

The Vital Role of Play in Childhood

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“The ability to play is one of the principal criteria of mental health.” Ashley Montagu

The Universal Nature of Play

In over 30 years of working with young children, families, and teachers in Waldorf kindergartens all over the world, I have observed one consistent feature of childhood: creative play is a central activity in the lives of healthy children. Play helps children weave together all the elements of life as they experience it. It is an outlet for the fullness of their creativity, and it is an absolutely critical part of their childhood. The unique qualities of each child become apparent in the way they play. Some cultural differences emerge, for children imitate what they see around them and play it out. But there are strong universal qualities in play. For example, three-year-olds around the world play in similar ways; their play is different from that of five- or six-year-olds.

The universal nature of play is evident. One can speak of the language of play that unites young children all over the world. It is fascinating to watch children from different countries playing together. Although they may not be able to speak one word of the other’s language, they can play together for hours. They enter a common realm where the external differences of language and culture are small compared to the vast similarities embedded in the child’s inner urge to play.

Although play is a steady part of healthy children’s lives, it is not easy to define what play is. I prefer to think of it as a bubbling spring of health and creativity within each child—and, for that matter, within every human being. Sometimes this spring seems to stop flowing, but it remains at the heart of every human being and, with a bit of effort, the blockages can be cleared away and a creative, playful spirit can flow again. This can happen at any age.

When young children are ill they often stop playing for a few days. As soon as they are better, their parents notice the spark of play shining in their eyes again. In general, when children are able to play creatively, they blossom and flourish. If they stop playing over an extended period of time, they can suffer a decline and even become depressed or show signs of other illnesses.

Play is of central importance in a child’s life. This is well supported by decades of research, some of which is described in this article.

Despite its central importance in children’s healthy development, play—in the creative, open-ended sense in which I use the term—is now seriously endangered in the United States and many other countries. It is being pushed out of children’s lives for a number of reasons. I will mention four:

1. Children have become dependent on electronic entertainment: television, videos, and computers. U.S. children spend three to five hours per day in front of screens outside

school hours. This leaves little time or inclination for real play. When media-filled children do play, it is naturally full of media characters and stories. It becomes increasingly hard for children to make up their own creative stories in play, for their imaginations have been overpowered by what they have seen on the screen. In extreme cases children are fixated on these screen images and will not allow any changes in the story they are playing out.

2. Kindergarten programs in the U.S. focus so strongly on teaching literacy, numeracy, and other academic subjects that many children no longer have time to play in kindergarten. Many kindergartens are now full day. In a typical six-hour public kindergarten in the New York or Washington area, for instance, children spend ninety minutes per day on early literacy drills, sixty minutes on mathematics, and thirty minutes on science. They have about thirty minutes for outdoor play but no time for indoor play. They have music once a week, art once a week, and a few other subjects. In Montgomery County, Maryland, near Washington, D.C., I have been told that the word “play” does not appear at all in the kindergarten curriculum.

3. This academic approach to early learning is shifting downward. Three- and four-year-olds are now expected to engage in far more early writing and reading activities than ever before. Head Start, the U.S. federal program for low-income children, was forced to revise its curriculum this year to make more time for early literacy and less time for play. Children will be assessed on their overall gains and programs will be evaluated according to how the children do. Since it is difficult, although not impossible, to assess children on how well they play, normal assessments focus on how many letters and numbers children know, and how many of the basic steps in literacy and numeracy they have taken.

4. The amount of time spent in sports and other organized activities for young children has increased greatly in the past thirty years, beginning with pre-schoolers, so that children have little time for their own play activities.

Dr. Alvin Rosenfeld, a noted child and adolescent psychiatrist who is concerned about the demise of play and of family time, recently quoted these statistics: This over-scheduled family style has insinuated itself into the fabric of our family lives. In the past twenty years, structured sports time has doubled, unstructured children’s activities have declined by 50%, household conversations have become far less frequent, family dinners have declined 33%, and family vacations have decreased by 28% (Rosenfeld, 2004).

Given the importance of play for children’s physical, social, emotional, and mental development, the demise of play will certainly have serious consequences during childhood and throughout children’s lives. Indeed, there is growing concern about what kind of society we are creating if a generation of children grow up without play and the creative thinking that emerges from play. Can democracy survive if creative thinking dies out?

I have observed the steady decline of play over the past thirty years, but even I was astonished by a recent call from a counselor in an elementary school near Washington. She had been talking with a first-grade class and used the word "imagination." When they stared blankly at her, she explained its meaning, but the children continued to look puzzled. She gave an example from her own childhood when she loved to play Wonder Woman. She would put on a cape, she said, and run down the hill near her house with arms outstretched, pretending to be aloft. "That's imagination, when you pretend to be someone you're not," she explained to the children.

"But we don't know how to do that," said one child, and all the others nodded their heads in agreement. Not one child in that first grade seemed to know what imaginative play was.

What Research Tells Us about Play

There has been a great deal of research about play over many decades. In general the research shows strong links between creative play and language, physical, cognitive, and social development. According to researcher Sara Smilansky, children who show the greatest capacities for social make-believe play also display more imagination and less aggression, and a greater ability to use language for speaking and understanding others (Smilansky, p. 35).

Research in Germany in the 1970s showed that by fourth grade children who had attended play-oriented kindergartens surpassed those from academic-oriented kindergartens in physical, social, emotional, and mental development. The findings were so compelling that Germany switched all its kindergartens back to being play-oriented (Der Spiegel, pp. 89-90).

In the U.S. the research of the High/Scope Foundation in Ypsilanti, Michigan is often cited. There, sixty-nine low-income children, ages three and four, who were considered to be at risk of future school failure were divided into three groups. One, called the High/Scope group, was offered a program with much child-initiated activity, including play. Another, called the Direct Instruction group, received much instruction in academic subjects. The third, called the Nursery Program, was a combination of the other two. As the children grew up, those who had been in the High/Scope and Nursery programs succeeded in school and life significantly better than the children in the more academic, Direct Instruction program. At age fifteen, the following results were noted: Initially, all three curriculum approaches improved young children's intellectual performance substantially, with the average IQs of children in all three groups rising twenty-seven points. By age fifteen, however, students in the High/Scope group and the Nursery School group. . . reported only half as much delinquent activity as the students in the Direct Instruction group. . . (High/Scope).

By the time the children had grown up and were age twenty-three, the research continued to point to a much higher success level for those who had been able to play in nursery school. The High/Scope and Nursery School groups showed gains over the Direct

Instruction group on seventeen different variables. At a time when young people in the U.S. are going to prison in record numbers, I think it is especially important to note that the Direct Instruction group had significantly more felony arrests than the other two groups. They also had had more years of special education for emotional impairment, and their level of schooling did not rise as high as the youngsters from the High/Scope group. A recent study by Rebecca Marcon of the University of North Florida found results similar to those of High/Scope when children from different preschool programs were followed through fourth grade. Those who had attended play-oriented programs where child-initiated activities predominated did better academically than those who had attended academic-oriented programs (Marcon).

I would have thought that such research alone would convince educators, parents and policymakers that it is foolish—and even dangerously unhealthy—to immerse three- and four-year-olds in direct instruction programs. Yet these programs are gaining favor throughout the United States. The president and Congress have set the highest levels ever for academic achievement for Head Start children, and have supported legislation that would influence all pre-school programs to move in this direction.

Recent research looks at how young children learn in terms of brain development. This new research does not seem to produce radical new findings about play and learning. Rather, it confirms that the healthy essentials of childhood, including forming trusting relations with caring adults and exploring the world through play, movement, language, and hands-on activities, are in fact essential. Brain researchers continually remind us that the brain is not an isolated organ in the body. It is linked to everything else—to language, to movement, to social and emotional experiences. Thus, when the hands, the eyes, the ears, or the heart are being stimulated through life activity, so is the brain.

Dr. Frank Wilson, a neurologist at Stanford University who has specialized in working with performing artists with hand problems, makes the point that an unusually large part of the brain is linked to the human hand. Thus, if you want to stimulate the brain, get children involved in hands-on activities. He is concerned that children today use their hands primarily for computer operations. He does not consider this to be true hands-on learning and is concerned that the brain is actually under-stimulated in ways that really count. Wilson says, “I would argue that any theory of human intelligence which ignores the interdependence of hand and brain function, the historic origins of that relationship, or the impact of that history on developmental dynamics in modern humans, is grossly misleading and sterile” (Wilson, p. 7).

Jane Healy, a learning expert who has written extensively about brain development and about computer use in childhood, emphasizes the need for children to move their bodies and to be engaged in nature and in life. At birth the brain has the capacity to learn to walk, run, jump, and do a host of other things. But the capacity in the brain develops only if the child actually does these things and doesn't just watch them being done on a screen. The brain is waiting to be awakened, but it needs a multi-sensory, enriched environment to be awakened (Healy, p. 177).

It is important to note here that an enriched environment does not mean an over-stimulating environment. It means a normally enriched environment. My experience is that children thrive when given space for indoor and outdoor play and have a sense of comfort from knowing that a caring adult is nearby, preferably doing things like gardening, woodwork, cooking, or cleaning. These life activities stimulate children's play. Add some basic play materials like logs, stones, cloths, and ropes, from which they can fashion their own toys, plus some artistic materials for self-expression, and a healthy scattering of stories, songs, and verses, and you quickly have a playful child. Under-stimulation, such as I have seen in very poor kindergartens in Africa, is a problem, but so is over-stimulation, which I see in nearly every kindergarten in the United States. Children need a calm and lovely environment, full of warm-hearted human beings who create a sense of security, are engaged in meaningful activity, and provide children with a reasonable amount of materials that can be used in dozens of different ways.

Some research shows a direct link between play and the development of mathematical abilities. Ranald Jarrell of the University of Arizona reports that "play is vital to the development of children's mathematical thinking. Unlike some forms of knowledge, mathematical knowledge, which deals with the relationships between and among things, cannot be learned by hearing adults talk about it. Experimental research on play shows a strong relationship between play, the growth of mathematical understanding, and improved mathematical performance" (Hirsh-Pasek and Golinkoff, p. 220).

As mentioned above, Sara Smilansky found strong evidence that the children who were best able to engage in sociodramatic play, that is, who could play with others in make-believe activities, also showed the greatest gains in many forms of language and social development. She also found that the more advanced players developed more imagination and were less aggressive (Klugman and Smilansky, p. 35).

The development of problem-solving skills has also been linked to play. One type of these skills is called "convergent," where there is one solution to a problem. The other is "divergent," where there are many possible ways to solve a problem. Both are needed in life. The former is what is measured on most standardized tests, which have a single correct answer to a question. Increasingly it is the type of thinking we educate children for. But the second type is what is often called for by life. Complex social, political, or economic questions rarely have just one clear-cut answer.

In *Einstein Never Used Flash Cards*, the authors report on a simple but impressive piece of research. One group of three-year-olds, led by a child named Amala, was given convergent materials to play with, including puzzles and other toys that have just one right way to be used. Michael's group was given blocks and other divergent play materials that can be used in many ways. Then both groups were asked to build a village with forty-five pieces of the play materials that Michael's group had been using. Researchers watched both groups to see how many structures they built and how many names they created for their structures. Michael's group built more structures and had more diverse names for them. When they had problems with the task they did not give up but found new solutions. They used trial and error a lot.

“Amala’s group acted very differently,” the authors write. “Having played with convergent toys they had one right answer, they got stuck and did the same things over and over again when they couldn’t do a divergent problem. They also gave up more quickly than Michael’s group. It was as if they had learned that problems have a single answer. . . .” The authors go on to point out that school generally teaches children to answer questions correctly. But play teaches children to think “outside the box.” If one wants children to grow up with creative capacities, then play is essential. “Where does creativity come from?” ask the authors. “From play—good old unmonitored, unstructured free and open play” (Hirsh-Pasek and Golinkoff, pp. 223-224).

A similar link between play and creativity in adulthood was researched by Stuart Brown, a psychiatrist then working in Texas. He interviewed prisoners who were incarcerated for murder or very aggressive driving that had resulted in a death and found that these prisoners did not have a history of play in their lives. In contrast, when he interviewed winners of the MacArthur “genius” award, a prestigious prize given to creative individuals in a wide range of fields by the John D. and Catherine T. MacArthur Foundation, he found that nearly all had a rich history of play from childhood onwards. In all, Brown interviewed about 8,000 people. What they told him confirmed his conclusion that healthy, varied play in childhood is necessary “for the development of empathy, social altruism and . . . a repertoire of social behaviors enabling the player to handle stress. It fosters curiosity, is a major catalyst to learning, and through long acquaintance with playful imagination, gives angry provoked individuals alternatives to acting impulsively and violently” (Stuart Brown, web site).

Animal Research Linking Play and Brain Development

A number of researchers have looked at the relationship between play and brain size. John Byers of the University of Idaho compared the playful wombats with the more docile koala bears and found that the wombats had bigger brains per body weight. When he and other researchers tracked the actual rates of brain growth from infancy to maturity in different animal types, they found correlations between periods of rapid brain growth and periods of more active play (cited in Furlow, 2001).

There is no certainty yet as to why play and brain size may go together. One explanation is that the most active periods of play may correlate with times when more synapses are forming in the brain. Synapses are the connections that develop between neighboring neurons. Another explanation is that play may stimulate the development of myelin, a fatty substance that allows nerves to transmit more complex information than they can while uncoated.

Researchers tend to be cautious in their conclusions and so also point out that perhaps there is not a direct correlation between play and brain growth. Both might be stimulated by another factor such as metabolism. More research is needed, but meanwhile there is a growing sense that play and brain growth are in fact related.

Marc Bekoff of the University of Colorado studied coyote pups at play. He found that their behavior was much more varied and unpredictable than that of adults. He reasons

that acting in this way activates many parts of the brain and that their brains receive a great deal of stimulation from their playful behavior. Bekoff concludes that “play creates a brain that has greater behavioral flexibility and improved potential for learning later in life.” He also states that “people have not paid enough attention to the amount of the brain activated by play.” He adds that there is enormous cognitive development in play (cited in Furlow).

The Relationship of Play to Health

As an early childhood teacher, I was struck by how often parents said things like this to me: “My child was sick, but it wasn’t too serious. He played the whole time.” Or they might say, “She was really sick and didn’t play at all.” Unconsciously they were associating play with health. There is a great wisdom in this.

The relationship was confirmed for me by the psychiatrist Stuart Brown. As a young intern he worked with very ill children in hospitals where one often did not know if the children would live or die. He noticed that sometimes he would enter the room of a very sick child, but the child would have a playful gleam in his or her eye for the first time. He found consistently that this was an indication of a return to health (Brown, State of World Forum).

Many other experts on play also point to the relationship between children’s overall health and their ability to play. Marc Bekoff of the University of Colorado says play is a sign of healthy development. He adds, “When play drops out, something is wrong.” He adds that we have become a “play-less society” and points to problems such as the prevalence of organized sports rather than spontaneous play and the fact that school is beginning earlier and is becoming increasingly exam-oriented. If these trends continue, there is even less likelihood that children will be given time to play in the future (cited in Furlow, 2001).

Bryant Furlow, writing in *New Scientist*, expresses concern about the relationship between play and mental health: “Children destined to suffer mental illnesses such as schizophrenia as adults, for example, engage in precious little social play early in life. But can a lack of play affect the creativity and learning abilities of normal children?” No one knows for sure, but there is a growing concern that play is disappearing from childhood and that this will affect children’s physical, social, and emotional health. Furlow points out that when “rat pups are denied the opportunity to play [they] grow smaller neocortices and lose the ability to apply social rules when they do interact with their peers” (Furlow, 2001).

Implications for the Future

If imaginative free play continues to disappear from childhood, I anticipate several serious outcomes:

- An increase in mental illness beginning in childhood.
- Difficulties in the way children socialize and communicate with each other, including more aggression in social relationships.

- A change in the development of thinking with a loss of divergent thinking and a growing emphasis on convergent thinking.

Already there is serious concern about increases in mental illness in childhood, including depression, hyperactive disorders, and anxiety disorders. The World Health Organization of the United Nations reports that by the year 2020 childhood neuropsychiatric disorders will rise proportionately by over 50 percent, internationally, to become one of the five most common causes of morbidity, mortality, and disability among children (Surgeon General, 2001).

There is also a growing concern among teachers, psychologists, and others that children's social capacities are weakening. In general, technologically developed countries place such an emphasis on intellectual achievement that they forget how critical social abilities are. We are now seeing extreme situations, the cause of which is not yet known, such as the increase in Asperger syndrome and other forms of autism. The state of California reported a 210 percent increase in autism between 1987 and 1998, and the median age of patients dropped from fifteen to nine years (California Department of Developmental Services, p. 10). Many feel that the increase in autism may be emblematic of a more widespread problem—the growth of a social type of autism caused by too many hours staring at screens instead of interacting with humans in play and other ways, as well as other factors. This situation is not yet documented and needs research.

The example of Amala and Michael above showed how creative play is linked to open-ended divergent thinking. If one does not develop this type of exploratory, open-ended thinking, how does one approach today's social, political, economic, and ecological problems? Not many of our complex contemporary issues can be solved with a simple right or wrong answer. Most are far more intricate and require trial and error and a willingness to keep going through difficulties until one comes to the best solution possible. I am very concerned that without opportunities for open-ended, imaginative play, our children will not be capable of this type of creative thinking as they grow older. Modern democratic processes call for complex divergent thinking, and without it the tendency to favor authoritarian decision-making, where one person says what is right or wrong, grows much greater. We may well become a society with a narrow orientation to problem solving. When situations are not easily resolved, we may become more inclined to resort to aggression and violence, rather than complex problem solving.

I cannot help but wonder whether the politicians who are pushing for early literacy and other forms of direct instruction for three- to six-year-olds are simply ignorant of the importance of play, or whether they would prefer a populace whose creative thinking and social capacities are impaired. Such a populace would find it harder to participate in a diverse, democratic society, and might well opt to be ruled by a government with a strong hand.

Restoring Play

There are many steps that can be taken to restore play to children's lives, but here are a few:

1. Leading educators, health professionals, and other child advocates need to work together to examine the role of play in childhood and the ways in which it is endangered.

Their findings need to be publicized as widely as possible, with an emphasis on what children need for healthy development.

The formation of commissions of prominent experts needs to be done as quickly as possible, for there are many countries at this time that are on the brink of eliminating play in early childhood education in favor of direct instruction of academic subjects for young children. The experience in the United States is that once this change happens, it is very difficult to reverse the process. The U.S. has offered academic instruction to five-year-olds in kindergartens for 30 years. There is no evidence that it has worked, and there is much concern that it has caused great harm. Nonetheless, rather than admitting failure, policymakers are now insisting that one start teaching reading through direct instruction to three- and four-year-olds. They believe that the younger one begins the better, despite research and experience that prove the opposite.

In 2002, the U.S. Senate's Health, Education, Labor and Pensions Committee prepared legislation to support preschool programs for three- and four-year-olds. Such financial support is badly needed, but the legislation was controversial. In part, it called for healthy steps toward a holistic approach to early childhood education, but it also repeatedly called for early literacy and offered bonuses to states that could show gains in "kindergarten readiness." These gains would almost certainly need to be shown in academic areas, as few programs assess children's gains in social and emotional development. The Alliance for Childhood issued a statement of concern that was signed by leading educators and health professionals and was distributed in the Senate and to other government officials (Alliance for Childhood).

2. Parents, educators, and health professionals need to become activists on behalf of young children and engage directly in the development of healthy approaches to early childhood education.

At present, in the United States and other countries, politicians have actively entered the realm of early childhood education and are insisting that early childhood programs promote early literacy and numeracy at the expense of child-initiated activity. This needs to be countered by grassroots and other forms of activism in every community and in every preschool and kindergarten program. Research and experience clearly show what young children actually need for balanced, healthy development. It is time that the fruits of that research and experience are implemented in every early childhood setting. To do anything else is to promote the miseducation of children.

3. Develop large-scale public education campaigns to help parents and professionals understand the importance of play and how to strengthen children's play.

Most early childhood teachers in the U.S., for instance, receive little or no training in helping children play. Since the play patterns of children are already disturbed, simply encouraging children to play is often not enough. Teachers and parents need workshops, literature, videos, and other educational tools to help them support children in play.

4. Parents and community leaders need to work together to create safe play spaces for children.

Children need play spaces where they can run in the grass, roll down hills, and, if possible, play in a stream or fountain. Such play spaces need some adult supervision at a

paid or volunteer level. Just as parents now volunteer to coach sports, they can be encouraged to volunteer to supervise free play spaces and receive training on how to do this. A starting place is to organize a play day in a neighborhood or community (International Play Association).

Conclusion

Research and experience show strong relationships between a child's capacity to play and his or her overall development—physical, social, emotional, and intellectual. There is reason to be deeply concerned that as play disappears from childhood children will suffer in all these areas. In many countries, play is diminishing and the first indications of such suffering are becoming apparent. Yet nation after nation is rushing toward removing play from young children's lives in the misguided belief that three- to six-year-olds are ripe and ready for direct instruction in early literacy and other academic subjects. For the sake of the children, and for the sake of the society they are part of, this direction needs to be reversed now and play needs to be restored as a healthy essential of childhood.

(Parts of this article are adapted from one that appeared in the book *All Work and No Play*, Sharna Olfman, editor, Praeger, 2003.)

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