

Chapter 13

Epilogue

Learning to Play and Learning Through Play

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The editors of this volume posed a challenge at the outset. In effect, is children's obvious enjoyment of play a pleasant pastime with little significance for effective cognitive and social skill development? Or, can play be viewed as an intrinsic learning process, actually a critical method for learning? The opening chapter by Zigler and Bishop-Josef provided a thought-provoking review of the way the government call for a "No Child Left Behind" program and its legislative implementation has led many early childhood educators to emphasize drill-based literacy instruction even in preschool settings. Many preschool directors have therefore cut the time commitment for play as a part of children's early experience. Although there is reasonably good evidence that guided forms of pretend and socio-dramatic play have proven useful in school settings (J. Singer and Lythcott, 2002), the survey of Head Start programs and other early childhood care settings provided by Zigler and Bishop-Josef points to a zeitgeist which constrains or completely eliminates various forms of play in the interest of formalized instruction.

The succeeding chapters of this volume then address the theoretical and empirical relevance of children's games of mastery, rule play, or pretending for the admittedly important task of preparing preschool children for effective school entry and for the smooth transition to skills in reading, arithmetic, and civic knowledge. In this closing chapter, I will attempt to establish a broader context for the role of play in child development and point to implications from the separate chapters that offer answers on the value of children's play as a feature of effective learning through early and middle childhood.

Play as a Critical Feature of Childhood Adaptation

Consider the tasks and confrontations with the "booming, buzzing confusion" of the world that a growing infant and preschool child must cope with early on. We may roughly classify coping mechanisms and tasks to be mastered as "givens" or as "wired-in" abilities as well as abilities that emerge through the child's learning and practice alone or often with the aid of adult caregivers. The relatively innate mechanisms include crying to signal distress and, within about two months, smiling to signal pleasure, sucking, grasping, visual, and other forms of sensory exploration. Direct contact with the physical surroundings are critical as the neurologist Frank Wilson (1998) has shown in his fine study of how touching and various forms of manual contact influence brain function and even language or culture. Of course, children must also learn to crawl, to stand, to walk, to respond to facial expressions of the people around them, to laugh reciprocally, and to signal one's major needs early on by pointing, directed gazing or means other than screaming and weeping. These kinds of abilities involve solitary

practice but also benefit from the assistance or informal or, even sometimes, direct instruction of parents, other caregivers, or siblings.

In contrast to these innate sensory-motor activities, a new form of behavior, play emerges in the second and third years. Along, of course, with early writers such as Vygotsky (1978), Lewin (1935), Piaget (1962), Luria (1932) and many recent researchers propose that play is an adaptive, organized means by which children learn to make sense of their physical and social environment. Through play they gain a feeling of control over the bigness and complexities they confront. They also learn to overcome fears as they create manageable *frames* to enclose scary situations, animals, or people they encounter in real life or on the TV screen. Consider the difference between children's random running, jumping, repetitive mastery efforts, and the apparently greater efficiency of cognitive and social skill mastery that is consequent on their introducing game structure into their movements. The chapters by Berk and coauthors and by Christie point up the self-regulatory and literacy readiness facilitations produced by the special properties of game play, especially pretending and make-believe. More reviews of theory and research on the adaptive significance of imaginative or symbolic play (to use Piaget's term) may be found in J. Johnson et al. (2004) and D. Singer and J. Singer (1990; 2005). Early pretend play when well-practiced and joined with constructive interactions with other children enhances awareness of reality-fantasy distinctions. It also contributes to the child's development of a theory of mind (Leslie, 1987; Schwebel et al., 1999; Harris, 2000). This much research construct deals with the emergence around the age four of children's awareness that their own perceptions or beliefs may not be the same as those

of other children or adults. It also seems linked to some degree to the experience of make-believe play with other children.

As the talking aloud of children fades in the middle childhood period we see the fuller emergence of private imagery and the child's awareness of his or her own stream of consciousness. Such awareness of one's private ability to control or vary one's thoughts may prove in the interest of planfulness, enjoyable fantasy, or heightened self-knowledge (D. Singer & J. Singer, 1990; J. Singer, 1973; J. Singer, 2006; Vygotsky, 1978).

Play, then, may well serve a variety of evolutionary adaptive features for the growing child. As Pellegrini and Holmes (See Chapter 3) own research and their review of the literature suggests, at a basic level, the opportunity for children to break out of the structural school regimen for a brief period to create their own games enhances their learning opportunities. Many years ago the research on Authoritarian, Laissez-Faire and Democratic classroom atmospheres directed by Kurt Lewin demonstrated that more constructive classroom atmospheres resulted when children's school behavior in recess and free-play had moderate adult guidance (Lewin et al., 1939). Further support for Pellegrini and Holmes research is suggested by the findings of an international study of educational systems which ranked the Finnish schools as the world's best based on students' test performance. Among several distinctive features of these schools is the requirement of a 15-minute recess every hour with play opportunities (Alvarez, 2005). Actually, as our own research and work described by Berk and her colleagues in Chapter 5_ suggests, the opportunities to shift from adult guidance to self-guided play may be critical in creating attitudes conducive to self-regulation of behavior and emotion in

children (see also chapters by Biblow and by Freyberg in J. Singer, 1973; D. Singer & J. Singer, 1990).

The child-controlled story-telling of pretend and make-believe play in the preschool years, carried over either silently or in group play form in middle childhood may not only be associated with greater delay of gratification or reduced aggression in children, but also yields benefits in effective language usage and literacy readiness but may also be associated with increased creative ability (Russ, 1993; 2004). (See chapters by Christie and by Bellin and Singer, as well as J. Singer & D. Singer, 1981.)

Learning to Play

Almost all of the chapters of this volume describe research studies and observational evidence attesting to the adaptive learning that may be a consequence of children's play. Before we review these conclusions, however, we must recognize that children's play itself in its most constructive forms requires enhancement chiefly through various forms of adult intervention. Most child development specialists would agree that the tendency to play is innate and that it emerges naturally and sequentially in children who are free of serious brain disorders like autism, (see Chapter 12 by Preissler), or social neglect, and trauma (See Chapter 11 by Haight et al.). For play to flourish as a truly enjoyable, cognitive, and socially adaptive human ability it requires (to use Vygotsky's term) the scaffolding support of one or more concerned adults. This seems especially true for imaginative play since its delicate, internalized structure seems to feed on a combination of parental approval and support, guidance into plot content and, at least initially, modeling of parental playfulness and story-telling (Levenstein, 2005;

Shmukler, 1981; D. Singer & J. Singer, 1990, 2005; J. Singer, 1993). In a study I conducted forty years ago with nine-year-olds, those children who showed more imaginative play skills and self-regulatory ability proved to have a close association with at least one parent who had engaged in story-telling and play modeling (J. Singer, 1961).

Our contributors bring out the importance for children to learn to play with some adult guidance in various ways. The chapter by Berk and colleagues builds on Vygotsky's concept of the proximal zone of development but describes further recent studies pointing to how adult interventions can enhance imaginative playfulness. Bellin and D. Singer's chapter calls attention to the fact that many parents from disadvantaged backgrounds reported that no one played with them as children and it did not occur to them to play with their own preschoolers. They benefited from brief training sessions which they then transferred to their children. Christie's chapter calls attention to a series of studies such as those directed by Eli Saltz (Saltz, Dixon & Johnson, 1977) in Detroit and Sara Smilansky (1968) in Israel where children from impoverished or culturally disadvantaged backgrounds increased their socio-dramatic play following adult-guided instructions. Haight and collaborators' chapter describes careful observational study of mother-child dyads in families exposed to traumatic experiences where adults use a playful interaction that evokes valuable responses in the children. Weber's chapter calls attention to some ways that parents are increasingly using TV-viewing or home videos with very young children to stimulate playful behavior as well as cognitive learning. Resnick's chapter carries this emphasis further with older children and early teens who are eased into constructive computer usage and play as a part of club activities at the Massachusetts Institute of Technology. Nicolopoulou and her collaborators, in their

chapter, carry the teaching a playful orientation to children a step further towards developing an internalized narrative orientation by the use of journal-keeping and by fostering creative self-descriptions. Preissler's chapter addresses the problem of dealing with children afflicted with various forms of autism that are known to limit natural imaginative play. Through carefully guided interventions the children gain new abilities for playfulness.

In summary, our contributors make clear that a critical first step in helping children to use play situations for effective learning is for adults to guide them into enriching and varying their inborn interest in and desire to play. Children eagerly responded to such guidance. We can benefit from more research that identifies particular approaches to enhancing play at different ages, for children at different stages of cognitive development, and for children exposed to socioeconomic stressors or to brain disorders. While books describe specific approaches for teaching play to children at home (D. Singer & J. Singer, 2001) or in school (McCaslin, 1984; Rosenberg, 1987), I believe the time may be ripe for a handbook or comprehensive review presenting a series of age and condition-appropriate guides for parents, teachers, or other concerned adults teaching children to enhance their play whether in its mastery, pretense, or rule-game forms.

Learning Through Play

I have stressed the importance of adult intervention to enhance children's play skills because many children who stem from educationally or economically disadvantaged families may be especially at risk in sustaining effective utilization of their natural play tendencies. A majority of children, perhaps because of early parental

attachment and encouragement, may be ready to respond to play opportunities for learning. Let us turn now to how parents, teachers, and other caregivers may make use of play, especially in its pretend and make-believe form, to foster learning that is aimed first of all at fundamental school readiness skills and then towards broader features of cognitive and social adaptation.

We have already seen from the Berk group's Chapter 5 that a critical beginning for children's readiness to sustain the civility and orderliness needed in the classroom may emerge through role-playing and other make-believe play. The grasp of sequencing, of cooperation, and of attention to others are enhanced by the miniature plots and necessary characterizations of an unfolding imaginative narrative. The Christie Chapter 4 and Nicolopoulou and collaborators' Chapter 7 also demonstrate ways in which journal-keeping (even in scribbling or drawing form) or extended socio-dramatic and role-playing games point children towards sequencing and towards sharing, cooperation and other good-citizen behaviors. Weber's Chapter 9 and the Bellin and Singer Chapter 6 emphasize the importance of politeness modeling by real adults or children in videos that many children now watch at younger and even younger ages. Our own research at Yale on the *Mister Rogers' Neighborhood* television show along with other work on the late Fred Rogers fine series, have demonstrated the importance of children's exposure to thoughtful, responsible, and cooperative actions in a story-telling and play context (Tower et al., 1979). Our studies of the *Barney and Friends* Public Broadcasting preschool series demonstrate that independent raters can document regular instances of politeness and cooperative play behavior in every episode. These studies also attest to how exposure even in the vicarious TV world carries over into children's play and

classroom activities (D. Singer & J. Singer, 1998). In several of our earlier studies, observers scoring children's spontaneous floor play in preschool, found that children engaging more frequently in imaginative play were also more likely to be cooperative with adults, capable of persistence, and less likely to be aggressive or disruptive in that setting or at home (D. Singer & J. Singer, 1990; J. Singer & D. Singer, 1981).

Imaginative play opportunities both in spontaneous occurrence and as a consequence of adult guidance also help prepare children for the necessary discipline and self-restraint or delayed gratification of the school as Berk and colleagues' Chapter 5 makes clear. What then of the very specific content areas that are critical in the early schooling of the very young? Christie's Chapter 4 examines the specifics of beginning literacy which include acquisition of new vocabulary, understanding how printed words go with speech sounds and meanings, the beginning of word sounding, of an early sense of numeracy and other features of reading and writing. That chapter suggests a series of ways in which imaginative play opens the child to curiosity about written material and to the linkages of words, sounds, and meanings. It also affords practice opportunities through well-motivated play-reinactments that may be more efficient than formal drill in reinforcing memory for the processes involved in reading. Words then are more naturally fitted into contexts, a demonstrably superior form of spoken or written vocabulary or number acquisitions and retention. In their chapter, Nicolopoulou and her coauthors, carries this further by fostering journal-keeping and encouraging children to take control of writing and story-telling. In the Bellin and D. Singer Chapter 6, the pretend games, such as *Rhyme Store*, *Octopus Treasure*, and *Trip to Mars*, provide the children with demonstrations and practice opportunities of new vocabulary, phonemic sounding

through rhyming as well as counting. Creative play opportunities offered by Ginsburg in Chapter 8 show how even more subtle features of arithmetic or mathematics, more generally, can be inculcated to children in delightful playful formats. A spoonful of make-believe sugar does intend help the medicine of math go down!

Resnick's work with somewhat older children uses imaginative game play in the context of introducing and encouraging computer skills. The establishment of a club atmosphere, the involvement of the children in playful and cooperative group play interactions demonstrates in vivid fashion that computer skills can be acquired even by children whose family backgrounds have been impoverished, stressful and deprived of a computer-ready atmosphere.

Chapters by Haight and by Preissler focus even more on at-risk children, the socially traumatized and the brain disordered. Carefully managed mother-child interactions which take on a playful form help by providing children exposed to violence new meaning structures and vocabulary as well as readiness to use literacy skills and emotional awareness. The work with Asperger and autistic children described by Preissler points to the ways playful teaching by extra-familial caregivers may not only enhance vocabulary and reading skills but may help these children and adolescents improve their ability to identify their own and other's emotions.

It should be clear from the chapters in this volume that children's play yields numerous learning opportunities and creates conditions conducive to reading readiness and to the acquisition of basic school skills as well as broader potentialities for adaptive functioning. An example of a formal curriculum available to children at the preschool or kindergarten levels which integrates imaginative play with literacy preparation and early

reading is the *Letter People* (Landry & Abrams, 2005). In this commercially distributed program each letter of the alphabet is given a humorous name and characterization and the sounds and uses of the letters are woven into story sequences, songs and interesting interactions that foster the basis for phonemic and other literacy skills. Research on the effectiveness of classroom utilization of this well-organized but play-centered curriculum is beginning to appear (Abrams and Company, 2003).

We need more research that can help us to evaluate the benefits of play in a systematic, quantitative fashion. Some of the positive outcomes described in these chapters are based on observations and anecdotes. Even the more extensively documented formal research studies described or reviewed are often based on short-term interventions or follow-up studies. We especially need more longitudinal work. I would also look for broader efforts to follow up early adult-child situations such as forms of attachment to parents, and how these yield different degrees of readiness by the child to initiate pretend play. Recent area of interest in the study of parent-child relations has come in the observations not only of attachment, but of maternal attentiveness to children's thought patterns (mind-mindedness). We need research on both attachment styles in children and mind-mindedness in mothers to see if such attitudes foster early imaginative play (Borelli & David, 2003-2004; Fonagy et al., 2002; Meins et al., 2003). I would hypothesize that those mothers, fathers, or other adult caregivers who are especially sensitive to their children's thinking processes may be subtly, if not actually directly fostering the child's curiosity, storytelling, and narrative play. For some adults, such stimulation may come in religious storytelling; for those in recounting fairytales,

family histories, or even fantasy epics like The Tolkien *Lord of the Rings*, The Harry Potter series, the *Star Wars* films and videos, or C.S. Lewis' *Narnia* legends.

A Final Word: Some Broader Implications of Imaginative Play

Children who engage in constructive imaginative play in childhood are mastering a heightened awareness of reality-fantasy distinctions. They also gradually learn to recognize the *reality* of human thought processes which are private, individualized, and potentially useful for one's self entertainment, for self-examination and ultimately for effective scientific or artistic creativity. Let me elaborate on this feature of one's play-derived imagination. The chapters in this volume are persuasive in pointing to the usefulness, indeed the importance of imaginative play as a feature of specific aspects of school readiness, of literacy, numeracy, general knowledge acquisition, and even civility. They are thus responsive to the editors and early chapter contributors like Pelligrini and Christie. They call for a defense of recess and play opportunities for children in the face of certain governmental or other educators' misguided demands for excessive drill-focused, "teaching to the test" emphases in early education. We need to see early play as potentially valuable in even a broader context.

With all due respect to the cognitive skills of our primate cousins or to the seeming intelligence of whales and porpoises, the stream of consciousness identified in 1890 by William James (1952) as a central feature of our psychology may be specific to our species. Our brains are wired to generate sensory-derived images that recur and are shaped into a virtual reality world. This world we experience privately in ongoing thought, in vivid memories, in day and sleeping dreams, and in anticipatory

representations of possible future events or social interactions. Just as we must adapt over time to the social and physical demands of our “real” environment, we must also acquire abilities to recognize, to accept and to control, at least to some degree, the reality of our ongoing consciousness. Cave paintings that date back about twenty thousand years, well before we have any evidence of human literacy, attest to art as an early means of human imagery control. Through multiple forms of religious worship and ritual, spirituality, myths and legends, the seven or eight millennia of human written records attest to ways in which we have learned to regulate and to share the memories, speculations, and fantasies that characterize ongoing thought.

In the twentieth century and already in the start of our new millennium, we have witnessed an amazing acceleration not only in world-wide literacy, but in the devising of electronic technologies that all reflect aspects of our conscious memories, fantasies, and narrative capacities. These media may also serve as vast systems to distract us from the insistent, often painful, or existentially threatening nature of our private streams of thought (D. Singer & J. Singer, 2005). I propose that those of us who, early on, learned through imaginative play and pretend games to recognize and to control our imagery may have at least gained an important resource for adapting to the increasing and inevitable complexities of adult life. Years of practice in the playful exercise of make-believe games which then become internalized into a form of control of one’s thought processes may have significant coping value in many practical life situations. Let’s consider, for example, how such self-regulatory manipulation of one’s ongoing conscious thought may actually be useful not only for confronting real life dilemmas, but also for addressing

personal conflicts and interpersonal difficulties once one is involved in some form of psychotherapy.

At a modest level, individuals who have learned to attend to and to reexamine their memories and future fantasies may have certain advantages in daily life or in working effectively in various psychotherapies (J. A. Singer, 2005; J. L. Singer, 2006). Children who have early-on engaged in imaginative play or who have been encouraged to use play during therapy have been shown in early clinical studies and in controlled research to function more effectively in psychotherapeutic situations (Reddy et al., 2005; Russ, 2004; D. Singer, 1993; J. Singer, 1973). The recent examination of child development research by Sandra Russ, for example, leads to her conclusion that pretend play will facilitate insightful problem solving, divergent thinking ability, the likelihood of developing alternative coping strategies, richer and more complex emotional expressiveness, and higher levels of empathetic responses or adaptive perspective-taking (Russ, 2004, p. 32). Russ then examines further evidence from child psychotherapy or other play intervention studies and indicates that play interventions, if they are focused and controlled, do reduce fears and anxieties in various areas including those about undergoing medical procedures or problems of separation or loss. Her analysis of the research also points to the specific aspects of imaginative play as critical features of anxiety-reduction interventions. The evidence also supports the notion that well-developed make-believe play skills are more likely to yield effective play behaviors in child psychotherapies or interventions (Russ, 2004, p. 75). The clinical reports of play therapy by Dorothy Singer (1993) exemplify some of these research findings.

One of the most recently published and probably one of the most carefully evaluated forms of child psychotherapy is the Parent Management Training method, developed over decades by Alan Kazdin (2005). This method and its manual are based on operant conditioning and positive reinforcement learning principles for use by a therapist-trained parent with an oppositional, aggressive, or antisocial child or early adolescent. Much of the treatment involves parent recognition and practice of behavior-contingent positive reinforcement, avoidance of physical punishment, and employment of well-planned time-outs. It is interesting to note that regular use is made of role-play as part of the process in training parents and also in the parent's subsequent directional involvement with the child. Pretend activities are regularly employed to help identify in advance constructive behaviors by the child which will be rewarded in the play and then are later actually rewarded when they occur in "real time".

A similar method termed Parent Child Interaction Therapy (PCIT), also empirically-supported, was developed by Brinkmeyer and Eyberg (2003). These investigators trained parents in a set of interaction and communication procedures they labeled P.R.I.D.E. for Praise, Reflection of children's verbalization, Imitation of the child's play activity, Description of the child's play and Enthusiasm in responding to constructive behaviors or responses (Brinkmeyer & Eyberg, 2003). The PCIT approach obviously relies heavily on playful interactions between parent and the troubled child. Both of these well-researched treatment approaches for extremely difficult children, while clearly behaviorally-focused, still rely on the basic usefulness of play.

Play, then, can be seen to have life-adjustment implications that go well beyond the school readiness and cognitive learning that has been the chief focus of this volume.

Let me take this point a step further by a suggestion, admittedly speculative at this time, but with implications for further research on the broader learning value of pretend play. Robert Sternberg and his research group at Yale have generated a considerable body of data around the concept of *successful intelligence*. This work is premised on the notion that intellectual competence is broader than the individual's ability as measured by standardized tests of IQ which are constructed statistically to measure the g factor or, basically, abstract thinking in verbal and mathematical forms. Sternberg's research has shown that such abstract intellectual skill, while undoubtedly important, has limited predictive value in areas of effective human functioning beyond school grades.

To predict a greater array of effectiveness not only in broader school performance but also in vocational and career adjustment and in social interactions, one must measure at least two other ability dimensions, Practical or "Street-Smart" Intelligence and Creative Intelligence. Successful intelligence as measured by combining these three dimensions has been shown to be more effective than IQ measurement alone in predicting competent performance in business, military leadership, and other social as well as school settings (Sternberg, 1985; 1997; 1999; Sternberg & Grigorenko, 2000). Beyond the measurement value of the theory, there is evidence that actual teaching of elementary and high school students to heighten the three skills can be effective. Training procedures with adults have also been shown to be useful (Grigorenko et al., 2002; Sternberg et al., 2000). Sternberg and his numerous collaborators have provided through research and observation indications of how so-called tacit knowledge or street-smart skills, as well as creative attitudes, prove useful in a variety of personal and professional dilemmas or challenges.

For our purposes we can take note that much of the measurement as well as the training procedures in this growing body of research depends on the use of vignettes of daily life scenes and on role-playing or other imaginative performances by the children or adult participants. There has not yet been a systematic effort to tie early childhood pretend play specifically into this work on successful intelligence. This area deserves exploration in future research. Consider how much of the time children's imaginative play involves thinking of alternative solutions to plot dilemmas. Some of these solutions are certainly fantastic, but, very often, some have practical value. The creative aspects of intelligence are, of course, more obviously linked to the divergent thought capacities or abilities to "think outside the box". Longitudinal research with children as well as studies of creative adults have linked original thinking and novel achievements in the arts to a history of early make-believe play (Russ, 1993; 2004; D. Singer & J. Singer, 1990).

Reviewing the examples of learning to play and learning through play provided in this volume encourages us to consider in how many ways children's play may be tied to the dimensions of practical and creative intelligence and may indeed be important precursors of a broadly adaptive, "successful intelligent" lifestyle. The thoughtful investigator of children's imagination, Paul Harris has called attention to the "roughly synchronous emergence of pretend play and language in young children." This leads him to propose that at some phase of evolution this "explosive fusion" of language and imagination laid the basis for our great human capacity to conceive of a variety of events, many never actually "witnessed but all imaginable," to find words to communicate them to others as well as to entertain them ourselves (Harris, 2000, p. 195).

Our volume began with a challenge raised by some that children's play might not be relevant for adaptive development. Our chapters contradict that implication. Rather we can summarize the reviews of theory and research by our authors as providing an impressive body of evidence that children's play may well be a critical contributor to the development of a literate, creative, and socially effective society.

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