning through self-directed exploration. Children are provided with a variety of different materials and activities, and they learn in a self-directed way as they choose from among the options. Teachers are present and sometimes facilitate small-group activities to enhance children's development of social skills, but the emphasis is on allowing children to learn through self-initiated discovery.

Children attending Montessori schools show cognitive and social advantages.

Montessori's design for preschool programs proved instantly popular, and remains popular today. There are thousands of Montessori preschool programs worldwide, but until recently they had not been evaluated systematically through research. Now studies by developmental psychologist Angeline Lillard (2008; Lillard & Else-Quest, 2006) have demonstrated the validity of Montessori's insights.

Lillard compared two groups of 3- to 6-year-old children. One group of children had attended a Montessori preschool, and the other group attended other types of preschools. All the children in the non-Montessori group had originally applied to Montessori schools but were not able to enter due to space limitations, with admission determined by a random lottery. This was a crucial aspect of the study design; do you see why? If the researchers had simply compared children in Montessori schools with children in non-Montessori schools, any differences would have been difficult to interpret, because there may have been many other differences between the families of children in the two types of schools (e.g., children in Montessori schools may have more-educated parents). Because the families of children in the non-Montessori schools had also applied to get their children into the Montessori schools, it can be assumed that the family backgrounds of the children in the two groups were similar.

The children who attended Montessori preschools were more advanced in both cognitive and social development than the children who attended the other preschools. Cognitively, the Montessori children scored higher on tests of reading and math skills than the other children. They also performed better on a card-sorting task that tested the ability to apply decision rules. Socially, in playground observations the Montessori children engaged more in cooperative play and less in rough, chaotic play such as wrestling. In sum, the Montessori approach appears to provide children with a setting that encourages self-initiated, active learning and thereby enhances cognitive and social development.

Cross-National Variations

<table>
<tr><td>6.10</td><td>**LEARNING OBJECTIVE**</td><td>Describe the distinctive practices of Japanese preschools and how they reflect cultural values.</td></tr>
</table>

Japanese preschools emphasize group play and cooperation.

Although attending preschool has become a typical experience among children in developed countries, there is great variation in how countries structure preschool and what they wish young children to learn. In most countries, parents hope for social benefits from preschool, but there is variation between countries in the expectations of cognitive and academic benefits. In some countries, such as China and the United States, learning basic academic skills is one of the primary goals of having children attend preschool (Johnson et al., 2003; Tobin et al., 2009). In other countries, such as Japan and most of Europe, learning academic skills is a low priority in preschool (Hayashi et al., 2009). Rather, preschool is mainly a time for learning social skills such as how to function as a member of a group.

Japan is of particular interest in this area, because Japanese students have long been at or near the top of international comparisons in reading, math, and science from middle childhood through high school (NCES, 2011). You might expect, then, that one reason for this success is that they begin academic instruction earlier than in other countries, but just the opposite turns out to be true. In one study of Japanese and American parents and preschool teachers, only 2% of the Japanese listed "to give children a good start academically" as one of the top three reasons for young children to attend preschool (Tobin et al., 2009). In contrast, over half the Americans named this as one of the top three reasons. There was a similarly sharp contrast in response to the item "to give children the experience of being a member of the group." Sixty percent of Japanese endorsed this reason for preschool, compared to just 20% of the Americans.

Preschools in Japan teach nothing about reading and numbers. Instead, the focus is on group play, so that children will learn the values of cooperation and sharing. Preschool children wear identical uniforms, with different colors to indicate their classroom membership. They each have the same equipment, which they keep in identical drawers. Through being introduced to these cultural practices in preschool, children also learn collectivistic Japanese values.

THINKING CULTURALLY

How does the Japanese practice of having children wear identical uniforms in preschool represent a custom complex? That is, what cultural beliefs underlie this cultural practice?

Preschool as a Cognitive Intervention

<table>
<tr><td>6.11</td><td>**LEARNING OBJECTIVE**</td><td>Describe early intervention programs and their outcomes.</td></tr>
</table>

One type of preschool experience that focuses intensively on cognitive development is the **early intervention program**. These are programs directed at young children who are at risk for later school problems because they come from low-income families. The goal of early intervention programs is to give these children extra cognitive stimulation in early childhood so that they will have a better opportunity to succeed once they enter school.

By far the largest early intervention program in the United States is Project Head Start. The program began in 1965 and is still going strong, with about 1 million American children enrolled each year (Head Start Bureau, 2010). The program provides 1 or 2 years of preschool, but it also includes other services. Children in the program receive free meals

early intervention program program directed at young children who are at risk for later problems, intended to prevent problems from developing

benefits of the program in a wide range of areas, including income and family stabil-ity. This program shows that an intensive, high-quality early intervention program can have profound and lasting benefits.

WHAT HAVE YOU LEARNED?

1. What constitutes developmentally appropriate educational practice for preschool children?
2. How do Japanese preschools differ from American preschools?
3. What is the goal of early intervention programs?
4. How have results of small-scale early intervention programs such as the High Scope Preschool Project differed from those of programs such as Head Start?

Language Development

As we saw in Chapter 5, by age 3 children are remarkably adept at using language. Nev-ertheless, their language development from age 3 to 6 continues at a remarkable pace, in areas including vocabulary, grammar, and pragmatics.

Advances in Vocabulary and Grammar

6.12   **LEARNING OBJECTIVE**   Explain how advances in vocabulary and grammar occur in early childhood.

Perhaps the most amazing advance at this age is the growth in children's vocabulary. The average 3-year-old has a vocabulary of about 1,000 words; by age 6, the average vocabulary has increased to over 2,500 words (Bloom, 1998). This means they are adding words nearly every day (Clark, 1995).

How do they do it? Clearly children's brains are built for learning language, as noted in the previous chapter, and early childhood is a **sensitive period** for language learning, when the capacity for learning new words is especially pronounced (Pinker, 1994). As we learned in Chapter 5, young children add new words to their vocabulary through a process known as *fast mapping* (Ganger & Brent, 2004; Swingley, 2010). This means that as young children learn new words they begin to form a mental map of interconnected sets of word categories. When they hear a word the first time they instantly connect it to one of these categories based on how the word is used in a sentence and how it seems to be related to words they already know, to help discern its meaning.

The kinds of words children fast-map earliest depend partly on the language. Chil-dren learning Eastern languages such as Chinese, Japanese, and Korean tend to learn more verbs than nouns at first, because sentences often emphasize verbs but only im-ply the nouns without speaking them (Kim et al., 2000). In contrast, children learn-ing English and other Western languages fast-map nouns earlier than verbs, because nouns are prominent in these languages. In both Eastern and Western languages, modifiers (such as large, narrow, pretty, low) are added more slowly than nouns and verbs (Mintz, 2005).

sensitive period in the course of development, a period when the capacity for learning in a specific area is especially pronounced

As young children add new words to their vocabulary, they also continue to learn **grammar**, which is a language's distinctive system of rules. Some examples of rules include single/plural forms; past, present, and future tense; word order; and use of articles (such as "a" and "the") and prepositions (such as "under" and "by"). Without any formal training, young children grasp the grammatical rules of their language with few errors simply by hearing and using the language in daily interactions. By age 4, it is estimated that children use correct grammar in 90% of their statements (Guasti, 2000; Pinker, 1994).

But how do we know they have really learned the rules of their language? Couldn't they simply be repeating what they hear older children and adults say? In a classic study investigating this question, Jean Berko (1958) had young children respond to questions involving nonsense words (see **Figure 6.5**). Although they had never heard the words before—Berko had made them up—the children were able to apply the grammar of English and use nouns in plural and possessive forms. As noted in Chapter 5 (p. 196), the readiness with which children learn grammar indicates that they possess what Chomsky (1969) called a language acquisition device, which is an innate capacity for grasping quickly a language's rules.
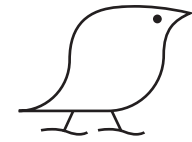
This is a wug.
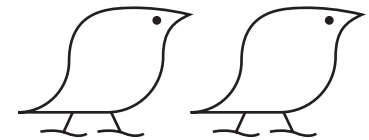
**Now there is another one.
There are two of them.
There are two _____ .**

Figure 6.5 • **Berko's Language Study**
How do the results of this study show young children's grasp of grammar?"
Source: Adapted from Berko, 1958.

Pragmatics: Social and Cultural Rules of Language

Describe how children learn pragmatics in early childhood, and identify to what extent these social rules are culturally based.

LEARNING OBJECTIVE 6.13

In order to use language effectively, children must learn not only vocabulary and grammar but the social rules or **pragmatics** for using language in interaction with others. Pragmatics guide us in knowing what to say—and what not to say—in a given social situation. For example, children learn to say "please" when asking for something and "thank you" when they receive something.

Children begin learning pragmatics even before they begin speaking, through gestures, for example when they wave "bye-bye" to someone when leaving. By the age of 2, they know the pragmatics of a basic conversation, including taking turns speaking (Pan & Snow, 1999). However, at this age they have not yet grasped the pragmatics of sustaining a conversation on one topic, and they tend to change topics rapidly as new things occur to them, without much awareness of the other person's perspective.

By age 4, children are more sensitive to the characteristics of their conversational partner and will adjust their speech accordingly. In one study using hand puppets, 4-year-olds used different kinds of speech when acting out different puppet roles (Anderson, 2000). When playing a socially dominant role such as teacher or doctor they used commands frequently, whereas when playing subordinate roles such as student or patient they spoke more politely.

The use of pragmatics represents not only social understanding but cultural knowledge. All cultures have their own rules for what kinds of speech can be used in what kinds of situations. For example, some cultures require children to address adults with respectful titles, such as "Mr." for adult men. Many cultures have words that are classified as "bad words" that are not supposed to be spoken, especially by children.

These are the kinds of pragmatics children learn in the course of early childhood, but while they are learning them there can be some embarrassing moments for parents along the way. One day when she was about 3 years old my daughter Paris and I were going through the check-out line in the grocery store, and she said to

grammar a language's distinctive system of rules

pragmatics social and cultural context of language that guides people as to what is appropriate to say and not to say in a given social situation

How might the language used in this kind of play demonstrate a grasp of pragmatics?

the clerk, apropos of nothing, "When I grow to a mommy, I'm going to have a baby in my tummy!" On another occasion, at age 4 my son Miles was talking about how he planned to live to be 100 years old and asked me if I would still be around by then. "Probably not," I said. "You're only four years old, and I'm forty-six." "Ooohhh," he said with genuine concern in his voice, "then you don't have many years left!" Adults understand intuitively that young children lack a sense of pragmatics, so they tend to find such moments amusing rather than offensive. By middle childhood, most children learn when it is culturally appropriate to speak and when it is best to keep your thoughts to yourself.

✔•⌐**Study** and **Review**
  └ at **MyDevelopmentLab**

WHAT HAVE YOU LEARNED?

1. What changes to a child's vocabulary occur between the ages of 3 and 6?
2. How do children learning Eastern languages differ from children learning Western languages in the kinds of words that they fast-map earliest?
3. Give an example of a young child showing an early understanding of pragmatics.
4. How do pragmatics represent cultural knowledge?

Section 2 VIDEO GUIDE Theory of Mind Across Cultures (Length: 6:44)

This video contains several demonstrations of children from various countries performing tests of theory of mind.

1. How does acquiring a theory of mind impact a child's social interactions?

2. According to this video, does acquiring a theory of mind occur at the same age across cultures?

3. Can you think of any interactions that may help or hinder a child in developing a theory of mind?

👁•⌐**Watch** the **Video** Theory of Mind Across Cultures
     └ at **MyDevelopmentLab**

LEARNING OBJECTIVES

6.14 Identify advances in emotional understanding and self-regulation during early childhood.

6.15 Describe moral development in early childhood, including empathy, modeling, and morality as cultural learning.

6.16 Describe the roles that parents and peers play in gender socialization and explain how gender schemas lead to self-socialization.

6.17 Describe the four types of parenting "styles" and the outcomes associated with each, and explain why those outcomes are complex.

6.18 Describe the major cultural variations in approaches to parenting.

6.19 Describe the main cultural variations in how parents discipline young children, and explain how cultural context influences children's responses to discipline.

6.20 Identify the most common features of sibling relationships worldwide, and describe how children with no siblings differ from other children.

6.21 Explain how the quality of friendships changes from toddlerhood to early childhood, and describe the role of play and aggression in young children's friendships.

6.22 Identify the rates and consequences of media use in early childhood.

Emotional Regulation and Gender Socialization

After the emotional volatility and intensity of the toddler years, children make great advances in emotional self-regulation in early childhood. Also notable in their emotional development during this time is increasing empathy and a greater grasp of the moral system of their culture, learned in part by modeling their behavior after the behavior of others who are important in their lives. With regard to gender development, early childhood is a life stage of great importance, with children gaining a fuller understanding of the gender roles and expectations of their culture and beginning to enforce those gender roles on others as well on themselves.

Emotional Regulation

Identify advances in emotional understanding and self-regulation during early childhood.	LEARNING OBJECTIVE 6.14

Early childhood is a time of great advances in emotional development, specifically in emotional understanding and self-regulation. With respect to emotional understanding, in the course of early childhood children become adept at understanding the sources of other people's expressed emotions (Eisenberg & Fabes, 2006). In studies that show children cards depicting expressed emotions, by age 5 children are usually accurate in explaining the emotions of the situation (e.g., "She's happy because she got a present," or "He's sad because his mom scolded him"). They are also adept at understanding how emotional states are the basis of subsequent actions, for example that an angry child is more likely to hit someone (Kagan & Hershkowitz, 2005).

Extreme expressions of emotion decrease in the course of early childhood, as effortful control develops.

emotional self-regulation ability to exercise control over one's emotions

undercontrol trait of having inadequate emotional self-regulation

externalizing problems problems that involve others, such as aggression

overcontrol trait of having excessive emotional self-regulation

internalizing problems problems that entail turning distress inward, toward the self, such as depression and anxiety

initiative vs. guilt in Erikson's lifespan theory, the early childhood stage, in which the alternatives are learning to plan activities in a purposeful way, or being afflicted with excess guilt that undermines initiative

Young children become more adept not only at understanding others' emotions but at controlling their own. In fact, **emotional self-regulation** is considered to be one of the major developmental tasks of early childhood (Grolnick et al., 2006). Developing emotional self-regulation is crucial to social relations, because maintaining harmonious social relations often requires us to restrain our immediate impulses—to wait in line, to let others go first in a game or a conversation, or to take fewer pieces of candy than we really want. Across cultures, early childhood is a time when expectations for emotional self-regulation increase (Whiting & Edwards, 1988). From age 2 to 6, extremes of emotional expression such as temper tantrums, crying, and physical aggression decrease (Alink et al., 2006; Carlson, 2003). In the brain, the development of the frontal cortex promotes this process, because this is the part of the brain most involved in emotional self-regulation (Bell & Wolfe, 2007).

Another key reason why emotional outbursts decline during early childhood is that children learn strategies for regulating their emotions (Grolnick et al., 2006). Experimental studies have identified the strategies that young children use when presented with an emotionally challenging situation, such as being given a disappointing prize after being led to expect a very attractive prize (Eisenberg & Fabes, 2007). Some of the most effective strategies are leaving the situation; talking to themselves; redirecting their attention to a different activity; and seeking comfort from an attachment figure. These strategies are part of what researchers call *effortful control,* when children focus their attention on managing their emotions (Cipriano & Stifter, 2010). Parents can help young children develop effortful control, by providing emotional and physical comfort when their children are upset, by suggesting possible strategies for managing emotions, and by modeling effortful control themselves (Katz & Windecker-Nelson, 2004).

Children vary in their success at achieving emotional self-regulation in early childhood, depending both on their temperament and on the socialization for self-regulation provided by parents and others. Children who have problems of **undercontrol** in early childhood have inadequately developed emotional self-regulation. These children are at risk for **externalizing problems**, such as aggression and conflict with others, in early childhood and beyond (Cole et al., 2003). However, developing **overcontrol**, an excessive degree of self-regulation of emotions, is also problematic. This can lead to **internalizing problems**, such as anxiety and depression, in early childhood and beyond (Grolnick et al., 2006). Throughout life, internalizing problems are more common among females and externalizing problems are more common among males (Frick & Kimonis, 2008; Ollendick et al., 2008).

Successful emotional regulation means developing a level of effortful control that is between the two extremes. As Erikson (1950) noted in proposing that early childhood is the stage of **initiative vs. guilt**, children need to learn emotional control but without being so tightly regulated that they feel excess guilt and their ability to initiate activities is undermined. But different cultures have different views of what the optimal level of emotional control is (Chen et al., 2007). Behavior that looks like undercontrol in one culture could be valued as a healthy expression of vigor in another culture, at least for boys (Levine & New, 2010). Behavior that looks like overcontrol in one culture could be valued as the virtue of reticence in another culture (Rogoff, 2003).

Moral Development

Describe moral development in early childhood, including empathy, modeling, and morality as cultural learning.

As described in Chapter 5, toddlerhood is when the sociomoral emotions first appear, such as guilt, shame, embarrassment, and pride. Even in toddlerhood, the sociomoral emotions are shaped by cultural standards. Toddlers feel guilt, shame, or embarrassment when they

violate the expected standards for behavior indicated by those in their social environment, and pride when they comply. 👁

One sociomoral emotion that is especially important to moral development in early childhood is empathy. As we have seen, toddlers and even infants show indications of empathy, but the capacity for empathy develops further in early childhood (Eisenberg & Valiente, 2004). Children become better at perspective-taking, and being able to understand how others think and feel makes them more empathic. Empathy promotes prosocial behavior such as being generous or helpful. It contributes to the moral understanding of principles such as avoiding harm and being fair, because through empathy children understand how their behavior would make another person feel. As empathy increases, prosocial behavior increases over the course of early childhood (Eisenberg et al., 2006).

In early childhood, moral development advances further as children gain a more detailed and complex understanding of the rules and expectations of their culture. Toddlers know when others approve or disapprove of something they have done, and usually respond with the appropriate sociomoral emotion. However, in early childhood there is greater awareness of the rule or expectation that evoked the approval or disapproval. Also, young children are more capable than toddlers of anticipating the potential consequences of their actions and avoiding behaviors that would be morally disapproved (Grolnick et al., 2006).

Young children do not inherently know the rules and expectations of their culture and must learn them, sometimes by unknowingly violating them and then observing the consequences in the responses of their parents and others. For example, one day when our twins were about 4 years old, they got into the laundry room in the basement and took cups of liquid detergent and spread it all over the basement furniture—sofa, table, loveseat, VCR, CD player—all of which were ruined! I don't think they had any intention or awareness of doing something wrong, although after we found out what they had done they knew from our response they should never do it again.

A good example of cultural learning of morality can be found in the research of Richard Shweder, who has compared children, adolescents, and adults in India and the United States (2009; Shweder et al., 1990). Shweder has found that by about age 5, children already grasp the moral standards of their culture, and their views change little from childhood to adolescence to adulthood.

Shweder found that there are some similarities in moral views in early childhood in India and the United States, but also many differences. At age 5, children in both countries have learned that it is wrong to take others' property ("steal flowers from a neighbor's garden") or to inflict harm intentionally ("kick a dog sleeping on the side of the road"). However, young children also view many issues with a different moral perspective depending on whether they live in India or the United States. Young children in the United States view it as acceptable to eat beef, but young children in India view it as wrong. Young children in India view it as acceptable for more of a father's inheritance to go to his son than to his daughter, but young children in the United States view it as wrong. Young children in both cultures have the ability to understand their culture's moral rules, even though the moral rules they have learned by early childhood are quite different.

How do children learn moral rules so early in life? There are several ways. Sometimes moral rules are taught explicitly. The Ten Commandments of the Jewish and Christian religions are a good example of this. Sometimes morality is taught through stories. Barbara Rogoff (2003) gives examples of storytelling as moral instruction in a variety of cultures, including Canadian First Nations people, Native Americans, and the Xhosa people of South Africa. Among the Xhosa (pronounced ZO-sa), it is usually the elders that tell the stories, but the stories have been told many times before, and even young children soon learn the stories and participate in the narrative.

👁 **Watch** the **Video** Moral Development at **MyDevelopmentLab**

Moral lessons are often communicated through stories. Here, a village elder tells children stories in Tanzania.

Young children also learn morality through custom complexes (see Chapter 4). Remember, the essence of the custom complex is that every customary practice of a culture contains not just the customary practice itself but cultural beliefs, often including moral beliefs. Shweder (Shweder et al., 1990) gives an example of this kind of moral learning in India. Like people in many cultures, Indians believe that a woman's menstrual blood has potentially dangerous powers. Consequently, a menstruating woman is not supposed to cook food or sleep in the same bed as her husband. By the end of early childhood, Indian children have learned not just that a menstruating woman does not cook food or sleep with her husband (the cultural practice) but that it would be *wrong* for her to do so (the moral belief).

A variation on the custom complex can be found in American research on *modeling*. Research extending over more than 30 years has shown that young children tend to model their behavior after the behavior of others they observe (Bandura, 1977; Bussey & Bandura, 2004). Most of this research has been experimental, involving situations where children observe other children or adults behaving aggressively or kindly, selfishly or generously; then children's own behavior in a similar experimental situation is observed. Children are especially likely to model their behavior after another person if the other person's behavior is rewarded. Also, they are more likely to model their behavior after adults who are warm and responsive or who are viewed as having authority or prestige. According to modeling theory, after observing multiple occasions of others' behavior being rewarded or punished, children conclude that the rewarded behavior is morally desirable and the punished behavior is forbidden (Bandura, 2002). So, by observing behavior (and its consequences) they learn their culture's principles of moral conduct. ✳

In addition to grasping early their culture's moral principles, young children begin to display the rudiments of moral reasoning. By the age of 3 or 4, children are capable of making moral judgments that involve considerations of justice and fairness (Helwig, 2008). By age 4 they understand the difference between telling the truth and lying, and they believe it is wrong to tell lies even when the liar is not caught (Bussey, 1992). However, their moral reasoning tends to be rigid at this age. They are more likely than older children to state that stealing and lying are always wrong, without regard to the circumstances (Lourenco, 2003). Also, their moral judgments tend to be based more on fear of punishment than is the case for older children and adults (Gibbs, 2003). Their moral reasoning will become more complex with age, as we will see in later chapters.

Teaching moral rules is a large part of parenting young children. Sometimes the hardest part is keeping a straight face. My wife and I bought a nice leather chair for our living room when our twins turned 4 years old, thinking that by now they were old enough to know they should be gentle with a nice piece of furniture. Wrong! Within 2 weeks they had put several large scratches in it. When confronted, they confessed at first, but then retracted their confession and looked for an alibi. "We didn't do it, Daddy," claimed Paris, lawyer for the defense. "Well, then who did?" I demanded. She cast her eyes down, as if it were painful for her to reveal the true offender. "Santa Claus," she said.

Gender Development

6.16	**LEARNING OBJECTIVE**	Describe the roles that parents and peers play in gender socialization, and explain how gender schemas lead to self-socialization.

In all cultures, gender is a fundamental organizing principle of social life. All cultures distinguish different roles and expectations for males and females, although the strictness of those roles and expectations varies widely. Of course, many other animals, including all our mammal relatives and certainly our primate cousins, have male–female differences in their typical patterns of behavior and development. What makes humans distinctive is that, unlike other animals, we require culture to tell us how males and females are supposed to behave.

GENDER IDENTITY AND GENDER SOCIALIZATION Early childhood is an especially important period with respect to gender development. Recall from Chapter 5 that even earlier, at age 2, children attain *gender identity*, that is, they understand themselves as being either male or female (Ruble et al., 2006). However, in early childhood, gender issues intensify. By age 3–4, children associate a variety of things with either males or females, including toys, games, clothes, household items, occupations, and even colors (Ruble et al., 2006).

Furthermore, they are often adamant and rigid in their perceptions of maleness and femaleness, denying, for example, that it would be possible for a boy to wear a ponytail and still remain a boy, or for a girl to play roughly and still remain a girl (Blakemore, 2003)! One reason for their insistence on strict gender roles at this age may be cognitive. It is not until age 6 or 7 that children attain **gender constancy**, the understanding that maleness and femaleness are biological and cannot change (Ruble et al., 2006). Earlier, children may be so insistent about maintaining **gender roles** because they believe that changing external features like clothes or hair styles could result in a change in gender.

The similarity of children's gender roles and gender behavior across cultures is striking, and there is a biological basis to some gender differences, as we saw in Chapter 5. However, children in virtually all cultures are also subject to intense gender socialization.

GENDER SOCIALIZATION As we learned in Chapter 5, parents play an active role in delivering cultural gender messages to their children (Ruble et al., 2006; Whiting & Edwards, 1988). They may give their children distinctively male or female names, dress them in gender-specific colors and styles, and provide them with cars or dolls to play with (Bandura & Bussey, 2004).

Parents' important role in gender socialization continues in early childhood. They continue to give their children the clothes and toys they believe are gender appropriate. They express approval when their children behave in gender-appropriate ways, and disapproval when their children violate gender expectations (Gelman et al., 2004; Leaper & Smith, 2004). In conversations, parents sometimes communicate gender expectations directly (e.g., "Don't cry, you're not a little girl, are you?"). They also communicate indirectly, by approving or not contradicting their children's gender statements. ("Only boys can be doctors, Mommy.") Parents also provide models, through their own behavior, language, and appearance, of how males and females are supposed to be different in their culture (Bandura & Bussey, 2004).

Fathers become especially important to gender socialization in early childhood and beyond. They are more insistent about conformity to gender roles than mothers are, especially for boys (David et al., 2004; Wood et al., 2002). They may not want their daughters to play rough and tumble games, but they are adamant that their boys not be "sissies" or "wimps." As we will see in later chapters, males' greater fear of violations of gender roles is something that continues throughout life in many cultures.

Peers also become a major source of gender socialization in early childhood. Once children learn gender roles and expectations, they apply them not only to themselves but to each other. They reinforce each other for gender-appropriate behavior, and reject peers who violate gender roles (Matlin, 2004; Ruble et al., 2006). Here, too, the expectations are stricter for boys than for girls (Bandura & Bussey, 2004). Boys who cry easily or who like to play with girls and engage in girls' games are likely to be ostracized by other boys (David et al., 2004).

GENDER SCHEMAS AND SELF-SOCIALIZATION As a result of gender socialization, from early childhood onward children use **gender schemas** as a way of understanding and interpreting the world around them. Recall from Chapter 4 that *scheme* is Piaget's term for a cognitive structure for organizing and processing information. (*scheme* and *schema* are used interchangeably in psychology.) A gender schema is a gender-based cognitive structure for organizing and processing information (Martin & Ruble, 2004).

gender constancy understanding that maleness and femaleness are biological and cannot change

gender roles cultural expectations for appearance and behavior specific to males or females

gender schema gender-based cognitive structure for organizing and processing information, comprising expectations for males' and females' appearance and behavior

APPLYING YOUR KNOWLEDGE . . . *as a Nurse*

New grandmother Natalie wonders where newborn Nicole will receive male gender-role socialization while being raised by her two mothers. What can you tell her?

Fathers tend to promote conformity to gender roles more than mothers do.

Once children learn the gender roles of their culture, they may strive to conform to them. Here, girls in Cambodia attend a dance class.

According to gender-schema theory, gender is one of our most important schemas from early childhood onward. By the time we reach the end of early childhood, on the basis of our socialization we have learned to categorize a wide range of activities and objects and personality characteristics as "female" or "male." This includes not just the obvious—vaginas are female, penises are male—but many things that have no inherent "femaleness" or "maleness" and are nevertheless taught as possessing gender—the moon as "female" and the sun as "male" in traditional Chinese culture, or blue as a "boy color" and pink as a "girl color" (in Korea, pink is a "boy color," which illustrates how cultural these designations are).

Gender schemas influence how we interpret the behavior of others and what we expect from them (Frawley, 2008). This well-known story provides an example: "A little boy and his father were in a terrible automobile accident. The father died, but the boy was rushed to the hospital. As the boy was rushed into surgery, the doctor looked down at him and said, 'I cannot operate on this boy—he is my son!'"

How could the boy be the doctor's son, if the father died in the accident? The answer, of course, is that the doctor is the boy's *mother*. But people reading this story are often puzzled by it because their gender schemas have led them to assume the doctor was male. (This story is less effective than it used to be, because so many women are physicians today! Try it on someone.)

In early childhood, children tend to believe that their own preferences are true for everyone in their gender (Liben & Bigler, 2002). For example, a boy who dislikes peas may justify it by claiming "boys don't like peas." Young children also tend to remember in ways that reflect their gender schemas. In one study (Liben & Signorella, 1993), children who were shown pictures that violated typical gender roles (e.g., a woman driving a truck) tended to remember them in accordance with their gender schemas (a man, not a woman, driving the truck). Throughout life, we tend to notice information that fits within our gender schemas and ignore or dismiss information that is inconsistent with them (David et al., 2004).

Once young children possess gender schemas, they seek to maintain consistency between their schemas and their behavior, a process called **self-socialization**. Boys become quite insistent about doing things they regard as boy things and avoiding things that girls do; girls become equally intent on avoiding boy things and doing things they regard as appropriate for girls (Bandura & Bussey, 2004; Tobin et al., 2010). In this way, according to a prominent gender scholar, "cultural myths become self-fulfilling prophesies" (Bem, 1981, p. 355). By the end of early childhood, gender roles are enforced not only by socialization from others but by self-socialization, as children strive to conform to the gender expectations they perceive in the culture around them.

THINKING CULTURALLY

Give an example of a custom complex *for gender—a cultural practice or custom that reflects cultural beliefs related to gender roles in your culture.*

WHAT HAVE YOU LEARNED?

1. What can parents do to help children develop effortful control?
2. Why do children become more empathic during early childhood?
3. How do children learn morality through modeling?
4. Why are fathers especially important to gender socialization?
5. How does gender-schema theory explain why Americans consider pink a "girl color"?
6. How does self-socialization lead to gender-typed behavior?

self-socialization process by which people seek to maintain consistency between their gender schemas and their behavior

Parenting

Parents are a key part of children's lives everywhere, but how parents view their role and their approaches to discipline and punishment vary widely. First, we look at a popular model of parenting "styles" based on American parenting, then at more culturally based views of parenting.

Parenting "Styles"

> Describe the four types of parenting "styles" and the outcomes associated with each, and explain why those outcomes are complex.

Have you heard the joke about the man who, before he had any children, had five theories about how they should be raised? Ten years later he had five children and no theories.

Well, jokes aside, most parents do have ideas about how best to raise children, even after they have had children for awhile (Tamis-Lamonda et al., 2008). In research the investigation of this topic has involved the study of **parenting styles**, that is, the practices that parents exhibit in relation to their children and their beliefs about those practices. This research originated in the United States and has involved mainly American children and their parents, although it has now been applied in some other countries as well.

> **Watch** the **Video** Parenting Styles at **MyDevelopmentLab**

For over 50 years, American scholars have engaged in research on this topic, and the results have been quite consistent (Collins & Laursen, 2004; Maccoby & Martin, 1983; Steinberg, 2001). Virtually all of the prominent scholars who have studied parenting have described it in terms of two dimensions: demandingness and responsiveness (also known by other terms such as *control* and *warmth*). Parental **demandingness** is the degree to which parents set down rules and expectations for behavior and require their children to comply with them. Parental **responsiveness** is the degree to which parents are sensitive to their children's needs and express love, warmth, and concern for them.

Various scholars have combined these two dimensions to describe different kinds of parenting styles. For many years, the best known and most widely used conception of parenting styles was the one articulated by Diana Baumrind (1968, 1971, 1991a, 1991b). Her research on middle-class White American families, along with the research of other scholars inspired by her ideas, has identified four distinct parenting styles (Collins & Laursen, 2004; Maccoby & Martin, 1983; Steinberg, 2000; see **Table 6.1**).

Authoritative parents are high in demandingness and high in responsiveness. They set clear rules and expectations for their children. Furthermore, they make clear what the consequences will be if their children do not comply, and they make those consequences stick if necessary. However, authoritative parents do not simply "lay down the law" and then enforce it rigidly. A distinctive feature of authoritative parents is that they *explain* the reasons for their rules and expectations to their children, and they willingly engage in discussion with their children over issues of discipline, sometimes leading to negotiation and compromise. For example, a child who wants to eat a whole bag of candy would not simply be told "No!" by an authoritative parent but something like, "No, it wouldn't be healthy and it would be bad for your teeth." Authoritative parents are also loving and warm toward their children, and they respond to what their children need and desire.

parenting styles practices that parents exhibit in relation to their children and their beliefs about those practices

demandingness degree to which parents set down rules and expectations for behavior and require their children to comply with them

responsiveness degree to which parents are sensitive to their children's needs and express love, warmth, and concern for them

authoritative parents in classifications of parenting styles, parents who are high in demandingness and high in responsiveness

TABLE 6.1 Parenting Styles and the Two Dimensions of Parenting

		Demandingness	
		High	Low
Responsiveness	**High**	Authoritative	Permissive
	Low	Authoritarian	Disengaged

Authoritarian parents are high in demandingness but low in responsiveness. They require obedience from their children, and they punish disobedience without compromise. None of the verbal give-and-take common with authoritative parents is allowed by authoritarian parents. They expect their commands to be followed without dispute or dissent. To continue with the candy example, the authoritarian parent would respond to the child's request for a bag of candy simply by saying "No!" with no explanation. Also, authoritarian parents show little in the way of love or warmth toward their children. Their demandingness takes place without responsiveness, in a way that shows little emotional attachment and may even be hostile.

Permissive parents are low in demandingness and high in responsiveness. They have few clear expectations for their children's behavior, and they rarely discipline them. Instead, their emphasis is on responsiveness. They believe that children need love that is truly "unconditional." They may see discipline and control as having the potential to damage their children's healthy tendencies for developing creativity and expressing themselves however they wish. They provide their children with love and warmth and give them a great deal of freedom to do as they please.

Disengaged parents are low in both demandingness and responsiveness. Their goal may be to minimize the amount of time and emotion they devote to parenting. Thus, they require little of their children and rarely bother to correct their behavior or place clear limits on what they are allowed to do. They also express little in the way of love or concern for their children. They may seem to have little emotional attachment to them.

THE EFFECTS OF PARENTING STYLES ON CHILDREN A great deal of research has been conducted on how parenting styles influence children's development. A summary of the results is shown in **Table 6.2**. In general, authoritative parenting is associated with the most favorable outcomes, at least by American standards. Children who have authoritative parents tend to be independent, self-assured, creative, and socially skilled (Baumrind, 1991a, 1991b; Collins & Larsen, 2004; Steinberg, 2000; Williams et al., 2009). They also tend to do well in school and to get along well with their peers and with adults (Hastings et al., 2007; Spera, 2005). Authoritative parenting helps children develop characteristics such as optimism and self-regulation that in turn have positive effects on a wide range of behaviors (Jackson et al., 2005; Purdie et al., 2004).

All the other parenting styles are associated with some negative outcomes, although the type of negative outcome varies depending on the specific parenting style (Baumrind, 1991a, 1991b; Snyder et al., 2005). Children with authoritarian parents tend to be less self-assured, less creative, and less socially adept than other children. Boys with authoritarian parents are more often aggressive and unruly, whereas girls are more often anxious and unhappy (Russell et al., 2003). Children with permissive parents tend to be immature and lack self-control. Because they lack self-control, they have difficulty getting along with peers and teachers (Linver et al., 2002). Children with disengaged parents also tend to be impulsive. Partly as a consequence of their impulsiveness, and partly because disengaged parents do little to monitor their activities, children with disengaged parents tend to have higher rates of behavior problems (Pelaez et al., 2008).

authoritarian parents in classifications of parenting styles, parents who are high in demandingness but low in responsiveness

permissive parents in classifications of parenting styles, parents who are low in demandingness and high in responsiveness

disengaged parents in classifications of parenting styles, parents who are low in both demandingness and responsiveness

TABLE 6.2 Outcomes Associated With Parenting Styles in White Middle-Class Families

Authoritative	Authoritarian	Permissive	Disengaged
Independent	Dependent	Irresponsible	Impulsive
Creative	Passive	Conforming	Behavior problems
Self-assured	Conforming	Immature	Early sex, drugs
Socially skilled			

In Latin American cultures, too, the authority of parents is viewed as paramount. The Latino cultural belief system places a premium on the idea of *respeto*, which emphasizes respect for and obedience to parents and elders, especially the father (Cabrera & Garcia-Coll, 2004; Halgunseth et al., 2006; Harwood et al. 2002). The role of the parent is considered to be enough to command authority, without requiring that the parents explain their rules to their children. Another pillar of Latino cultural beliefs is **familismo**, which emphasizes the love, closeness, and mutual obligations of Latino family life (Halgunseth et al., 2006; Harwood et al., 2002).

Does this mean that the typical parenting style in non-Western cultures is authoritarian? No, although sometimes scholars have come to this erroneous conclusion. It would be more accurate to state that the parenting-styles model is a cultural model, rooted in the American majority culture, and does not apply well to most other cultures. Of course, children everywhere need to have parents or other caregivers provide care for them in early childhood and beyond, and across cultures parents provide some combination of warmth and control. However, "responsiveness" is a distinctly American kind of warmth, emphasizing praise and physical affection, and "demandingness" is a distinctly American kind of control, emphasizing explanation and negotiation rather than the assertion of parental authority. Other cultures have their own culturally based forms of warmth and control, but across cultures, warmth rarely takes the American form of praise, and control rarely takes the American form of explanation and negotiation (Matsumoto & Yoo, 2006; Miller, 2004; Wang & Tamis-Lamonda, 2003).

Even within American society, the authoritative style is mainly dominant among White, middle-class families (Steinberg, 1996). Most American minority cultures, including African Americans, Latinos, and Asian Americans, have been classified by researchers as "authoritarian," but this is inaccurate and results from applying to them a model that was based on the White majority culture (Chao & Tseng, 2002). Each minority culture has its own distinctive form of warmth, but all tend to emphasize obeying parental authority rather than encouraging explanation and negotiation. Hence they have warmth as "authoritative" parents do but they view parental authority as "authoritarian" parents do; the American model of parenting styles cannot really be applied to them.

Within cultures, parenting varies depending on the personalities of the parents, their goals for their children, and the characteristics of the children that evoke particular parenting responses. Overall, however, the dominant approach to parenting in a culture reflects certain things about the underlying cultural beliefs, such as the value of independence versus independence and the status of parental authority over children (Giles-Sims & Lockhart, 2005; Hulei et al., 2006). The cultural context of parenting is so crucial that what looks like the same parental behavior in two different cultures can have two very different effects, as we will see in the next section.

In most cultures, parents expect to be respected and obeyed without justifying their actions. Here, a mother and daughter in Japan.

familismo cultural belief among Latinos that emphasizes the love, closeness, and mutual obligations among family members

Discipline and Punishment

6.19   **LEARNING OBJECTIVE**   Describe the main cultural variations in how parents discipline young children, and explain how cultural context influences children's responses to discipline.

In many cultures, early childhood is when issues of discipline for disapproved behavior first arise. As we have seen, it is common for cultures to be indulgent of infants and toddlers, because they are seen to be too young to exercise much judgment or self-control. However, by early childhood children become more capable of emotional and behavioral self-regulation, and when they disobey or defy the authority of others they are believed to have enough understanding to know what they were doing and to be responsible for the

consequences. For this reason, early childhood is usually the age when children are first disciplined for not following expectations or not doing what is required of them.

CULTURAL VARIATIONS IN DISCIPLINE All cultures require children to learn and follow cultural rules and expectations, and all cultures have some system of discipline for misbehavior. However, cultures vary widely in the nature of the discipline, and the consequences of discipline vary depending on the cultural beliefs that underlie the approach.

In Western cultures the approach to discipline in early childhood tends to emphasize the authoritative style of explaining the consequences of misbehavior and the reasons for discipline (Huang et al., 2009; Tamis-Lamonda et al., 2008). "Michael, if you don't stop banging that toy against the floor I'm going to take it away! Okay, now I'm going to take it away until you can learn to play with it nicely." Western parents also tend to use a lot of praise for compliant and obedient behavior, which is notable because the use of praise is very rare in other cultures (LeVine et al., 2008; Whiting & Edwards, 1988). Discipline for misbehavior may involve taking away privileges (as in the example just given) or a **time out** in which the child is required to sit still in a designated place for a brief period, usually only a few minutes (Morawska & Sanders, 2011). Little research has been conducted on the effectiveness of time out under normal family circumstances, but it has been shown to be effective with young children who have behavioral problems (Everett & Bryk, 2007; Everett et al., 2007; Fabiano et al., 2004).

In addition to using time out, parenting researchers recommend (1) explaining the reasons for discipline; (2) being consistent so that the consequences will be predictable to the child (and hence avoidable); and (3) exercising discipline at the time of the misbehavior (not later on) so that the connection will be clear to the child (Klass et al., 2008). One popular approach suggests that if a parent's request to a young child is ignored or disobeyed, the parent counts a warning: "One-two-*three,*" and if the request is not obeyed by "three" the child is then put in time out, 1 minute for each year of their age (Phelan, 2010). I can tell you, my wife and I found that this worked like magic with our twins in early childhood; we almost never got to "three."

Other cultures have different approaches to discipline. Japan provides an interesting example of a culture where shame and withdrawal of love is the core of discipline in early childhood. Recall that *amae,* introduced in Chapter 5, is a Japanese word that describes the close attachment between mother and child (Rothbaum et al., 2000). During infancy, *amae* takes the form of an emotionally indulgent and physically close relationship between the Japanese mother and her baby. However, in toddlerhood and early childhood, a new element, shame and withdrawal of love, is added. Japanese mothers rarely respond to their children's misbehavior with loud reprimands or physical punishment. Instead, they express disappointment and withdraw their love temporarily. The child feels shame, which is a powerful inducement not to disobey again.

This system of early childhood socialization seems to work well in Japan. Japanese children have low rates of behavioral problems, and high rates of academic achievement (Stevenson & Zusho, 2002). They grow up to be Japanese adults who have low rates of crime and social problems and high levels of economic productivity, making Japan one of the most stable and economically successful societies in the world.

However, the same parental behaviors appear to have a different, more negative effect in Western countries. Among American researchers, parenting that uses shame and withdrawal of love has been described using the term **psychological control** (Barber, 2002). This kind of parenting has been found in American studies to be related to negative outcomes in early childhood and beyond, including anxious, withdrawn, and aggressive behavior, as well as problems with peers (Barber et al., 2005; Silk et al., 2003). In Finland, too, a longitudinal study that began in early childhood found psychological control to predict negative outcomes in later childhood and adolescence, especially when psychological control was combined with physical affection, as it is in *amae* (Aunola & Nurmi, 2004).

"Time out" is a popular discipline strategy among middle-class American parents.

time out disciplinary strategy in which the child is required to sit still in a designated place for a brief period

psychological control parenting strategy that uses shame and withdrawal of love to influence children's behavior

What explains this difference? Why does *amae* appear to work well in Japan but not in the West? It is difficult to say, since this question has not been researched directly. However, the answer may be some kind of interaction between the parents' behavior and the cultural belief system. In Japan, *amae* fits neatly into a larger system of cultural beliefs about duty and obligations to others, especially to family. In the West, psychological control contrasts and perhaps collides with cultural beliefs about the value of thinking and behaving independently. It may be this friction between the parental practices and the cultural beliefs that results in negative outcomes, not the parental practices in themselves.

PHYSICAL PUNISHMENT AND ITS CONSEQUENCES Research on physical punishment (also known as **corporal punishment**) suggests a similar kind of interaction between parenting practices and cultural beliefs. Physical punishment of young children is common in most parts of the world (Curran et al., 2001). This approach to punishment has a long history, as you will see in the **Historical Focus: Beat a Child, Save a Soul** feature. Most adults in most countries around the world remember experiencing physical punishment as children. Although most countries still allow parents to spank their young children, nearly all outlaw beatings and other harsh forms of physical punishment, which the historical record shows was quite common until about 100 years ago (Straus, 1994).

Is physical punishment destructive to young children, or is it a form of instruction that teaches them to respect and obey adults? Here, as with *amae,* the answer appears to be very different depending on the cultural context. Many studies in the United States and Europe have been conducted on physical punishment of young children, and these studies have found a correlation between physical punishment and a wide range of antisocial behavior in children, including telling lies, fighting with peers, and disobeying parents (Alaggia & Vine, 2006; Kazdin & Benjet, 2003). Furthermore, several longitudinal studies have reported that physical punishment in early childhood increases the likelihood of bullying and delinquency in adolescence and aggressive behavior (including spousal abuse) in adulthood (Jaffee et al., 2004). On the basis of these studies, some scholars have concluded that physical punishment in early childhood increases children's compliance in the short run but damages their moral and mental health in the long run (Amato & Fowler, 2002; Gershoff, 2002).

However, studies that cast a wider cultural net report considerably more complicated findings. In one longitudinal study, White and African American families were studied when the children were in early childhood and then 12 years later, when the children were in adolescence (Lansford et al., 2004). The White children showed the familiar pattern: physical punishment in early childhood predicted aggressive and antisocial behavior in adolescence. However, for African American children, nearly the opposite pattern was found. The more physical punishment the children experienced in early childhood, the *less* likely they were to be aggressive and antisocial in adolescence. Other studies have reported similar findings of the generally beneficial results of early childhood physical punishment among African Americans (Bluestone & Tamis-Lamonda, 1999; Brody & Flor, 1998; Steele et al., 2005). Similarly, studies of traditional cultures have found that many of the parents in these cultures use physical punishment on young children, and the children nevertheless grow up to be well-behaved, productive, mentally healthy adults (Levine et al., 2008; Whiting & Edwards, 1988).

Like the findings regarding *amae,* the findings on physical punishment show the crucial role of cultural context in how young children respond to their parents' behavior. In White American and European cultures, physical punishment is generally disapproved and not widely or frequently used (Graziano & Hamblen, 1996). In these cultures, physical punishment is likely to be combined with anger (Gunnoe & Mariner, 1997; McLoyd & Smith, 2002). In contrast, among African Americans, and in traditional cultures, the use of physical punishment in early childhood is widespread (Brody & Flor, 1998; Ispa & Halgunseth, 2004; Pinterhughes et al., 2000). Usually, it is mild in degree and is delivered not in an angry rage but calmly and sternly, as part of a "no-nonsense" parenting style

corporal punishment physical punishment of children

(Brody & Flor, 1998). Physical punishment is often combined with parental warmth, so that children understand their parents' behavior not as a frightening and threatening loss of parental control but as a practice intended to teach them right from wrong and the importance of obeying their parents (Gunnoe & Mariner, 1997; Mosby et al., 1999). This cultural context makes the meaning and the consequences of physical punishment much different than it is in White American and European cultures.

HISTORICAL FOCUS   Beat a Child, Save a Soul

Physical punishment is a widespread parenting practice with young children, and it has a long history. It is recommended in the Bible, in the book of Proverbs written over 2,000 years ago: "Do not be afraid to beat your child. You shall beat him with the rod, and save his soul from hell." Notice that physical punishment is not meant to be harmful but helpful, a form of moral instruction that will "save [the child's] soul."

For much of the next 1,500 years, the Bible was the basis of the cultural beliefs of most of the West, including beliefs regarding family relations. Physical punishment was a standard part of parenting. It was only during the Enlightenment, beginning about 400 years ago, that Western cultural beliefs began to broaden, and as part of that process came new ideas about parenting. One influential figure in this change was John Locke (1632–1704), the British philosopher who wrote the first known parenting manual, even though he was a lifelong bachelor with no children himself (insert your own punch line here). Locke's revolutionary idea was that all children are born as a *tabula rasa,* a blank slate, rather than being filled with sin that needs to be beat out of them. Consequently, Locke discouraged physical punishment and advocated explanation and negotiation instead, much as Western psychologists do today. He believed that if parents rewarded good behavior with esteem and made shame the consequence of bad behavior they would not have to resort to physical punishment.
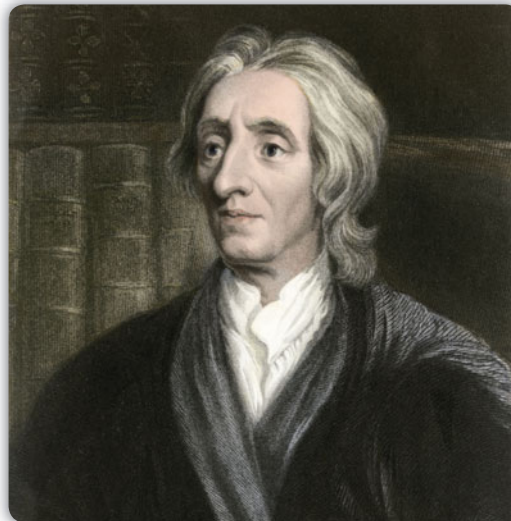
John Locke was a childless bachelor who wrote the first parenting manual in the 17th century.

Another influential figure of the Enlightenment who had much to say about parenting and punishment was the French philosopher Jean Jacques Rousseau (1712–1778). Like Locke, Rousseau was no model father. He had at least five children by a variety of women but was never involved in the care of any of them. Nevertheless, for over two centuries he was tremendously influential in European views of parenting and punishment. In his book *Emile* (1763), he laid out what he believed to be an ideal program for raising children. He argued that they should be given as much freedom as possible to allow their goodness and curiosity to flourish. Locke believed children were born as blank slates, but Rousseau went further and proposed that children are born naturally good, only to be corrupted and warped by misguided parenting methods, including physical punishment. In Rousseau's view, physical punishment is unnecessary because children are born good and innocent, and it is wrong because it damages children's natural propensity for kindness.

Primarily due to Locke's and Rousseau's influence, over the course of the 18th and 19th centuries support for physical punishment gradually declined in the West (Straus, 1994). In recent years, physical punishment of children has even become prohibited by law in 24 countries, mainly in Europe (Curran et al., 2001). Nevertheless, physical punishment remains common in most parts of the world, as this chapter shows.

CHILD ABUSE AND NEGLECT Although there are wide cultural variations in discipline and punishment of young children, today there is a widespread view across cultures that children should not be physically harmed and that parents have a responsibility to provide for their children's physical and emotional needs (UNICEF, 2011). However, there are all kinds of parents in the world, and in all cultures there are some who fail to meet these basic requirements. **Child maltreatment** includes both abuse and neglect of children, specifically:

- *Physical abuse,* which entails causing physical harm to a child, including hitting, kicking, biting, burning, or shaking the child;
- *Emotional abuse,* including ridicule and humiliation as well as behavior causing emotional trauma to children such as locking them in a dark closet;

child maltreatment abuse or neglect of children, including physical, emotional, or sexual abuse

- *Sexual abuse,* meaning any kind of sexual contact with a minor; and
- *Neglect,* which is failure to meet children's basic needs of food, shelter, clothing, medical attention, and supervision.

Most research on maltreatment of young children has focused on physical abuse (Cicchetti, 2001). A variety of risk factors for physical abuse have been identified, involving characteristics of children as well as characteristics of parents. Young children are at risk for physical abuse if they are temperamentally difficult or if they are unusually aggressive or active and hence more difficult for parents to control (Li et al., 2010). Parental risk factors for physical abuse of children include poverty, unemployment, and single motherhood, all of which contribute to stress, which may in turn trigger abuse (Geeraert et al., 2004; Zielinski, 2009). Stepfathers are more likely to be abusive than biological fathers are, and child abuse is correlated with spouse abuse, suggesting that the abuser has a problem with anger management and self-control that is expressed in multiple ways (Asawa et al., 2008). Abusive parents often view their children as somehow deserving the abuse because of disobedience or because they are "no good" and will not respond to anything else (Bugental & Happaney, 2004). Parents who abuse their children were abused by their own parents in about one-third of cases (Cicchetti & Toth, 1998). 👁

Physical abuse is destructive to young children in a wide variety of ways. It impairs emotional and self-development, including self-regulation, empathy, and self-concept (Haugaard & Hazen, 2004). It is damaging to the development of friendships and social skills, because abused children find it difficult to trust others (Elliott et al., 2005). It also interferes with school performance, as abused children are often low in academic motivation and have behavior problems in the classroom (Boden et al., 2007). Furthermore, children who are abused are at risk for later emotional, social, and academic problems in adolescence and beyond (Fergusson et al., 2008; Herrenkohl et al., 2004).

What can be done to help abused children? In most cultures, there is some kind of system that removes children from their parents' care when the parents are abusive. In traditional cultures, the system tends to be informal. Children with abusive parents may go to live with relatives with whom they have a more positive, less conflictual relationship (LeVine et al., 2008). In Western countries, it is more often the formal legal system that intervenes in cases of child abuse. A state agency investigates reports of abuse, and if the report is verified the child is removed from the home. The agency may then place the child in **foster care**, in which adults approved by the agency take over the care of the child (Pew Commission on Foster Care, 2004). In the United States, about half of children in foster care are placed with relatives through the formal system (U.S. Dept. of Health & Human Services [DHHS], 2004). In addition, three times as many children are estimated to live with nonparental relatives, similar to the informal system of traditional cultures. Sometimes children in foster care return home after a period, sometimes they are adopted by their foster family, and sometimes they "age out" of foster care when they turn age 18 (Smith, 2011). Children in foster care are at high risk for academic, social, and behavioral problems, especially if they experience multiple foster-home placements (Crum, 2010; Plant & Siegel, 2008; Vig et al., 2005). 👁

Another alternative is for children to live in a *group home* staffed by the state agency that oversees child abuse and neglect cases (Dunn et al., 2010). I worked in a group home when I was an emerging adult, years ago. I still remember many of the kids vividly, especially one boy who had scars all over his back from where his parents had beaten and burned him. Group homes are usually a temporary alternative until the child can be placed in foster care or with relatives (DeSena et al., 2005).

Programs have also been developed to prevent child maltreatment. In the United States, one notable program is the *Nurse–Family Partnership* (NFP), with sites in 22 states (DHHS, 2005). In this program, expectant mothers who have many of the risk factors for abuse receive regular home visits by a trained nurse for 2 years. The nurse provides information and advice about how to manage crises, how to manage children's behavior without physical punishment, and how to access community agencies that provide services for families (Olds, 2010). In a 15-year follow-up comparing families who participated in the NFP to other families with similar risks, the NFP group showed a 79% reduction in child abuse and neglect (Eckenrode et al., 2001).

👁 **Watch** the **Video** Childhood Sexual Abuse at **MyDevelopmentLab**

👁 **Watch** the **Video** Adoption and Foster Care at **MyDevelopmentLab**

foster care   for maltreated children, approach in which adults approved by a state agency take over the care of the child

WHAT HAVE YOU LEARNED?

1. How do Baumrind's four parenting styles differ on the dimensions of demandingness and responsiveness?
2. What are the outcomes associated with authoritative parenting?
3. Give an example of a reciprocal or bidirectional effect between parent and child.
4. How does the Asian tradition of filial piety translate into a parenting style that differs from Western authoritative parenting?
5. What are three characteristics of effective discipline, according to American parenting researchers?
6. What are some of the negative effects of child maltreatment?

The Child's Expanding Social World

Across cultures, the social world expands considerably in early childhood. Infants and toddlers need a great deal of care, nurturance, and supervision. And, as we have seen in the previous two chapters, infants and toddlers are usually kept in close proximity to someone who will provide this for them, usually the mother, sometimes in collaboration with a father, grandmother, aunt, or older sibling.

When they reach early childhood, children still need a considerable amount of care, but they no longer need to be constantly watched by others. The anthropologist Margaret Mead (1935) proposed a general scheme many decades ago that still applies well to how most of the world's children experience the social changes of childhood (see **Table 6.3**). Recall from Chapter 5 that Mead designated children ages 0–2 with the term *lap child*, to denote their near-constant dependence on the care and monitoring of others. For early childhood, Mead proposed two terms. At ages 3–4 is the *knee child*, who is still cared for mainly by the mother but also spends time with other children, especially of the same gender. At ages 5–6 is the *yard child*, who is given more scope to venture beyond the immediate family area and into the "yard," that is, into a social world where parents are nearby but not always directly present.

Margaret Mead's scheme was the basis of a classic study of young children across cultures conducted by anthropologists Beatrice Whiting and Carolyn Edwards (1988). Whiting and Edwards studied children ages 2–10 in twelve different cultures in places around the world, including Africa, Asia, South America, and the United States. Their goal was to see what kinds of similarities and differences exist in the social worlds of children across cultures.

They found substantial similarities worldwide in how cultures socialize young children and structure their social environments. From lap children to knee children to yard children, there is a gradual lessening of dependence on the mother and a gradual move into the social orbit of peers and older children. Like lap children, knee children receive a great deal of nurturance from mothers and from older children. However, more is required of

TABLE 6.3 Mead's Classifications of Childhood Stages		
Age	**Term**	**Features**
0–2	Lap child	Needs constant care; doted on by others
3–4	Knee child	Still cared for mainly by mothers, but spends more time with other children
5–6	Yard child	More time spent with same-sex peers; sometimes unsupervised

Across cultures, children are given more autonomy and more responsibility in the course of early childhood. Here, a girl washes dishes outside her Guatemalan home.

knee children than of lap children. Knee children are expected to stop breast feeding and to have less bodily contact with the mother. Parents and older children expect knee children to be toilet trained, to have basic manners (such as waiting their turn), and to perform minor chores. Older children exercise more dominance over knee children than over lap children, because knee children are perceived as better able to understand and follow commands.

Yard children are allowed more freedom than knee children. Yard children spend most of their time close to home, as knee children do, but 20% of the time they are outside of their immediate home area doing errands or playing. However, most cultures share a view that children cannot reason very well until about age 6 and this limits how far a yard child can be away from home or supervision.

The cultures studied by Mead and by Whiting and Edwards were mostly in developing countries, but many of the same patterns apply in developed countries. Across countries and cultures, the social world expands in early childhood to include more time and more interactions with siblings, peers, and friends. In developed countries the media world expands as well, as children not only watch TV as they have from infancy but many also begin to play electronic games as well.

Siblings and "Only Children"

6.20 **LEARNING OBJECTIVE** | Identify the most common features of sibling relationships worldwide, and describe how children with no siblings differ from other children.

A gap of 2–4 years between children is common worldwide, traditionally. In developing countries, especially in rural areas, breast feeding often lasts at least 2 years, and as we have seen, breast feeding acts as a natural contraceptive by suppressing the mother's ovulation. In economically developed countries, parents often choose to space their children by 2–4 years (maybe it takes them that long to forget how much work it is to take care of an infant!). Consequently, it is often in early childhood that children experience the birth of a younger sibling.

How do young children respond to a baby brother or sister? As we learned in Chapter 5, jealousy is the predominant emotion, initially. In their study of 12 cultures, Whiting and Edwards (1988) found a great deal of variability on most issues, but in all 12 cultures jealousy was recognized as a common response to the birth of a younger sibling. Nevertheless, there was great variability in how parents responded to the jealousy of young children, from physical punishment in Africa to trying to comfort and reassure the jealous child in the United States. From the outset, young children expressed love as well as jealousy toward their younger siblings. Like people of other ages, they enjoyed doting on the lap child.

More recent American studies show this same pattern of ambivalence toward younger siblings. Aggressive and hostile behavior is common, but so is helping, sharing, and teaching (Kramer & Kowal, 2005; Martin & Ross, 2005; Natsuaki et al., 2009).

Ambivalence continues with age, when there is a younger sibling in early childhood and an older sibling in middle childhood. Middle-childhood siblings care for and teach their younger siblings, but also command and dominate them, and sometimes physically punish them (Howe & Recchia, 2009; Pike et al., 2005; Volling, 2003). Younger siblings admire their older siblings and model their behavior after them, trying to learn to do what their older siblings can do, although sometimes resenting their authority. But even conflict

between siblings can have positive effects. Studies indicate that young children with older siblings possess more advanced theory of mind understanding than children who have no older sibling (McAlister & Peterson, 2007; Randell & Peterson, 2009). One explanation of this is that, as siblings argue, compete, and cooperate they learn better how to understand the thinking of others and accept that others have a point of view that may be different than their own.

What about children who have no siblings? This has become an increasingly common condition over the past half century, as birthrates have fallen worldwide. In the United States, about 20% of children have no siblings. In some parts of Europe and Asia birthrates are just 1.1–1.4 children per woman, meaning that there are more children who do not have a sibling than do have one (Population Reference Bureau, 2010). What is it like to be an **only child**?

Having siblings is a mixed blessing, and having no siblings has mixed effects as well. In general, "only children" fare at least as well as children with siblings (Brody, 2004). Their self-esteem, social maturity, and intelligence tend to be somewhat higher than children with siblings, perhaps because they have more interactions with adults (Dunn, 2004). However, in American studies they are somewhat less successful in social relations with peers, perhaps because children with siblings gain peerlike practice in social relations (Kitzmann et al., 2002).

Only children have been especially common in China in recent decades. Beginning in 1978, in response to fears of overpopulation, the Chinese government instituted a "one-child policy" making it illegal for parents to have more than one child without special government approval. There were fears that this policy would create a generation of "little emperors and empresses" who were overindulged and selfish, but those fears appear to be unfounded. Like only children in the United States, only children in China demonstrate several advantages over children with siblings, including higher cognitive development, higher emotional security, and higher likeability (Jiao et al.,1996; Wang & Fong, 2009; Yang et al., 1995). Unlike their American counterparts, Chinese only children show no deficits is social skills or peer acceptance (Hart et al., 2003). One unexpected benefit of the one-child policy is that girls, who in Chinese tradition have often been less favored than boys, have more opportunities in education than they did when they had to compete with brothers for family resources (Fong, 2002).

Because of its "one-child" policy, China today has many children without siblings.

Peers and Friends

Explain how the quality of friendships changes from toddlerhood to early childhood, and describe the role of play and aggression in young children's friendships.

LEARNING OBJECTIVE   **6.21**

As described in Chapter 5, even toddlers are capable of forming friendships (Rubin et al., 2005). They delight in each other's company, they enjoy favorite shared activities, and they provide each other with companionship and emotional support. In early childhood, friendships also have these qualities, but by this age children are more capable than toddlers of understanding and describing what a friendship entails. They regard a friend as someone you like and who likes you, and as someone who plays with you and shares toys with you (Hartup & Abecassis, 2004). By age 5 or 6, they also understand that friendship is characterized by mutual trust and support, and that a friend is someone you can rely on over time (Hay et al., 2004; Park et al., 1993).

Before proceeding further, it is important to distinguish between friends and peers. Friends, as you know, are people with whom you develop a valued, mutual relationship.

only child child who has no siblings

peers persons who share some aspect of their status in common, such as age

Peers are persons who share some aspect of their status in common, such as age. So, in social science research on human development, a child's peers are the same-age children who are part of the daily environment, such as the other children in the child's class at school. Some of those children may become the child's friends, others may not; a child's friends are usually peers, but not all peers become friends.

Across cultures, relations with both peers and friends tend to become more strictly segregated by gender in the course of early childhood. Boys tend to have other boys as their peers and friends, and the social world of girls is populated mostly by other females. However, cultures differ substantially in the mix of ages in peer groups. A striking difference in early childhood peer relations between traditional cultures and Western cultures is that in the West, mixed-age peer play groups are relatively rare. By age 3 or 4, most children are in some kind of preschool setting for at least part of their typical week, and preschool is the main context for their peer interactions. In contrast, children in traditional cultures often play in mixed-age groups that may include children in toddlerhood, early childhood, and middle childhood (LeVine et al., 2008).

Two of the most researched topics concerning peers and friends in early childhood are play and aggression.

PLAY IN EARLY CHILDHOOD As mentioned in Chapter 5, in toddlerhood and early childhood there are several distinct types of play, including solitary play, parallel play, simple social play, and cooperative pretend play. From toddlerhood through early childhood, solitary play and parallel play decline somewhat while simple social play and cooperative pretend play increase (Hughes & Dunn, 2007). Cooperative pretend play becomes more complex in the course of early childhood, as children's imaginations bloom and they become more creative and adept at using symbols, for example using a stick to represent a sword and a blanket over two chairs to represent a castle (Dyer & Moneta, 2006). However, even at age 5 or 6 most children display a variety of types of play, engaging in cooperative play for awhile and then making a transition to solitary play or parallel play (Robinson et al., 2003). ⊙

👁—⃞ **Watch** the **Video** Play Styles at **MyDevelopmentLab**

In the course of early childhood, children become more sex-segregated in their play. In the 12-cultures study by Whiting and Edwards (1988), across cultures children played in same-sex groups 30–40% of the time at ages 2–3, rising to over 90% of the time by age 11. American studies report similar results (Fabes et al., 2003). In one observational study, the percent of time playing in same-sex groups was 45% for 4-year-old children and 73% for 6-year-old children (Martin & Fabes, 2001). Furthermore, numerous studies have found that boys generally engage in high-activity, aggressive, competitive "rough and tumble" play in their groups, whereas girls' play tends to be quieter, more cooperative, and more likely to involve fantasy and role play (Ruble et al., 2006).

In most cultures, the proportion of same-gender play rises during early childhood. Here, young girls in India play a clapping game together.

Children vary in their levels of sociability from infancy onward, and by early childhood there are distinct differences among children in how successful they are in using the social skills required for play in a group setting. Preschool social life rewards the bold, and children who are temperamentally inhibited spend a lot of their preschool time watching others play without taking part themselves (Coplan et al., 2004; Rubin et al., 2002). However, for some children it simply takes time to become accustomed to the preschool social environment. The more preschool experience children have, the more successful they are at taking part in social play (Dyer & Moneta, 2006). Sometimes children observe other children's play as a prelude to entering the play themselves (Lindsey & Colwell, 2003). Also, some children simply enjoy playing by themselves. They may spend more time than others in solitary play, but it could be an indication of an unusually lively and creative imagination rather than a

and hostile aggression can each be expressed in several ways. *Physical aggression* includes hitting, kicking, pushing, or striking with an object. *Verbal aggression* is the use of words to hurt others, through yelling at them, calling them names, or hostile teasing. **Relational aggression** (or *social aggression*) involves damaging another person's reputation among peers through social exclusion and malicious gossip.

Physical aggression among young children has been a target of a great deal of research. There is abundant evidence that physical aggression peaks in toddlerhood and early childhood (Alink et al., 2006). One top aggression researcher, Richard Tremblay (2004), summarized a wide range of longitudinal studies extending from infancy to adulthood across many countries and found a common pattern that physical aggression peaks at 24 to 42 months—the second year of toddlerhood and the first year of early childhood—then declines. Boys are consistently more physically aggressive than girls, in early childhood and throughout the life span.

However, there is a great deal of variation around this average pattern. Not all boys are aggressive in early childhood, and not all boys and girls show a decline in aggression after age 3. One national study in the United States followed the course of physical aggression in a longitudinal study of children from age 2 to 9 (NICHD Early Childhood Research Network, 2004). The researchers identified five different "trajectory groups" with regard to aggression. The largest group declined steeply in physical aggression from age 2 to 9. However, two other groups were "low trajectory" groups that never showed much physical aggression, one was a "moderate trajectory" group that remained moderate, and one was a "high trajectory" group that remained high.

In general, individual differences in physical aggression remain stable across time, that is, children who rarely display physical aggression in early childhood are unlikely to display it in middle childhood and adolescence, and children who are especially aggressive in early childhood tend to be more aggressive than their peers in later periods as well (Brame et al., 2001; Lansford et al., 2006; Schaeffer et al., 2003; Vaillancourt et al., 2003). However, longitudinal studies show that parents who are especially patient, sensitive, and involved can reduce high aggression in early childhood to moderate aggression by middle childhood (NICHD Early Childhood Research Network, 2004; Tremblay, 2002). Early childhood is a crucial time for addressing physical aggression, because when aggression is still high at the end of early childhood it is a strong predictor of later aggressive behavior in adolescence and adulthood (Loeber et al., 2005; Tremblay & Nagin, 2005).

Across cultures, aggression is frequently a component of children's play in early and middle childhood, especially for boys (Edwards, 2005). Physical "rough-and-tumble" play such as wrestling is common among boys of the same age when they are brought together in school and playground settings (Scott & Panksepp, 2003). This aggressive play occurs in other mammals as well, and is in part a way of establishing a dominance hierarchy (Hassett et al., 2008). Aggressive play establishes who is on top and who is not, and in this way serves to avoid more serious aggression.

In contrast to physical aggression, verbal aggression rises across early childhood, at least in the Western countries where this research has been done (Dodge et al., 2006; Underwood, 2003). As children become more adept at using words, they grow capable of applying their verbal abilities to a wide range of purposes, including aggression. Also, verbal aggression becomes substituted for physical aggression across the years of early childhood as children learn that adults regard physical aggression toward peers as unacceptable and as children become more capable of restraining their physically aggressive impulses (Tremblay, 2000, 2004; Tremblay & Nagin, 2005).

Relational aggression also becomes more common in the course of early childhood (Crick et al., 2006). Like the increase in verbal aggression, the increase in relational aggression reflects children's growing cognitive and social understanding. They become more capable of understanding the complexities of social relationships, and more aware of the

APPLYING YOUR KNOWLEDGE
. . . *as a Nurse*

Do you think the 1-2-3 approach to discipline would be likely to work with a young child who has a problem with physical aggression? If not, what approach would you recommend to a parent with an aggressive child?

relational aggression type of aggression that involves damaging another person's reputation among peers through social exclusion and malicious gossip

ways that social weapons can be used to hurt others and gain social status. They learn that a punch on the shoulder does not hurt nearly as much, or last nearly as long, as the pain of being the only one not invited to a birthday party or being the subject of a nasty rumor (Murray-Close et al., 2007; Nelson et al., 2005). Verbal and relational aggression are slightly more common among girls than among boys in early childhood, but the differences are minor, much smaller than the gap between boys and girls in physical aggression (Underwood, 2003).

CULTURAL FOCUS   Shyness in China and Canada

In studies of young children in the West, shyness has long been associated with negative characteristics such as anxiety, insecurity, and social incompetence (Rubin & Coplan, 2010). Consistently, shy children have been found to experience problems in their relations with peers and to be prone to negative self-perceptions and depression (Rubin et al.,1995). Shyness in young children has been viewed by Western researchers as a problem to be cured.

But what about in other cultural contexts? Xinyin Chen, a developmental psychologist who grew up in China and now lives in Canada, hypothesized that shyness would have a different meaning in the Chinese cultural context, and set out to compare the consequences of shyness among Chinese and Canadian children (Chen et al., 2006).

In one study conducted by Chen and his colleagues, 4-year-old children in China and Canada were invited into a laboratory setting in groups of four and observed in two 15-minute free-play interactions. Shy children were identified as those who spent the most time in onlooker behavior (watching the activities of others) or unoccupied behavior (wandering around the room alone or sitting alone doing nothing). Through this process, 50 of 200 Chinese children and 45 of 180 Canadian children were classified as shy.

Although the proportion of shy children to non-shy children was identical in the two countries, the responses shy children received from their peers was very different. When shy Canadian children made attempts to interact with their peers, the peers often reacted negatively (e.g., "No!" or "I won't do it") and rarely reacted positively with encouragement and support. In contrast, peers of shy children in China responded much more positively when shy children initiated contact, often inviting them to play or allowing them to join a game. Overall, peers in Canada tended to be antagonistic or non-responsive toward shy children, whereas in China, peers of shy

children were more often supportive and cooperative.

However, Chen and his colleagues have been conducting research in China for over 20 years now, and they have recorded striking shifts in the social implications of shyness for young Chinese children over that time. The past 20 years have been a period of dramatic social change in China, as the country has moved rapidly from a state-controlled Communist economy to a free-market economy. This transition has resulted in changes in values as well, with a decline in the traditional Chinese collectivistic values of duty, respect, and obligation, and a rise in individualistic values of self-assertion and independence.

The change in values has been reflected in Chen's research on peers' responses to shy Chinese children. In the 1990 sample Chen studied, shyness was positively associated with a variety of favorable aspects of adjustment, including peer acceptance, leadership, and academic achievement. However, by the time Chen repeated the study in 2002, the correlation had flipped. Now shyness was associated with negative adjustment, including peer rejection and depression. In just a 12-year period, the cultural meaning of shyness had reversed. As Chen observed, "the extensive change toward the capitalistic system in the economic reform and the introduction of Western ideologies may have led to the decline in the adaptive value of shyness" (Chen et al., 2006, p. 139).

Shyness has had different social meanings in China than it does in Western countries, at least until recently.

Media Use in Early Childhood

6.22   **LEARNING OBJECTIVE**   Identify the rates and consequences of media use in early childhood.

Early childhood is a period when children's media world expands greatly, especially in developed countries. Many types of media use increase from toddlerhood to early childhood (Lemish, 2007). The major types of media use in early childhood are television, electronic games, and recorded music.

THE NEGATIVE IMPACTS OF TELEVISION USE: VIOLENCE AND ADVERTISING Television is popular with people all over the world, including young children. In early childhood, TV-viewing time per day varies from about 1½ hours in Sweden and Germany to about 3 hours in Hungary, Turkey, and the United States (Hasebrink, 2007a). In the United States, over 30% of children ages 2–7 have a TV set in their bedroom (Scheibe, 2007). African Americans are especially high in TV consumption, with rates of over 4 hours a day in childhood compared to about 3 hours a day in other American ethnic groups (Roberts & Foehr, 2004). The most popular shows among young children are the ones made especially for them, such as cartoons and educational shows like *Sesame Street* (Lemish, 2007).

Although television is embraced everywhere for its entertainment value, many people have concerns about the effects of television, especially on children and especially with respect to violence. Content analyses have found that children's programs are even more violent than programs for adults. One study found that two-thirds of all children's programs contained violence, and about half the violence took place in cartoons (Aikat, 2007). Violence was portrayed as funny about two-thirds of the time, and in most cases the victims were not shown experiencing pain and the perpetrator of the violence was not punished. ◉➤

Simulate the **Experiment** Media Violence at **MyDevelopmentLab**

What are the effects of witnessing so much TV violence on young children's development? More than 5 decades of research, including more than 300 studies using a variety of methods, has led to a strong consensus among scholars that watching TV violence increases children's aggression (Bushman & Chandler, 2007). The more aggressive children are, the more they like to watch TV violence, but TV violence inspires aggressive thoughts and behavior even in children who are not usually aggressive (Bushman & Huesmann, 2001). Experimental studies indicate that causation is involved, not just correlation. For example, in one early study, children in a preschool were randomly assigned to two groups (Steur et al., 1971). Over 11 days, one group watched violent cartoons, whereas the other group saw the same cartoons but with the violence removed. During playground observations following this 11-day experiment, children who had seen the violent cartoons were more likely than children in the nonviolent cartoon group to kick and hit their peers.

Young children ages 3–6 are believed to be especially vulnerable to the effects of TV violence (Bushman & Chandler, 2003). They are more likely than younger or older children to model their behavior after the behavior of others, including TV characters. Also, they are less likely than older children to have a clear understanding of the boundary between fantasy and reality, and so more likely to believe that what they witness on TV is real.

Another important effect of TV watching in early childhood concerns advertising. In the United States, the average child sees about 40,000 TV commercials each year, mostly for toys, cereal, candy, and fast food (Scheibe, 2007). Young children are especially susceptible to advertising, as they are less aware of advertising intent than older children are. Most do not perceive a distinction between a program and an advertisement until about age 5 (Jennings, 2007). The more TV young children watch, the more they attempt to influence their parents to buy the advertised products (Valkenburg & Buijzen, 2007). Because most

of the products children see advertised are unhealthy foods, concern has grown that TV advertising is one influence behind the growing international epidemic of obesity in children (Bergstrom, 2007a).

THE BENEFICIAL EFFECTS OF EDUCATIONAL TELEVISION TV has also been found to have some beneficial effects on young children. In recent decades, educational programs have been developed that are highly popular among young children. Perhaps most notable is the *Sesame Street* program, which is broadcast in 120 countries worldwide (Truglio, 2007). The content of the program is based on knowledge from developmental psychology of what will be most appealing to young children and most effective at teaching them the academic skills that will prepare them for school (Bergstrom, 2007b). Content is adapted to the culture in which the program is shown, for example addressing the stigma of AIDS in South Africa and promoting cross-cultural respect and understanding among children in the Middle East (Truglio, 2007).

Sesame Street and other programs have shown impressive positive effects on young children's development. In one study, viewing *Sesame Street* at ages 2 and 3 predicted higher scores at age 5 on tests of language development and math skills, even controlling for parents' education and income (Scantlin, 2007). In another study, children who viewed *Sesame Street* at age 5 were recontacted at ages 15 and 19 and were found to have higher grades in English, math, and science than children in the comparison group (Anderson et al., 2001). Studies of *Sesame Street* and other educational programs have shown the programs to have other positive effects as well, such as promoting imaginative play (Scantlin, 2007) and prosocial behavior such as cooperation (Bergstrom, 2007b).

ELECTRONIC GAMES AND MUSIC Although the focus of most media research concerning young children has been on television, other media are also important in their lives, notably electronic games and recorded music.

Television is now nearly universal, but playing electronic games usually depends on access to a computer, and computer access is much more variable across countries. In one international study, over 60% of households in developed countries reported having a computer, but this percentage was much lower in other regions, including eastern Europe (25%), Latin America (about 10%), and Africa (about 5%) (Hasebrink, 2007b). In U.S. studies, 70% of 4- to 6-year-olds have used a computer, and 38% of 5- to 7-year olds use a computer on a typical day, mostly for playing electronic games (Foehr, 2007). Boys play electronic games more than girls do, overall, and the kinds of games they prefer differ, with boys preferring fighting and sports games and girls preferring adventure and learning games (Kubisch, 2007). These gender differences endure through childhood and adolescence, as we will see in later chapters. Electronic games can also be played on handheld devices and mobile phones, but access to these media tends to come in middle childhood and beyond.

Listening to recorded music is also part of the daily media diet of most children in developed countries (Kinnally, 2007). Over half of parents of young children report singing to or playing music for them each day. On average, children ages 2–7 listen to music for about 45 minutes per day. Children ages 3–5 listen mostly to children's songs, but by age 6 children pay more attention to popular music and start to recognize and prefer the latest "hit songs" of the day.

Music evokes a positive response even from infants, but early childhood is an especially important time for the development of responses to music (Kinnally, 2007). It is during early childhood that children first connect musical sounds with specific emotions, for example recognizing songs in major keys as happy and songs in minor keys as sad. By age 5, children show distinct preferences for music that is harmonious rather than dissonant and has a steady rather than erratic beat. There is little research

Listening to recorded music is a common part of children's lives in developed countries.
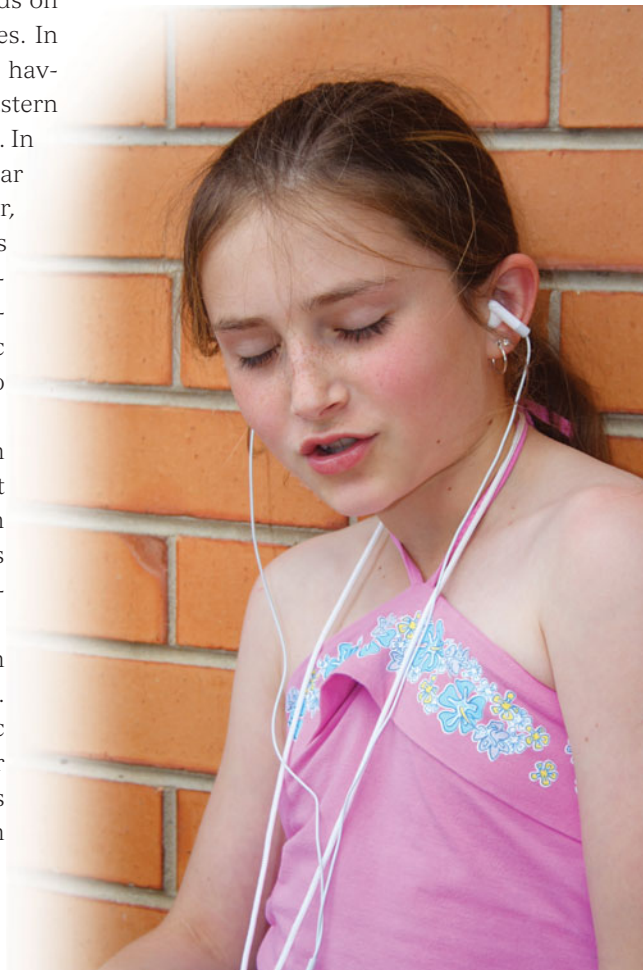
on the effects of music on young children. Research on music effects is concentrated on adolescence because of concerns about the effects of violent music on adolescent development, as we will see later in the book.

WHAT HAVE YOU LEARNED?

1. Across cultures, what is the predominant emotional response to the birth of a new sibling?

2. How do "only children" compare to children with siblings in terms of their self-esteem, intelligence, and social relations with peers?

3. How are friends different from peers?

4. How does play in traditional cultures differ from play in Western cultures during early childhood?

5. Give an example of relational aggression.

6. What gender differences exist in electronic game use during childhood?

7. Why is early childhood an especially important time for the development of responses to music?

Section 3 VIDEO GUIDE Mandatory Reporting (Length: 3:39)

This video explains the concept of mandatory reporting and includes interviews with both a doctor and a child care worker.

1. Why is mandatory reporting so important?

2. The narrator of this video lists several occupations who are held to legal standards for mandatory reporting. Do you feel that any occupation is missing from the list? Why or why not?

3. If you were in an occupation that held you to legal mandatory reporting and you were faced with a child that you felt might be being psychologically abused, what are some ways you might try to inquire about the abuse?

Summing Up

✔●— **Study** and **Review** at **MyDevelopmentLab**

((●— **Listen** at **MyDevelopmentLab**   Listen to an audio file of your chapter at **MyDevelopmentLab**

SECTION 1   PHYSICAL DEVELOPMENT

6.1   Describe the physical growth and change that takes place during early childhood.

The pace of physical development slows in early childhood. From ages 3 to 6 the typical American child grows 2–3 inches per year and adds 5–7 pounds. Average heights and weights in early childhood are considerably lower in developing countries, due to inadequate nutrition and higher likelihood of childhood diseases.

6.2   Describe the changes in brain development that take place during early childhood and the aspects of brain development that explain "infantile" amnesia.

The most notable changes in brain development during early childhood take place in the connections between neurons and in myelination. Most people experience infantile amnesia (the inability to remember anything prior to age 2) and have limited memory for personal events that happened before age 5.

6.3   Identify the main nutritional deficiencies and the primary sources of injury, illness, and mortality during early childhood in developed and developing countries.

About 80% of children in developing countries experience nutritional deficiencies, but a surprisingly high percentage of children in developed countries experience them as well. Calcium is the most common nutritional deficiency in the United States, whereas the two most common types of malnutrition in developing countries are lack of protein and lack of iron. Mortality

rates in early childhood are much higher in developing countries than in developed countries but have declined substantially in recent years. In developed countries, the most common cause of injury and death by far in early childhood is motor vehicle accidents.

6.4   Describe changes in gross and fine motor abilities during early childhood, and explain how these changes may have a cultural basis.

From age 3 to 6, young children learn to: make more hops in a row and hop on one foot; jump farther from a standing position and to make a running jump; climb stairs without support, alternating their feet; throw a ball farther and more accurately; become better at catching a ball; and increase their running speed and their ability to stop suddenly or change direction. In their fine motor development, children learn to pick up small objects more quickly and precisely, to draw something that is recognizable to others, to write their first letters and some short words, to put on and remove their clothes, to use scissors, and to use a knife to cut soft food. Gross and fine motor skills are culturally specific and depend on what types of activities children are exposed to.

6.5   Describe the development of handedness and identify the consequences and cultural views of left-handedness.

About 10% of children are left-handed. Being left-handed has been stigmatized in many cultures, perhaps due to its association with higher risk of developmental problems.

KEY TERMS

corpus callosum *p. 232*   **reticular formation** *p. 232*   **infantile amnesia** *p. 233*   **handedness** *p. 237*
cerebellum *p. 232*   **hippocampus** *p. 233*   **anemia** *p. 234*

SECTION 2   COGNITIVE DEVELOPMENT

6.6   Explain the features of Piaget's preoperational stage of cognitive development.

Piaget viewed the preoperational stage of cognitive development (ages 2–7) as prone to a variety of errors, including centration, lack of reversibility, egocentrism, and animism. Research has shown that Piaget underestimated the cognitive abilities of early childhood.

6.7   Explain what "theory of mind" is and the evidence for how it develops during early childhood.

Theory of mind is the ability to understand thinking processes in one's self and others. By age 2, as they begin to use language more, children show increasing recognition that others have thoughts and emotions that can be contrasted with their own. By age 3, children know it is possible for them and others to

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imagine something that is not physically present, an understanding that becomes the basis of pretend play for many years to come. While 3-year-olds are better than 2-year-olds at understanding that others have thoughts and feelings that are different from their own, they still find it difficult to take others' perspectives. Perspective-taking ability advances considerably from age 3 to 6.

6.8   Identify the ways that cultural learning takes place in early childhood.

A great deal of cultural learning takes place in early childhood through observing and working alongside parents or siblings, and in many cultures children make important work contributions to the family during this stage.

6.9   Identify the features that are most important in preschool quality.

Children generally benefit cognitively from attending preschool, but the social effects of preschool are more mixed and in some ways negative. Key features of high-quality preschool programs include education and training of teachers, class size and child–teacher ratio, age-appropriate materials and activities, and teacher–child interactions.

6.10 Describe the distinctive practices of Japanese preschools and how they reflect cultural values.

Preschools in Japan focus not on academic objectives but rather on group play, so that collectivist Japanese values, such as cooperation and sharing, are reinforced.

6.11 Describe early intervention programs and their outcomes.

Early intervention programs have often resulted in a rise in IQ that fades after a few years. Some early interventions via preschool have had long-term positive effects on children's development, but the effects depend greatly on the quality of the program.

6.12 Explain how advances in vocabulary and grammar occur in early childhood.

Children's vocabularies expand immensely in early childhood, from about 1,000 words at age 3 to about 2,500 words at age 6, and they readily grasp the grammatical rules of their culture with few errors by age 4.

6.13 Describe how children learn pragmatics in early childhood, and identify to what extent these social rules are culturally based.

Pragmatics guide us in knowing what to say—and what not to say—in a given social situation, and by age 4, children are sensitive to the characteristics of their conversational partner and will adjust their speech accordingly All cultures have their own rules for what kinds of speech can be used in what kinds of situations.

KEY TERMS

SECTION 3   EMOTIONAL AND SOCIAL DEVELOPMENT

6.14 Identify advances in emotional understanding and self-regulation during early childhood.

Early childhood is a key time for the development of emotional self-regulation, as children improve at effortful control.

6.15 Describe moral development in early childhood, including empathy, modeling, and morality as cultural learning.

The capacity for empathy increases in early childhood, which leads in turn to an increase in prosocial behavior. Children learn morality in part through modeling, i.e., observing the behavior of others and its consequences. Early childhood is also a time when children begin to show a capacity for moral reasoning.

6.16 Describe the roles that parents and peers play in gender socialization, and explain how gender schemas lead to self-socialization.

Children learn gender identity by age 2, but do not learn gender constancy until age 6 or 7. During early childhood they often become rigid in their views of gender roles. Parents are key agents of gender socialization, especially fathers, and conformity to gender roles is enforced by peers as well. Once young children possess gender schemas, they seek to maintain consistency between their schemas and their behavior, a process called self-socialization.

6.17 Describe the four types of parenting "styles" and the outcomes associated with each, and explain why those outcomes are complex.

American parenting research has emphasized the dimensions of demandingness and responsiveness, in combinations resulting in four categories of "parenting styles": authoritative, authoritarian, permissive, and disengaged. By American standards, authoritative parenting is associated with the most favorable outcomes. However, the relationship between parenting styles and children's development is complex due to reciprocal effects between parents and children.

6.18 Describe the major cultural variations in approaches to parenting.

The effects of parenting on young children depend substantially on cultural context. The authoritative parenting style is very rare in non-Western cultures because parents expect that their authority will be obeyed without question and without requiring an explanation.

6.19 Describe the main cultural variations in how parents discipline young children, and explain how cultural context influences children's responses to discipline.

In Western cultures the approach to discipline in early childhood tends to emphasize the authoritative approach of explaining the consequences of misbehavior and the reasons for discipline. Physical punishment and the close interdependent *amae* mother–child relationship have quite different effects on children depending on the cultural context.

6.20 Identify the most common features of sibling relationships worldwide, and describe how children with no siblings differ from other children.

Jealousy toward young siblings is very common worldwide in early childhood. "Only children" fare very well compared to children with siblings, even in China where there has been concern about the social effects of the government's "one-child" population policy.

6.21 Explain how the quality of friendships changes from toddlerhood to early childhood, and describe the role of play and aggression in young children's friendships.

Children engage in cooperative pretend play more in early childhood than in toddlerhood. Physical aggression peaks in toddlerhood and the first year of early childhood, then declines as verbal aggression rises.

6.22 Identify the rates and consequences of media use in early childhood.

In early childhood, TV-viewing time per day varies from about 1½–3 hours across developed countries. Abundant evidence shows that violent television promotes aggressive behavior in young children. Boys most often play electronic games involving fighting and sports, whereas girls prefer adventure and learning games. Early childhood is an especially important time for the development of responses to music, as children learn to connect musical sounds with specific emotions.

KEY TERMS

emotional self-regulation *p. 254*
undercontrol *p. 254*
externalizing problems *p. 254*
overcontrol *p. 254*
internalizing problems *p. 254*
initiative vs. guilt *p. 254*
gender constancy *p. 257*
gender roles *p. 257*

gender schema *p. 257*
self-socialization *p. 258*
parenting styles *p. 259*
demandingness *p. 259*
responsiveness *p. 259*
authoritative parents *p. 259*
authoritarian parents *p. 260*
permissive parents *p. 260*

disengaged parents *p. 260*
reciprocal or bidirectional effects *p. 261*
filial piety *p. 261*
familismo *p. 262*
time out *p. 263*
psychological control *p. 263*
corporal punishment *p. 264*

child maltreatment *p. 265*
foster care *p. 266*
only child *p. 269*
peers *p. 270*
instrumental aggression *p. 271*
hostile aggression *p. 271*
relational aggression *p. 272*

Practice Test

✓ Study and Review at MyDevelopmentLab

1. Which of the following best describes the physical changes that take place during early childhood?
   a. Most children lose their baby fat and become more like adults in terms of their body proportions.
   b. Physical development occurs at a more rapid pace than it did in the first 3 years.
   c. Girls are slightly taller and heavier than boys.
   d. Cross-cultural comparisons have shown that only genetics plays a role in individual differences in height and weight.

2. The limited memory for personal events and experiences prior to age 5 is probably due to incomplete myelination of the
   a. reticular formation.
   b. corpus callosum.
   c. cerebellum.
   d. hippocampus.