care is often rare or nonexistent (Eveleth & Tanner, 1990). In countries that have undergone rapid economic development in recent decades, such as China and South Korea, a corresponding decline in the average age of menarche has been recorded (Graham et al., 1999; Park et al., 1999).

SOCIAL AND PERSONAL RESPONSES TO PUBERTAL TIMING Think back for a moment to when you were passing through puberty. What were your most memorable pubertal events? How did you respond to those events—and how did the people around you respond? I loved to sing at that age, and I distinctly remember going from soprano at age 13—the only boy in a sea of girls—to 2nd bass by age 15. I reached puberty quite a bit later than most of my peers.

Social and personal responses to puberty are intertwined, because how adolescents respond to reaching puberty depends in part on how others respond to them. In developed countries, social and personal responses may depend on whether adolescents reach puberty relatively early or relatively late compared with their peers. When adolescents spend time in school on most days, surrounded by peers, they become acutely aware of how their maturation compares to others'.

A great deal of research has been conducted on early versus late maturation among adolescents in the West, especially in the United States, extending back over a half century. The results are complex: They differ depending on gender, and the short-term effects of maturing early or late appear to differ from the long-term effects.

Research consistently shows that the effects of early maturation are usually negative for girls. Findings from a variety of Western countries concur that early-maturing girls are at risk for numerous problems, including depressed mood, negative body image, eating disorders, substance use, delinquency, aggressive behavior, school problems, and conflict with parents (Lynne et al., 2007; Mendle et al., 2007; Weichold et al., 2003; Westling et al., 2008). Early maturation is a problem for girls in part because it leads to a shorter and heavier appearance, which is a disadvantage in cultures that value slimness in females. It can also be troublesome because their early physical development draws the attention of older boys, who then introduce them to an older group of friends and to substance use, delinquency, and early sexual activity (Lynne et al., 2007; Weichold et al., 2003; Westling et al., 2008). Studies of the long-term effects of early maturation for girls are mixed, with some finding that the effects diminish by the late teens and others finding negative effects well into emerging adulthood (Graber et al., 2004; Posner, 2006; Weichold et al., 2003).

In contrast to girls, the effects of early maturation for boys are positive in some ways and negative in others. Early-maturing boys tend to have more favorable body images and higher popularity than other boys (Graber et al., 1997; Weichold et al., 2003). The earlier development of facial hair, lowered voice, and other secondary sex characteristics may make early-maturing boys more attractive to girls. Early-maturing boys may also have a long-term advantage. One study that followed early-maturing adolescent boys 40 years later found that they had achieved greater success in their careers and had higher marital satisfaction than later-maturing boys (Taga et al., 2006). However, not everything

about being an early-maturing boy is favorable. Like their female counterparts, earlymaturing boys tend to become involved earlier in delinquency, sex, and substance use (Westling et al., 2008; Wichstrom, 2001; Williams & Dunlop, 1999).

Late-maturing boys also show evidence of problems. Compared to boys who mature "on time," late-maturing boys have higher rates of alcohol use and delinquency (Andersson & Magnusson, 1990; Williams & Dunlop, 1999). They also have lower grades in school (Weichold et al., 2003). There is some evidence that late-maturing boys have elevated levels of substance use and deviant behavior well into emerging adulthood (Biehl et al., 2007; Graber et al., 2004). Late-maturing girls have relatively few problems (Weichold et al., 2003).

Cultural Responses: Puberty Rituals

Identify the main gender differences in puberty rituals worldwide.

Does your culture have any formal way of marking the entrance from childhood to adolescence? Have you ever participated in or witnessed a bar mitzvah or bat mitzvah, the Catholic ritual of confirmation, or the quinciñeara that takes place at age 15 for girls in Latin American cultures? These are examples of puberty rituals that have developed in many cultures to mark the departure from childhood and the entrance into adolescence. Puberty rituals are especially common in traditional cultures. Alice Schlegel and Herbert Barry (1991) analyzed information on adolescent development across 186 traditional cultures and reported that 68% had a puberty ritual for boys, 79% for girls (Schlegel & Barry, 1991).

For girls, menarche is the pubertal event that is most often marked by ritual (Schlegel & Barry, 1991). In fact, in many cultures menarche initiates a monthly ritual related to menstruation that lasts throughout a woman's reproductive life. It is remarkably common for cultures to have strong beliefs concerning the power of menstrual blood. Such beliefs are not universal, but they have been common in all parts of the world, in a wide variety of cultures. Menstrual blood is often believed to present a danger to the growth and life of crops, to the health of livestock, to the likelihood of success among hunters, and to the health and well-being of other people, particularly the menstruating woman's husband (Buckley & Gottlieb, 1988; Marvan & Trujillo, 2010). Consequently, the behavior and movement of menstruating women are often restricted in many domains, including food preparation and consumption, social activities, religious practices, bathing, school attendance, and sexual activities (Crumbley, 2006; Mensch et al., 1998). Menarche is often believed to possess special power, perhaps because it is a girl's first menstruation, so the restrictions imposed may be even more elaborate and extensive (Yeung & Tang, 2005).

Traditional puberty rituals for males do not focus on a particular biological event comparable to menarche for females, but the rites for males nevertheless share some common characteristics. Typically, they require the young man to display courage, strength, and endurance (Gilmore, 1990). Daily life in traditional cultures often demands these capacities from young men in warfare, hunting, fishing, and other tasks. Thus the rituals could be interpreted as letting them know what will be required of them as adult men and testing whether they will be up to adulthood's challenges. We'll explore Samoan puberty rituals in the Cultural Focus: Coming of Age in Samoa feature on the next page.

In the past, rituals for boys were often violent, requiring boys to submit to and sometimes engage in bloodletting of various kinds. Among the Amhara of Ethiopia, boys were forced to take part in whipping contests in which they faced off and lacerated each other's

faces and bodies (LeVine, 1966). Among the Tewa people of New Mexico (also known as the Pueblo Indians), at some point between the ages of 12 and 15 boys were taken away from their homes, purified in ritual ceremonies, and then stripped naked and lashed on the back with a whip that drew blood and left permanent scars.

Although these rituals may sound cruel if you have grown up in the West, adults of these cultures believed that the rituals were necessary for boys to make the passage out of childhood toward manhood and to be ready to face life's challenges. In all these cultures, however, the rituals have declined in frequency or disappeared altogether in recent decades as a consequence of globalization (Schlegel, 2010). Because traditional cultures are changing rapidly in response to globalization, the

LEARNING OBJECTIVE

puberty ritual formal custom developed in many cultures to mark the departure from childhood and the entrance into adolescence

Public circumcision for boys at puberty is still practiced in some African cultures. Here, three Masai adolescents from Tanzania celebrate their successful completion of the ritual.



APPLYING YOUR KNOWLEDGE

In the light of the difficulties often experienced by early-maturing girls, can you think of anything families, communities, or schools could do to assist them?

Early maturing girls are at high risk for problems, in part because they attract the interest of older boys.

Adolescence

THINKING CULTURALLY

Are there any rituals in Western cultures that are comparable to the puberty rituals in traditional cultures? Should people in Western cultures recognize and mark the attainment of puberty more than they do now? If so, why, and how?

traditional puberty rituals no longer seem relevant to the futures that young people anticipate. However, public circumcision for boys is still maintained as a puberty ritual in many African cultures (Vincent, 2008).

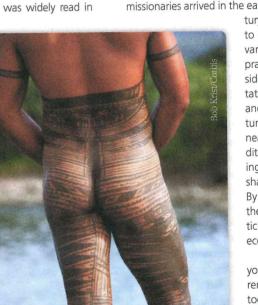
Female circumcision in adolescence, which involves cutting or altering the genitals, also remains common in Africa, with rates of over 70% in many countries and above 90% in Mali, Egypt, Somalia, and Djibouti (Baron & Denmark, 2006). The physical consequences of circumcision are much more severe for girls than for boys. Typically, a great deal of bleeding occurs, and the possibility of infection is high. Afterward many girls have chronic pain whenever they menstruate or urinate, and their risks of urinary infections and childbirth complications are heightened (Eldin, 2009). Critics have termed it female genital mutilation (FGM) and have waged an international campaign against it (Odeku et al., 2009). Nevertheless, it remains viewed in many African cultures as necessary in order for a young woman to be an acceptable marriage partner (Baron & Denmark, 2006).

CULTURAL FOCUS Coming of Age in Samoa

ne interesting example of a puberty ritual that both males and females participate in comes from the islands known as Samoa, in the Pacific Ocean near New Zealand. Samoa became known to many Americans early in the 20th century when the anthropologist Margaret Mead wrote about Samoan adolescence in Coming of Age in Samoa (1928). The book was widely read in

the United States (and, in fact, all over the world). Many people were fascinated by the stark contrast between adolescence in Samoa and adolescence in the West.

Samoa differed from Western cultures in having a ritual to mark the beginning of adolescence. The traditional rite of passage into adolescence involved an elaborate process of tattooing sometime between ages 14 and 16 (Coté, 1994). The tattoos were made in elaborate geometric patterns and extended from the waist to the knees (see accompanying photo). Having the tattoos applied was painful and took a long time. For boys, the process usually took 2 to 3 months to complete, whereas the less elaborate tattoos for girls took 5 to 6 days. Even so, the young men took satisfaction in sharing the ordeal and in supporting one another. In spite of the pain, few young men or young women declined to take part in it, because being tattooed was considered essential to sexual attractiveness and to being accepted as a legitimate candidate for full adult status.



Tattoos are a puberty ritual in Samoa.

This tattooing ritual has been profoundly affected by the globalization of adolescence. In the past 100 years, Samoan culture has changed a great deal (Coté, 1994;

has changed a great deal (Coté, 1994; McDade & Worthman, 2004). Christian missionaries arrived in the early 20th cen-

tury and sought to stamp out a variety of native practices they con-

sidered immoral, including the ritual of tattooing. The rise of secondary education and the widening of economic opportunities for Samoans who immigrated to nearby New Zealand undermined the traditional economy and caused the tattooing ritual to be viewed as irrelevant or even shamefully "primitive" by some Samoans. By now, most Samoans have abandoned their cooperative, traditional ways for participation in the wage labor of the global economy.

Recently, however, tattooing for young men has undergone a revival. Currently, the majority of young men get tattoos in their teens to demonstrate their pride in the traditional ways of their culture, as part of an explicit attempt to resist the total absorption of their indigenous culture into the global culture (Coté, 1994).