CHAPTER 16

Cross-Cultural Issues in the Study of Adolescent Development

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Anthropologists have long considered cross-cultural studies to be among their disciplinary specialties. However, since any foreign culture is seen through the lens of the observer's home culture, one could argue that all observations of foreign cultures are by their very nature cross-cultural, not only those by anthropologists. Cross-cultural studies, therefore, could include the ethnographies, or descriptive reports, by observers throughout history, such as the writings of Herodotus, the letters the Jesuits and Franciscans sent home from the New World, and the reports of traders, travelers, and colonial administrators since at least the sixteenth century. Nevertheless, the *systematic* study of other cultures is a special feature of anthropology.

Explicit comparison has been a feature of anthropology from its beginning. Attempts to classify similarities and differences across cultures include even the long-discredited attempts in the nineteenth century to understand cultural evolution, which divided cultures into those at the stages of Savagery, Barbarism, and Civilization (Morgan, 1877). The earliest scholarly paper using statistical techniques to analyze culture traits in a sample of cultures also dates from the late nineteenth century (Tylor, 1889).

One impact of anthropology on the other social sciences has been to influence other disciplines to test assumptions and findings, based on research in modern Western societies, with data from non-Western cultures. Psychologists responded by looking at psychological issues with subjects from other cultures. In the early 1960s, John Berry was testing Western models of perception among the Eskimo (Berry, 1966), and not many years later Pierre Dasen was addressing Piaget's research from a cross-cultural perspective (Dasen, 1972). The *Journal of Cross-Cultural Psychology*, the earliest of such journals, appeared in 1966 (Berry, Poortinga, Segall, & Dasen, 1992; Segall, Dasen, Berry, & Poortinga, 1990).

Anthropologists also benefited from the research theories and methods of psychology. Psychological anthropology depended heavily on personality theory developed by psychologists. Some anthropologists refined their observational techniques by making systematic observations of target individuals who represented specific categories (e.g., by sex and age) within the population they studied, thus moving from the cultural to the individual level. Others used Thematic Apperception Test cards to elicit stories that reflected cultural themes of personality traits or interpersonal relations (Schlegel, 1977).

The deliberate bridging of disciplines was expressed in the mid-twentieth century by the introduction of interdisciplinary programs in some respected universities, such as the

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Department of Social Relations at Harvard. Anthropologists, psychologists, and sociologists collaborated on research and teaching, and graduate students in the department received cross-disciplinary training.

It was in this intellectual climate that the Society for Cross-Cultural Research (SCCR) was founded in 1972 by George Peter Murdock and others. Although for most of his career Murdock was in the Department of Anthropology at Yale, his graduate training was in sociology, and he had a keen interest in psychology. The founding members of SCCR were mainly anthropologists and psychologists, with some other social scientists. The membership has retained that proportion of disciplinary representation and is deliberately interdisciplinary in its meeting programs and its journal, *Cross-Cultural Research*.

CROSS-CULTURAL STUDIES OF ADOLESCENCE

Psychologists and sociologists, using Western subjects, have conducted most of the research on adolescence. As these disciplines gained wider distribution throughout the world, non-Western psychologists, in particular, studied the adolescents of their own cultures. This type of cross-cultural research blends theories and methods, derived mainly from European and American sources, with a deep understanding of the local culture and conditions. Research on Indian adolescent girls by Saraswathi and Dutta (1988) and Sharma (1996) provide good examples of the insights such an approach can reach.

In spite of the success of Margaret Mead's *Coming of Age in Samoa* (1928), which was a study of Samoan adolescent girls, cultural anthropologists have until recently showed little interest in adolescence or adolescent development. They continued to refer to the rituals performed at around puberty in many societies as initiation into adulthood. This was so even after the work of Mead and, later, a few other anthropologists (e.g., Elwin, 1947; Wilson, 1951) clearly showed that a socially marked stage of life between childhood and adulthood existed in the preindustrial and preliterate societies they examined. Exceptions to this general absence of anthropological studies of adolescence are cross-cultural studies of initiation ceremonies by Cohen (1964) and Young (1965), the latter a social psychologist. In both, the authors refer to a subsequent adolescent stage, but they do not discuss it.

The lack of interest by anthropologists in adolescence may have been due in part to assumptions about adolescence. It was assumed by many that an adolescent stage is the social construct of modern societies, with schools that separate postpubertal individuals from adults for much of the time. According to this assumption, before widespread schooling appeared, teenage girls and boys were thought of as young adults, with adult-like responsibilities and interests. Anthropologists, who for the most part studied preliterate and preindustrial cultures, gave little attention to the developmental stage of individuals past puberty.

Another reason for the neglect of adolescence may have come from psychology. Psychological anthropologists of the mid-twentieth century, whose primary interest lay in the development of personality, were strongly influenced by Freudian and other branches of psychology that regard early influences as the determinants of adult personality and behavior. According to Freud, for example, significant socialization declines once young people have passed through the period of latency and reach the genital stage (Hall, 1954). Anthropologists, particularly psychological anthropologists, reported on the behavior of children, but they neglected adolescents. Thus, while there was plenty of evidence of adolescence in the ethnographic and historical literature—indeed, a later cross-cultural study of adolescence (Schlegel & Barry, 1991) would have been impossible without such evidence—it was usually buried in discussions of other topics or mentioned in passing.

Coming of Age in Samoa (Mead, 1928) presented a challenge that most other anthropologists did not take up. Mead's doctoral

dissertation, the basis for her book, was a test of the assumption that adolescence was a time of *Sturm und Drang*, and that this itself was biologically determined by hormonal changes and their consequences. Mead's work, which purported to discredit that assumption, was heralded by many anthropologists as a triumph of cultural over biological determinism.

By the 1970s, interest in adolescence had experienced something of a revival among anthropologists. Two major cross-cultural research projects on adolescence were established at this time, one by Beatrice and John Whiting (two anthropologists) at Harvard, and one by Herbert Barry III (a psychologist) and Alice Schlegel (an anthropologist) at the University of Pittsburgh. All of these researchers had done comparative studies of earlier stages in human development. The Whitings had organized the Six Cultures Project in the 1950s, which resulted in monographs by anthropologists and psychologists on child socialization in six cultures. Schlegel and Barry had conducted cross-cultural research on adolescent initiation ceremonies (Schlegel & Barry, 1980) and adolescent games (Schlegel & Barry, 1989), and Barry had participated in a large body of cross-cultural research on childhood, some of it reproduced or cited in Barry and Schlegel (1980). Schlegel (1973) had also written "The Adolescent Socialization of the Hopi Girl," based on her field observations of Hopi daily life and the recollections of middle-aged and old women. In both the Pittsburgh and the Harvard projects, interest in adolescence seemed to grow naturally out of research on earlier stages and the questions that arose out of this research, just as many longitudinal studies of psychological development that began in infancy grew into studies of adolescence as their samples aged.

The Harvard and Pittsburgh cross-cultural projects differed in their method. The Harvard Adolescence Project sent anthropologists to seven widely dispersed sites of very different cultures to conduct detailed studies of adolescent life. Of these seven studies, four have been published as books by Rutgers University Press in the series "Adolescents in a Changing World." The Pittsburgh project, referred to as the Adolescent Socialization Project, used the Standard Ethnographic Sample (Murdock & White, 1969). Coders collected data drawn from ethnographic material on these cultures, and the principal investigators analyzed and interpreted these data. The data were reported in Barry and Schlegel (1990) and the analytic findings in Schlegel and Barry (1991). (Specific works resulting from the Harvard and Pittsburgh projects will be discussed further in a later section of this chapter.)

At about the same time that these projects were designed, there was a renewed burst of interest among some anthropologists in biological explanations. This was the result of research by animal behaviorists and biological anthropologists on reproductive behavior in animal populations, including our closest relatives among the primates. This research program, neo-Darwinian in its premises, put into motion the development of a new field, sociobiology, which has now matured into the more nuanced disciplines of evolutionary psychology and evolutionary ecology. Any study of reproductive behavior in humans, and indeed in our primate kin, the monkeys and apes, cannot ignore adolescence, when hormonal changes underlie the motivation to find a sexual partner and begin a reproductive career, even though the individual has not yet reached full physical and social development (cf. Weisfeld, 1999).

Anthropologists during these years were faced with a new form of an old dilemma, the question of human universals versus the uniqueness of cultures. Those who stressed the universalities of human behavior were often at odds with those who argued for the importance of local cultural determination in molding not only beliefs and values but also behavior generally. Somewhere in the middle were those who, like the present author, hold that there are evolved psychological constants that are expressed behaviorally in various ways depending on features of the natural and

social environments. These include anything from the prevalence of war to the availability of game for hunting or the practices carried along in converting to a new religion. Some of these features may be cultural, but behavior may also be influenced by demographic conditions or other features to which culture itself responds. A pictorial model is not so much one of linear cause and effect as of multidirectional influences and responses with feedback loops, without a strict division between nature and nurture.

WHAT IS CROSS-CULTURAL RESEARCH?

The term *cross-cultural* is used rather loosely to describe several modes of research and analysis. At its simplest, cross-cultural studies analyze behavior in another culture as an implied comparison with the culture of the investigator. Berry's (1966) study of perception among the Eskimo serves as an example in psychology, as do many of the case studies done by anthropologists. The book-length case studies of adolescence that resulted from the Harvard Adolescence Projects are among the best investigations of non-Western adolescent life in the anthropological literature. They describe and analyze adolescence among Arctic Inuit (Condon, 1987), an Australian Aboriginal community (Burbank, 1988), the Ijo of Nigeria (Hollos & Leis, 1989), and in a town in Morocco (Davis & Davis, 1989). A brief description of the Harvard Adolescence Project appears as a foreword in each of these volumes.

Other cross-cultural studies examine a particular variable, a behavior or culture trait, in two or several cultures or nations (the latter is technically *cross-national*), and usually offer an explanation for the similarities or differences. One study of this type developed by anthropologists is the controlled comparison. Its most common form is a comparison of (usually) two cultures that are similar in most important respects but differ in the behavior or culture trait of interest (i.e., the similarities are controlled for). An alternative is a comparison of (usually) two cultures that are different in most respects but are similar in the variable of interest, controlling for the differences. In both instances, the point is to explain the difference or similarity, respectively, in the dependent variable. The study by Hollos and Leis (1989) of adolescence in two Ibo villages, one more modern and one more traditional, is an example of the first form.

Cross-cultural research has a more specific meaning than the general one, which applies to all research that compares cultures. In its specific sense, it refers to tests of hypotheses using ethnographic materials from a large representative sample of cultures. Data are coded from these materials according to a codebook, which consists of the variables to be coded (e.g., present/absent or along a scale) and their operational definitions. The data are then analyzed using appropriate statistical techniques, and the findings are interpreted. For example, appendices I, II, and III of Schlegel and Barry (1991) contain information on the sample, the codebook, and the statistical techniques used in their cross-cultural study of adolescent socialization.

CENTRAL ISSUES IN THE CROSS-CULTURAL STUDY OF ADOLESCENCE

Biological adolescence is universal. Recent research into the structure and processes of the developing brain make it clear that there are neurobiological changes as well (Steinberg et al., 2006), and we can safely assume that these too are universal. The consensus is not so clear regarding adolescence as a stage of social development, however.

Scholars conducting cross-cultural research on adolescence have asked several fundamental questions in this respect. Is social adolescence universal, or is it only found in a limited number of societies, modern ones with schooling and perhaps a few others? When does social adolescence begin and when does it end? What are the characteristics of social adolescence.

and how is it similar or different across cultures? Which features of adolescence differ between girls and boys, and which are similar? And finally, if social adolescence is universal, why does our species, *Homo sapiens*, have this period between puberty and the socially recognized stage of adulthood?

The primary source of data for addressing these questions here is the research of the Adolescent Socialization Project. Unless otherwise noted the data in this section are drawn from the resulting publication of the findings (Schlegel & Barry, 1991). This book reported on only a portion of the 341 variables in the project, coded separately for girls and boys. Data came from ethnographic materials on cultures in the Standard Ethnographic Sample (Murdock & White, 1969), a worldwide representative sample of known reported preindustrial cultures. Of the 186 cultures in the sample, 181 had information on adolescence that could be coded. (Details are found in the text and appendices in Schlegel and Barry [1991].) These are all traditional cultures, and the ethnographic material on each refers to a specific community at a particular time.

Is Adolescence as a Social Stage Universal?

Here we have the "black swan" problem: One contrary case can negate the generalization, unless it can be accounted for by special circumstances. All of the cultures in the sample, with one possible exception with respect to girls, recognized a social stage between childhood and adulthood for both sexes, during which time the behavior and treatment of young people differed from that of both younger children and adults. In several cases there was an additional stage between adolescence and full adulthood, which we termed *youth*, for one or both sexes. Such a stage, somewhat similar to what Arnett (2001) has called "emerging adulthood," is a feature of most regions and social classes of modern societies. It also existed in some traditional ones such as ancient Athens and Sparta, Europe since at least the Middle Ages, and militaristic states of Africa like Zulu. Arnett (2001) has conceptualized the youth stage of modern societies as "emerging adulthood," with characteristic features that differentiate it quite markedly from the institutionalized youth stages of preindustrial societies.

Given the great variety of cultures in the sample by geographical placement, by subsistence techniques from hunting to advanced agriculture, and by level of technological development, we can be fairly confident that social adolescence is a constant across cultures for both sexes. Its absence rather than its presence requires an explanation.

There may be at least two exceptions, one in the Standard Ethnographic Sample and one other, to the generalization that adolescence is a social universal. Girls of the Gros Ventre Indians of Montana and girls of some Australian aboriginal tribes (Burbank, 1988) married and had sexual relations with their husbands before menarche. Aboriginal girls as young as 9 or 10 in some cases. We do not have information on the lives of these girls, except that Gros Ventre co-wives, older than the new bride, treated her as a little sister. It is impossible to say whether an adolescent stage was acknowledged for these very young wives or whether they were treated as adults and expected to behave like them. Nor do we know if the transition from childhood was marked by very early signs of puberty, which would mean that girls entered an adolescent stage before menarche, whether or not it ended at marriage. We do know that in at least one Aboriginal tribe, the Aranda, social adolescence began with the appearance of the breast buds, an early sign of puberty.

Many cultures have a special term for adolescence as a period between childhood and adulthood, but most do not. We should not confuse the presence or absence of linguistic markers with social reality, however. The Navajo Indians of New Mexico and Arizona, whose language does have terms for *adolescent girl* and *adolescent boy*, did not have

many distinctive markers in appearance or age-specific behaviors to set off this stage. On the other hand, their neighbors the Hopi, whose language does not have terms for adolescents, held public events where adolescent girls and boys could display themselves. Hopi girls after menarche wore their hair in a style that signaled that they were ready for courtship. In another case, the Trobriand Islanders of Melanesia spoke of adolescents as "the flower of the village," without giving this stage a label.

The Parameters of Adolescence

When Adolescence Begins

The difficulty in determining age at the beginning and end of adolescence lies in the absence of good data on chronological age for most of the cultures in the Standard Ethnographic Sample. Age can only be estimated. A better measure, more in line with the way most peoples regard social age, is level of physical development. Although such features of physical development as tooth eruption (Bogin, 1999) and brain development (Steinberg et al., 2006) seem to be universally consistent, reproductive maturation for both sexes is variable according to diet and possibly other conditions (Vizmanos & Marti-Hennenberg, 2001). For this reason, we defined social adolescence as beginning at around first menstruation and first ejaculation, unless otherwise indicated. We estimated menarche to be around age 14 in these relatively well-nourished populations, with spermarche 1 or 2 years later, unless there was information to the contrary, basing our estimates on Eveleth and Tanner (1976). There are several cases of girls' social adolescence beginning before menarche with earlier signs of pubertal change, such as breast development. The Aranda, mentioned earlier, is one such case.

Length of Adolescence and Youth

In most cultures social adulthood began at marriage, particularly for girls. In a few, full social adulthood was reached after one or more children were born to a couple. In other cases, a ceremony other than marriage marked the transition from boy to man. For the Hopi Indians of Arizona, a girl became a woman at marriage, but a boy became a man when he was initiated into one of the four male ceremonial societies. He did not marry until after this event.

Length of social adolescence can vary between the sexes within a culture. In fact, boys' adolescence is frequently longer than girls' adolescence. Boys, whose growth spurt follows spermarche, do not reach their full physical development until some time after puberty, rarely before their late teens in the populations of the sample. Girls, whose growth spurt precedes menarche, develop adult-like bodies much earlier (although they go through a period of adolescent sub-fecundity before they are capable of maintaining a pregnancy) (Bogin, 1999). Thus, they are likely to be considered ready for adult life earlier than are their male peers, who have not yet attained an adult-like body. This, then, is a reason, grounded in biological development, for a longer adolescence for boys than for girls.

A cultural reason for a longer male adolescence is that boys generally have to prove themselves capable of meeting the obligations of husband and father before the parents of a prospective bride will accept him as a son-in-law. For both biological and social developmental reasons, the end result is that boys may still be considered adolescents or youth while the girls of their cohort are already married adults and bearing children.

A youth stage, when present, typically begins and adolescence ends when the young person has attained full or almost full physical growth. This is rarely before the late teens. Individuals at that age are more developed, not only physically but also cognitively (Hooper, 2004), than boys and girls in their early teens. When full social adulthood is not reached until after the late teen-age years, usually sometime in the early to middle 20s or even later, cultures generally recognize a social stage that intervenes between adolescence and adulthood.

During this stage, young people have more responsibilities, and usually more freedom, than adolescents, without the privileges and social recognition of adulthood. This stage of "youth" or "emerging adulthood" (Arnett, 2001) was common for males in cultures in which they spent a period of time before marriage as warriors or in other specialized roles, while girls did not have such an intervening stage but married within a few years of menarche. When marriage for most girls was delayed as well, as it has been for most social classes in Europe since at least the sixteenth century, girls as well as boys passed through a youth stage (Levi & Schmitt, 1997; Mitterauer, 1992).

Marriage and the Beginning of Adulthood

If marriage marks the beginning of adulthood, the length of adolescence or youth depends on the factors that determine the timing of marriage. One of these factors is the economic opportunities provided to boys and youth that allow them to meet the obligations of marriage. Another factor is whether youth are given special social roles, such as warrior, that preclude marriage. A factor determining the age of marriage for girls is the benefit of keeping a daughter at home for the labor or income she provides. This has to be weighed against the present or future benefits a son-in-law provides through his labor, economic or social connections, or goods, the last in the form of bride wealth (Schlegel & Eloul, 1988).

Marriage strategies and negotiations were important elements in the social lives of most traditional peoples, who sought to use the marriages of their children for economic and political benefit and to maintain or improve the social position of their families (Schlegel & Eloul, 1988). This is generally true for societies of all types, from simple foragers (hunters and gatherers) to complex traditional states.

In European and European-derived societies, and more recently in modernizing ones, industrialization weakened the economic hold that most families had on their adolescent and older unmarried children. This new economic formation provided boys, and later girls as well, with opportunities for economic independence that had been undreamed of for most. Family resources that helped get a spouse, whether economic or social (e.g., kinship connections), receded in importance. Personal effort plus ability became a path to success for many more than just a few exceptional individuals. Family control over daughters as well as sons declined as educational and occupational opportunities opened up to them. As girls became more independent, boys and young men could direct their appeal as suitors to the girls themselves, without as much regard for their parents as in earlier times. Adults lost considerable authority over the young of both sexes as marital prospects depended more on personal resources other than familial ones, such as those the potential marriage partners could obtain by themselves.

Before we generalize too broadly about the dependence of the young on their families, we must recognize that there have always been sectors in many societies, not just the less privileged in class-based ones, in which the marital prospects of young males were poor and only ability and luck could help them succeed. Even the Hopi have tales of orphan boys without kinship support, on whom Spider Grandmother, like a fairy godmother, takes pity and helps them find a wife and a place in the community. These legends tell of success through individual ability and luck. They are not unlike tales of upward social mobility that have become popular legends in technologically more advanced societies, like those of Cinderella or Dick Whittington (the legendary London scullery boy who rose to become lord-mayor of London).

CONSTANTS AND VARIANTS OF ADOLESCENCE ACROSS CULTURES

This section examines the constants and variants across cultures and between the sexes. The data are cultural rather than individual in

nature; that is, each "subject" is a culture in the sample, and the code for each variable of each culture—present/absent or point on an ordinal scale—represents the best judgment of the coders. For the purpose of rendering the data manageable, ordinal scales were converted into two categories, and these variables were analyzed statistically as above or below the mean.

The following discussion highlights those findings from the Adolescent Socialization Project that, in this author's judgment, have the greatest relevance to issues in the study of contemporary adolescents. They are not necessarily presented in the form they were in the original cross-cultural report (Schlegel & Barry, 1991).

Adolescents and Their Families

The Household—the Primary Locus of Socialization

In Western cultures, that is, European and European-derived cultures, a common family form for many centuries has been the nuclear-family household, which consists of a married couple and their children, plus perhaps other unmarried or widowed adult kin, boarders, and household workers. Household authority rests with the central couple. The other common form has been the stem-family household. That contains an older couple and one of their children (more often a son, but a daughter if there is no male heir) plus that child's spouse and children. Household workers and unmarried kin may also belong to the household. This household form occurred in many world regions of peasant agriculture, including many parts of Asia, where the household required more than two working adults but limits on land or other household resources kept the household fairly small.

In underpopulated African pastoral and farming regions, and in other places where vast tracts of arable land or grasslands constituted the landscape, the constraints were on shortage of labor rather than shortage of land. Extended-family households provided for household expansion by keeping some married children, most often sons, and their spouses and children in the parental home. These societies often promoted polygynous marriage, which expanded the domestic female labor force and provided more children for help in farming or herding. Wealthy families in traditional advanced societies like India and China also formed extended-family households to bring together the male kin, fathers, sons, and brothers that formed the family corporation and ran its enterprises.

These are broad generalizations, for there are variations of these forms suited to local needs and the rules or customs of inheritance of property. Household structure and activities provided the social milieu within which children and adolescents were socialized and girls and boys learned their varying social roles. In the nuclear-family and extended-family households, before a demographic shift away from high fertility, the ratio of children to adults in the household was equal or high. For example, given four dependent children per woman, the nuclear-family household had a ratio of two children per one adult with whom they were likely to have reciprocal obligations and emotional ties. In the extended-family household, the ratio of children to adults might even be higher, particularly where there were polygynous marriages. The stem-family household, where polygyny was usually absent or uncommon, contained two parents and two grandparents, so the ratio was one-to-one. Since it often also contained unmarried adult children of the founding couple, uncles and aunts of the children, the ratio could be even lower.

Thus, the social and emotional settings in which children were socialized were structured in different ways that depended on the household form. It is not surprising that where there were extended-family households, much rearing of young children was done by older siblings (Weisner, 1982) and cousins, and older children had authority over and responsibility for younger ones. Children as young

as four could be left to mind the baby and could expect to be punished for serious mishaps. Sibling care was also common in highly fecund nuclear-family households. In stem-family households, grandparents as well as older siblings could do much of the child care.

The effects on adolescents of household demography show up in the association between household form and the traits of competition and aggression. Competitiveness in boys is associated with the nuclear-family household (0.052) and weakly associated negatively with the stem-family household (−0.087, a trend). Competitiveness in girls is weakly associated with the nuclear-family household (0.072, a trend). Aggressiveness in boys is negatively associated with the stem-family household (−0.031). In girls, aggressiveness is positively associated with the nuclear-family household (0.020). For both sexes, the strongest positive associations of both competitiveness and aggressiveness are with competition with peers. However, family social structure, as setting the stage for the family emotional structure, does appear to be a factor. The ratio of adults to children affects the quantity and quality of adult-child interactions, and this in turn affects sibling interactions. Children learn in the family what they will carry over into adolescence.

Relations with Family Members

Regardless of household form, in most cultures adolescents of both sexes spent most of their waking hours with adults of the same sex, boys in somewhat fewer societies than girls because, in foraging or pastoral cultures in the sample, the boys were often out with other boys hunting or herding. Most production in sedentary societies, whether farming or craft production, took place in the home, and adolescents worked alongside adults there.

Almost all production was sex typed, and girls and boys worked primarily with family members of the same sex. Overall, boys had the most contact with fathers and older brothers, the greatest subordination to and the least intimacy with fathers, and the most conflict with fathers and older brothers, although the level of conflict overall was low. Girls had the most contact with mothers and older sisters and, like boys, the greatest subordination to and the least intimacy with fathers. Level of conflict with all kin was very low. Although there were important exceptions, in general, family life was quite harmonious and showed little rebellion by adolescent sons or daughters. This is in marked contrast to the stereotypic (if overstated) portrayal of adolescence in modern societies.

It should be remembered that adolescents in most of these cultures depended heavily on parents and other kin for help in moving into the adult stage of life. Open defiance, without other resources to fall back on, would have been self-destructive. Nevertheless, parental interests could conflict with those of adolescents and youth, particularly when the children felt that they were being exploited or denied their legitimate dues, and open conflict or passive resistance could ensue.

Having said that, it should be emphasized that in most cases, as far as we can tell from the ethnographic literature, the older generation helped the younger one. We often hear that children provided social security in old age when other institutional means were lacking, and it is likely that that possibility factored into family decisions about fertility. However, over the course of a lifetime the resource flow was probably at least as much down the generational ladder as up, especially as most people did not live much past their productive years. The economic and social benefits of children came through their labor and marital connections as much as through later help to aged parents.

A striking feature of adolescent life in these traditional societies is the degree to which adolescents were embedded in adult-based structures and activities. We see this with the family and kin circle, and we shall see it again when we examine other social forms.

Peers and Peer Groups

Peer groups were an important feature of adolescent life in the cultures of the sample; but

aside from those places where boys hunted or herded away from the home base or spent time in schools (like the Aztecs), peers often did not have many hours of the day when they were together. Unless adolescents were called out by adults for group instruction or community service, most peer contact occurred during leisure time.

Peer relations were more important in adolescence than in childhood in these traditional cultures, as they are in modern ones. Before adolescence, children rely heavily on their families for their needs, and they turn to family members for evaluation and validation. Adolescents in all cultures are more self-sufficient. In foraging societies, children were generally able to provide enough food to feed themselves by the time they reached adolescence, while European history and folklore tell of adolescent boys sent out to make their own way in the world.

In traditional cultures, as it is in modern ones, adolescence was a time when evaluation and validation by peers as well as adults became a critical issue. This may be because one's peers, the allies or competitors in adolescence, become one's adult allies or competitors in the near future, when economic and marital opportunities and decisions come into play.

Contact with Peers

Locations where adolescents joined with other adolescents differed somewhat between the sexes. Girls and boys both had groups of friends unless the local community was too small to have more than one or two adolescents at a time, like a small foraging band. In these cases, adolescents waited until bands congregated to meet up with their age-mates. In most communities, girls' groups or pairs of friends were just as likely to meet in the company of adult women, their mothers and neighbors, as apart from them. Boys' groups, however, tended to congregate away from adults or at the periphery of an adult male group. This spatial placement is described, or can be inferred from other descriptions, in the ethnographic literature. The author has also observed it in a tribal Philippine village, an upper-class community in Malaysia, Hopi villages (all described in Schlegel & Barry, 1991), a town in Egypt, and one village each in modern Germany and Italy.

The Italian case is instructive, because this is a village in an advanced industrial culture. Its inhabitants were formerly peasants, but in the last half-century or more they have worked in a nearby city or held paid jobs in the local economy. The following scene describes the village piazza as the present author observed it on a summer evening in 2003. It depicts a pattern of spatial placement by sex and age-stage found over the world.

> On one side of the piazza stood the bar-restaurant, a gathering place for the local inhabitants. As evening fell, villagers began to drift in. After getting drinks at the bar, often coffee or soda, they took chairs outside. The men sat on one side of the main door and the women and adolescent girls sat on the other, although occasionally a man moved his chair over to the women's side to talk to his wife or mother. The male adolescents and youths sat or stood by the wall of the buildings opposite. In earlier times someone often would bring out an accordion or guitar for impromptu singing and dancing, but if there is music today it is likely to come from a transistor radio, as it did on this occasion. As the evening wore on, some girls and boys broke away from where they were standing or sitting and met off to one side of the piazza. A few left in pairs or small groups. The adults began to head homeward, and by ten o'clock the piazza was deserted.

The Structure and Character of Peer Groups

Both girls and boys in the cultures of the sample formed friendship dyads and peer groups, but girls were more likely than boys to meet in pairs. Peer groups of boys tended to be larger than peer groups of girls of the same culture, and they were more structured: that is, they more often had an established hierarchy and a name, more so in permanent than in nomadic or

semipermanent settlements. Boys' peer groups were in general more important in socializing their members for adult community life than were girls' groups. Girls participated more in community life by accompanying mothers and other close kin, while boys were more likely to participate as groups of peers. When boys were under adult male supervision, the men in authority over them were not necessarily kin.

Peer-group activities also differed between the sexes. Girls joined together primarily for leisure-time activities, and these were usually unstructured like simple games or chatting and storytelling. Boys more than girls were engaged in structured activities like competitive games with rules (cf. Schlegel & Barry, 1989). As will be discussed later in this section on peer groups, boys' groups provided community service in more cultures than girls' groups did, although sometimes both girls' and boys' groups, together or separately, acted to benefit the community.

The dynamics of peer-group relations differed between girls and boys. Girls in most cultures exhibited little competitiveness in peer relations, although they were certainly capable of it; on an 11-point scale for this trait, two cultures received a rating of 9, the highest any culture received (20 received this rating for boys). Girls were frequently the minor members of groups dominated numerically and socially by adult women, which offered little opportunity for them to compete for social position. Boys, however, were often with other boys away from adult supervision during leisure time, and here jockeying for position in the status hierarchy could receive full play. Even when boys were under adult supervision, they might compete for excellence in whatever tasks the adults had assigned them, in order to win the approval of the men and the respect of their age-mates.

However, the same boys' groups that were internally competitive could also be cooperative—the two modes of operating were not mutually exclusive. This is illustrated by observations the author and her researchers made in 1994–1996 of a class of 15 adolescent boy apprentices in Frankfurt am Main, Germany. They were members of an in-house vocational training program of a major electronics firm. The following description is drawn from the author's notes:

> It did not take many weeks from the beginning of the training program for this class to sort themselves into a hierarchy, which lasted through the two-and-a-half years they were being observed. The boy who seemed the most assertive at first ended up in the middle group, while the undisputed leader who emerged was the boy who clearly excelled over the others. The boys at neither the top nor the bottom displayed a good deal of good natured competition in their humorous but pointed banter and controlled horseplay. Toward the bottom were the one or two less competent, and the least competent was frequently the butt of jokes and pranks. Nevertheless, the better apprentices helped the others, including the boy at the bottom, and everyone was usually invited when they got together outside of their work-training hours. Social rank in this group depended on competence on the job, particularly the hands-on projects.

Participation in Community Life

Peer-Group Participation in the Community

Adolescent peer groups often engage in activities that benefit the entire community. One universal or almost universal way is to provide entertainment for adults through displays of beauty and prowess in dancing and sports. These displays serve several purposes. Beyond providing entertainment, they allow adults to look the adolescents over and judge them as worthy or unworthy of attention. In small communities where future social success and even marital prospects depend on how they are viewed by adults, young people are eager to be looked on favorably. And they all want to be admired by their fellow adolescents, particularly those of the opposite sex.

In some cultures in the sample and elsewhere, adolescent groups assumed responsibility for

certain rituals, community festivals, or other community projects. Groups of adolescent boys in some Japanese villages, and groups of adolescents of both sexes in some tribal regions of India, were responsible for keeping village paths clean. Ritual involvement by teenage girls and boys was common throughout Latin America, where the adolescent groups took on such duties as helping to clean the church or organize religious processions. Some tasks of community life, like taking charge of certain aspects of public festivals, were done by groups of adolescent girls and boys, separately or together. This practice continues in Siena, Italy, today in the public dinners held as fundraisers by the city's district associations (*contrade*), where adolescents take part by helping set up, clean up, and serve food.

Adolescent groups may also be given some responsibility for enforcing community rules of behavior. Reports of adolescent boys being allowed to engage in what otherwise would be considered antisocial acts—destroying property of rule violators, beating those who have aggressed against the community in some way, or publicly mocking those persons whose behavior threatens community moral standards—come from such disparate places as Pygmy villages in the Congo, American Chinatowns, and European peasant villages, respectively. In all these cases, groups of boys were permitted to aggress against disruptive adults with community approval.

Participation as Individuals

In traditional communities, adolescents were everywhere, working with adults or sharing responsibility. Adolescent girls and boys sold in the marketplace, participated with their family members in public rituals, and made themselves available to adults for tasks beyond the capabilities of younger children.

Adolescents also participated as individuals in religious sodalities and civil organizations. Hopi girls and boys began to take part in sodality activities as children, taking on increasing responsibility as adolescents. In contemporary Germany, many adolescents from about age 15 or 16 join one or more of the clubs (*Vereine*), from hunting or singing to chess or stamp collecting, that are a prominent feature of German town and village life.

The ethnographies used in the Adolescent Socialization Project, as well as others of cultures not in the sample, reveal that adolescents interacted freely and often with adults in the community. These adults were not just family members or adults who had authority over them in specific domains, like employers, religious leaders, or instructors, but also adults engaged in the same activities as the adolescents. Adolescents may have in many respects behaved differently, and were treated differently, than either children or adults, but they were not segregated.

Sexual Attitudes and Practices

Managing Adolescents' Sexual Behavior

Families and communities everywhere must deal with adolescent children who are not considered ready for marriage, but who are highly motivated to engage in sexual relations. Adolescent girls are also capable of producing offspring, once they lose the protection of adolescent subfecundity.

A matter of concern to a girl's family was the possibility of her pregnancy outside of marriage. Bastardy by itself was not a social problem where children of unwed mothers either stayed with the maternal grandparents when the mother married, or accompanied the mother into her new household. However, even where such children were not stigmatized in any way, they were still at a disadvantage. This is because there was usually no obligation for the biological father or his kin to provide whatever material or social benefits they normally provided to a man's children; if they did provide any, what they gave often depended on how they valued any particular child. This was true for matrilineal societies, where children belong to their mothers' kin group, as well as those with other forms of kinship.

Managing the strong sexual urges of boys and youth, unsupervised by adults during much of their leisure time, concerned the larger community. If boys and youth had no class of females sexually available to them, such as their female age-mates, it was tempting to try to flout the rules and seduce unmarried girls or the young wives of adult men. The sexuality of young males in these cultures was a matter of concern to the fathers of daughters and the older husbands of young wives (Schlegel, 1991). The families of boys were also interested parties, as angry fathers and husbands could cause trouble for them as well as for their adolescents.

The Value on Virginity

Whether or not sexual intercourse, or heterosexual activity of any kind, was permitted depended on the way people valued virginity, particularly virginity of girls. A cross-cultural study with the same sample by the present author (Schlegel, 1991) found that virginity was valued to a statistically significant degree when family property accompanied daughters into marriage, as in dowry or indirect dowry. It tended to be valued in far fewer cultures in which goods or labor (i.e., bride wealth and bride service) were provided to the family of the bride by the groom or his family. Fewer than half of the cultures in which bride wealth was given valued virginity. In other words, families were more likely to pay to give a virgin daughter than to acquire a virgin daughter-in-law. Virginity was also not likely to be valued when no goods, beyond perhaps voluntary wedding gifts to the couple, were given at marriage.

What this means is that cultures, and social classes in class-stratified societies, in which the bride's family gave property generally demanded virginity and attached a moral value to it. This value was found in most of the traditional civilizations of Europe, Asia, and the pre-Columbian civilizations of the New World, at least in their propertied classes where marriage transactions that involved the transfer of property from the bride's family were the norm. Some areas of Southeast Asia were an exception; Red (1988), writing of the fifteenth and sixteenth centuries, attributes this to the economic independence of women there, and it is likely that the availability of safe and socially approved abortions was also a factor.

Sexually Permissive Cultures

Where virginity had little or no value, adolescent girls were allowed to engage in sexual activity, which may or may not have included full sexual intercourse. The most permissive cultures were those that had adolescent dormitories where girls and boys congregated in the evening, after the day's work and the evening meal with the family were over. After singing and games it was usual for couples to pair off to sleep together, with or without intercourse. Such dormitories were found in parts of tribal Southeast Asia and India. The East African Kikuyu also had adolescent dormitories where couples could fondle and engage in interfemoral intercourse, but here the girls wore leather aprons that prevented penetration.

The best descriptions of an adolescent dormitory, somewhat romanticized, come from Elwin's (1947) ethnography of the Muria tribe of Madhya Pradesh, India, and a later study of the same people by Gell (1992). The sexual freedom of adolescence was fondly remembered by older Muria. Once married, however, a couple was expected to be faithful. Adultery was strongly disapproved, and according to reports it was rare.

We should not think that these were adolescent paradises, however. There is plenty of evidence that girls and boys often felt rejected when their favored partner preferred someone else. A Muria girl in love with her preferred partner, and the boy who loved her, were despondent when her parents married her to someone else.

Even where adolescents had sexual freedom, boys did not necessarily have access to girls. Girls could require gifts and tests of devotion before they were willing to accept a

suitor. Alternatives to heterosexual intercourse in these and other societies were masturbation and homoerotic activity.

Homoerotic Activity

There is little ethnographic reporting on masturbation among adolescents, as this is a private practice that is rarely observed by ethnographers or discussed with them. There is, however, information on adolescent homoerotic activity in a number of cultures in the sample. From the evidence we have, it appears that where adolescent homoerotic behavior was tolerated or expected for one or both sexes, it was considered to be either youthful experimentation or an acceptable outlet for sexual urges, without social consequences like an out-of-wedlock pregnancy (Schlegel, 1995). There was no evidence that homoerotic activity in adolescence led to adult homosexuality as a preferred or frequent form of sexual behavior.

Ritualized homoerotic behavior, involving adolescent boys, has been reported for several parts of Melanesia (Herdt, 1984). The fullest ethnography that discusses this is Herdt's (1981) book on the Sambia (a fictitious name). Young males until marriage slept in the men's house, which during the day was used as a meeting place for adult men. Preadolescent Sambia boys fellated adolescent boys, a behavior the Sambia explained by their belief that boys need to ingest semen in order to grow. When the boys married, their wives had not yet reached menarche. They, too, needed semen, so both these immature wives and the younger boys fellated the youngest husbands. After the wife's menarche, or at least after a child was born, fellatio was discontinued and heterosexual intercourse was the normal sexual practice for adults.

Sexual Abuse of Adolescents

The somewhat developed bodies of adolescents plus their lack of social power make them potential victims of sexual predators. Most of the ethnographic information for the sample came from observations made in small communities, villages or long-established neighborhoods in traditional towns and cities. Predatory acts here would be difficult to accomplish and would be seriously punished by family, kin, and community members. However, there is information on sexual abuse for one of the societies, ancient Rome during the early Empire.

The third century was close to the time span pinpointed for the sample (A.D. 110), when the morals and customs of the Romans were adapted by Christian society and colored the writings of the first Church Fathers. Clement of Alexandria, not of Rome but socialized to upper-class Roman culture, warned Christians against frequenting brothels, for the girls or boys they engaged might be sons or daughters they had abandoned as unwanted infants (Boswell, 1988). Other evidence of the sexual use of adolescent slaves or prostitutes is plentiful for Ancient Greece and Rome. It is likely that similar information could be found for any of the large cities of pre-industrial Europe or Asia, where abandonment of unwanted children, slavery, or destitution of the underclass provided a pool of exploitable adolescents.

One domain in which sexual abuse is known from much anecdotal evidence to occur, but for which systematically collected data are very scanty, is abuse within the family, or more often the circle of kin. Relatives such as uncles and older cousins have opportunities to abuse young adolescents sexually in cultures that promote family cohesiveness, where relatives come into frequent contact and children are expected to respect older kin and obey them without question. Many of these cultures like those of India and the Middle East, value virginity, the loss of which brings shame on the family (Schlegel, 1991). Family members blame the abused girls themselves, and their mothers for not adequately supervising them, rather than risk tearing the social fabric of the larger kin group. While such abuse is no doubt rare, there is enough anecdotal information to indicate that it can happen where there are opportunities for such abuse. It is the deviant

side of close kin connections and the involvement of adolescents with adult kin.

Adolescent Misbehavior

Misbehavior has to be judged according to the cultural standards of the community: what is delinquent for one society or sector may not be for another. We have already seen that adolescents may be called upon to do the social "dirty work" that is below the dignity of adults to do, or that would result in major ruptures of social harmony if performed by adults. In such cases, boys' peer groups may be encouraged to punish those who pose some sort of threat to the community, as in the American Chinatowns or Pygmy villages already mentioned. For purposes of the cross-cultural study, antisocial behavior was defined as expected misbehavior, not the actions of deviants who probably exist in every society. It included such diverse activities as hostile speech, fighting or crimes against persons, theft, disapproved sexual behavior, and disapproved drunkenness or misuse of other drugs.

Information on this subject was rather sparse, from only 54 cultures for boys and 28 for girls. It was impossible to generalize about the girls, for expected antisocial behavior was present in only six cultures. For boys, it was coded as present in 24 and absent in 30. We cannot assume that absence of reporting means absence of the feature, but it is probable that in detailed ethnographies, expected antisocial behavior would have been mentioned if it were a prominent feature of the culture. In our best judgment, boys' adolescent misbehavior was limited and occasional in most societies. Girls were even less likely to cause problems for the community. The most common forms of boys' misbehavior were theft (nine) and physical violence (seven).

Theft is significantly associated with the opportunity to own property, such as domesticated animals, but work is not emphasized as an area of skill. In other words, it seems that theft resulted from the desire for goods without a means by which the individual could gain them by effort other than theft. Theft of animals is endemic in pastoral societies, for example, and one way of starting a herd is to steal from your neighbor (disapproved) or a neighboring community (often approved). Violence was most likely to occur where peer competition was high and cooperation was low. Boys also followed the example of adults, for adolescent violence is significantly associated with frequent deviance by men.

Theft and violence do not show any relation to hostile or strained relations within the family or with adults in general. They appear to have resulted from present situations that stimulated impulsive behavior, the failure of socialization in teaching how to control impulses, and, where adult deviance was high, the example of grown men.

Boys' antisocial behavior in general is positively related to a low degree of contact that boys had with adult men generally and adult men outside the home, that is, men who were not members of their household. It is also positively related to a lack of emphasis on productive skills. This means that in cultures that involved boys with adult men and taught them productive skills, teaching that was usually done by grown men, boys were not likely to be expected to misbehave. Most girls in the sample societies had close and frequent, often almost continuous, contact with adult women, and they were usually kept busy learning and doing productive work.

Some Implications for Contemporary Adolescence

Our examination of a number of features of adolescence that differ across cultures or between the sexes suggests several implications for adolescence in modern and modernizing cultures.

Involvement with Adults

Adolescents in modern cultures generally spend less time with adults, and adults of the same sex, than adolescents in traditional cultures, since they are in school for much of the

day, and adult family members and neighbors often work away from home. The contrast of adolescents in the sample cultures with American adolescents is particularly striking. In the United States, extreme age segregation limits contacts across generations in civic or leisure-time activities. In many sectors of American society, adolescents are remarkably uninvolved with adults other than immediate family members and authority figures like teachers, coaches, youth leaders, and the like.

Yet, it would be wrong to assume that adults other than parents play no meaningful roles in the lives of American adolescents. It would be easy to stereotype American teenagers as A Tribe Apart, the title of a recent book (Hersch, 1998). As the work of Greenberger, Chen, and Beam, (1998) on VIPs (very important persons) shows, adolescents often have one or two adults other than parents to whom they turn for counsel. Hamilton and Darling (1998), among others, have also written about the importance of adult mentors in the lives of adolescents. Nevertheless, for many adolescents, the workplace and civil society provide few opportunities for adolescents to develop long-term close relationships with unrelated adults; and while young people may love grandparents and other kin, these are often not readily available.

In the European nations where the author has done research, Italy and Germany, adolescents are much more involved with adults than American teenagers are, even though European adolescents attend school and spend considerable leisure time with peers. Kin and neighborhood networks in these countries provide more scope for adolescent–adult interaction, and institutions exist that promote such interaction. This is pronounced in Germany and other German-speaking countries and regions, which have extensive apprenticeship programs for adolescents. German adolescents are also involved with adults in social clubs and civic organizations, the *Vereine*.

Socialization for adulthood begins early when adolescents interact often and freely with adults. It eases the transition to adulthood, as adolescents have many opportunities to observe adult behavior and select realistic role models from those they admire. Such interaction also sets the stage for possible friendships between the generations. These may be especially valuable as escape valves when pressures within the family and with peers mount, and adolescents can turn to adults, rather than other adolescents, for solace and advice. Institutions that involve adolescents with adults also provide settings for socialization that could be particularly important for the children of dysfunctional families.

Work

Most adolescents in traditional societies, where production generally took place in the home or the small job shop, were at work for much of their time. Schooling, where it existed, took up only part of the day. Among traditional elites, whose children did not do productive labor, the boys learned the skills they would need to be successful managers of family enterprises, soldiers, diplomats, or whatever elite men did, and girls learned the practical and social skills they would need as wives of these men.

Such practical learning is found in apprenticeship programs in modern societies. While informal apprenticeships are widespread throughout the world, Germany, Austria, and Switzerland have established apprenticeship systems that employ the majority of their adolescent boys and girls aged 16 and older. These adolescents, who are either in blue-collar or white-collar apprenticeships, typically attend vocational school (with some academic subjects) for part of the time and work the rest of the time at their place of employment, where they receive apprentice wages. These systems bring together employers, unions, and state educational bureaucracies in a relationship that is not always harmonious, but it does produce an institution that succeeds in preparing young people for future vocations.

Apprenticeship programs modeled after the German system have been adapted to American high-school settings in a few places (Schlegel,

1996). They offer adolescents the opportunity to enter jobs that are not dead-end but rather are the first rung on a vocational career ladder. A broader application of similar programs would be particularly helpful for adolescents who lack the ability or the motivation to continue on to higher education, and it would give them an incentive to finish high school and get their vocational certificate.

Sexual Behavior

Sexual activity among adolescents to the point of sexual intercourse now is more common, and in many quarters more tolerated, than it was fifty years ago. The decline in the value on virginity corresponds in time with increased opportunities of young people to be independent of family resources, and the corresponding decline of adult authority over them. There has been a trickle-down effect from the sexual freedom of youth to the sexual freedom of adolescents, particularly as means of escaping adult supervision have increased through access to cars and now the Internet, and adults themselves are more permissive toward sexual behavior outside of marriage.

Sexual permissiveness is not without consequences. The most obvious are the risks of pregnancy and contracting a sexually transmitted disease; another is the danger of sexual coercion by other adolescents. There are emotional risks as well. As we saw in the case of the Muria, sexual intimacy can intensify emotional attachment for one or both participants, and the almost inevitable break-up can be very disturbing to adolescents unprepared to cope with such an emotional jolt.

Judging from the limited amount of available information, homoerotic behavior among adolescents is not uncommon in traditional cultures, nor is it usually stigmatized. There is no evidence that such acts in adolescence lead to a preference for homosexuality or even to an interest in it, unless the individual already has that preference. For many adolescents with heterosexual preference, homoerotic acts may be a kind of waystation between the sexual play of children and full adult heterosexuality. Experimentation with a same-sex friend can be a way of socializing young people for sexual behavior with a partner of the opposite sex, without the same emotional load that a heterosexual relationship may carry for one or both participants. This would only be true of the kind of homoerotic activities reported for cultures of the sample; that is, they occur among adolescent friends, where the dangers of sexual predation and the risk of sexually transmitted disease are minimal, not between adolescents and adults.

Antisocial Behavior

The two most common forms of misbehavior in the sample cultures are theft and fighting. Theft is associated with the difficulty or impossibility of obtaining desired objects. Juvenile theft in modern societies is generally dealt with through attempts at prevention, and punishment. It is probably impossible to curtail desire, as television and advertising keep desirable material objects constantly in view, and one mark of high status in the group is ownership of these objects. But a better way to prevent theft, by reducing the motive, would be to increase the means by which adolescents who otherwise would not have access to these objects could attain them in a legitimate manner, through earnings of some kind. Unlike adolescents in some nations, American teenagers who are not bound for college have little access to programs that vocationally train and gainfully employ them and prepare them for adult vocations.

Violence was found where peer competition was high and cooperation was low. Some competition for status, and for attractiveness to the opposite sex, is probably inherent in adolescent social relationships. However, young people are less likely to become angry and fight when they are working together on a project and depending on one another for success in completing it. Activities that place less emphasis on competition and more on cooperation, particularly cooperation with tangible results

that bring recognition and reward to the whole cooperating group, would be a place to start.

It would be very difficult to reduce adolescent misbehavior when adults frequently commit antisocial acts, for these variables are significantly correlated. Attempts to reduce youth delinquency alone are less likely to be effective than attempts that also address adult delinquency. Adolescent delinquency may be more than simply an epiphenomenon of adult delinquency; it may have causes of its own, but it exists within an environment of adult delinquency, as the cross-cultural study finds.

DISCUSSION

The cross-cultural method is correlational, not experimental, and it has the strengths and weaknesses of all correlational methods. Cross-cultural studies are most valuable when they are one of a set of studies that use different methods to address a topic (i.e., triangulation), but this can be said of any kind of study in the social sciences. The findings of cross-cultural studies of adolescence, instructive by themselves, also point to directions that other studies can take using more restricted samples, such as a sample from a single culture.

Some of the findings presented here have been illustrated with single-case studies, based on the field research of the author and others. Those that are relevant to research on modern adolescents received particular attention.

Overall, cross-cultural data indicate that social adolescence is a panhuman phenomenon. The few ambiguous cases seem to be anomalies that could be explained by specific local conditions. Projecting into the past, it seems likely that our late-Pleistocene ancestors, and even earlier ones, recognized a social adolescence. This possibility is reinforced by studies of a developmental stage in the behavior of higher primates that is analogous to human social adolescence (Walters, 1987).

We have also seen that social adolescence is generally coterminus with biological adolescence, but its beginning and ending can vary according to social conditions. Since biological adolescence is broadly defined as the period during which the human reproductive system becomes active and matures, it is not surprising that social adolescence in most cases begins with some physical signs of puberty and ends with marriage, when the reproductive careers of most people become established. In cultures or social sectors where marriage is delayed for one or both sexes, a second pre-adult period intervenes between adolescence and full social adulthood. This we have termed *youth*.

The presence of adolescence as a social stage has often been explained as a needed time for young people to learn adult skills and roles. This explanation is called into question when we learn that in many traditional societies, by puberty both sexes had acquired the survival skills they needed. Furthermore, it was common worldwide for adult married couples to live with the groom's or the bride's parents, permanently (until these parents died) or up to the time they were able to set up their own household. Presumably, a very young couple just past puberty would be as capable of survival as an older couple, for both would be embedded in the social networks that promote survival. So there is more to adolescence than just a time for extended learning of survival skills.

As we have seen, this social stage has a biological basis. For girls, menarche, or other physical signs of puberty, signal the readiness to move out of childhood; for boys, secondary sex characteristics also indicate that the boy has reached sexual maturity and is no longer a child. For humans as for higher primates, eggs and sperm do not by themselves lead to full adult reproductive behavior (which in humans is generally preceded by the formation of some kind of pair bond). At the very minimum, female bodies have to develop sufficiently to carry a pregnancy, and male bodies must be sufficiently large and developed to indicate that they can fulfill the requirements of manhood. Biological adolescence is the time when both sexes make this transi'ion. Social adolescence generally tracks biological adolescence,

with some variations across cultures as to the beginning and ending of this social stage.

The biology of reproductive development was probably no different for Pleistocene *Homo sapiens* than it is for us today, although the timing may have been. The reproductive maturity of children of both sexes comes early in modern well-nourished societies, with diets that promote the higher levels of body fat that are associated with early puberty. By comparison, reproductive maturity occurs late in many foraging societies of recent times. This can be accounted for by their low-fat and low-sugar diet—wild vegetal foods and the lean meat that comes from wild game. It is likely that puberty came much later to our Pleistocene ancestors, and social adolescence may have been rather short, especially for girls. A longer period of social adolescence may be a cultural artifact, brought on by the domestication of calorie-rich plant and animal foods that promoted earlier puberty without a corresponding early entrance into adulthood.

A stage of social adolescence for girls is a cultural feature, but it may be based in part on the recognition that early pregnancies can be difficult and dangerous. The dangers of pregnancies may be greater where biological adolescence comes early, before the female body has fully developed. If menarche is late, and full fecundity is not achieved before the late teens, pregnancy at age 18 or 19 is probably safe if the pregnant mother receives adequate nutrition. In such cases, social adolescence could be short without endangering the woman's health or that of her child.

Adolescent boys, whose growth spurt follows spermarche, do not look like men and are not ready to participate fully in adult male activities. As we have seen, men usually exclude adolescent boys from their leisure-time groups or allow their presence only at the margins of the men's group. By the very late teens, though, most boys are ready to join the society of adult men, unless cultural factors create an intervening youth stage.

Human evolution and behavior are dependent on neither nature nor nurture alone, but rather on the complex interplay and mutual influence of biological and cultural factors. An understanding of adolescent behavior, and how social adolescence comes to be a stage in the human life cycle, requires a biocultural approach.

CONCLUDING REMARKS

The data for this chapter come from a sample of preindustrial cultures. Many of these cultures still exist, but they do so in a form that would be unrecognizable to the residents of the communities in which the ethnographic observations were made. The people of these cultures are all moving into the industrial world, for better or for worse, if they have not already done so. Pygmy foragers of the Congo have become sedentary farmers. The Yanomami of tropical South America are connected to the Internet and fight for indigenous rights. Grandchildren of Uttar Pradesh villagers go to New Delhi for jobs or education, and some emigrate to England or the United States. Kazaks, former pastoralists, are very much in the news as the nation of Kazakhstan enters the world market with its oil and gas reserves. In large stretches of the Sudan, some adolescents who in earlier times would have, at worst, tried to steal a cow are now killing innocent victims: "Child" soldiers are often teenagers capable of wielding a loaded AK-47 rifle that weighs 9.5 pounds.

Today's teenagers are no longer isolated from modern political and economic forces; they are participants in the global reach of contemporary adolescent culture (Schlegel, 1999; see also Amit-Talai & Wulff, 1995). Their lives have changed irrevocably, and the future of their cultures depends on how they are prepared to meet these changes.

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