
Play as Preparation for Learning and Life

An Interview with Peter Gray

Peter Gray, research professor at Boston College and past chair of its Psychology Department, originally trained in neurobiology at Columbia and Rockefeller University; but he now publishes in the fields of comparative, evolutionary, developmental, and educational psychology. In the academy, Gray is known best for his widely assigned university-level textbook *Psychology*, now in its sixth edition. His *Psychology Today* blog—“Freedom to Learn: Play and Curiosity as Foundations for Learning”—has earned a large following while drawing eclectically from recent scholarship in history, anthropology, sociology, and economics. Gray has long appreciated how spontaneous, unsupervised play aids self-directed learning and self-assurance in children, and he explores this natural process and its societal implications at length in his latest book, *Free to Learn: Why Unleashing the Instinct to Play Will Make Children Happier, More Self-Reliant, and Better Students for Life*. In this interview, Gray talks about the lifelong social, physical, and moral value of play, and he identifies and traces the consequences of factors that in recent decades have eroded opportunities to play. As a sharp and methodical critic of the way America currently delivers education, he offers remedies for creeping playlessness and academic underachievement that include a root-and-branch rethinking of mainstream schooling. **Key words:** definition of play; developmental psychology; evolutionary psychology; evolution of play; informal games; modern schools; play study; Sudbury Valley School.

American Journal of Play: How did a neurobiologist become interested in play?

Peter Gray: I started off as a neurobiologist, but now I consider myself an evolutionary developmental psychologist. My interest in play arose out of a combination of my experiences as a father and my general interest in human evolution. As a father, I was amazed by the enormous amount my son learned in his self-directed play, both alone and with other kids. Later, he attended a democratic school—the Sudbury Valley School, in Framingham, MA—where children and teenagers are in charge of their

own education. I was fascinated by it and by the success of its graduates, and I began to study it at the same time I was still conducting research on hormone-brain interactions in rats and mice. It was fascinating to me to see how, in this setting, the drives to play and explore motivated learning through all childhood and teenage years—not just in early childhood as so many developmental psychologists seem implicitly to believe. At the same time, my evolutionary perspective led me to think about play more generally. The young of all mammals play, and human children everywhere play when they are free to do so. I began to wonder why. What are the evolutionary functions of play? Eventually this question and others about children's capacities for self-education became far more interesting to me than the questions I was pursuing in my rodent research.

AJP: Do your thoughts about free play arise in part from your own childhood?

Gray: I was a child primarily in the 1950s, the decade at the end of what Howard Chudacoff, in his book on the history of children's play in America, refers to as "the golden age of children's unstructured play." I don't particularly like Chudacoff's term "unstructured" here, because I think all play is structured, and I think Howard would agree with me on that. I expect what he really means by unstructured play is play that is structured by the kids themselves rather than by adults. Sometimes I call that *free play*, but I would rather call it just *play*, because I think activities structured for kids by adults are not fully play, at least not by my definition of the term.

AJP: As a child, did you learn by playing?

Gray: Yes. Like other kids at the time, I learned an enormous amount through play. In all of the communities I lived in (we moved a lot), you could go outdoors at almost any daylight time after school, on weekends, or all summer long and find kids playing and exploring, usually with no adults in sight. In such play, we discovered our passions and developed skills related to them, learned how to get along with one another despite our squabbles, learned how to solve our own problems, learned how to get out of the predicaments we got ourselves into, and learned how to control our emotions. These are all crucial lessons that can't be taught in school or by other adult-directed means; they can only be learned through free, self-directed experience.

AJP: Obviously you believe kids today miss the types of experiences you enjoyed. Why do they, chiefly?

Gray: I do believe that. Since the 1950s, there has been a continuous decline

in children's freedom to play and explore away from adults. This is partly because of increased time in school and doing schoolwork at home, but it is also, even more, the result of adults taking greater control of children's lives outside of school. Now kids are more likely to engage in formal, adult-directed sports than in pickup games, more likely to take karate classes than have snowball wars with other kids. Part of the reason for this is that parents now are afraid to let their kids play unsupervised. Whenever something awful happens to a child playing unsupervised anywhere in the developed world, the media dramatizes it and so-called experts use it as yet another opportunity to worry parents about the dangers of freedom for kids.

AJP: Is such worry unfounded?

Gray: No, not unfounded; I must admit there have been some real changes in neighborhoods that may in fact make free play less safe than it once was. Parents—especially mothers, but also fathers—are no longer home as much as they once were, so there is no one glancing out of windows ready to help if something does go wrong. Adults don't know their neighbors as they once did, which leads to a decline in a sense of neighborhood and thereby also to a decline in real safety as well as perceived safety. Even the decline in birth rate plays a role; in most neighborhoods there are fewer kids to play with than there were in the past. When there are fewer kids outdoors, for whatever reason, the outdoors becomes less safe—as well as less attractive—for any individual kid. There is safety in numbers.

But another part of the social change is this, which I think may be the most significant part. We have for various reasons, mostly related to the increased weight of formal schooling, come to think of childhood as a time for résumé building; and play does not fit on a résumé. Parents are motivated to get their kids into the best colleges possible; and they have become convinced, rightly or wrongly, that formal extracurricular activities, adult-directed volunteer activities, and good grades in school, not play, are the route to doing that. They think it's important to get kids onto this sort of track even when they are still little.

AJP: What are the chief dangers of that type of thinking, that type of social change?

Gray: This decline in play has had serious consequences. Clinical psychologists have documented dramatic, continuous increases in all sorts of psychopathology among young people over the past five or six decades, the

same decades over which play has been declining. As based on unchanged measures and criteria, today children and teenagers are five to eight times more likely to be depressed or anxious to a clinically significant degree than they were in the 1950s, and roughly four times more likely to commit suicide. Also, research has documented a continuous increase in narcissism in young people, which entails an inability to see from other people's perspectives and to make meaningful connections with others. In my new book *Free to Learn: Why Unleashing the Instinct to Play Will Make Children Happier, More Self-Reliant, and Better Students for Life*, I explain in depth why I believe these changes are caused largely by the decline in children's freedom and opportunities to play.

AJP: You said earlier that by your definition, adult-directed activities are not fully play. How do you define play?

Gray: Play, as I define it and as many other play theorists tend to define it, is, first and foremost, *self-chosen and self-directed*. Players choose freely whether or not to play, make and change the rules as they go along, and are always free to quit. Second, play is *intrinsically motivated*; that is, it is done for its own sake, not for external rewards such as trophies, improved résumés, or praise from parents or other adults. Third, play is *guided by mental rules* (which provide structure to the activity), but the rules always leave room for creativity. Fourth, play is *imaginative*; that is, it is seen by the players as in some sense not real, separate from the serious world. And last, play is *conducted in an alert, active, but relatively unstressed frame of mind*.

I should add that play is not an all-or-none phenomenon. An activity can be more or less playful; but to the degree that an activity has all of these elements, we are all likely to identify it fully as play. I elaborate on all of these elements, and show how they contribute to play's power in promoting learning, in my book.

AJP: Are choice and motivation especially connected?

Gray: Yes. Children generally lose motivation when they lose choice—when adults are in charge—and so they don't learn such primary lessons as how to structure their own activities, solve their own problems, and take charge of their own lives.

AJP: Given your definition of play, do you regard informal games as superior to organized sports?

Gray: Yes. Children learn many valuable life lessons in informal games that

they don't learn in organized sports. Contrast, for example, an informal pickup game, of baseball with an adult-directed Little League game. In the pickup game, children learn that, to keep the game going, they have to keep the other players happy, because unhappy players will quit and go home. They learn how to negotiate rules and make compromises; they learn how to settle disputes, because there is no umpire to do it for them; and they learn that playing well and having fun really are more important than winning, because, in the end, nobody cares who won. In Little League the players may learn a lot about how to play baseball, but they learn much less about how to live happy, responsible, compassionate lives.

AJP: You once played and coached organized sports. How do you reconcile that experience with what you just said about informal games?

Gray: First, I should point out that I played sports at a very small school. We had good teams, mostly because we had all been playing pickup basketball and baseball since early childhood, just for fun. Of course we had an adult coach on the high school team, but he gave us a lot of freedom to choose our own ways of playing, and he always emphasized fun over winning. When I was a student at Columbia College, in New York, one of the ways I worked my way through was as an athletic director at a gym run by the Salvation Army. I was there to help solve any problems that arose and to help organize the group's basketball team, made up of kids of high school age. I *coached* them when they played other teams. But, truth be told, most of the kids on the team knew more about basketball, including strategy, than I did, so I was pretty much just a group moderator, who brought the team together now and again to huddle and figure out what to do next. The only way I got away with being *coach* in that context was because I knew enough not to try to tell them what to do! I had played a lot of pickup basketball as a kid, but they had played much more and with better players. By that time, I think, I had already learned that the proper purpose of these games is to have fun. I've never been involved in really high-pressure competitive sports.

AJP: If play, which includes all the elements you listed, is so central to intellectual and social development, why do most college psychology textbooks ignore play?

Gray: Play is given short shrift even in developmental- and child-psychology textbooks and also in compendiums of these fields for researchers. A stunning example of this is the most recent (sixth) edition of the *Handbook of*

Child Psychology, published by Wiley. *Handbook* is a misnomer for it; you couldn't possibly hold it in your hand. It is four volumes long—consisting of more than 5,000 double-column pages and 79 chapters, each by a different expert or set of experts on child development. It's intended to be a full account of psychology's findings and theories about children's behavior and provide a foundation for training graduate students in developmental psychology. Yet, amazingly, *none* of the 79 chapters is about play or even hint at play in their titles, and in all four volumes together, fewer than 10 total pages are devoted to play. Even less is devoted to curiosity and exploration.

AJP: How do you account for that?

Gray: To modify a phrase once used by William James, "only a mind polluted by too much immersion in academia" could possibly think about children for long without thinking about play and curiosity. If you ask a man or woman on the street to free associate to the concept *child*, the words *play* or *playful* will usually be near, if not at the top of, the list, and *curious* won't be far behind. To most nonacademic observers, play and curiosity comprise a good part of the very essence of childhood. Mark Twain has a lot more to tell us about the real psychology of children than does this supposedly comprehensive account of child psychology. This compendium is worse than the field as a whole, as you can find at least some research on children's play and exploration in journals of child development, but far less than you would expect. And most of what you find concerns children of preschool age, observed in the context of their preschool. There is almost no research on the more sophisticated ways that children and teenagers play and explore as they grow older.

AJP: Why do you believe that is so?

Gray: My theory is that it came about largely because of the long, tight marriage of the field of developmental psychology to the school system. The field really got its start with IQ testing, to help educators decide how to place children into grades and classes in school, and the tie between developmental psychology and schooling has persisted ever since. Funding agencies, too, are more interested in supporting research that helps us understand how to get children to learn better in school than in understanding how children learn on their own. Moreover, for the researcher, there is the practical matter of finding subjects for research. Students provide a ready and more or less captive group for research. It's difficult

and time-consuming to reach out into the nonschool part of the community to find people willing to be studied; it's a lot easier to study people in schools. A large proportion of all of the research conducted into adult psychology is conducted with college freshmen and sophomores, who volunteer their time as subjects because it is part of a course requirement or because it boosts the grade they get in an introductory psychology class. Psychologists who study people younger than college age have to leave the ivory towers a little bit to find their subjects, and the most convenient places by far to find them are in schools.

AJP: Are you saying that the school setting misleads investigators?

Gray: Yes. Children in schools are used to being manipulated, observed, and tested. You can subject different groups to different conditions, give them tests before and after the manipulation, tally the results, and, *voilà*, you have, quite likely, a finding that you can publish in a scholarly journal of child development. It will probably be titled something like, "The effect of manipulation X on children's learning of Y." But you can't study play this way. And you also can't study it using the usual experimental methods.

AJP: Why not?

Gray: Because once you try to manipulate and control behavior, you are no longer observing play. To study play, you have to behave more like an anthropologist than like a typical research psychologist. You have to observe while doing your best not to interfere. Unfortunately, although anthropologists have done a better job with play than we psychologists have, they too tend to neglect children's play, as they are generally more interested in observing the norms and rituals of the adults in the cultures they study than in observing children.

AJP: Is this scarcity of play study in the field of psychology due more to circumstances than to intent, then?

Gray: Yes. There is nothing nefarious about any of this. Developmental psychologists are, for the most part, honest researchers trying to study what they and others around them see as important. The result, though, is a biased and narrow view of the human nature of children—a view that focuses way too much on what adults do to and for children and way too little on what children do for themselves and each other.

AJP: From your work in evolutionary psychology, what are the most important lessons you have learned about play?

Gray: Well, that's largely what my new book, *Free to Learn*, is about. A short

answer is that the young of all mammals play, especially young humans. Play is the means by which young mammals practice the skills they must develop in order to survive and reproduce. These include physical skills, such as chasing down prey or avoiding predators; social skills required to get along with others of their kind; and emotional skills, such as those required to control fear and anger in tense situations. Children, even more than other young mammals, learn physical, social, and emotional skills through play. Also, play and exploration are the natural means by which children practice the values that they observe in the culture around them. In other words, play and exploration are the natural ways by which children have always educated themselves, beginning way before there was anything like schools.

AJP: If play serves evolutionary purposes, as you suggest, then how can we believe that play occurs for its own sake?

Gray: Here it's useful to distinguish between the evolutionary function of a behavior and the more immediate goal or purpose of the behavior. Natural selection has designed young mammals to play, and to play in certain ways, because in the long run such play makes them more capable of surmounting life's hurdles. But young mammals—and those include young humans—are not consciously playing for that reason. Consciously (at least for humans, and I suspect for other mammals), they are playing because it is fun. Animal behaviorists, in particular, distinguish play from other forms of activity by noting the animal's focus on the *means* of their actions and their relative lack of concern for the *ends*. For example, a kitten *playing* at preying on a mouse repeatedly catches the mouse and lets it go in order to catch it again. In contrast, a cat actually *preying* on a mouse kills it with a quick, efficient bite to the neck and then may eat it. For the playing animal, the prime motivator is the activity itself, that of pouncing on the mouse; for the preying animal, the prime motivator is the end of the activity, the delicious dead or dying mouse.

AJP: Who among classic theorists besides Charles Darwin should we be reading on the subject of the evolution of play?

Gray: The classic theorist whom I find most on target is Karl Groos, the much-ignored German philosopher and naturalist who wrote *The Play of Animals* (1898) and *The Play of Man* (1901). Groos was ahead of his time, both in his thinking about evolution and in his thinking about play. He understood well the writings of Charles Darwin, and he had a sophisticated, modern

understanding of instincts. He recognized that animals, especially mammals, must, to varying degrees, learn to use their instincts. Young mammals come into the world with biological drives and tendencies (instincts) to behave in certain ways, but to be effective such behaviors must be practiced and refined. Play, according to Groos, is essentially an instinct to practice other instincts. I've committed a sentence from *The Play of Animals* to memory: "Animals can not be said to play because they are young and frolicsome, but rather they have a period of youth in order to play; for only by doing so can they supplement the insufficient hereditary endowment with individual experience, in view of the coming tasks of life." Consistent with his theory, Groos divided animal play into categories related to the types of skills the play promotes, including movement play (running, leaping, climbing, swinging in trees, and so on), hunting play, fighting play, and nursing play (playful care of infants).

In *The Play of Man*, Groos extended his insights about animal play to humans. He pointed out that young humans, much more so than the young of any other species, must learn different skills depending on the society in which they develop. Therefore, he argued, natural selection led to a strong drive in human children to observe the activities of their elders and incorporate those activities into their play. Thus, hunter-gatherer children play at hunting, tracking, digging up tubers, building huts, and the like; children in farming cultures play at planting, harvesting, and tending animals; children in industrial cultures play at mechanics; and (going beyond Groos's time) children in our culture today play at computers. In my own writing, I build upon Groos as I talk about children's play as a key component of the biological foundation for education.

AJP: Who's reading Groos profitably now, if anyone?

Gray: As far as I can tell, neither book is read today by students of psychology.

The Play of Animals is still often referred to approvingly by researchers who study animal play, but *The Play of Man* is rarely referred to at all. I have occasionally seen psychologists dismiss Groos's theory by referring to Piaget's criticism of it in his book *Play, Dreams, and Imitation in Childhood*. I suspect these psychologists had only read Piaget, or someone else's account of Piaget's critique, but had not read Groos. Piaget, unlike Groos, didn't fully understand Darwin's theory of evolution by natural selection. He criticized the key aspect of Groos's theory of play because he didn't understand how a future effect of behavior (the survival it promotes) could

be a cause of the behavior. That was a standard argument, a hundred years ago or so, against any sort of Darwinian analysis of behavior. Piaget—like most thinkers of his time—seemed not to appreciate the Darwinian distinction between *ultimate cause* (the reason for which a behavioral tendency comes about in evolution) and *proximate cause* (the immediate stimulus or situation that triggers the behavior).

AJP: In an article for an earlier issue of this *Journal* and elsewhere you have written at length about play in hunter-gatherer society. What does our long social history as hunter-gatherers tell us about how we should regard play as learning?

Gray: We humans were all hunter-gatherers until about eleven thousand years ago, when agriculture first began to become established in some parts of the world. We evolved, biologically, to meet the needs and conditions of our hunter-gatherer way of life. Some groups, in isolated parts of the world, managed to survive as hunter-gatherers into the twentieth century, and to some degree even until today, relatively unaffected by the modern world. Anthropologists have studied them and found that in some ways these different groups are remarkably similar to one another, regardless of which continent they live on or whether they live in rainforests or deserts. They live in small, mobile bands, which move from campsite to campsite as they follow the available game and edible vegetation. Within the band, they make decisions by consensus. They place particularly high value on sharing, equality, and individual autonomy. Their beliefs in autonomy and equality are such that they refrain from telling one another what to do, and this applies to children as well as to adults. The adults trust children's instincts and judgments, and they do not try to direct children's behavior. They also understand that children learn through their own, self-directed play and exploration, so they allow children, and even teenagers, essentially unlimited time for such activities.

By observing hunter-gatherers, anthropologists have been able to see firsthand how children's instincts to play and explore serve the function of education. The children eagerly observe and explore the social, biological, and physical world around them and play at the activities that are crucial to success in their culture. As they become adults, their playful hunting, gathering, tool making, hut construction, musical and artistic endeavors, diplomacy, and the like begin to take on productive adult forms but still retain their playful nature. In some of my writing, I have argued that

play is not only the means by which hunter-gatherer children educate themselves, but it is also key to understanding how hunter-gatherers maintain their egalitarian values. Social play is necessarily an egalitarian activity in which sharing and respect for one another's needs and desires are essential. By maintaining a playful attitude in all of their activities, hunter-gatherers essentially turn all of life into a cooperative group game.

AJP: Does that approach to learning hold implications for society today?

Gray: Yes, it does. Children are designed to educate themselves through their self-directed exploration and play, but to do so well they need certain environmental conditions. They need plenty of free time to play and explore. They need access to the tools of the culture and permission to play with those tools, in their own chosen ways. They need to be able to associate with whom they please, in an age-mixed environment, so younger children can learn skills from older ones and older children can learn to care for and nurture younger ones. They also need access to a variety of adult experts, to whom they can look for help and guidance when they want it. And, perhaps most of all, they need to be immersed in a moral community, where they have a voice in the rules and how the rules are enforced, so they grow up feeling responsible for others as well as themselves.

AJP: Do modern schools provide this type of environment?

Gray: None of this happens in our standard schools. In our schools today, learning becomes work rather than play, directed by teachers rather than learners. Curiosity is squashed because the lessons are all about the questions that teachers ask, not questions that students ask. And the questions the teachers ask aren't even the teachers' real questions. Children have essentially no say in the rules that affect them or in how those rules are enforced. It is as if the architects of our school system decided to deprive children of all of the environmental conditions that allow children to educate themselves, so as to prevent self-education and thereby make children dependent on teachers. I think this is no accident. Analyses of the history of education show that schools originated not so much to teach skills and ideas as to teach obedience and doctrine. The fundamental task of children in our schools is to do whatever the teachers ask of them, no matter how meaningless it seems to the child, which requires suppressing the child's curiosity and will. The early educational theorists were quite explicit in stating that the primary function of schools is to suppress children's will-

fulness and replace it with a spirit of obedience. Remember, it wasn't so long ago in history that willfulness was almost a synonym for sinfulness. Today educational theorists don't usually talk that way, but the schools still function that way.

AJP: If you could change all that, what would schools be like today?

Gray: We don't need top-down, coercive, teacher-directed education. Children are capable of educating themselves beautifully for today's world if we provide them with appropriate environmental conditions. What we need, for healthy child development and learning, are settings that provide children with the opportunities to educate themselves—settings that provide, for our time and place, educational opportunities that are equivalent to those that existed in hunter-gatherer cultures. I have referred to this kind of educational reform as “a huge leap backwards as well as forward” in education. It's a huge leap backwards because it acknowledges and is founded upon an understanding of the historical, evolutionary conditions in which our educational instincts evolved. It's a huge leap forwards in that it brings that understanding into modern times and uses it in ways appropriate to conditions in our world today and tomorrow. Children today need time and opportunity to play with today's tools, not yesterday's tools.

AJP: You have written elsewhere about how the Sudbury Valley School in Framingham, MA, provides such a setting. Will you tell us about your personal and scholarly involvement with that school?

Gray: I first became involved with the school many years ago when my son became a student there. He rebelled continuously against the standard public school he was enrolled in, until we had almost no choice but to take him out, after fourth grade, and find another form of schooling. We found Sudbury Valley, and that marked a turning point in my research career. This extraordinary school fascinated me. My questions were motivated first by my concerns as a parent: Would my son become educated in this school? Would he be able to go on to college if he wanted to? Would he be reducing his future options by attending such a radically different school? But my questions were also motivated by academic curiosity.

AJP: Please tell us a little about the school and how children learn there.

Gray: Briefly, Sudbury Valley is a private day school that enrolls students from age four on through the teenage years without regard to any indices of academic ability. It currently has about 130 students and 10 staff members and

operates on a per-student budget about half that of the local public schools. The school is run by the students and staff members together, through the School Meeting, which operates on a one-person, one-vote basis. The School Meeting appoints all of the administrative committees of the school, makes all school rules, and votes on all major budgetary decisions. It also hires and fires the staff, each of whom is on a one-year contract and must be voted back in to continue from one year to the next. When a student or staff member is accused by anyone of violating a school rule, that person is brought before the Judicial Committee. This committee consists of one staff member and a set of students, chosen semirandomly in such a way as to represent the whole range of ages at the school, who serve for a period of time before a new group is chosen. It operates like a jury in our larger community. It judges guilt or innocence and, in the former case, decides on an appropriate punishment.

AJP: Tell us some more about the School Meeting and how it governs.

Gray: The School Meeting creates all of the school's rules, designing them to prevent students and staff from interfering with others' activities, hurting anyone, or damaging the school environment; no rules have to do with education. Children and teenagers are allowed to spend their time as they please, as long as they don't violate any of the rules. This is, first and foremost, a moral, democratic community in which children are full voting members, assumed to be responsible. An assumption of the school is that education is each person's concern and comes naturally from life, both at school and out of school. The school has equipment appropriate to our modern culture—including computers, lots of books, a fully equipped kitchen, woodworking equipment, music practice rooms, art materials, sporting equipment, and more. It also, among its staff and students, has people who know how to use this equipment. The students can associate with whom they please, and age mixing, even across wide age gaps, is common.

AJP: What are some of the particular benefits that students derive this school setting?

Gray: From my perspective, Sudbury Valley provides, for our time and place, the educational advantages that a hunter-gather band provided for its time and place. Children learn from one another through their play and exploration in age-mixed groups; they ask for help from staff when they want it; and they are immersed in a moral community where they are responsible not

just for themselves, but for the community as a whole. Staff members don't call themselves teachers; they are simply the more mature, adult members of the community. If they have more influence than do most students in school decisions, it is because their wisdom and experience enable them to produce more cogent arguments, much as is the case for elders in a hunter-gatherer band. But the staff members don't, by any means, always agree with one another. Young students benefit intellectually by hearing staff members and older students argue out issues and suggest compromises at School Meetings, much as hunter-gatherer children learn from hearing their elders argue around the campfire. As the children grow older, they become increasingly able and emboldened to take vigorous roles themselves in these discussions.

AJP: What formal study have you made of the Sudbury Valley School?

Gray: My first formal study was a follow-up of the graduates, which showed that they do very well in life, go to college if they want to, and, as a group, have gone on successfully to the whole range of careers that are valued by our society. The school clearly succeeds as an educational institution, even though it violates all of the principles of schooling that most people in our culture believe are essential. In subsequent research, my graduate student at the time Jay Feldman and I studied the ways by which age-mixed interactions among children and adolescents contribute to children's education in this environment.

AJP: Did you ask the graduates if going to the school disadvantaged them in any way, or if any regretted going there?

Gray: I asked exactly that. None of the graduates reported that he or she regretted going to Sudbury Valley instead of a more traditional school; they all said that the advantages they gained from the school outweighed any possible disadvantages. In their elaborations, they said that they left the school feeling more responsible, more mature, and more passionate about life and learning than they believed they would have had they attended a more traditional school. Those who went to college said that their ability to handle freedom and their eagerness to learn gave them an advantage compared with students who went to college after a traditional high school education. Those who went directly into careers or explicit career training said that the school gave them the chance to develop passionate interests and specialized skills and to figure out how to turn those into a career, which likely would not have happened had they stayed in a traditional school.

AJP: Can you describe a typical day for a typical student at Sudbury Valley School?

Gray: There are no typical days or students. One student might spend all day doing just one thing—maybe working diligently to reach a new level in a challenging video game, or reading the latest teen romance novel or a now-classic Harry Potter book, or painting a portrait, or looking for salamanders in the brook that runs through the school grounds. Another might go from one activity to another every half hour or so, on average. Some might spend all day shooting the breeze with friends, seemingly doing nothing, but if you listened closely and thought about what they were saying to one another you might change your mind about that.

AJP: Give us some other examples of their activities.

Gray: Some might be playing on playground equipment or climbing trees or scrambling around on the huge boulders at the edge of the ten-acre campus. Some might be playfully fencing with padded swords, while others scoot around them on bicycles, roller blades, or even unicycles. Some would be playing games such as foursquare or informal versions of soccer. You might see a couple of kids fishing in the millpond. And, if it's warm enough, you might see someone sitting under a tree reading a book or studying something on a laptop computer. Indoors you would see lots of computer play, but you would also find kids painting or sculpting in the art room, little kids building with LEGO blocks in the playroom or engaged in an elaborate make-believe game. In the relatively soundproof music room, you might find a group jamming or maybe preparing for the next school concert. You might see a group baking cookies in the kitchen, perhaps to sell in order to help pay for some piece of equipment their special-interest group wants the school to buy. You would most likely find older kids and teenagers reading to little kids or playing with them in some mutually joyful way. And, if you poked your head into the room where the Judicial Committee is meeting, you might interrupt an intense, perhaps even heated, discussion of what to do about a new student who has been consistently violating school rules.

AJP: Can you tell us a little about the students?

Gray: The students come in all personality types. Some are quite impulsive and physically active and they seem to prefer a rather chaotic day. Among these may be some who were labeled as having ADHD [Attention Deficit Hyperactivity Disorder] when they were failing in public school, but here

they are doing fine, without drugs, though they tend to get into trouble with the Judicial Committee more often than do other students. Others are just the opposite of that, quite restrained, quite cautious about entering into new activities. But most are somewhere in between these ends of the dimension of impulsivity versus restraint. Some are very clearly intellectually inclined; others prefer concrete action. Some prefer to spend all day with friends; others prefer some time alone. Regardless of personality and preferences, students can find or create niches at the school that work for them, and those niches may vary over the course of a day, a year, or their whole set of years at the school.

AJP: How can the school cover subjects like math and science that often seem tedious to some students and not playful? How does the school ensure that students learn what they need?

Gray: The school as an institution feels no obligation to ensure that students learn any particular skills or subjects. What people choose to learn is their own business. That's a fundamental premise of the school's philosophy. The school does, however, go out of its way to make sure that students have the *opportunity* to learn whatever they want to learn. Students who want help or guidance in learning something can usually find someone to help them, either among the other students or the staff, and there are plenty of books, computers, and other tools for learning. The school does not divide the vast spectrum of knowledge and ideas up onto discrete entities, like *math* or *science* or *history*. Rather, people engage in activities that interest them and, in the process, learn what others might label as *math* or *science* or *history*. The kid who, out of sheer interest, is trying to identify all of the species of reptiles and amphibians he can find on the school grounds or in the adjacent forest is actually doing science, although he wouldn't call it that (unless he were trying to justify his unusual schooling to a meddlesome uncle). The kids cutting recipes in halves or thirds in the kitchen or counting the proceeds from the latest cookie sale and calculating how much more they need to buy the new kitchen appliance they want, are doing math, but, again, they would rarely call it that.

In the process of their everyday activities at the school, and in life outside of the school, all of the students develop the basic literary and numerical skills that most of us remember and use as we grow older, past our school years; and many become true experts in the realms that

interest them. Some of the students are naturally renaissance people; they dabble in lots of areas. Others are specialists, but as they delve deeply into their specialties they also become broader. The kid identifying reptiles and amphibians becomes interested in the natural history of these species and begins to read about them and then about the environments in which they live. All of that is play. If the same kid goes on, after graduation, to become an ecologist or a fish and wildlife biologist, it will still be largely play, though it will also have a serious purpose.

AJP: Does bullying occur at Sudbury Valley School?

Gray: Teasing occurs, and there are squabbles, and fights occasionally break out among the little kids (which are quickly broken up by bigger kids). But sustained bullying seems not to occur. My graduate student, Jay Feldman, who spent hundreds of hours observing at the school as part of his doctoral dissertation work, was struck by the absence of bullying.

AJP: What forestalls bullying at the school?

Gray: I think there are several factors that work against bullying. Age mixing is one of them. Children and teenagers are surrounded by kids who are both older and younger than themselves. Little kids tend to bring out the nurturing instincts in older ones. Older children and teenagers—boys as well as girls—love to care for little kids, and this spirit of caring spills over into a more caring attitude toward one another. A research study in Kenya, many years ago, showed that boys who helped care for younger siblings at home behaved in more kindly ways even to their peers than did boys who didn't have such babysitting chores (because they had a sister who did that). There is even some new research showing that, in traditional middle schools, the simple act of bringing a baby into the classroom periodically, to be observed and talked about by the students, has the effect of reducing bullying, not just while the baby is there but even during the intervals between baby visits.

AJP: Does this calming effect work from the other direction on the age spectrum, too?

Gray: Yes, I believe it does. If a nine-year-old starts to pick on a six-year-old at the school, it is quite likely that a twelve-year-old will step in and scold him or her for it. To the nine-year-old, a scolding from an admired older kid seems to be much more effective than one from an adult. When we segregate children by age in traditional schools and other settings, we establish conditions that tend to promote competition and bullying and remove

conditions that tend to promote kindness. Daniel Greenberg, one of the founders of the school and its principal philosopher, has long contended that free age mixing is the key to the school's success, and our observations corroborate that view. If you tried to start a school like Sudbury Valley, but with kids all about the same age, it wouldn't work.

AJP: You mentioned earlier that kids help set the rules. Is there an antibullying rule?

Gray: Yes. Through its democratic procedures, the school has established an antibullying rule that works quite effectively. It states, essentially, that it is illegal to continue to do or say something to another person if that person, in a serious voice, has asked you to stop. If you call me a jackass and I don't laugh, and if you call me that again and I tell you to stop, and then you do it once more, I can write out a complaint against you to the Judicial Committee. There, a group that includes kids our age, younger kids, older kids, and one adult will hear my complaint, hear your defense, call for witnesses if our stories don't coincide, and pass judgment about your guilt or innocence. If they find you guilty, the punishment might be that you have to stay away from me for the next two weeks.

A student in a typical school who goes to the teacher or principal to complain of bullying is seen as a ratfink and will be bullied all the more. Only a fool or someone extraordinarily brave and self-sacrificial would report bullying in those conditions. But, at Sudbury Valley, the rule violated is one that all students had a voice in making, and the arbiter of justice is a jury of their peers—their friends—not an authoritarian dictator. The democratic ethos and procedures of Sudbury Valley also work effectively against bullying. In an atmosphere of respect for individual rights and liberty, bullying stands out as anomalous. Moreover, over time every student serves on the Judicial Committee, so everyone has heard such stories and talked about the pain that people can feel when repeatedly insulted or mistreated; so students think about these issues more than do students in standard schools. I should add that use of the Judicial Committee to resolve disputes such as the one I just described occurs mostly for the younger children. Older children and teenagers can usually work things out for themselves.

AJP: Does play counsel restraint as well?

Gray: Remember that the most basic freedom in play is freedom to quit. If players can't quit, it's not play. When children play together they must

restrain whatever mean impulses they experience and must look out for other players so as not to ruin the game. If I mistreat other players or fail to understand and satisfy their needs, they will quit and leave me alone. That is the natural consequence of my meanness or lack of sensitivity, and it is a powerful force that will motivate me to pay more attention to others' points of view and feelings next time. Children are endowed with very strong drives to play with other children, but to satisfy that drive they have to learn to get along with other children. That, I think, is one of the central evolutionary functions of play—teaching people to get along with one another. As I have said elsewhere, the golden rule of play is not, “Do unto others as you would have them do unto you,” but is “Do unto others as they would have you do unto them.” That’s a harder rule to follow, because to follow it you have to get into other peoples’ minds to experience what they are experiencing. Children learn that in play. The equality of play is not the equality of sameness, but the equality of diversity.

AJP: Would you describe play as democratic?

Gray: The values of social play are the values of democracy. In social play you have to take everyone’s views into account, allow everyone to have a voice in making and enforcing the rules, treat everyone with respect, and try to satisfy everyone’s needs, because if you don’t, then people will quit and the game will fall apart. I think it’s no coincidence that the strong drive for social play evolved in our hunter-gatherer past, in settings where the democratic values were most crucial to survival. Members of a band had to get along as equals and treat each other well; otherwise the band would fall apart and people might die, because hunter-gatherers need the help of one another in order to survive. I think the strong drive for social play in children came about at least partly as a means for them to learn how to live with one another in nonhierarchical, mutually supportive, democratic ways.

AJP: Let’s go back to the student body. Do all kids, or almost all, who come to Sudbury Valley School thrive there?

Gray: My experience observing the school suggests that there are two categories of kids, both of which are rare, who don’t do well there. One category consists of those who, for whatever reason, have no interest in fitting into the school or following the rules and do not, over time, change in this regard. A fair number of kids, especially those who first enroll when they are teenagers, come with that attitude and then come around, as they are

gradually socialized into the school's culture. But occasionally a kid will come who is so persistently disruptive and disrespectful of other students and the school and so unresponsive to the socializing forces of the school, that he or she is eventually expelled by vote of the School Meeting, after a series of suspensions. The other category, also rare, are children who have some sort of brain disorder that makes them unable to learn in the ways that I have described as natural, through free play and exploration in a social environment. I'm not talking here about kids diagnosed with ADHD. They generally do fine at the school; they even learn eventually to control their impulses and follow the rules. Likewise, diagnoses of dyslexia or other learning disorders of that type have not proven to be a barrier to success at Sudbury Valley. In this environment, kids who were previously diagnosed as dyslexic appear to have no particular difficulty learning to read. But severe autism is a problem. Kids with autism don't naturally play, don't naturally socialize, and don't respond to the friendly overtures of the other kids. They need special, directive help that the school is not able to provide. Kids with a mild form of Asperger's seem to do fine, but those farther out on the spectrum do not.

AJP: Does the school's emphasis on informal cooperation and play make it difficult for Sudbury graduates to compete in the world at large?

Gray: Life, I think, is an informal game, not a formal one. That's even truer in the ever-changing world of today than it was in the more stable world of yesterday. The rules are not fixed; we have to make them up as we go along to fit the changing circumstances, and we have to do so cooperatively, with other people, because we need their help and support just as they need ours.

In the end, in life no one wins or loses; we all wind up in the same place. What matters is how we played the game. Did we have fun? Did we help others have fun? I would argue that even by the most conventional measures of success—such as career advancement or income—those who are most successful are generally those who know how to cooperate, so as to turn what would otherwise be competition into a satisfying situation for all involved (though there are some notable exceptions). And certainly in our personal and family lives, a drive to win, to prove ourselves superior to our partners, is a detriment to success, not an asset. The lessons of informal play, I think, are far more germane to a happy life than are the lessons of formal play. I don't think I'm being Pollyannaish to say that, although I've been accused of it. Just look around. Aren't the happiest people you know

also, most often, the nicest, most cooperative people? Getting along well with others is far more important to success for most people than is math; and you can't teach it, all you can do is allow people to learn it by letting them play.

AJP: Has the Sudbury Valley School concept of education spread?

Gray: Yes, but very slowly. Today, forty-five years after Sudbury Valley was founded, there are about two-dozen schools in the United States explicitly modeled after it and somewhat more than a dozen in other countries. But that still is a tiny number, and the schools are all small. Even Sudbury Valley currently has only about 130 students. People are not breaking down the doors to get in.

AJP: Why do you think that is?

Gray: It's very hard to change cultural norms. For several generations now, almost everyone in our culture has gone to school, defined in a particular way. Most people can't imagine children growing up well without it. They picture wild kids on the street, or eventual homelessness. Even parents who believe in the concept of Sudbury Valley are reluctant to send their children there because they fear criticism from others, and in some states and nations Sudbury-type schools are illegal; parents are arrested if they send their children to such a school. Moreover, the millions of people whose careers depend on the school system—teachers, administrators, textbook writers, test makers, education professors, and the like—have an enormous vested interest in keeping the school system pretty much as it is; and politicians in both major parties regularly call for more coercive schooling, not less.

AJP: In the face of such obstacles, what prospects do you see for democratic, voluntary, playful education?

Gray: As more people learn about Sudbury schools and other schools for self-directed education, and as more people know others who have gone to such schools and done well in life, these schools will begin to seem more normal, less frightening to parents and other adults. Eventually, as more students begin to leave standard, coercive schooling for self-directed education, a tipping point will be reached, and then there will be an explosive growth in such schools and a rapid decline in coercive schools. I'm not ready to predict when this will happen. I'd love to see it happen in my lifetime, however, and I wouldn't rule out that possibility. Hey, call me Pollyanna if you'd like, but I think I am realistically optimistic on this.

AJP: Are you as optimistic about the prospects for play itself?

Gray: I'm even more optimistic about the prospects for play itself. I have seen, over the past few years, an increase in parents' concerns about the lack of free play for their children and the need for safe places for play. This hasn't necessarily translated into action yet, but I think it is about to. We're also beginning to see a renewed interest in play research and theory among academicians. Yes, I am optimistic!