Adolescent Storm and Stress, Reconsidered

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G. S. Hall's (1904) view that adolescence is a period of heightened "storm and stress" is reconsidered in light of contemporary research. The author provides a brief history of the storm-and-stress view and examines 3 key aspects of this view: conflict with parents, mood disruptions, and risk behavior. In all 3 areas, evidence supports a modified storm-and-stress view that takes into account individual differences and cultural variations. Not all adolescents experience storm and stress, but storm and stress is more likely during adolescence than at other ages. Adolescent storm and stress tends to be lower in traditional cultures than in the West but may increase as globalization increases individualism. Similar issues apply to minority cultures in American society. Finally, although the general public is sometimes portrayed by scholars as having a stereotypical view of adolescent storm and stress, both scholars and the general public appear to support a modified storm-and-stress view.

Nearly 100 years after G. Stanley Hall (1904) proposed that adolescence is inherently a time of storm and stress, his view continues to be addressed by psychologists. For the most part, contemporary psychologists reject the view that adolescent storm and stress is universal and inevitable (e.g., Eccles et al., 1993; Offer & Schonert-Reichl, 1992; Petersen et al., 1993; Steinberg & Levine, 1997). However, the storm-and-stress view is usually invoked by psychologists only in passing, in the course of addressing some other topic. Rarely has the storm-and-stress view been considered directly, and rarely have its merits and limitations been evaluated in depth.

Hall initiated the scientific study of adolescence, and since his time (especially in the past 20 years), research on adolescence has produced a great deal of information that bears on the question of adolescent storm and stress. As the centennial of Hall's (1904) landmark two-volume work approaches, this may be an appropriate time to evaluate the merits of the view for which he is best known today. I argue here that a case can be made for the validity of a modified storm-and-stress view. The claim that adolescent storm and stress is characteristic of all adolescents and that the source of it is purely biological is clearly false. However, evidence supports the existence of some degree of storm and stress—at least for adolescents in the middle-class American majority culture—with respect to conflict with parents, mood disruptions, and risk behavior. Not all adolescents experience storm and stress in these areas, but adolescence is the period when storm and stress is *more*

likely to occur than at other ages. I emphasize that there are individual differences among adolescents in the extent to which they exhibit storm and stress and that there are cultural variations in the pervasiveness of adolescent storm and stress.

Storm and Stress: A Brief History

Hall (1904) was the first to consider the storm-and-stress issue explicitly and formally in relation to adolescent development, but he was not the first in the history of Western thought to remark on the emotional and behavioral distinctiveness of adolescence. Aristotle stated that youth "are heated by Nature as drunken men by wine." Socrates characterized youth as inclined to "contradict their parents" and "tyrannize their teachers." Rousseau relied on a stormy metaphor in describing adolescence: "As the roaring of the waves precedes the tempest, so the murmur of rising passions announces the tumultuous change.... Keep your hand upon the helm," he advised parents, "or all is lost" (Rousseau, 1762/1962, pp. 172–173).

Around the time Rousseau was writing, an influential genre of German literature was developing, known as "sturm und drang" literature—roughly translated as "storm and stress." The quintessential work of the genre was Goethe's (1774/1989) *The Sorrows of Young Werther,* a story about a young man who commits suicide in despair over his doomed love for a married woman. There were numerous other stories at the time that depicted youthful anguish and angst. The genre gave rise to popular use of the term "storm and stress," which Hall (1904) adopted a century later when writing his magnum opus on adolescent development.

Hall (1904) favored the Lamarckian evolutionary ideas that were considered by many prominent thinkers in the early 20th century (Freud and Jung included) to be a better explanation of evolution than Darwin's theory of natural selection. In Lamarck's now-discredited theory, evolution takes place as a result of accumulated experience. Organisms pass on their characteristics from one generation to the next not in the form of genes (which were
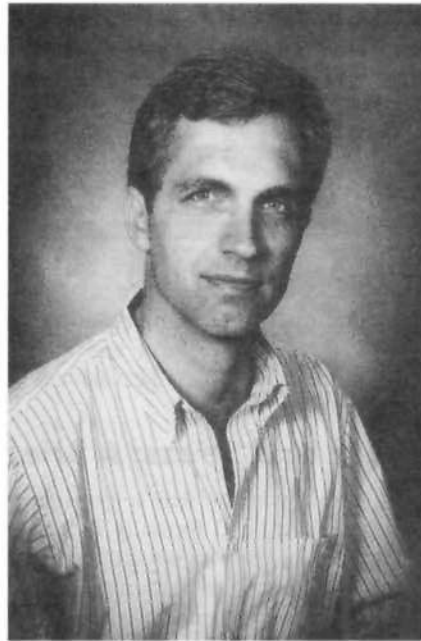
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unknown at the time Lamarck and Darwin devised their theories), but in the form of *memories and acquired characteristics*. Thus, Hall, considering development during adolescence, judged it to be "suggestive of some ancient period of storm and stress" (1904, Vol. 1, p. xiii). In his view, there must have been a period of human evolution that was extremely difficult and tumultuous; the memory of that period had been passed ever since from one generation to the next and was *recapitulated* in the development of each individual as the storm and stress of adolescent development. To Hall, this legacy of storm and stress was particularly evident in adolescents' tendency to question and contradict their parents, in their mood disruptions, and in their propensity for reckless and antisocial behavior.

Although Hall is often portrayed as depicting adolescent storm and stress as universal and biological, in fact his view was more nuanced. He acknowledged individual differences, noting for example that conflict with parents was more likely for adolescents with "ruder natures" (1904, Vol. 2, p. 79). Also, he believed that a *tendency* toward storm and stress in adolescence was universal and biologically based, but that culture influenced adolescents' expression and experience of it. He saw storm and stress as more likely to occur in the United States of his day than in "older lands with more conservative traditions" (1904, Vol. 1, p. xvi). In his view, the storm and stress of American adolescence was aggravated by growing urbanization, with all its temptations to vice, and by the clash between the sedentary quality of urban life and what he saw as adolescents' inherent need for activity and exploration. Hall also believed that adolescent storm and stress in his time was aggravated by the failure of home, school, and religious organizations to recognize the true nature and potential perils of adolescence and to adapt their institutions accord-

ingly, a view not unlike that of many more recent scholars (e.g., Eccles et al., 1993; Simmons & Blythe, 1987).

In the century since Hall's work established adolescence as an area of scientific study, the debate over adolescent storm and stress has simmered steadily and boiled to the surface periodically. Anthropologists, led by Margaret Mead (1928), countered the claim that a tendency toward storm and stress in adolescence is universal and biological by describing non-Western cultures in which adolescence was neither stormy nor stressful. In contrast, psychoanalytic theorists, particularly Anna Freud (1946, 1958, 1968, 1969), have been the most outspoken proponents of the storm-and-stress view. Like Hall, psychoanalytic theorists viewed adolescent storm and stress as rooted in the recapitulation of earlier experiences, but as a recapitulation of ontogenetic oedipal conflicts from early childhood rather than phylogenetic epochs (Blos, 1962). This recapitulation of Oedipal conflicts provoked emotional volatility (as the adolescent ego attempted to gain ascendancy over resurgent instinctual drives), depressed mood (as the adolescent mourned the renunciation of the Oedipal parent), and conflict with parents (in the course of making this renunciation; Blos, 1962). Furthermore, the resurgence of instinctual drives was regarded as likely to be acted out in "dissocial, even criminal" behavior (Freud, 1968, p. 18).

Anna Freud (1958, 1968, 1969) viewed adolescents who did not experience storm and stress with great suspicion, claiming that their outward calm concealed the inward reality that they must have "built up excessive defenses against their drive activities and are now crippled by the results" (1968, p. 15). She, much more than Hall, viewed storm and stress as universal and immutable, to the extent that its absence signified psychopathology: "To be normal during the adolescent period is by itself abnormal" (1958, p. 267).

In recent decades, two types of studies concerning adolescent storm and stress have appeared. A handful of studies, mostly by Buchanan and Holmbeck (Buchanan, 1998; Buchanan et al., 1990; Buchanan & Holmbeck, 1998; Holmbeck & Hill, 1988; Offer, Ostrov, & Howard, 1981), have focused on public perceptions of adolescence as a time of storm and stress. These studies (using American middle-class samples) have consistently found that most people in the American majority culture perceive adolescence as a time of relative storm and stress. For example, Buchanan et al. (1990) found that the majority of both parents and teachers agreed with statements such as "early adolescence is a difficult time of life for children and their parents/teachers." Buchanan and Holmbeck (1998) reported that college students and parents of early adolescents viewed adolescents as more likely than elementary school children to have problems such as symptoms of internalizing disorders (e.g., anxiousness, insecurity, and depression) and risk taking/rebelliousness (e.g., recklessness, impulsivity, and rudeness). Similarly, the majority of college students surveyed by Holmbeck and Hill (1988) agreed with statements such as "adolescents frequently fight with their parents."

A second type of contemporary study has addressed the actual occurrence of adolescent storm and stress, in the specific areas of conflict with parents (Gecas & Seff, 1990; Steinberg, 1987), emotional volatility (Larson & Richards, 1994), negative affect (Brooks-Gunn & Warren, 1989; Buchanan, Eccles, & Becker, 1992; Petersen et al., 1993), and risk behavior (Arnett, 1992; Moffitt, 1993). Storm and stress tends to be mentioned in these studies not as the primary focus but in the course of addressing another topic. Consistently, these studies reject the claim—usually attributed to Hall—that adolescent storm and stress is universal and find only weak support for the claim that it is biologically based. However, the studies also consistently support a modified storm-and-stress thesis that adolescence is a time when various types of problems are *more likely* to arise than at other ages. The primary goal of this article is to draw together the evidence from these areas and to present an argument for the validity of the modified storm-and-stress thesis.

Defining Storm and Stress

It is important at this point to address directly the question of what is included under the concept of adolescent storm and stress. Taking historical and theoretical views in combination with contemporary research, the core of the storm-and-stress view seems to be the idea that adolescence is a period of life that is *difficult* (Buchanan et al., 1990)—more difficult in some ways than other periods of life and difficult for adolescents as well as for the people around them. This idea, that adolescence is difficult, includes three key elements:

1. *Conflict with parents.* Adolescents have a tendency to be rebellious and to resist adult authority. In particular, adolescence is a time when conflict with parents is especially high.

2. *Mood disruptions.* Adolescents tend to be more volatile emotionally than either children or adults. They experience more extremes of mood and more swings of mood from one extreme to the other. They also experience more frequent episodes of depressed mood.

3. *Risk behavior.* Adolescents have higher rates of reckless, norm-breaking, and antisocial behavior than either children or adults. Adolescents are more likely to cause disruptions of the social order and to engage in behavior that carries the potential for harm to themselves and/or the people around them.

This is not an all-inclusive list of the possible elements of adolescent storm and stress. Occasionally, storm and stress has been discussed in terms of other elements such as school difficulties (Eccles et al., 1993) and self-image (Offer & Offer, 1975). However, the three elements discussed here appear consistently in the writings of Hall (1904), the anthropologists (Mead, 1928), the psychoanalysts (Blos, 1962; Freud, 1968, 1969), and contemporary scholars (e.g., Buchanan, 1998; Eccles et al., 1993; Offer & Schonert-Reichl, 1992; Petersen et al., 1993; Steinberg & Levine, 1997). Thus, these three elements are the focus of this article.

Before proceeding, one more comment is in order about the length of adolescence. Hall (1904, Vol. 1, p. xix) viewed adolescence and its accompanying storm and stress as lasting through the early twenties. Other observers of adolescent storm and stress, from Aristotle to the present, have applied their comments not just to early adolescence but to a middle and late adolescence/emerging adulthood extending through the late teens and early twenties (see Kett, 1977). Here, I too consider the evidence related to the storm-and-stress view for an extended adolescent age range. Different elements of storm and stress have different peaks—conflict with parents in early adolescence (Paikoff & Brooks-Gunn, 1991), mood disruptions in midadolescence (Petersen et al., 1993), and risk behavior in late adolescence and emerging adulthood (Arnett, 1992, 1999). Each of these elements represents a different kind of difficulty to be experienced, for adolescents as well as for those around them. It is in combination that they create a perception of adolescence as a difficult period of life.

I now consider each of the three elements of the storm-and-stress view, in order of their developmental peak during adolescence: conflict with parents, mood disruptions, and risk behavior.

Conflict With Parents

Hall (1904) viewed adolescence as a time when "the wisdom and advice of parents and teachers is overtopped, and in ruder natures may be met by blank contradiction" (Vol. 2, p. 79). He viewed this as due not only to human evolutionary history but also to the incompatibility between adolescents' need for independence and the fact that "parents still think of their offspring as mere children, and tighten the rein where they should loosen it" (Vol. 2, p. 384). Contemporary studies have established that conflict with parents increases in early adolescence, compared with preadolescence, and typically remains high for a couple of years before declining in late adolescence (Laursen, Coy, & Collins, 1998; Paikoff & Brooks-Gunn, 1991; Smetana, 1989). A recent meta-analysis by Laursen et al. (1998) concluded that within adolescence, conflict frequency is highest in early adolescence and conflict intensity is highest in midadolescence. One naturalistic study of early adolescents' conflicts with parents and siblings reported a rate of 2 conflicts every three days, or 20 per month (Montemayor & Hanson, 1985). During the same time that the number of daily conflicts between parents and their early adolescent children increases (compared with preadolescence), declines occur in the amount of time they spend together and in their reports of emotional closeness (Larson & Richards, 1994). Conflict is especially frequent and intense between mothers and early adolescent daughters (Collins, 1990).

This conflict makes adolescence difficult not just for adolescents but for their parents. Parents tend to perceive adolescence as the most difficult stage of their children's development (Buchanan et al., 1990; Pasley & Gecas, 1984; Small, Cornelius, & Eastman, 1983). However, it should be added that there are substantial individual differences, and there are many parents and adolescents be-

tween whom there is little conflict, even if overall rates of conflict between parents and children rise in adolescence. Conflict between parents and adolescents is more likely when the adolescent is experiencing depressed mood (Cole & McPherson, 1993), when the adolescent is experiencing other problems such as substance abuse (Petersen, 1988), and when the adolescent is an early-maturing girl (Buchanan et al., 1992).

Almost without exception, contemporary scholars emphasize that higher rates of conflict with parents in adolescence do not indicate a serious or enduring breach in parent–adolescent relationships (e.g., Hill & Holmbeck, 1987; Montemayor, 1986; Offer & Offer, 1975; Rutter, Graham, Chadwick, & Yule, 1976; Steinberg & Levine, 1997). Even amidst relatively high conflict, parents and adolescents tend to report that overall their relationships are good, that they share a wide range of core values, and that they retain a considerable amount of mutual affection and attachment. The conflicts tend to be over apparently mundane issues such as personal appearance, dating, curfews, and the like (Smetana, 1988). Even if they disagree on these issues, they tend to agree on more serious issues such as the value of honesty and the importance of education.

This point seems well-established by research, but it does not mean that adolescence is not a difficult time for both adolescents and their parents as a result of their minor but frequent conflicts. A useful connection could be made here to the literature on stress. This literature provides substantial evidence that it does not take cataclysmic events such as loss of employment or the death of a loved one to induce the experience of high stress. On the contrary, many people experience a high degree of stress from an accumulation of minor irritations and aggravations, the "daily hassles" of life (Kohn, Lafreniere, & Gurevich, 1991; Taylor, 1991). Thus, for parents and adolescents, it may be true that their frequent conflicts tend to concern relatively mundane day-to-day issues. However, it may be that the "hassle" of these frequent conflicts is substantially responsible for perceptions that adolescence is a difficult time.

Furthermore, the principal issues of conflict between adolescents and their parents may not be as trivial as they seem on the surface. Conflicts between adolescents and their parents often concern issues such as when adolescents should begin dating and whom they should date, where they should be allowed go, and how late they should stay out. All of these issues can serve as proxies for arguments over more serious issues such as substance use, automobile driving safety, and sex. By restricting when adolescents can date and with whom, parents indirectly restrict adolescents' sexual opportunities. By attempting to restrict where adolescents can go and how late they should stay out, parents may be attempting to limit adolescents' access to alcohol and drugs, to shield adolescents from the potentially dangerous combination of substance use and automobile driving, and to restrict adolescents' opportunities for sexual exploration.

Sexual issues may be especially likely to be argued about in this indirect way, through issues that seem mundane (and therefore safe for discussion) on the surface. No

clear mores currently exist in American society concerning the sexual behavior of unmarried young people in their teens (Michael, Gagnon, Laumann, & Kolata, 1994). Because of this lack of social consensus, parents of adolescents are left with many questions that admit no easy answers. Few would agree that sexual intercourse is permissible for 13 year olds, but beyond this the questions grow more complex. Is kissing OK for 13 year olds? When do necking and petting become permissible? At what age should dating be allowed, in light of the fact that it may lead to kissing, necking, petting, and more? If intercourse is not permissible for 13 year olds, what about for 16 or 17 year olds? For the most part, American parents prefer not to discuss these issues—or any other sexual issues—directly with their children (Jones et al., 1986). Yet even parents who believe in giving their adolescents a substantial degree of autonomy may not feel that they can simply leave sexual decisions to their adolescents, particularly in a time when AIDS and other sexually transmitted diseases are prevalent (Eccles et al., 1993). The result is that parents and their adolescents argue about seemingly trivial issues (such as whether dating should be allowed as early as age 13 or whether a 17 year old's curfew should be at midnight or at 1 a.m.) that may be proxies for arguments over complex and sensitive sexual issues.

Some scholars (e.g., Steinberg, 1990) have suggested that conflict between adolescents and their parents is actually beneficial to adolescents' development, because it promotes the development of individuation and autonomy within the context of a warm relationship. This may be true, but high conflict may make adolescence a difficult time for adolescents and their parents even if the conflict ultimately has benefits.

Mood Disruptions

The claim of a link between adolescence and extremes of emotion (especially negative) is perhaps the most ancient and enduring part of the storm-and-stress view. Hall (1904) viewed adolescence as "the age of . . . rapid fluctuation of moods" (Vol. 1, p. xv), with extremes of both elation and depressed mood. What does contemporary research tell us about whether adolescence is distinguished by high emotional volatility and a tendency toward negative moods? In general, studies that have assessed mood at frequent intervals have found that adolescents do indeed report greater extremes of mood and more frequent changes of mood, compared with preadolescents or adults. Also, a number of large longitudinal studies concur that negative affect increases in the transition from preadolescence to adolescence (see Buchanan et al., 1992, for a review).

One of the most interesting and enlightening lines of research on this topic in recent years has involved studies using the Experience Sampling Method (ESM; e.g., Csikszentmihalyi & Larson, 1984; Larson & Ham, 1993; Larson & Richards, 1994). Also known as the "beeper method," this research entails having adolescents (and others) carry beepers throughout the day and having them record their thoughts, behavior, and emotions when they are beeped at random times. This method has provided an

unprecedented look into the daily lives of adolescents, including how their emotions vary in the course of a day and how these variations compare with the emotions recorded by preadolescents and adults using the same method.

The results of this research indicate that there is truth to the storm-and-stress claim that adolescence is a time of greater mood disruptions. Adolescents report experiencing extremes of emotion (positive as well as negative, but especially negative) more often than their parents do (Larson & Richards, 1994; also see Larson, Csikszentmihalyi, & Graef, 1980). They report feeling "self-conscious" and "embarrassed" two to three times more often than their parents and are also more likely to feel awkward, lonely, nervous, and ignored. Adolescents also report greater mood disruptions when compared with preadolescents. Comparing preadolescent fifth graders with adolescent ninth graders, Larson and Richards (1994) described the emotional "fall from grace" that occurs in that interval, as the proportion of time experienced as "very happy" declines by 50%, and similar declines take place in reports of feeling "great," "proud," and "in control." The result is an overall "deflation of childhood happiness" (p. 85) as childhood ends and adolescence begins.

Larson and Richards (1994) saw this increase in mood disruptions as due to cognitive and environmental factors rather than pubertal changes. They noted that there is little relationship in their data between pubertal stage and mood disruptions. Rather, adolescents' newly developed capacities for abstract reasoning "allow them to see beneath the surface of situations and envision hidden and more long-lasting threats to their well-being" (p. 86). Larson and Richards also argued that the experience of multiple life changes and personal transitions during adolescence (such as the onset of puberty, changing schools, and beginning to date) contributes to adolescents' mood disruptions. However, Larson and Richards emphasized that it is not just that adolescents experience potentially stressful events, but *how* they experience and interpret them, that underlies their mood disruptions. Even in response to the same or similar events, adolescents report more extreme and negative moods than preadolescents or adults.

In addition to the ESM studies, other studies have found negative moods to be prevalent in adolescence, especially for girls. In their review of adolescent depression, Petersen et al. (1993) described a "midadolescence peak" (p. 157) that has been reported in studies of age differences in depressed mood, indicating that adolescents have higher rates of depressed mood than either children or adults. Petersen et al. analyzed 14 studies of nonclinical samples of adolescents and concluded that depressed mood ("above which a score is thought to be predictive of clinical depression," p. 157) applied to over one third of adolescents at any given time.

Adolescents vary in the degree to which they experience mood disruptions. A variety of factors have been found to make mood disruptions in adolescence more likely, including low popularity with peers, poor school performance, and family problems such as marital discord

and parental divorce (Petersen et al., 1993). The more negative life events adolescents experience, the more likely they are to experience mood disruptions (Brooks-Gunn & Warren, 1989). Although these individual differences should be kept in mind, overall the results of research indicate support for the storm-and-stress view that adolescence is more likely than other age periods to be a time of emotional difficulty.

Risk Behavior

At the beginning of a scene in "The Winter's Tale," Shakespeare (1623/1995) has an older man deliver a soliloquy about the youth of his day. "I would that there were no age between ten and three-and-twenty, or that youth would sleep out the rest," he grumbles, "for there is nothing in between but getting wenches with child, wronging the ancientry, stealing, fighting . . . " (Act III, Scene 3). This lament should ring familiar to anyone living in Western societies in recent centuries and to people in many other societies as well. Adolescence has long been associated with heightened rates of antisocial, norm-breaking, and criminal behavior, particularly for boys. Hall (1904) included this as part of his view of adolescent storm and stress, agreeing that "a period of semicriminality is normal for all healthy [adolescent] boys" (Vol. 1, p. 404).

Contemporary research confirms that in the United States and other Western countries, the teens and early twenties are the years of highest prevalence of a variety of types of risk behavior (i.e., behavior that carries the potential for harm to self and/or others). This pattern exists for crime as well as for behavior such as substance use, risky automobile driving, and risky sexual behavior (Arnett, 1992; Moffitt, 1993). Unlike conflict with parents or mood disruptions, rates of risk behavior peak in late adolescence/emerging adulthood rather than early or middle adolescence (Arnett, 1999). Rates of crime rise in the teens until peaking at age 18, then drop steeply (Gottfredson & Hirschi, 1990). Rates of most types of substance use peak at about age 20 (Johnston, O'Malley, & Bachman, 1994). Rates of automobile accidents and fatalities are highest in the late teens (U.S. Department of Transportation, 1995). Rates of sexually transmitted diseases (STDs) peak in the early twenties (Stein, Newcomb, & Bentler, 1994), and two thirds of all STDs are contracted by people who are under 25 years old (Hatcher, Trussell, Stewart, & Stewart, 1994).

The variety of respects in which adolescents engage in risk behavior at greater rates than children or adults lends further validity to the perception of adolescence as a difficult time, a time of storm and stress. Although adolescents generally experience their participation in risk behavior as pleasurable (Arnett, 1992; Lyng, 1993), suffering the consequences of such behavior—contact with the legal system, treatment for an STD, involvement in an automobile accident, and so forth—is likely to be experienced as difficult. Furthermore, it is understandable that parents may find it difficult to watch their children pass through the ages when such behavior is most likely to occur.

In this area, as with conflict with parents and mood disruptions, it is important to recognize individual differ-

ences. Adolescents vary a great deal in the extent to which they participate in risk behavior. To some extent, these differences are forecast by behavior prior to adolescence. Persons who exhibit behavior problems in childhood are especially likely to engage in risk behavior as adolescents (Moffitt, 1993). Individual differences in characteristics such as sensation seeking and impulsivity also contribute to individual differences in risk behavior during adolescence (Arnett, 1992; Zuckerman, 1983). Nevertheless, although not all adolescents engage in risk behavior, the majority of adolescents take part occasionally in risk behavior of one kind or another (Arnett, 1992; Moffitt, 1993). This lends substantial credence to the view that adolescence is a period of storm and stress.

Why Storm and Stress?

Even if we accept the argument that adolescence is a time of heightened tendency toward storm and stress, the question of why this should be so remains. To what extent do the roots of storm and stress lie in the biological changes that take place in the course of puberty? To what extent are the roots cultural, with adolescent storm and stress being especially pronounced in cultures that value individualism?

Current evidence indicates that biological changes make some contribution. With respect to mood disruptions, reviews of the effects of hormones on adolescents' moods have concluded that the dramatic hormonal changes that accompany puberty contribute to emotional volatility (Buchanan et al., 1992) and negative moods (Brooks-Gunn, Graber, & Paikoff, 1994), particularly in early adolescence when the rate of hormonal change is steepest. However, scholars in this area emphasize that the hormonal contribution to adolescent mood disruptions appears to be small and tends to exist only in interaction with other factors (Brooks-Gunn et al., 1994; Brooks-Gunn & Warren, 1989; Susman, 1997).

More generally, with respect to mood disruptions as well as with respect to conflict with parents and risk behavior, too little is known about the role of biological factors to make definitive statements at this point about the role they may play in adolescent storm and stress. Numerous possibilities exist concerning biological influences on storm and stress and the interaction between biological and cultural factors. For example, recently a phenomenon called *delayed phase preference* has been identified (Carskadon, Vieria, & Acebo, 1993), which is a tendency, based in the biological changes of puberty, for adolescents to prefer staying up until relatively late at night and sleeping until relatively late in the morning. Does the cultural practice of requiring adolescents to get up in the early morning to attend school—even earlier than young children—result for some adolescents in a sleep-deprived state that may contribute to mood disruptions and more frequent conflict with parents? Other possible biological contributors to adolescent storm and stress include genes that may become active in adolescence and increase the likelihood of mood disruptions, as well as biological bases for developmental changes in characteristics such as emotional regulation (mood dis-

ruptions), aggressiveness (conflict with parents), and sensation seeking (risk behavior).

Even with the limitations that exist in the knowledge of biological contributions to adolescent storm and stress, it is clear that the biological changes of puberty do not make adolescent storm and stress universal and inevitable. This is easily and unmistakably demonstrated by the fact that not all cultures experience the same levels of adolescent storm and stress, and some evidently do not experience it at all. Margaret Mead's (1928) original assertion to this effect has more recently been confirmed by Schlegel and Barry (1991), in their analysis of adolescence in 186 "traditional" (preindustrial) cultures worldwide. They reported that most traditional cultures experience less storm and stress among their adolescents, compared with the West.

A key difference between traditional cultures and the West, as Schlegel and Barry (1991) observed, is the degree of *independence* allowed by adults and expected by adolescents. In the majority cultures of the West, because of cultural values of individualism, it is taken for granted by adolescents and their parents (as well as by most Western social scientists) that children should become independent from their parents during the course of adolescence and should attain full independence by the end of adolescence. A substantial amount of adolescent storm and stress arises from regulating the pace of adolescents' growing independence (Steinberg, 1987). Differences of opinion over the proper pace of this process are a source of conflict between adolescents and their parents, and part of parents' perception of adolescence as difficult results from their concern that adolescents' growing independence may lead to participation in risk behavior (Pasley & Gecas, 1984). In contrast, independence for adolescents is less likely to be expected by adolescents and their parents in traditional cultures, so it is less likely to be a source of adolescent storm and stress (Dasen, in press).

Even in traditional cultures, adolescent storm and stress is not unknown. Biological changes in combination with changing family obligations and changing economic responsibilities are common to adolescence virtually everywhere and inherently involve new challenges and—for some adolescents, at least—difficulty (Dasen, in press). Some ethnographies on adolescence describe conceptions in traditional cultures of adolescence as a time of mood disruptions (e.g., Davis & Davis, 1989; Kirkpatrick, 1987). It should also be noted that differences exist among traditional cultures, with cultures that exclude adolescent boys from the activities of men being more likely to have problems with their adolescent boys than cultures in which boys take part daily in men's activities (Schlegel & Barry, 1991). Nevertheless, adolescent storm and stress is generally more common in the industrialized societies of the West than in traditional cultures.

However, all over the world, traditional cultures are becoming integrated into the global economy and are being influenced by Western (especially American) cultures through growing economic ties and through exposure to Western movies, music, and television (Barber, 1995).

Within traditional cultures, adolescents are often the most enthusiastic consumers of Western media (Barber, 1995; Schlegel, in press), and evidence shows that adolescents may embrace the individualism of the West more readily than their parents do (Feldman, Mont-Reynaud, & Rosenthal, 1992). A potentially rich topic for research in the coming years would be to monitor changes in the degree of adolescent storm and stress in traditional cultures as globalization proceeds.

The limited evidence available so far indicates that adolescents in traditional cultures often are able to maintain their traditional values and practices—including low conflict with parents and low rates of risk behavior—even as they become avid consumers of Western popular culture (Feldman et al., 1992; Feldman, Rosenthal, Mont-Reynaud, Leung, & Lau, 1991; Schlegel, in press). However, it remains to be seen whether adolescents' adherence to traditional ways and their low levels of storm and stress will be sustained as globalization increasingly changes the nature of their daily experience. For adolescents in traditional cultures, the results of globalization include more time in school, more time with peers, less time spent with their parents and other adults, and more time for media-oriented leisure (Schlegel, in press). All of these changes mean greater independence for adolescents, greater emphasis on their individual development, and less emphasis on their obligations to others. If it is true that cultural values of individualism lie at the heart of adolescent storm and stress, then it seems likely that adolescence in traditional cultures will become more stormy and stressful in the ways described here as the influence of the West increases (Dasen, in press).

This does not mean that storm and stress is likely to increase in all respects for all adolescents in traditional cultures. Individual differences will undoubtedly exist, as they do in the West. Indeed, increased individualism means broadening the boundaries of socialization, so that a greater range of individual differences is allowed expression (Arnett, 1995). Furthermore, the increased individualism fostered by globalization is likely to result in benefits for adolescents, along with increased storm and stress. Cultural changes toward globalization and individualism are likely to mean that adolescents in traditional cultures will have a greater range of educational and occupational opportunities than previously and that these choices will be less constrained by gender and other factors (Dasen, in press; Noble, Cover, & Yanagishita, 1996). However, the cost may be greater adolescent storm and stress. It is even possible that storm and stress will become more characteristic of adolescence in traditional cultures than in the West, because adolescents in rapidly changing societies will be confronted with multiple changes not only in their immediate lives but in their societies as well (Dasen, in press).

Similar issues exist within American society. Currently, there is evidence that adolescent storm and stress may be more likely in the majority culture—the largely White middle class—than in other cultures that are part of American society. For example, parent–adolescent conflict has been found to be more frequent in White middle-class families than in Mexican American families (Suarez-Orozco & Suarez-Orozco, 1996). In the same way that values of individualism make adolescent storm and stress more likely in the American majority culture compared with non-Western traditional cultures, a similar difference in values may make storm and stress more likely in the American majority culture than in certain minority cultures that are part of American society. And in the same way that adolescence in traditional cultures may become more stormy and stressful as the influence of the West increases, adolescents in American minority cultures may exhibit storm and stress to the extent that they adopt the individualistic values of the American majority culture.

Thus, it might be expected that adolescent storm and stress will increase with the number of generations an adolescent's family has been in the United States. Among Asian American adolescents, for example, it has been found that the greater the number of generations their families have been in the United States, the more likely the adolescents are to exhibit aspects of storm and stress (Fletcher & Steinberg, 1994; Steinberg, 1996; also see Rosenthal, 1984). However, as with the issues involving traditional cultures, the direct exploration of storm-and-stress issues involving adolescents in American minority cultures has been minimal thus far and represents a promising area for further investigation.

Scholars and Stereotypes

When adolescent storm and stress is discussed by contemporary scholars on adolescence, it is generally in the context of the scholars expressing concern over the "stereotype" or "myth" of adolescent storm and stress that is perceived to exist among parents, teachers, and the general public (Buchanan et al., 1990; Holmbeck & Hill, 1988; Offer & Schonert-Reichl, 1992; Petersen et al., 1993; Steinberg & Levine, 1997). Scholars contrast these popular perceptions of adolescence as a difficult time with their own research findings that adolescence is not difficult for all adolescents in all respects and that the biological changes of puberty are not strongly related to any storm and stress that does exist in adolescence.

One of the implications of the argument presented here is that the findings of the scholars and the conception of adolescence held by nonscholars in American society may not be so far apart after all. With respect to conflict with parents, mood disruptions, and risk behavior, the results of scholars' research indicate that adolescence is stormy and stressful for many American adolescents and for the people around them. It is true that this research also indicates that there are substantial individual differences in these difficulties and that storm and stress is by no means universal and inevitable. However, there is no indication that most people in the American public see storm and stress as universal and inevitable. On the contrary, the studies that have investigated perceptions of storm and stress inquire about people's perceptions of adolescents *in general*. People's responses endorsing storm-and-stress statements indicate simply that they see storm and stress as characteristic of adolescents taken as a group, not that

it is characteristic of all adolescents without exception (Buchanan, 1998; Buchanan et al., 1990; Buchanan & Holmbeck, 1998; Holmbeck & Hill, 1988).

People tend to see adolescence as a time of life that is more likely than other times of life to involve difficulties such as conflict with parents, mood disruptions, and risk behavior, and scholars' research supports this modified storm-and-stress view of adolescence rather than contradicting it. Contemporary scholars disagree not so much with the American public or even with G. Stanley Hall (1904), but mainly with the psychoanalytic theorists of the past, particularly Anna Freud (1946, 1958, 1968, 1969), who can truly be said to have claimed that adolescent storm and stress is universal and inevitable. The one storm-and-stress issue on which scholars and the general public seem genuinely to disagree is the meaning and significance of parent–adolescent conflict, which scholars concede is common but tend to deprecate as being over trivial and mundane issues. However, as I have argued, there may be more merit to the popular view on this topic than scholars have acknowledged.

One reason for scholars' concern over public beliefs about adolescent storm and stress is that they fear such beliefs could have negative consequences. Some scholars speculate that storm-and-stress beliefs may lead parents to adopt authoritarian parenting techniques as a way of thwarting the storm and stress they anticipate in their adolescents (Holmbeck, 1996). Others fear that if storm and stress is regarded as normative, adolescents with serious problems will not get the attention and help they need because their problems will be dismissed as normal for adolescence (Offer & Schonert-Reichl, 1992; Petersen et al., 1993). These concerns are legitimate and are well-taken. However, there are also concerns that arise from underrating the likelihood of storm and stress, and benefits that can result from expecting adolescence to be a time of storm and stress. Although it is true that if adolescence is expected to be a time of "turmoil" there may be adolescents whose problems go unrecognized and untreated, it is also true that if adolescence is expected to be no more difficult than childhood, then adolescents who are experiencing normal difficulties may be seen as pathological and in need of treatment.

Also, expecting adolescence to be difficult could have positive effects. Anticipating adolescent storm and stress may inspire parents and teachers to think ahead about how to approach potential problems of adolescence if they arise. Furthermore, parents, teachers, adolescents, and others who expect adolescence to be difficult may be pleasantly surprised when a particular adolescent shows few or no difficulties, as will be the case for many adolescents because there are considerable individual differences in the storm and stress they experience (Buchanan, 1998).

Conclusion

Adolescent storm and stress is not simply a myth that has captured the popular imagination but a real part of life for many adolescents and their parents in contemporary American society. Although the extreme portrayal of adolescent storm and stress by certain psychoanalytic theorists (Freud, 1958, 1968 1969) is a caricature of normal adolescent development, there is support for Hall's (1904) view that a tendency toward some aspects of storm and stress exists in adolescence. In their conflicts with parents, in their mood disruptions, and in their higher rates of a variety of types of risk behavior, many adolescents exhibit a heightened degree of storm and stress compared with other periods of life. Their parents, too, often experience difficulty—from increased conflict when their children are in early adolescence, from mood disruptions during midadolescence, and from anxiety over the increased possibility of risk behavior when their children are in late adolescence. However, storm and stress in adolescence is not something written indelibly into the human life course. On the contrary, there are cultural differences in storm and stress, and within cultures there are individual differences in the extent to which adolescents exhibit the different aspects of it.

Finally, to view adolescence as a time of storm and stress is not to say that adolescence is characterized only by storm and stress. Even amidst the storm and stress of adolescence, most adolescents take pleasure in many aspects of their lives, are satisfied with most of their relationships most of the time, and are hopeful about the future (Offer & Schonert-Reichl, 1992). G. S. Hall (1904) saw adolescence as stormy and stressful, but also as "the birthday of the imagination" (Vol. 1, p. 313) and "the best decade of life" (Vol. 1, p. xviii), when "the life of feeling has its prime" (Vol. 1, p. 59). The paradox of adolescence is that it can be at once a time of storm and stress and a time of exuberant growth.

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