The title of Sandra Russ's book *Pretend Play in Childhood: Foundation of Adult Creativity* attracted me for good reason. Most of us want to be creative in one way or another, but as adults we pretend less and play less, as we prefer to do things that carry utility value; something like pretend play loses its appeal as we grow older. If, indeed, pretend play enhances our creativity, it may not be too late to exercise this capacity.

The book brought to mind the movie *The Sixth Sense* (Shyamalan, 1999), in which Malcolm Crowe (Bruce Willis) has a soul without a body, but he still believes he has a body (reminiscent of phantom limb). He walks around and meets people, including beloved ones, only to find out that he is literally a dead man walking, an epiphany for the character himself as well as a shocking revelation for the audience. Such a powerful drama can be envisioned in the mind of the film maker only through pretend play. In fact, more generally, one might say that creative writing is fundamentally a fancier form (adult version) of pretend play.

But can we extrapolate from this resemblance that adult creativity might find its origins in pretend play in childhood? Can we further argue that pretend play can be cultivated and harnessed to enhance adult creativity? These questions are precisely what Russ set out to address with her three decades of research.

**Is Pretend Play a Mechanism for Developing Creativity?**

*Pretend play,* according to Russ, refers to a symbolic behavior in which one thing is treated as if it were something else. It is the kind of make-believe activities that children perform to entertain themselves without apparent instrumental purposes. The act is symbolic—taking mental representations of situations, people, or things that are not real and transforming
them in the imagination. Thus, puppets start to assume an animated life, carry out a variety of tasks, and have a variety of encounters in a child’s imagination, which is a staged setting for Russ’s research (see the Affect in Play Scale in Appendix A). The act of pretend play also involves affect, as it typically means experiencing vicariously a life of someone or something that is not one’s own, a fantasy or imaginative life that can be actualized only when one suspends disbeliefs and lets emotions and feelings guide the flow of events and actions.

It is an intriguing, intuitively appealing hypothesis to propose that pretend play is crucial for the development of creativity; however, articulating its workings and processes is quite a challenging intellectual exercise. Can pretend play be merely a developmentally transitory phenomenon, a behavior that everyone engages in during childhood but then grows out of? Or, as the author suggests, can one develop creativity through alternative manners and channels? Whatever the case, building a compelling case for the importance of pretend play in childhood means carefully charting trajectories and pathways from pretend play in childhood to adult creativity in a way that is psychologically probable, such that one might trace, say, Franz Kafka's fictional world (e.g., *Metamorphosis* or *The Castle*) to his pretend or imaginative play in childhood with a good degree of confidence.

There are several ways to conceptualize the linkage between pretend play in childhood and creativity in adulthood. One is cognitive: Pretend play may enhance one’s tendency to represent the world in a hypothetical, imaginative way that is novel and original. The other is affective: Pretend play opens up the world by tapping into rich affective experiences, leading to a much enriched inner life and inner vision of the world, hence personal creativity. Russ explores these possible avenues quite thoroughly and argues that through these mechanisms pretend play helps build everyday creativity (little c) in childhood that will eventually lead to major creative contributions (big C).

The book has eight chapters. Russ lays the theoretical foundations for bridging pretend play in childhood and creativity in adulthood in the first two chapters. The conceptual work is quite ambitious, crisscrossing many theoretical traditions and ideas, from Freud to the author’s own integrated model of play and creativity. An advantage in casting a theoretical net widely is that it helps build a nomological network of constructs that represent a range of theoretical traditions yet reveal the centrality of cognitive and affective processes involved in pretend play. For example, Russ is able to identify from these traditions several central constructs involved in pretend play, such as primary processes, divergent thinking, openness to experience, intrinsic motivation, playfulness, and positive affect. Conceptually and empirically sorting through their complex relationships with pretend play and creativity is a challenging undertaking.

**What Evidence Supports the Claims?**

Chapters 3 and 4 report research efforts and findings from the extant literature, made by others as well as the author herself, on cognitive and affective processes, respectively. The Affect in Play Scale (APS), an assessment protocol developed by the author, is a central methodological device for her endeavor. Indices of pretend play (e.g., quality of fantasy and imagination) were linked to a range of cognitive processes and outcome measures, such as divergent thinking, insights in problem solving, perspective taking, and creative narrative.
Because the data were coded for individuals, and often a between-subject design was used rather than an experimental-control type that affords causal inference, it begs the question of whether it was the act of pretend play that evoked related cognitive processes or simply individual differences that led to the observed correlations between indices of pretend play and various cognitive processes and outcome measures. This would become an intractable “which came first, chicken or egg?” problem, until one realizes that behaviors and dispositions often reciprocate with each other to produce a developmental trajectory. Some longitudinal studies reported in Chapter 3 bear out this point.

The role of affect in cognitive development has previously not been well spelled out conceptually and empirically. One reason may be that creative cognition has not been a central topic in the developmental literature. But Russ’s explicit linking of affect in pretend play to the cognitive processes and development central to creative ideation marks a change in this situation. She followed up the leads provided by several leading researchers on emotions (e.g., mood induction, affect and broadened associative network, playfulness) and carried out her own research, using her APS as a main tool to identify several ways in which affect in pretend play facilitates creative ideation. Although there are many ways in which affect can be important to cognitive development, affective experiences engendered by pretend play are clearly one of the factors that help children build rich connections between themselves and the world, building a good foundation for later creative work.

Russ describes several case studies of real-life adult creativity in science/technology and the arts in Chapters 5 and 6, respectively, to show that creative scientists, technological innovators, and artists evoke cognitive and affective processes in their creative work that are not very different from those in children’s pretend play. This is the other end of the story in bridging pretend play in childhood and creativity in adulthood.

But can this isomorphism help make the case for the importance of pretend play in childhood for adult creativity? The author shows some anecdotal evidence that these adult creators were fond of activities similar to pretend play when they were young. But a more systematic investigation is warranted of the long-term developmental consequences of individual differences in pretend play to make a more compelling case. As the author points out, the ways in which pretend play helps develop creativity in science and technology might be different if compared with the arts. These issues await further investigation.

Can Pretend Play Be Cultivated to Enhance Creativity?

All the scientific research Russ conducted on linking pretend play and creativity naturally leads to a question about its implications for educational practice: Can pretend play be cultivated and harnessed to enhance the likelihood of creativity, regardless how “little” this “c” might be? Chapters 7 and 8 are devoted to this topic, and several intervention studies that the author has conducted show some preliminary supporting evidence that this is the case. Some of the cross-cultural comparisons (e.g., between the United States and Italy) are quite intriguing, but, again, whether the differences in pretend play are due to different cultural practices of parenting (whether pretend play is encouraged) is subject to alternative interpretations.
Several issues warrant careful consideration when one is designing such intervention studies and testing the training effects. For example, how much of a dose of pretend play is needed, and how frequently and for how long, to produce a lasting effect? Echoing a point made earlier, I add that pretend play in childhood is often a spontaneous act and as such will reveal nontrivial individual differences. To what extent these individual differences or predispositions for pretend play affect the training effects, particularly when creativity is concerned, also needs to be clarified. In this regard, simply being behaviorally engaged in pretend play may not help very much, but being truly cognitively and affectively engaged may. Russ’s elaboration of how these processes work to enhance creativity, a central topic of this book, is quite fascinating and in many ways compelling.

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