
The Decline of Play and the Rise of Psychopathology in Children and Adolescents



PETER GRAY

Over the past half century, in the United States and other developed nations, children's free play with other children has declined sharply. Over the same period, anxiety, depression, suicide, feelings of helplessness, and narcissism have increased sharply in children, adolescents, and young adults. This article documents these historical changes and contends that the decline in play has contributed to the rise in the psychopathology of young people. Play functions as the major means by which children (1) develop intrinsic interests and competencies; (2) learn how to make decisions, solve problems, exert self-control, and follow rules; (3) learn to regulate their emotions; (4) make friends and learn to get along with others as equals; and (5) experience joy. Through all of these effects, play promotes mental health. **Key words:** anxiety; decline of play; depression; feelings of helplessness; free play; narcissism; psychopathology in children; suicide

CHILDREN ARE DESIGNED, by natural selection, to play. Wherever children are free to play, they do. Worldwide, and over the course of history, most such play has occurred outdoors with other children. The extraordinary human propensity to play in childhood, and the value of it, manifests itself most clearly in hunter-gatherer cultures. Anthropologists and other observers have regularly reported that children in such cultures play and explore freely, essentially from dawn to dusk, every day—even in their teen years—and by doing so they acquire the skills and attitudes required for successful adulthood.¹

Over the past half century or so, in the United States and in some other developed nations, opportunities for children to play, especially to play outdoors with other children, have continually declined. Over this same period, measures of psychopathology in children and adolescents—including indices of anxiety, depression, feelings of helplessness, and narcissism—have continually increased. This article documents this decline in play and increase in psychopathology and argues for a causal link between the two. Humans are extraordinarily adaptive to changes in their living conditions, but not infinitely so. They evolved as a

species in conditions in which children learned through play how to get along with others, solve problems, inhibit their impulses, and regulate their emotions. I argue that without play, young people fail to acquire the social and emotional skills necessary for healthy psychological development.

Throughout this article the term *free play* refers to activity that is freely chosen and directed by the participants and undertaken for its own sake, not consciously pursued to achieve ends that are distinct from the activity itself.² Thus, adult-directed sports and games for children do not fall into the category of free play. I contend that free play's value for the psychological development of children depends on its self-directed and intrinsically rewarding nature.

Decline in Children's Free Play

Historically, with the rise of agriculture, children's opportunities for free play have diminished. In many post-hunter-gatherer societies, children had to spend large portions of each day working—typically at domestic and farming tasks and, with the industrial revolution, in factories. They played when they could, even while working; and when they did play, they played freely without adult direction. There are no data prior to the midtwentieth century relating opportunities for play to the psychological well-being of children, as psychological well-being was not measured then. In this article, I concentrate on the historical period from about 1955 until today, especially in the United States, a period and locale for which we do have reliable data about young people's psychological well-being.

Historians of play have contended, with good evidence, that the high plateau in children's free play in North America encompassed the first half of the twentieth century. Indeed, in his book on the history of play in America, Howard Chudacoff refers to this period as "the golden age of unstructured play."³ By *unstructured play* Chudacoff means play that is structured by children themselves rather than by adults, so his term corresponds to what I call *free play*. By the middle of the twentieth century, children were relatively freed from long hours of labor, and a heightened sentimentality about childhood fostered a positive attitude toward children's free play and the development of parks and other play spaces to promote it. Since about 1955, however, children's free play has been continually declining, at least partly because adults have exerted ever-increasing control over children's activities outside of the world of labor. This decline in play, over the past five to six decades, is the concern of this article.

The most noticeable and probably greatest decline has occurred in children's outdoor play with other children. Anyone over forty has witnessed this change firsthand. In the 1950s and 1960s, and to a lesser degree in the 1970s and 1980s, it was possible to walk through almost any North American neighborhood—after school, on weekends, or any time in the summer—and see children outdoors at play. Today, in many neighborhoods, it is hard to find groups of children outdoors at all, and, if you do find them, they are likely to be wearing uniforms and following the directions of coaches while their parents dutifully watch and cheer. These changes have been documented by other historians of play as well as by Chudacoff.⁴

Precisely how fast and how much children's free play has declined over the last half century is difficult to quantify, though all of the historians of play suggest that it has been continuous and great. The most objective attempt at such quantification, but just for a sixteen-year period, is found in the work of sociologists at the University of Michigan, who made assessments of how children spent their time in 1981 and again in 1997.⁵ In both years, they asked a large, representative sample of parents in the United States to keep records of their children's activities on days chosen at random by the researchers. They found that children not only played less in 1997 than in 1981 but also appeared to have less free time for all self-chosen activities in 1997 than in 1981. For six- to eight-year-olds, for example, the researchers found a 25 percent decrease in time spent playing, a 55 percent decrease in time spent conversing with others at home, and a 19 percent decrease in time spent watching television over this sixteen-year period. In contrast, they found an 18 percent increase in time spent in school, a 145 percent increase in time spent doing schoolwork at home, and a 168 percent increase in time spent shopping with parents. In this study, the "play" category included indoor play, such as computer games and board games, as well as outdoor play. We can only assume that the amount of outdoor play decreased even more than 25 percent, as the amount of indoor computer play must have increased during this period (because it would have been essentially zero in 1981). The total amount of time that the average child in this age group spent at play (including computer play) in 1997 was just slightly over eleven hours per week.

In another study, conducted by Rhonda Clements nearly a decade ago, a representative sample of 830 mothers throughout the United States were asked to compare their children's play with their own play when they were children.⁶ Eighty-five percent of the mothers agreed with the statement that their own children (ages three to twelve) played outdoors less than they themselves had

when they were their children's age. In fact, 70 percent of the mothers reported that, as children, they had played outdoors daily, and 56 percent said that when they did play outdoors they generally played for periods of three hours or more at a time. In response to the same questions regarding their children's play, these percentages were, respectively, just 31 percent and 22 percent. Similar results, documenting parents' perceptions that their children play outdoors much less than they (the parents) did when they were children, have been found in smaller-scale surveys conducted in the United Kingdom.⁷

The decline of children's outdoor play is often blamed on the seductive qualities of television and, more recently, computer games and Internet activities. Certainly, these changes in technology have played a role. In Clements's survey, 85 percent of mothers cited television viewing and 81 percent cited computer play as among the reasons why their children played outdoors so infrequently. However, in the same survey, most of the mothers admitted that they themselves restricted their children's outdoor play, and 82 percent cited safety concerns, including fear of crime, as reasons for doing so.

It can be argued reasonably that children spend so much time watching television and playing by themselves indoors partly because they are not allowed to play freely outdoors, and when they are allowed outdoors, they do not find the attractive play spaces and groups of other children with whom to play that children found in decades past. Surveys indicate that children still prefer to play outdoors with friends when they have the chance. In one recent international survey, 54 percent of mothers reported that "Playing outside at a playground or park" ranked among the activities that made their children happiest. Outdoor play outranked all other activities, including "Watching television, films, or videos" (41 percent) and "Using electronic games" (19 percent).⁸ In another recent international survey, sponsored by the IKEA Corporation, 69 percent of the sample of children in the United States (and 58 percent of those in the entire international sample) said that their preferred place to play is outdoors. In the same study, paired comparisons showed that 89 percent of the children preferred outdoor play with friends to watching television, and 86 percent preferred it to computer play.⁹ These results occurred even though all of the children in the study were computer savvy and had access to computers at home (the survey was conducted via the Internet).

Parents today have more fears about allowing their children to play outdoors than parents in decades past, and media coverage certainly plays a role in these fears. Today, if a stranger abducts, molests, or murders a child anywhere in the developed world, the crime receives extensive and repeated news cover-

age. In truth, the rate of such cases is small and has declined, at least since the early 1990s in the United States.¹⁰ Parents, however, believe otherwise. In the IKEA survey, the most often-cited reason why parents restricted their children's outdoor play was, "They may be in danger of child predators" (cited by 49 percent of parents).¹¹ Other prominent fears expressed in the survey, which may be more realistic, were fears of road traffic and of bullies. In a smaller survey conducted in the United Kingdom, 78 percent of parents cited fear of molestation by strangers as a reason to restrict their children's outdoor play, while 52 percent cited dangers from traffic.¹²

Another cause of the decline in children's play relates to the increased time and weight given to schooling and to other adult-directed, school-like activities. Children now spend more time at school, and at school they spend less time playing, than was true in times past. The lengths of the school year and school day have increased; more young children attended academically oriented kindergartens and preschools than in times past; and recess time has shrunk and, in some school districts, disappeared completely.¹³

Increase in Childhood and Adolescent Psychopathology

Over the same half century that play has declined, the mental health of children and adolescents has also declined. Many sources document this decline in mental health, but the most compelling evidence—because it is not confounded by changes in methods of assessment—comes from analyses of standardized assessment questionnaires that have been administered to normative or quasi-normative populations of young people in schools and colleges over the decades. Jean Twenge, at San Diego State University, has been a leader in this research. The following paragraphs summarize evidence from such studies that anxiety, depression, feelings of helplessness, and narcissism have increased in young people in an apparently linear manner that seems to mirror the decline in play.

Increased anxiety and depression

Researchers have used Taylor's Manifest Anxiety Scale to assess anxiety levels in college students since 1952, and a version of this test for children (the Children's Manifest Anxiety Scale) has been used with elementary-school students (mostly ages nine to eleven) since 1956. Another, larger assessment questionnaire, the Minnesota Multiphasic Personality Inventory (MMPI), has been used with col-

lege students since 1938, and a version for adolescents (the MMPI-A) has been used with high-school students since 1951. The MMPI and MMPI-A assess various psychological problems and disorders, the most clearly interpretable of which (in today's terms) is depression. All of these questionnaires consist of statements about the self, to which the individual must agree or disagree. For example, Taylor's Manifest Anxiety Scale includes statements such as "I often worry that something bad will happen" and "Most of the time I feel pleasant." In this case, a "yes" to the first statement would add to the anxiety score, and a "yes" to the second would subtract from it.

Twenge and her colleagues have analyzed the scores obtained from many samples of young people in the United States over the decades on all of these tests.¹⁴ The results of the analyses are remarkably consistent. Taken collectively, they show that anxiety and depression scores, as well as various other indices of psychological disorder, have increased continually and dramatically from about 1950 to the present in children and in college students. In fact, the most recent scores reveal, on average, approximately a full standard deviation greater than the scores roughly fifty years earlier. This means that approximately 85 percent of young people in the most recent samples have anxiety and depression scores greater than the average scores for the same age group in the 1950s. Looked at another way, Twenge's analyses of MMPI and MMPI-A scores indicate that five to eight times as many young people today have scores above the cutoff for a likely diagnosis of a clinically significant anxiety or depressive disorder than was the case half a century ago. For example, based on the Depression Scale of the MMPI, approximately 8 percent of college students who took the test between 2000 and 2007 scored above the usual cutoff for clinical depression, compared to approximately 1 percent of those who took the test between 1938 and 1955.¹⁵

In work conducted independently of Twenge and her colleagues, Cassandra Newsom and others analyzed MMPI and MMPI-A scores collected from adolescents aged fourteen to sixteen between the years 1948 and 1989.¹⁶ Their results parallel Twenge's, and their article (published in 2003) includes tables showing how adolescents responded to specific items in 1948 and in 1989—years when large normative samples were tested. Figure 1, for illustration, displays the results for some of the items showing the largest changes. In each case, the percentage agreeing with the statement in 1948 occurs first, followed by the percentage agreeing in 1989.¹⁷

Suicide rates provide an even more sobering index of decline in young people's mental health. Between 1950 and 2005, the suicide rate for U.S. chil-

Statements from MMPI and MMPI-A	Percentage agreement in 1948	Percentage agreement in 1989
“I wake up fresh and rested most mornings.”	74.6%	31.3%
“I work under a great deal of tension.”	16.2%	41.6%
“Life is a strain for me much of the time.”	9.5%	35.0%
“I have certainly had more than my share of things to worry about.”	22.6%	55.2%
“I am afraid of losing my mind.”	4.1%	23.4%

Figure 1. MMPI and MMPI-A scores in 1948 and in 1989

dren under age fifteen quadrupled, and that for people between ages fifteen and twenty-four more than doubled. During the same period, the suicide rate for adults between ages twenty-five and forty rose only slightly, and the rate for adults over forty declined.¹⁸

These increases in psychopathology in children and adolescents seem to have nothing to do with realistic dangers and uncertainties in the larger world. In her analyses, Twenge found no relationship between indices of young people’s anxiety or depression and economic cycles, wars, or any of the other kinds of national or world events that people sometimes talk about as affecting young people’s mental states. According to Twenge, rates of anxiety and depression among children and adolescents were far lower during the Great Depression, World War II, the cold war, and the turbulent 1960s and early 1970s than they are today. The changes seem to have much more to do with the way young people view the world than with the way the world actually is.

Reduced sense of personal control

Clinicians know for certain that anxiety and depression correlate strongly with individuals’ sense of control or lack of control over their own lives. Those who believe that they master their own fate are much less likely to become anxious or depressed than those who believe that they are victims of circumstances beyond

their control. One might think that the sense of personal control would have increased over the past fifty years. Real progress has occurred in our ability to prevent and treat diseases; the old prejudices that limited people's options because of race, gender, or sexual orientation have diminished; and the average person is wealthier today than in decades past. Yet, the data indicate that young people's beliefs that they have control over their own destinies have declined continually.

The standard measure of a sense of personal control consists of a questionnaire, developed by Julian Rotter in the late 1950s, called the Internal-External Locus of Control Scale. It contains twenty-three pairs of statements. One statement in each pair represents a belief in an internal locus of control (control by the individual) and the other represents belief in an external locus of control (control by circumstances outside of the person). For each pair, the test subject must decide which of two statements is truer. For example, one pair is: "I have found that what is going to happen will happen," and "Trusting to fate has never turned out as well for me as making a decision to take a definite course of action." In this case, the first statement represents an external locus of control, and the second represents an internal locus of control. A version of the test for children, the Children's Nowicki-Stricklund Internal-External Control Scale (CNSIE), was first used in 1971.

Twenge and her colleagues analyzed the results of studies that used Rotter's scale on groups of college students from 1960 on through 2002 and found that, over this period, average scores shifted dramatically—away from the internal and toward the external end of the scale. The shift was so great that the average young person in 2002 was more external (more prone to claim lack of personal control) than were 80 percent of young people in the 1960s. In a separate inquiry, the researchers analyzed the results of studies that used the CNSIE with children, ages nine to fourteen, between 1971 and 1998. They found that the rise in externality was even greater for children than for college students and was greater for elementary-school children than for middle-school children. All in all, the rise in externality over the years showed the same linear trend as the rise in depression and anxiety.¹⁹

There is good reason to believe that the rise of external locus of control is causally linked to the rise in anxiety and depression. Clinical researchers have shown repeatedly—with children, adolescents, and adults—that the helpless feelings associated with an external locus of control predispose people for anxiety and depression.²⁰ When people believe that they have little or no control over their fate, they become anxious. They think, "Something terrible can happen to

me at any time, and I will be unable to do anything about it.” When the anxiety and sense of helplessness become too great, people become depressed. They feel, “There is no use trying; I’m doomed.” Research has also shown that those with an external locus of control are less likely to take responsibility for their own health, their own futures, and their community than are those with an internal locus.²¹

Increased narcissism

Further discouraging news comes from research on narcissism. *Narcissism* refers to an inflated view of the self, which tends to separate the self from others and to inhibit the formation of meaningful relationships. The Narcissistic Personality Inventory (NPI) was developed in the late 1970s to assess narcissism, and many studies have demonstrated its validity. Individuals who score high on this scale tend to exploit others for personal gain, tend to value self-aggrandizement over cooperation, are more likely than others to commit white collar crimes, rank themselves unduly high in leadership abilities, and tend to lash out angrily in response to criticism.²²

Twenge and her colleagues analyzed NPI scores for college students between 1982 and 2007 and found that, over this twenty-five-year period, the level of narcissism rose significantly and linearly. The level rose sufficiently so that by 2007 nearly 70 percent of college students scored higher in narcissism than the average college student in 1982.²³ Another analysis, at a single university, showed that the percentage of students who answered the majority of the NPI questions in the narcissistic direction nearly doubled (from 18 percent to 34 percent) just over the fifteen-year period from 1994 to 2009.²⁴

The increased narcissism among young people may seem to be inconsistent with the increases in anxiety, depression, and external locus of control that have been documented over the same years, but in fact it is consistent with these changes. Narcissism is sometimes characterized as equivalent to high self-esteem, but it is understood by clinicians to be a fragile and defensive variety of self-esteem. Narcissists commonly experience anxiety and depression when their experiences with reality run counter to their high self-views.²⁵ Moreover, narcissists are likely to attribute the lack of congruity between their perceived superior qualities and their relative lack of status and achievement in the world to factors beyond their control, a tendency consistent with an external locus of control.

Various other questionnaires administered to students over the years have shown shifts toward greater materialism, which is a strong correlate of narcis-

sism. In one repeated survey, for example, the percentage of first-year U.S. college students who ranked “Being very well off financially” among their most important goals increased from 46 percent in 1967 to 73 percent in 2006. Over the same period, the comparable percentage for “Developing a meaningful philosophy of life” dropped from 86 percent in 1967 to 42 percent in 2006.²⁶ Other research consistent with a shift toward narcissism shows that high-school students today have far more unrealistic expectations about their future careers than high-school students in generations past,²⁷ and students are more likely to cheat in order to get high grades than students in previous generations.²⁸

Did the Decline in Play Cause the Rise in Psychopathology?

Correlation, of course, does not prove causation. The observations that anxiety, depression, sense of helplessness, and narcissism have all increased as play has decreased does not prove that the decline in play caused these psychological changes. However, on grounds of logic, a strong case can be made for such a causal role. Before examining this case, however, it would be useful to look briefly at Twenge’s own explanations for the increased psychopathology. Her hypothesized causal factors do not point to the decline in play but do include changes in the culture that seem to be intimately linked to this decline.

Twenge’s explanations for the rise in psychopathology

In one of her articles, Twenge presents an extrinsic vs. intrinsic goals model to explain the generational rise in psychopathology.²⁹ The distinction between the two categories of goals is not sharp or easily defined, but, generally speaking, intrinsic goals are those that are part and parcel of, or very intimately related to, the activities that achieve them; and extrinsic goals are those that are more distantly related to the activities that achieve them and are often seen as imposed by the outside world rather than as stemming from within the self. Developing competence at an activity that one enjoys, making friends, finding meaning in life, and pursuing a heartfelt religious path are examples of intrinsic goals. Getting high grades in school, making lots of money, achieving high status, and looking good to others are examples of extrinsic goals.

Twenge argues convincingly that there has been a continual shift away from intrinsic toward extrinsic values in the culture at large and among young people

in particular, promoted, in part, by the mass marketing of consumer goods through television and other media. She refers also to evidence that the pursuit of extrinsic goals at the expense of intrinsic goals correlates with anxiety and depression.³⁰ It seems reasonable that this would be true, as the actions associated with extrinsic goals are by definition less satisfying than are those associated with intrinsic goals, and people have less control over the achievement of extrinsic goals than of intrinsic goals. With intrinsic goals, the actions and the goals are generally one and the same. With extrinsic goals, the actions are typically seen as unpleasant chores, which must be done to achieve desired ends, and the connection between the actions and the ends are not always certain.

In an earlier article on the increase in anxiety over recent decades, Twenge suggested that increased anxiety has resulted from increased social isolation and a reduced sense of community.³¹ More people today live alone, and fewer people now say that they have close confidants than was true in the past.³² Lack of a social support group that one can depend on is a well-known predisposing factor for anxiety and depression. As families in general have become increasingly isolated socially, so have children. Even within families, the sense of responsibility and social connection to one another may have declined, as the sense of individualism has increased. This suggestion is quite compatible with Twenge's later extrinsic vs. intrinsic goals model, as communal and family values tend to coincide with intrinsic goals.

A general shift away from interdependence and toward independence, a rise in social isolation, and a shift toward extrinsic values may also help account for the rise of narcissism. In fact, narcissism is defined in terms of excessive focus on the self and reduced focus on others' needs. Twenge and her colleagues have also suggested that an increased tendency for adults to offer excessive praise to children and to tell them how "wonderful" and "special" they are may have fostered narcissism.³³ Reports by adult narcissists indicating that their parents tended to put them on pedestals and praised them excessively for insignificant accomplishments reinforce the connection between parental praise and narcissism.³⁴

All of Twenge's explanations of the rise of psychopathology seem reasonable. They are well documented and logically consistent with one another. However, a strong case can be made that Twenge's explanatory factors are all causally linked, in both directions, to the decline in play and that the decline in play may be the factor that has most directly caused the decline in children's mental health.

How play promotes children's mental health

More specifically, I contend here that play helps children (a) develop intrinsic interests and competencies; (b) learn how to make decisions, solve problems, exert self-control, and follow rules; (c) learn to regulate their emotions; (d) make friends and learn to get along with others as equals; and (e) experience joy. Through all of these effects, play promotes mental health.

IN PLAY, CHILDREN DEVELOP INTRINSIC INTERESTS AND COMPETENCIES. Twenge does not mention play in her discussion relating the rise in psychopathology to the decline in intrinsic goals. But activity oriented toward intrinsic goals, almost by definition, *is* play. Play is, first and foremost, done for its own sake. A world that acknowledges the value of children's play and allows it to happen is a world that says, "Yes, it is okay to do what you want to do, okay to pursue intrinsic goals." A world that orients children toward building grade-point averages and résumés for uncertain future gain is a world that says, in effect, "Life is a chore, you are always striving for something in the future; you are not even quite sure what it is that you are striving for or why, and you have no guarantee of achieving it." This latter view seems, at face value, to be a perfect recipe for anxiety and depression. In school, children work for grades and praise (extrinsic goals) and in adult-directed sports, they work for praise and trophies (extrinsic goals)—all of which depend on other people's judgments. But, in free play, children do what they want to do, and the learning and psychological growth that result are byproducts, not conscious goals of the activity.

IN PLAY, CHILDREN LEARN HOW TO MAKE DECISIONS, SOLVE PROBLEMS, EXERT SELF-CONTROL, AND FOLLOW RULES. If the rise in anxiety and depression are linked to a decline in sense of personal control, then play would seem to be the perfect remedy. A fundamental characteristic of play, as noted earlier, is that it is directed and controlled by the players themselves. In school and in other adult-directed activities, adults decide what children should do and how they should do it, and adults solve the problems that arise. But in play, children themselves must decide what to do and how, and they must solve their own problems, including those that arise within the play frame (how best to capture the monster, for example) and those that arise from outside of the play frame (perhaps what to do about Mary's skinned knee or Johnny's lost shoes). In play, children learn to control their own lives and to manage the physical and social environment around them. In play, they also learn and practice many of

the skills that are central to life in their culture and thereby develop competence and confidence.³⁵

In an essay written in 1933, the Russian developmental psychologist, Lev Vygotsky, argued eloquently that a major value of children's play lies in the practice of self-control.³⁶ He pointed out that all play has rules and that players must exert conscious control over their own actions to follow the rules. The rules need not be written down or even stated explicitly; they may be understood intuitively. For example, a basic rule of rough-and-tumble play prohibits you from hurting other players; in a play fight, you go through some of the motions of real fighting, but you do not kick, bite, punch, or scratch. If you are the stronger of the two, you do not push or hit with full force. In sociodramatic play, you must stay in character: If you are superman, you must not cry when you fall and hurt yourself; And if you are the pet dog, you must walk around on all fours, regardless of the discomfort. Vygotsky pointed out that children's strong desires to play and to keep the game going lead them to accept restrictions on their behavior that they would not accept in real life, and this is how they acquire the capacities for self-control that are so crucial to social existence. They learn in play that self-control itself is a source of pleasure.

It makes perfect sense that play deprivation would lead to an external locus of control. Children who do not have the opportunity to control their own actions, to make and follow through on their own decisions, to solve their own problems, and to learn how to follow rules in the course of play grow up feeling that they are not in control of their own lives and fate. They grow up feeling that they are dependent on luck and on the goodwill and whims of others, a frightening feeling indeed when one realizes that luck goes both ways and that others are not always dependable.

IN PLAY, CHILDREN LEARN TO REGULATE THEIR EMOTIONS. Research into animal play has led to the theory that play serves to train young mammals in how to deal with the unexpected.³⁷ In their motor play and rough-and-tumble play, juvenile mammals appear to put themselves deliberately into awkward, moderately frightening situations. As they playfully gallop, leap, swing about in trees (if they are primates), and chase one another, they continuously alternate between losing and regaining control of their bodily movements. When they leap, for example, they twist and turn in ways that make it difficult to land. They seem to be dosing themselves with moderate degrees of fear, as if deliberately learning how to deal with both the physical and emotional challenges of the

moderately dangerous conditions they generate. In their playful fighting, at least among young rats, each animal seems to prefer to be in the subordinate position, which, again, offers the greatest emotional as well as physical challenge.³⁸ They self-handicap in ways that allow their playmate to get into the attack, on-top position, and then they struggle to recover. Experiments in which young rhesus monkeys or young rats were deprived of play are instructive. When deprived of playmates during a critical phase of their development, these animals later overreacted emotionally to stressful situations and, for this reason, failed to cope adaptively. They showed both excessive fear and inappropriate aggression.³⁹

Even casual observations of children playing outdoors confirm that these youngsters, like other young mammals, deliberately put themselves into moderately fear-inducing conditions in play. Their swinging, sliding, and twirling on playground equipment; their climbing on monkey bars or trees; their risky skateboarding down banisters—all such activities are fun to the degree that they are moderately frightening. If too little fear is induced, the activity is boring; if too much is induced, it becomes no longer play but terror. Nobody but the child himself or herself knows the right dose, which is why all such play must be self-directed and self-controlled. Beyond the physically challenging situations, children also put themselves into socially challenging situations in their social play. All varieties of social play can generate conflict as well as cooperation; and to keep playing, children must learn to control the emotions, especially anger and fear, that such conflict can induce.⁴⁰

Reduced ability to regulate emotions stemming from play deprivation, may well contribute to the high rates of psychopathology among young people today. Individuals suffering from anxiety disorders describe losing emotional control as one of their greatest fears.⁴¹ They are afraid of their own fear, and therefore small degrees of fear generated by mildly threatening situations lead to high degrees of fear generated by the person's fear of losing control. Research shows that highly anxious children, as well as highly anxious adults, score low on questionnaires assessing the degree to which they believe that they can control their own fearful reactions to moderately challenging situations.⁴² Other research suggests that an inability to control anger in conflicts with other people, in childhood as well as in adulthood, is part and parcel of narcissists' inability to make positive, intimate, social connections.⁴³

IN PLAY, CHILDREN MAKE FRIENDS AND LEARN TO GET ALONG WITH OTHERS AS EQUALS. As noted earlier, Twenge attributes the generational

increase in anxiety and depression partly to the increased social isolation in our culture. But play is children's natural means of making friends. It is what draws them and binds them together. Even among adults, a playful attitude, focused on intrinsic goals, promotes and nurtures friendships. The decline in play may be both a consequence and a cause of the increased social isolation and loneliness in the culture.

Social play also seems to offer the best available means to combat the feelings of superiority associated with narcissism. Parents may put their children on pedestals and tell them how special they are, and teachers may offer excessive praise and high grades for mediocre accomplishments, but children themselves do not overestimate one another in their play. In play, children do not tolerate airs of superiority or demands for special treatment and special rules.

Social play, by its nature, is an egalitarian activity. A fundamental characteristic of play is that it is voluntary; the players are free to quit at any time, and any player who feels bullied or belittled by the others will quit. To keep the game going—whether it is a rough-and-tumble play fight, a sociodramatic fantasy game, or a pickup game of baseball—it is essential to keep the other players happy, or at least happy enough that they will not quit. Rules must be negotiated, so everyone consents to them, or those who do not consent will leave. And during play, each player must be attuned to the emotional reactions and needs of the others, because anyone who becomes too upset will leave. If too many leave, the game is over. Children by nature want to play with other children, but to succeed in doing so, they have to learn and practice the means of getting along with others as equals.

Elsewhere I have argued that learning to get along and cooperate with others as equals may be the most crucial evolutionary function of human social play.⁴⁴ Play—both in childhood and in adulthood—appears to have been the primary means by which our hunter-gatherer ancestors overcame selfish tendencies and lived in the highly cooperative, egalitarian manner that was essential to their survival. Social play is nature's means of teaching young humans that they are not special. Even those who are more skilled at the game's actions than are the other players must consider the needs and wishes of the others as equal to their own, or else the others will exclude them. Some children require much more practice than do others to learn these lessons, and those may be the ones who, in the absence of much opportunity for social play, grow up to be narcissists.

SOCIAL PLAY MAKES CHILDREN HAPPY, AND ITS ABSENCE MAKES THEM UNHAPPY. Perhaps the most straightforward explanation for the rise of

depression and anxiety in children and adolescents is that, as a society, we have increasingly forced them into settings that make them unhappy and anxious and have deprived them of the activities that make them happy. A few years ago, Mihaly Csikszentmihalyi and Jeremy Hunter conducted a study of happiness and unhappiness in public-school students in the sixth through twelfth grades.⁴⁵ For a week, more than eight hundred participants, from thirty-three schools in twelve communities across the country, wore special wristwatches that were programmed to provide signals at random times between 7:30 a.m. and 10:30 p.m. Whenever the signal went off, participants filled out a questionnaire indicating where they were, what they were doing, and how happy or unhappy they were at the moment. The lowest levels of happiness by far occurred when children were at school or doing homework, and the highest levels occurred when they were out of school and conversing or playing with friends. Time spent with parents and time spent at solo leisure activities, such as watching television, fell in the middle of the happiness-unhappiness range. These findings are consistent with other research, cited earlier in this article, indicating that children are, on average, happier in social play with friends than they are in any other situation.

Somehow, as a society, we have come to the conclusion that to protect children from danger and to educate them, we must deprive them of the very activity that makes them happiest and place them for ever more hours in settings where they are more or less continually directed and evaluated by adults, settings almost designed to produce anxiety and depression. If we wish children to be happy and to grow up to become socially and emotionally fulfilled and competent adults, we must provide them, once again, with opportunities to spend many hours per day playing freely with friends.

Concluding Thoughts

This article has documented the decline of play and the rise of psychopathology in young people over the past several decades and has described reasons for believing that there is a causal connection between the two. Play, especially social play with other children, serves a variety of developmental functions, all of which promote children's mental health. In the absence of such play, children fail to acquire the social and emotional skills that are essential for healthy psychological development.

This article has been selective in describing the debilitating effects of the lack of play. It has focused on anxiety, depression, feelings of helplessness, and narcissism. It has not, until now, mentioned the dramatic rise in childhood obesity and decline in general physical fitness that others have attributed at least partly to the decline in outdoor play.⁴⁶ Others have also argued that the high rate of ADHD (Attention Deficit Hyperactivity Disorder) may be, at least partly, attributable to the decline in vigorous outdoor play.⁴⁷ To that argument, one might add that the learning of self-control and emotional regulation induced by all forms of social play seems to be a perfect countervailing force to the impulsivity, hyperactivity, and lack of emotional control that characterize ADHD.

In an essay that U.S. Secretary of State Hillary Clinton wrote about her own joyful and meaningful childhood play, she concluded: “We were so independent, we were given so much freedom. But now it’s impossible to imagine giving that to a child today. It’s one of the great losses as a society. But I’m hopeful that we can regain the joy and experience of free play and neighborhood games that were taken for granted growing up in my generation. That would be one of the best gifts we could give our children.”⁴⁸ If the evidence and reasoning presented in this article are correct, then restoring children’s free play is not only the best gift we could give our children, it is also an essential gift if we want them to grow up to be psychologically healthy and emotionally competent adults.

NOTES

1. Yumi Gosso, Emma Otta, Maria de Lima Salum e Morais, Fernando Ribeiro, and Vera Bussab, “Play in Hunter-Gatherer Society,” in *The Nature of Play: Great Apes and Humans*, ed. Anthony D. Pellegrini and Peter K. Smith (2005), 213–53; Peter Gray, “Play as a Foundation for Hunter-Gatherer Social Existence,” *American Journal of Play* 1 (2009): 476–522.

2. What I am here calling *free play* is in some writings called simply *play*, as the self-directed component is considered to be part of play’s definition. For a more thorough discussion of play’s definition, see Gray, “Play as a Foundation for Hunter-Gatherer Social Existence,” 479–484.

3. Howard P. Chudacoff, *Children at Play: An American History* (2007).

4. Joe L. Frost, *A History of Children’s Play and Play Environments: Toward a Contemporary Child-Saving Movement* (2010); Steven Mintz, *Huck’s Raft: A History of American Childhood* (2004).

5. Sandra L. Hofferth and John F. Sandberg, “Changes in American Children’s Time, 1981–1997,” in *Children at the Millennium: Where Have We Come From? Where Are We*

Going? Advances in Life Course Research, vol. 6, ed. Timothy Owens and Sandra L. Hofferth (2001): 193–229.

6. Rhonda Clements, “An Investigation of the Status of Outdoor Play,” *Contemporary Issues in Early Childhood* 5 (2004): 68–80.

7. Reported by Jonathon O’Brien and Jenny Smith, “Childhood Transformed? Risk Perception and the Decline of Free Play,” *The British Journal of Occupational Therapy* 65 (2002): 123–28.

8. Dorothy G. Singer, Jerome L. Singer, Heidi D’Agostino, and Raeka DeLong, “Children’s Pastimes and Play in Sixteen Nations: Is Free-Play Declining?” *American Journal of Play* 1 (2009): 283–312.

9. Family Kids and Youth, *Playreport: International Summary of Research Results* (2010), published online, available at www.fairplayforchildren.org/pdf/1280152791.pdf. This survey was sponsored by IKEA and was overseen by Barbie Clarke, CEO of the marketing research group Family Kids and Youth.

10. David Finkelhor, Heather Turner, Richard Ormrod, and Sherry L. Hamby, “Trends in Childhood Violence and Abuse Exposure: Evidence from 2 National Surveys,” *Archives of Pediatric and Adolescent Medicine* 164 (2010): 238–42.

11. Family Kids and Youth, *Playreport*.

12. See Clements, “An Investigation of the Status of Outdoor Play,” 123.

13. Frost, “A History of Children’s Play,” 199–200, 230–35.

14. Jean M. Twenge, “The Age of Anxiety? The Birth Cohort Change in Anxiety and Neuroticism, 1952–1993,” *Journal of Personality and Social Psychology* 79 (2000): 1007–21. Jean M. Twenge, Brittany Gentile, C. Nathan DeWall, Debbie Ma, Katharine Lacefield, and David R. Schurtz, “Birth Cohort Increases in Psychopathology Among Young Americans, 1938–2007: A Cross-Temporal Meta-Analysis of the MMPI,” *Clinical Psychology Review* 30 (2010): 145–54.

15. Twenge et al., “Birth Cohort Increases in Psychopathology Among Young Americans, 1938–2007,” 150.

16. Cassandra Rutledge Newsom, Robert P. Archer, Susan Trumbetta, and Irving I. Gottesman, “Changes in Adolescent Response Patterns on the MMPI/MMPI-A Across Four Decades,” *Journal of Personality Assessment* 81 (2003): 74–84.

17. Data are from tables 4 and 5 of Newsom et al., “Changes in Adolescent Response Patterns on the MMPI/MMPI-A Across Four Decades.” Because the scores for boys and girls on these items were similar and changed in similar ways, I have summarized the results by averaging the scores for the two sexes.

18. According to records kept by the Center for Disease Control, suicide rates among children and adolescents rose steeply between 1950 and approximately 1995; then they declined slightly until 2003, apparently because of greater awareness and the development of programs aimed at preventing childhood suicide. More recent reports, however, indicate that adolescent and childhood suicide rates have been rising, again, since 2003. For rates by age group from 1950 to 2005, see <http://www.infoplease.com/ipa/A0779940.html#axzz0zVy5PKaL>. For an example of a report of increased suicide since 2003, see Rick Nauert, “Teen Suicide Rates Remain High,” at <http://psychcentral.com/>

news/2008/09/04/teen-suicide-rates-remain-high/2874.html (2008).

19. Jean M. Twenge, Liqing Zhang, and Charles Im, "It's Beyond My Control: A Cross-Temporal Meta-Analysis of Increasing Externality in Locus of Control, 1960–2002," *Personality and Social Psychology Review* 8 (2004): 308–19.

20. For evidence supporting a causal link between a helpless style of thinking and depression, see Lyn Y. Abramson, Gerald I. Metalsky, and Lauren B. Alloy, "Hopelessness Depression: A Theory-Based Subtype of Depression," *Psychological Review* 96 (1989): 358–72; and Lauren B. Alloy, Lyn Y. Abramson, Wayne G. Whitehouse, Michel E. Hogan, Catherine Panzarella, and Donna T. Rose, "Prospective Incidence of First Onsets and Recurrences of Depression in Individuals at High and Low Cognitive Risk for Depression," *Journal of Abnormal Psychology* 115 (2006): 145–56. For evidence of a relation between external locus of control and anxiety in children, see Ho Cheung William Li and Oi Kwan Joyce Chung, "The Relationship Between Children's Locus of Control and Their Anticipatory Anxiety," *Public Health Nursing* 26 (2009): 153–60; and Carl F. Weems and Wendy K. Silverman, "An Integrative Model of Control: Implications for Understanding Emotion Regulation and Dysregulation in Childhood Anxiety," *Journal of Affective Disorders* 91 (2006): 113–24.

21. For references to such research see Twenge, "It's Beyond My Control"; and John W. Reich, Kristi J. Erdal, and Alex J. Zautra, "Beliefs about Control and Health Behaviors," in *Handbook of Health Behavior Research*, vol. 1, *Personal and Social Determinants*, ed. David S. Gochman (1997): 93–111.

22. W. Keith Campbell, Carrie Pierce Bush, Amy B. Brunell, and Jeremy Shelton, "Understanding the Social Costs of Narcissism: The Case of the Tragedy of the Commons," *Personality and Social Psychology Bulletin* 31 (2005): 1358–68; Timothy A. Judge, Jeffrey A. LePine, and Bruce L. Rich, "Loving Yourself Abundantly: Relationship of the Narcissistic Personality to Self- and Other Perceptions of Workplace Deviance, Leadership, and Task and Contextual Performance," *Journal of Applied Psychology* 91 (2006): 762–76; Sander Thomaes, Brad J. Bushman, Brad Orobio de Castro, and Hedy Stegge, "What Makes Narcissists Bloom? A Framework for Research on the Etiology and Development of Narcissism," *Development and Psychopathology* 21 (2009): 1233–47; Gerhard Blickle, Alexander Schlegel, Pantaleon Fassbender, and Uwe Klein, "Some Personality Correlates of Business White-Collar Crime," *Applied Psychology* 55 (2006): 220–33.

23. Jean M. Twenge and Joshua D. Foster, "Birth Cohort Increases in Narcissistic Personality Traits Among American College Students, 1982–2009," *Social Psychological and Personality Science* 1 (2010): 99–106; Jean M. Twenge, "Egos Inflating Over Time: A Cross-Temporal Meta-Analysis of the Narcissistic Personality Inventory," *Journal of Personality* 76 (2008): 875–901.

24. Twenge and Foster, "Birth Cohort Increases in Narcissistic Personality Traits," 102.

25. Shona M. Tritt, Andrew G. Ryder, Angela J. Ring, and Aaron Pincus, "Pathological Narcissism and the Depressive Temperament," *Journal of Affective Disorders* 122 (2010): 280–84.

26. John H. Pryor, Sylvia Hurtado, Victore B. Saenz, Jos Luis Santos, and William S. Korn, *The American Freshman: Forty Year Trends, 1966–2006* (2007): 32. The steepest

rates of changes in these two life goals occurred between 1967 and 1987; then the slopes leveled off, and the percentages remained relatively constant from year to year.

27. John Reynolds, Michael Stewart, Ryan Macdonald, and Lacey Sischo, "Have Adolescents Become too Ambitious? High School Seniors' Educational and Occupational Plans, 1976–2000," *Social Problems* 53 (2006): 186–206.

28. Fred Schab, "Schooling Without Learning: Thirty Years of Cheating in High School," *Adolescence* 26 (1991): 839–48; Joan Oleck, "Most High-School Students Admit to Cheating," *School Library Journal* (March 10, 2008), <http://www.schoollibraryjournal.com/article/CA6539855.html>

29. Twenge, "Birth Cohort Increases in Psychopathology," 146–47.

30. Tim Kasser, *The High Price of Materialism* (2002); Tim Kasser and Richard M. Ryan, "Further Examining the American Dream: Differential Correlates of Intrinsic and Extrinsic Goals," *Personality and Social Psychology Bulletin* 22 (1996): 280–87.

31. Twenge, "The Age of Anxiety?" 109, 117–18.

32. Miller McPherson, Lynn Smith-Lovin, and Matthew E. Brashears, "Social Isolation in America: Changes in Core Discussion Networks over Two Decades," *American Sociological Review* 71 (2006): 353–75.

33. Twenge *et al.*, "Egos Inflating Over Time," 892–93.

34. Lorna J. Otway and Vivian L. Vignoles, "Narcissism and Childhood Recollections: A Qualitative Test of Psychoanalytic Predictions," *Personality and Social Psychology Bulletin* 32 (2006): 104–16; Thomaes *et al.*, "What Makes Narcissists Bloom?" 1233–47.

35. Peter Gray, "The Evolutionary Biology of Education: How Our Hunter-Gatherer Educative Instincts Could Form the Basis for Education Today," *Evolution: Education, and Outreach* (2011), in press; Peter Gray, "The Special Value of Children's Age-Mixed Play," *American Journal of Play* 3 (2011): 500–22.

36. Lev Vygotsky, "The Role of Play in Development," in *Mind in Society: The Development of Higher Psychological Processes*, ed. Michael Cole, Vera John-Steiner, Sylvia Scribner, and Ellen Souberman (1978): 92–104.

37. Marek Spinka, Ruth C. Newberry, and Marc Bekoff, "Mammalian Play: Training for the Unexpected," *Quarterly Review of Biology* 76 (2001): 141–68.

38. Sergio M. Pellis, Vivien C. Pellis, and Heather C. Bell, "The Function of Play in the Development of the Social Brain," *American Journal of Play* 2 (2010): 278–96.

39. For reviews of such play-deprivation research, see Peter LaFreniere, "Evolutionary Functions of Social Play: Life Histories, Sex Differences, and Emotion Regulation," *American Journal of Play* 3 (2011), 464–88; and Pellis *et al.*, "The Function of Play in the Development of the Social Brain," 278–96.

40. LaFreniere, "Evolutionary Functions of Social Play," *American Journal of Play* 3 (2011), 464–88.

41. David H. Barlow. *Anxiety and Its Disorders: The Nature and Treatment of Anxiety and Panic*, 2nd ed. (2002).

42. Sanne M. Hogendoorn, Lidewij H. Wolters, Leentje Vervoort, Pier J. M. Prins, Frits Boer, and Else de Haan, "An Indirect and Direct Measure of Anxiety-Related Perceived Control in Children: The Implicit Association Procedure (IAP) and Anxiety Control

Questionnaire for Children (ACQ-C),” *Journal of Behavior Therapy and Experimental Psychiatry* 39 (2008): 436–50; Carl F. Weems and Wendy K. Silverman, “An Integrative Model of Control: Implications for Understanding Emotion Regulation and Dysregulation in Childhood Anxiety,” *Journal of Affective Disorders* 91 (2006): 113–24.

43. Kevin S. Carlson and Per F. Gjerde, “Preschool Personality Antecedents of Narcissism in Adolescence and Young Adulthood: A 20-Year Longitudinal Study,” *Journal of Research in Personality* 43 (2009): 570–78; Thomaes et al., “What Makes Narcissists Bloom?” 1233–47.

44. Gray, “Play as a Foundation for Hunter-Gatherer Social Existence,” 476–522.

45. Mihaly Csikszentmihalyi and Jeremy Hunter, “Happiness in Everyday Life: The Uses of Experience Sampling,” *Journal of Happiness Studies* 4 (2003): 185–99.

46. See chapter 8, “The Value of Play and the Consequences of Play Deprivation,” in Frost, *A History of Children’s Play and Play Environments*, 198–236.

47. Jaak Panksepp, “Can PLAY Diminish ADHD and Facilitate the Construction of the Social Brain?” *Journal of the Canadian Academy of Child and Adolescent Psychiatry* 16 (2007): 57–66; Jaak Panksepp, Jeff Burgdorf, Cortney Turner, and Nakia Gordon, “Modeling ADHD-Type Arousal with Unilateral Frontal Cortex Damage in Rats and Beneficial Effects of Play Therapy,” *Brain and Cognition*, 52 (2003): 97–105.

48. Clinton, Hillary R., “An Idyllic Childhood,” in *The Games We Played: A Celebration of Childhood and Imagination*, ed. Steven A. Cohen (2001), 161–65.