

G. STANLEY HALL'S *ADOLESCENCE*: Brilliance and Nonsense

Jeffrey Jensen Arnett
Clark University

G. Stanley Hall's two-volume work on adolescence is assessed from the perspective of modern psychology, 100 years after he published it. A surprising number of similarities exist between Hall's views of adolescence and our own, and several of those similarities are discussed here. Some of the most striking differences between Hall's views and the views of today's psychologists are also discussed, specifically, Hall's grounding of his beliefs about adolescent development in a Lamarckian evolutionary psychology that assumed the inheritance of acquired characteristics and memories; his views of sexuality, especially masturbation; and his claim that religious conversion is normative in adolescence. The cultural and historical context of Hall's views is then discussed, with an emphasis on how an awareness of the context of Hall's views can enhance our awareness of the context of our own views today.

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Every psychologist studying adolescents today knows of G. Stanley Hall's *Adolescence* because its publication in 1904 is widely viewed as the beginning of the field of adolescence as an area of scholarly and scientific research. However, few psychologists have actually read Hall's work. They know him mainly as a caricature, the deluded man from the old days who is responsible for the myth that "storm and stress" is a universal and inevitable part of adolescent development. As this story goes, later a more enlightened and scientific adolescent psychology showed Hall to be wrong.

It is true enough that Hall asserted that adolescence is inherently a time of "storm and stress" when all young people go through some degree of emotional and behavioral upheaval before establishing a more stable equilibrium in adulthood. However, Hall's view of storm and stress is far more complex than he is usually credited, and in fact his view accords remarkably well with current findings in our scientific psychology (Arnett, 1999). In any case, the storm and stress idea occupies only a few of the 1300-plus pages of *Adolescence*. The two volumes cover an amazing range of topics, from growth of the limbs to sexuality to cognitive development to psychopathology, and much more.

My goal in this paper is to present a reappraisal of the entire two-volume work, from the perspective of contemporary psychology. This is intended not only to raise appreciation of the magnitude of Hall's accomplishment and the durability of many of his insights and observations on adolescence. It may also sharpen our awareness of the historical and cultural context of all scholarship in developmen-

Correspondence concerning this article should be addressed to Jeffrey Jensen Arnett, Department of Psychology, Clark University, 910 Main Street, Worcester, MA 01610. E-mail: arnett@jeffreymarrett.com

tal psychology, including our own, and inspire reflections on how our scholarship today might be viewed from the perspective of 100 years from now.

I will begin by discussing various aspects of *Adolescence* that match what has been found since by scholars working in adolescent research. Next, I will analyze some aspects of *Adolescence* that differ from what we believe about adolescence today and that reveal the historical and cultural context of Hall's worldview and how it shaped his psychology. I will close the paper with some comments on how an analysis of Hall's work can inform our work in adolescent psychology today.

Evaluating Adolescence

Hall's *Adolescence* contains research, commentary, and speculation on nearly every imaginable topic pertaining to adolescent development (ages 14–24, in Hall's conception). Some passages read like they might have been published in a 21st century psychology journal article, with information and insights that are strikingly similar to what we believe today about adolescents. Other passages contain assertions so different from our current understanding of adolescent psychology that today's readers are likely to find them jarring, peculiar, even ludicrous. First, let us look at some topics where Hall presaged what we know today, then at some topics where his view differs radically from the view held by today's scholars on adolescence.

Similarities

Many of the findings we view today as new discoveries were already discussed by Hall a hundred years ago. I cannot discuss all of them here, so I will focus on some of the similarities I believe are most notable. Areas of similarity I will discuss are the prevalence of depressed mood in adolescence; adolescence as a time when crime rates peak; adolescence as a time of high sensation seeking; susceptibility to media influences in adolescence; characteristics of peer relations in adolescence; and biological development during puberty.

Hall viewed adolescence as a time when depressed mood is more common than at other ages. He quoted a study reporting that "The curve of despondency starts at eleven, rises steadily and rapidly till fifteen, then falls steadily till twenty three" (1904, vol. 2, p. 77). This is remarkably similar to findings from current research, which report a "mid-adolescence peak" in depressed mood, rising in early adolescence and then falling after the midteens (Petersen et al., 1993).

Furthermore, the causes of depressed mood stated by Hall are similar to the causes identified today: "Suspicion of being disliked by friends, of having faults of person or character that can not be overcome, the fancy of . . . hopeless love" (1904, vol. 2, p. 78). Modern studies, too, find social relations with friends and romantic partners to be a common source of depressed mood in adolescence (Larson & Richards, 1994; Petersen et al., 1993). Social-cognitive development in adolescence also contributes to rising depressed mood, according to Hall: "As the child's absorption of objects slowly gives place to consciousness of self, reflectiveness often leads to self-criticism and consciousness that may be morbid. He may become captious and censorious of himself and others" (1904, vol. 1, p. 314). Similarly, current scholars observe that adolescents' "advanced reasoning skills allow them to see beneath the surface of situations and envision hidden and more

long-lasting threats to their well-being. . . . These new reasoning skills . . . magnify adolescents' sensitivity to events at home as well as with friends and at school" (Larson & Richards, 1994, pp. 86–87).

A second striking similarity between Hall's observations and the modern psychology of adolescence is in the area of crime. The age-crime relationship described by today's criminologists was already well-known to Hall and his colleagues: "In all civilized lands, criminal statistics show . . . that there is a marked increase in crime at the age of twelve to fourteen, not in crimes of one, but of all kinds, and that this increase continues for a number of years" (1904, vol. 1, p. 325). Hall presented a graph of age and crime that looks very similar to the pattern today (Gottfredson & Hirschi, 1990), with a steep increase in the teens, peaking at age 18, followed by an equally steep decline.

In addition, Hall's observations about different types of delinquency presaged modern theories. Perhaps the most provocative and interesting theory of adolescent criminality in recent years is Moffitt's (1993) distinction between "adolescence-limited" and "life-course persistent" delinquents. According to Moffitt, these two types of delinquents may engage in similar behavior during adolescence, but they have different pasts and different futures: for adolescence-limited delinquents, delinquent behavior is temporary, and there was nothing in their childhood that seemed to put them at risk, but for life-course persistent delinquents their behavior in adolescence is a continuation of problems that began long before adolescence and are likely to continue well into adulthood. Hall made a similar distinction: "a period of semicriminality is normal for all healthy boys . . . those whose surroundings are bad will continue it, but others will grow away from it as they approach maturity" (p. 404). The risk factors for life-course persistent delinquency named by Moffitt (1993) are similar to those listed by Hall: "heredity, bad [prenatal] conditions, bad homes, unhealthy infancy and childhood," (1904, vol. 1, p. 406), along with parental divorce and single parenthood.

A third area of similarity between Hall and modern psychologists pertains to heightened sensation seeking in adolescence. Hall did not use the term "sensation-seeking," but he emphasized that the need for novel and intense sensation is especially high during adolescence: "At no time of life is the love of excitement so strong as during the season of the accelerated development of adolescence, which craves strong feelings and new sensations, when monotony, routine, and detail are intolerable" (1904, vol. 1, p. 368). Hall argued it is during adolescence that "Sensations are more objectified and their pleasure and their pain effects are more keenly felt. There is a new sense esthetic or enjoyment of the sensation itself for its own sake" (1904, vol. 2, p. 2). This observation is echoed in today's psychological research, which has found sensation seeking to be highest in the teens and early twenties (Arnett, 1994; Zuckerman, 1995). Furthermore, Hall identified the link between sensation-seeking and risk behavior in adolescence, which has been the main focus of contemporary research on sensation seeking: "[Y]outh must have excitement, and if this be not at hand in the form of moral and intellectual enthusiasms, it is more prone . . . to be sought for in sex or in drink" (1904, vol. 2, p. 74).

Hall also presaged the modern psychology of adolescence in attributing harmful effects to the media. Of course, in 1904 there were no electronic media such as recorded music, television, or computer games, which are blamed in our

time for a wide variety of pernicious effects, from causing violence (Cantor, 2000) and substance use (Villani, 2001) to promoting gender stereotypes (Brown, Steele, & Walsh-Childers, 2002). For Hall, the culprits were print media. He asserted that the young criminal may commit crimes in part because "his mind becomes inflamed with flash literature and 'penny dreadfuls'" that portray crime as glamorous and heroic (p. 361). Today's research has found that media use rises in adolescence, especially for recorded music and computer games (Hellenga, 2002; Roberts, Foehr, Rideout & Brodie, 1999), and Hall reported studies finding, analogously, that a "reading craze" often takes place in early adolescence (about ages 11–14; 1904, vol. 2, pp. 475–478). Studies described by Hall showed that the main motive for the reading craze was "to have the feelings stirred" (1904, vol. 2, p. 478), just as studies in our time have found that adolescents use television and music for mood regulation (Arnett, 1996; Kurdek, 1987; Larson, 1995).

One of the truisms of adolescent psychology today is that orientation toward peers and friends increases in adolescence (Larson & Richards, 1994), and Hall likewise observed that "some [adolescents] seem for a time to have no resource in themselves, but to be abjectly dependent for their happiness upon their mates" (1904, vol. 1, p. 84). Hall also noted, as modern research has, that risk behavior in adolescence usually takes place with friends (Maxwell, 2002; Prinstein, Boergers, & Spirito, 2001; Sieving, Perry, & Williams, 2000): "[T]he gregarious passion vents itself . . . sometimes in riotous bouts and carousals" (1904, vol. 1, p. 84).

Even more striking is that Hall noted the prevalence of what today is termed "relational aggression," which has become a focus of research in adolescent peer relations (Crick & Rose, 2000; Prinstein, Boergers, & Vernberg, 2001; Simmons, 2002). "Relational aggression" is the term for aggression expressed through gossiping, spreading rumors, and excluding others from the group. Physical aggression in adolescence is more common among boys but relational aggression has been found to be especially prevalent among girls, and Hall likewise noted of the adolescent girl that "In the teens she almost always learns to control the more violent physical outbreaks, but may . . . use her tongue in place of her fists" (p. 355).

Hall's two volumes contain a wealth of information about biological development during puberty, and what he reported is surprisingly consistent with what has been found in recent decades using far more sophisticated methods. For example, Hall discussed how various organs and body parts have different rates of growth, with the limbs growing faster than the rest of the body in early puberty (1904, vol. 1, p. 62), as more recent studies have found (Eveleth & Tanner, 1990). Hall provided an extremely detailed account of studies of bodily growth, for example on the growth in the length of the arm from shoulder to elbow (1904, vol. 1, p. 66). He reported studies noting, as modern studies have found, that the adolescent growth spurt in girls precedes that of boys "by a year or two" (1904, vol. 1, p. 14), and that girls are then taller than boys for about two years before being overtaken by them. However, in research by Hall and his contemporaries, "The majority of observers find the most rapid growth in height from fourteen to fifteen" (1904, vol. 1, p. 8), whereas for adolescents in the United States today the peak height velocity takes place at about 11 for girls and 13 for boys (Kipke, 1999; Petersen & Taylor, 1980). The change since Hall's time reflects improve-

ments in environmental conditions, and Hall also noted (as modern research has verified) that social class, health, and nutrition affect adolescents' ultimate height and weight (Eveleth & Tanner, 1990).

Perhaps the most surprising similarity between Hall and today's psychologists with respect to adolescents' biological development pertains to knowledge of brain development. Despite having no MRI or even EEG, Hall and his contemporaries knew that nearly all brain cells have already appeared at birth, that the brain reaches its full weight by age 12–14, that what really matters for intelligence is not the number of brain cells but the “fibers” (dendrites) connecting brain cells, and that these fibers show accelerated growth at puberty. The latter has been touted in recent years as a major new finding in research on adolescent brain development (Giedd, 2002).

In sum, Hall exhibited a remarkable range of knowledge of adolescence in his two-volume work, and many of his observations have held up well. A century later, his views continue to be part of the core knowledge of the field of adolescent psychology, in areas including the prevalence and sources of depressed mood in adolescence; the rise in crime rates during the teens and specific patterns of delinquency; heightened sensation seeking in adolescence and its relation to risk behavior; susceptibility to media influences; increased orientation toward peers and relational aggression in girls; and biological development during puberty—among others. Although adolescent psychology is generally regarded as beginning with the publication of Hall's volumes in 1904, it is clear that a great deal of knowledge about adolescence had already accumulated by that time. Hall's achievement was to draw that knowledge into one place, and add many insights of his own.

Differences

The similarities between many of Hall's views and adolescent psychology today are impressive, and testify to Hall's insightfulness and to the scientific knowledge that had been accumulated by Hall and his contemporaries by the time he wrote *Adolescence*. Nevertheless, Hall also differed sharply in many ways from today's psychologists in his views of adolescent development. Three issues especially mark Hall as a man of his times: his grounding of his understanding of adolescent development in the Lamarckian theory of evolution; his views of sexual development in adolescence, especially masturbation; and his claim that religious conversion in adolescence is normative and universal. The changes between Hall's time and our own demonstrate the cultural basis of psychological research: as the culture changed, so did psychologists' views of adolescent development.

The Lamarckism that was so central to Hall's thinking is one of the aspects of *Adolescence* that seem strangest a century later. All of us today have grown up with the knowledge that heredity is transmitted through genes, and we were aware of this long before we became psychologists. Yet to Hall and his contemporaries, genes were unknown, and it seemed perfectly plausible to them that memories and acquired characteristics could be inherited.

To Hall, a great deal about adolescence could be explained by reference to the evolutionary history of humanity. For example, he believed that evolution pro-

vided the key to understanding how children and adolescents should be educated: "While individuals differ widely in not only the age but the sequence of stages of repetition of racial history, a knowledge of nascent stages and the aggregate interests of different ages of life is the best safeguard against very many of the prevalent errors of education and of life" (1904, vol. 1, p. viii). Children, he believed, should not be taught to read until at least age 8; after all, literacy came very late in human evolutionary history, so younger children must not be ready to grasp it. As for adolescents, the dramatic biological and psychological changes of the period indicated clearly to Hall that it recapitulates a highly active and challenging period of the human past, so it must be a mistake to keep them cooped up in a classroom all day, sitting passively at their desks. Instead, they would learn best if their classroom learning were complemented by active participation in their environment, because adolescents "who have pets, till the soil, build, manufacture, use tools, and master elementary processes and skills, are most truly repeating the history of the race. This, too, lays the best foundation for intellectual careers" (1904, vol. 1, p. 174).

Hall's evolutionary psychology made him optimistic about the future of humanity. The early 20th century was a time of great optimism in the West. The 19th century had produced such technological wonders as train travel, steam ships, electricity, and the telegraph, and new wonders seemed to be appearing daily. Who could have foreseen then the blood-saturated century to come, with its world wars, genocide, and totalitarianism? To Hall and others, oblivious to the calamities in store, evolution promised that the future would produce not just technological but psychological progress, as the development of the human species proceeded ever onward and upward: "Nothing so reinforces optimism as evolution. It is the best, or at any rate not the worst, that survive. Development is upward, creative, and not decreative. From cosmic gas onward there is progress, advancement, and improvement" (1904, vol. 2, p. 546). Adolescence was central to this progress because it is "a state from which some of the bad, but far more of the good qualities of life and mind arise" (Hall, 1904, vol. 1, p. 351). The longer adolescence could be extended, the more that psychological progress could be made that would eventually be passed on to future generations.

Although we now know adherents of Lamarckism were mistaken, this does not mean that Hall necessarily drew the wrong conclusions about how best to promote adolescent development. In fact, the current focus in cognitive and educational psychology on the importance of active, participatory learning matches well with Hall's view of the best approach to educating adolescents (Keating, 1990). He was wrong about the validity of Lamarckism, but his insights about what adolescents respond to best in learning were valid nevertheless.

Sexuality is a second area in which Hall's perspective in *Adolescence* differs from ours today. Hall devoted a chapter to "Sexual Development: Its Dangers and Hygiene in Boys," and another chapter to "Periodicity," i.e., menstruation, and he also mentioned sex at various other points in the two volumes. In some respects he was enlightened for his times. In fact, his frank discussion of sexuality in *Adolescence* alarmed many people in that sexually conservative time (Ross, 1972).

Unlike many of his contemporaries, Hall viewed sexuality as normal and healthy. Even for adolescents, sexual desire was portrayed as normal: "Sex is the

most potent and magic open sesame to the deepest mysteries of life, death, religion, and love. It is, therefore, one of the cardinal sins against youth to repress healthy thoughts of sex at the proper age" (1904, vol. 2, p. 109). Parents were urged to be open in discussing sexuality with their adolescents. "It seems clear and certain that in our modern life something should be taught [about sexuality to adolescents] . . . This should, I believe, be chiefly personal, and by fathers to sons and by mothers to daughters. . . . [This] is perhaps almost the culminating function and duty of parenthood" (Hall, 1904, vol. 1, p. 469).

In other respects, however, Hall's view of adolescent sexuality would be regarded as repressive and even bizarre by most modern psychologists. This was, after all, the Victorian era, and Hall was definitely affected by the sexual repressiveness of his times and his culture. In *Adolescence*, this repressiveness was most evident in Hall's discussion of masturbation. (His discussion of masturbation refers exclusively to boys; evidently, masturbation among girls was something Hall either did not believe occurred or shied away from as too sensitive and potentially inflammatory to mention.)

Hall rejected the claims of those who asserted that masturbation results in effects as extreme as psychosis or even death. "[T]he immediate and sensational effects [are] often seriously believed in, and often purposely exaggerated for pedagogic effect. . . . The brain is not literally drained away; dementia, idiocy, palsy, and sudden death are not imminent" (1904, vol. 1, p. 439). Nevertheless, he endorsed many other popular myths about masturbation, claiming that "Neurasthenia . . . optical cramps . . . weak sluggishness of heart action . . . purple and dry skin . . . anemic complexion, dry cough, and many digestive perversions can be attributed to this scourge of the human race" (1904, vol. 1, p. 443). In addition, "Growth, especially in the moral and intellectual regions, is dwarfed and stunted. There are early physical signs of decrepitude and senescence. Gray hair, and especially baldness, a stooping and enfeebled gait . . ." (1904, vol. 1, p. 444).

The most serious effect of masturbation, to Hall the evolutionary psychologist, was on the biological quality of the offender's children. "[W]orse and earlier than any of these psychic effects are those that appear in the offspring . . . its effects are manifest, nearer, perhaps, in the incomplete maturity of mind and body in the next generation; in persistent infantilism or overripeness of children" (1904, vol. 1, p. 444). He claimed that masturbation is "destructive of that perhaps most important thing in the world, the potency of good heredity" (1904, vol. 1, p. 453).

This sounds like nonsense from the perspective of the early 21st century, but even then, Hall himself exposed the weakness of his argument when he argued for a tolerant approach to spontaneous emissions: "Spontaneous emissions are probably as universal for unmarried youth as menstruation for women. Ignorance of this fact, even by the virtuous and normal, causes an amount of anguish in young men perhaps as great as the physical suffering caused by lack of proper instruction to young women beginning their periods" (1904, vol. 1, p. 453). But spontaneous emissions result in ejaculation no less than masturbation does. If the problem with masturbation were truly that the loss of semen impaired heredity, this would be true for spontaneous emissions as well. By viewing them differently, Hall inadvertently revealed that his objection to masturbation was moral rather than biological. Because masturbation is voluntary, Hall condemned it and used

common terms of disparagement such as "self-abuse" and "secret vice" when describing it, but spontaneous emissions he condoned because they are involuntary and so could not be morally wrong.

So, what should an adolescent do about sexuality, if masturbation is forbidden? Despite his acknowledgment that sexual desire is normal and healthy in adolescents, Hall by no means approved of premarital intercourse, or even of necking and petting. Instead, like a good Victorian, Hall believed that the right approach to premarital sexuality for adolescents was a combination of denial and diversion: "The most rigid chastity of fancy, heart, and body is physiologically and psychologically as well as ethically imperative till maturity is complete on into the twenties" (1904, vol. 2, p. 121). By remaining "chaste," adolescents could be assured that they were enhancing their reproductive potential because suppressing sexuality until marriage would somehow enhance heredity and move evolution along another notch: "Yielding to mere and gross sensuous pleasure shortens the growth period, and the only way to prolong it and attain an ever higher and fuller maturity for the race is by the plain old virtue of self-restraint" (1904, vol. 1, p. 438). If an appeal to their evolutionary duty were not enough to motivate adolescents to chastity, then vigorous diversions would be helpful: "A rugged life with abundant stimulation of the sense of contact, temperature, and even pain, has great prophylactic value in preventing the focalization of dermal consciousness to the sexual parts and function" (1904, vol. 2, p. 7).

Masturbation, of course, would require particular vigilance in order to be suppressed, because "Its causes are many and difficult to proportion" (1904, vol. 1, p. 437), including not just the obvious "weakness of will" but also "springtime . . . prolonged sitting or standing, too monotonous walking . . . late-rising, . . . too great straining of the memory . . . erotic reading, pictures, and theatrical presentations . . . overeating, fondling, fur, and rocking chairs" (1904, vol. 1, p. 437), as well as feather-beds, horseback-riding, and bicycle riding, among many other instigators. Since so many things caused masturbation, efforts to prevent it must be similarly multipronged: "Work reduces temptation and so does early rising. . . . Good music is a moral tonic. . . . [C]old is one of the best of all checks. . . . Cold washing without wiping has special advantages . . . Pockets should be placed well to the side and not too deep, . . . while habitually keeping the hands in the pockets should be discouraged. . . . Rooms . . . should not be kept too warm . . . Beds should be rather hard and the covering should be light" (1904, vol. 1, pp. 465–469). And so on. Ultimately, however, to Hall the "cure" would have to be moral: "An evil of such dimensions will be cured by no newly discovered method or specific, but only by courageous application for generations of the many means already known for strengthening the physical and moral nature" (1904, vol. 1, pp. 465–469). Clearly, then, Hall's view of adolescent sexuality in general and masturbation in particular differs radically from the views held by most modern psychologists (e.g., Brooks-Gunn & Paikoff, 1997).

Finally, Hall's emphasis on religious conversion as a normative experience in adolescence sets him apart sharply from adolescent psychologists 100 years later. He devoted an 82-page chapter to "The Adolescent Psychology of Conversion"; today, it is rare to find studies of adolescents' conversion experiences (despite the pervasiveness of religious beliefs among young people in American society; Wallace & Williams, 1997). Yet Hall considered conversion "a natural, normal,

universal, and necessary process” (1904, vol. 2, p. 301), and he viewed adolescence as an especially propitious time for it, describing numerous studies supporting this conclusion. If conversion takes place before adolescence, according to Hall, it is “superficial and incomplete” (1904, vol. 2, p. 346) because children would only be mouthing words without understanding them. After adolescence, “its initiation is harder, its completeness rarer” (1904, vol. 2, p. 346), as people become more fixed in their views of the world. Hall himself experienced a religious conversion while in college (Ross, 1972), which may account in part for his attention to it in *Adolescence*.

Yet, a closer examination of Hall’s views shows that the “conversion” he praised as normal and universal was not essentially religious but moral, existential, and psychological. Although he described conversion in Christian terminology, as the experience of being cleansed from the stain of sin, he viewed sin not as a state of evil but as a sense of limitation and imperfection, and argued that “the Christian solution” to a sense of sin is most useful “if we interpret it in terms of modern psychology rather than . . . dogma” (1904, vol. 2, p. 314). Indeed, he scoffed at those who viewed the Bible with “bibliolatry and parasitic literalism” (1904, vol. 2, p. 330), and he declared “eternal warfare upon orthodoxies and all dogmatic finalities” (1904, vol. 2, p. 330).

For Hall, “conversion” was not a religious process of embracing a set of spiritual beliefs but a psychological process of subordinating the self to the limitations of reality and the needs of others. In adolescence, ambitions and dreams of glory flourish as the self grows inflated. The function of conversion is to deflate this egocentric grandiosity and lead adolescents to turn their love outward instead of inward: “Self-love merges in resignation and renunciation into love of man. Religion has no other function than to make this change complete. . . for the love of God and the love of man are one and inseparable” (1904, vol. 2, p. 304). Conversion, then, entailed “the great conversion from love of self to love of others” (1904, vol. 2, p. 345).

Many adolescent psychologists today would be sympathetic to Hall’s advocacy of urging adolescents to develop from love of self to love of others (e.g., Youniss & Yates, 1997), but most would not put it in religious terms, and even fewer would claim that such a “conversion” is normal and universal. But Hall went further. He connected conversion, as he connected almost everything else, back to his Lamarckian beliefs. Conversion is necessary, he asserted, because “The best of us carry a heavy handicap of biological sin from our ancestors” (1904, vol. 2, p. 353). That is, because memories and experiences are inherited, we have remnants of the tiger, wolf, ape, and other beasts still in our nature that only conversion can expel. Religious examples should be provided to adolescents to promote higher moral—and evolutionary—ideals. Hall esteemed Jesus not as the son of God but as evolutionary exemplar, representing “the culmination of the entire series of organic forms of existence . . . the revealer of a new and higher cosmic consciousness, advancing the human ideal and opening the way to the higher destiny of man” (1904, vol. 2, p. 328). Thus a properly guided conversion could inspire adolescents to grasp a higher rung of the evolutionary ladder. It is clear that few psychologists today would describe religious development this way.

Halls' Cultural-Historical Context and Our Own

It is easy for us to see, from the perspective of a century later, how Hall's views on adolescent psychology were shaped by his larger worldview, which was in turn based on the cultural and historical context of his times. The Lamarckism that was so central to his thinking was a popular idea in 1904. Darwin's *Origin of Species* had been published less than 50 years earlier (1859), and its influence was still resounding across the intellectual community in the West, shattering old conceptions of the world and inspiring new ones. Although Lamarck's theory actually predated Darwin's, Lamarckism and similar theories were used by Hall and others to apply the insights of Darwin to psychology. Within the assumptions of the Lamarckian paradigm, the conclusions that Hall drew about adolescent psychology were perfectly reasonable. It is the assumptions that were mistaken, but Hall could not have known that as we do now.

Hall's worldview was not only Lamarckian but Victorian. The Victorian worldview is best known today for its sexual repressiveness, but it had other features as well, including optimism about human progress and a restrictive view of women's roles as bound to home and hearth (Himmelfarb, 2001; Lasch, 1995; Wilson, 2003). As noted, Hall's sexual repressiveness is evident in his views of adolescent sexuality. His optimism is clear as well, in his belief that evolution would lead inevitably to a better human future. His restrictive view of women's roles is evident in his conclusions about the psychological and behavioral consequences of menstruation and in many other passages in *Adolescence* I have not discussed here. No doubt Hall thought of all these ideas as his own, not simply as a reflection of his times, but for us the connection between his personal views and the *zeitgeist* is evident.

What intellectual houses have we ourselves built on ephemeral ground, in today's psychology? We cannot know; if we knew, we would not have built them there. But the lesson of examining Hall's theory from our perspective is that humility is warranted when we display our conclusions in psychology today. Science as applied to human behavior can be a mighty force, as the accumulation of knowledge in psychology over the past century has shown. Nevertheless, in Hall's time and our own—in any time—we see “as through a glass, darkly.” It is tempting from our perspective to make light of ideas like Lamarckism and strange beliefs about masturbation, but we should also consider that there may well be ideas and beliefs widely held in psychology now that will provoke similar wonder in psychologists a century hence. Our understanding of psychology is always built on paradigms, and those paradigms are inevitably shaped by our time and place. Paradigms, while useful guides to knowledge, are always an imperfect and incomplete portrayal of the world as it really is. This is what an analysis of Hall's ideas reminds us of.

Conclusion

G. S. Hall's *Adolescence* was one of the seminal works of the early history of psychology. Nevertheless, it is a flawed work in many ways. Not only was adolescent psychology then in a nascent stage, so that research on some topics simply did not exist, but Hall's worldview led him to many prescriptions about

adolescent development that seem strange and repellent to us now, on topics such as sexuality and gender roles.

Yet many of Hall's views presaged what we believe about adolescent development today. Hall anticipated a surprising number of findings of modern psychology, including some of the most recent scholarship. A century after the publication of *Adolescence*, many of Hall's insights still seem valid, many of his conclusions have endured, and he continues to be regarded as the founder of a field that now includes thousands of researchers around the world. Who among us can hope to fare so well?

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