

He spends time in a number of chapters discussing his view that much of the play research conducted by educators and educational psychologists has used categories of play types and qualities that are incompatible with the theoretical definitions used in other disciplines and in much animal research. Pelligrini concludes that play research methods used in studies with children may need rethinking.

The reader who is interested in the history, culture, and controversies in theory and research concerning play will gain an enriched perspective. However, the coherence of chapters related to types of play seem less effective, perhaps because of the author's attempt to include many diverse views on the subjects. For example, in the chapters on locomotor, pretend, game, and object play, the level of detail varies: chapters include long descriptions of some new and some older studies, while other important recent research is mentioned only briefly or not at all. Interestingly, in spite of the exhaustive reviews of many studies, Pelligrini does not mention play with technology-enhanced materials: augmented pretense, virtual object and locomotor play, and computer games.

The chapter on social play is especially well written, and it discusses the author's own extensive research on rough-and-tumble play. This discussion really seems to come alive, and it raises some compelling arguments that this play is a more effective way of teaching social skills than a didactic "social skills program." Pelligrini makes another important point in several chapters that the research on play and human development has focused primarily on the few years of young children's lives rather than including the later childhood years. He argues for the necessity

of studying the entire age span through an ethological perspective.

Although the author's treatment of his subject demonstrates sound scholarship, the density of the writing style sometimes interferes with the clarity of his points, especially when he diverges from a main idea to give detailed substantiating and disconfirming evidence. In relation to other relevant works in the literature, this book works best as an academic book that could be used more as a reference, especially for reading particularly relevant chapters, rather than as a general text in an undergraduate—or even a graduate—level classroom. It provides a thought-provoking perspective, however, and it certainly raises good questions about why and how the various disciplines that have studied play could have such different foci. Finally, this book asks whether the author's goal of improving developmental and educational research on play and of making better use of play research by practitioners is actually achievable.

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Play: How It Shapes the Brain, Opens the Imagination, and Invigorates the Soul

Stuart Brown, M.D., with Christopher Vaughan

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Our culture seems to have a love-hate relationship with the act of playing. On the one hand, we value our leisure time and

can devote many hours to such activities as golfing or watching our kids play soccer. As parents, we support the toy industry with billions of dollars, and as sports fans, we spend similar amounts of money supporting our favorite teams and athletes. Yet at the same time, we will equate play with frivolity; we accept the reduction of playtime in school in favor of more hours for academics and testing, and we often utter these two telling expressions: “Stop playing, and get down to work” and the dismissive “Oh, he’s just playing.”

With *Play: How It Shapes the Brain, Opens the Imagination, and Invigorates the Soul*, Stuart Brown has written a book that clearly comes down on the love side of our cultural schizophrenia regarding play, the side that persuasively argues for the importance—or perhaps, necessity—of play in the lives of not just children but of all human beings. The book is divided into two parts. The first explores the question “Why Play?” The second part is titled “Living the Playful Life.” The author builds his argument for the importance of play by looking at personal play histories, the play of animals, the relationship of play to brain development, and the effect of play deprivation on the development of such sociopaths as Charles Whitman, the young man who in 1966 used the campus tower at the University of Texas in Austin as a perch from which to shoot and kill fifteen people. Brown’s conclusion in this integrative study of play is that play is part of our evolutionary history; in other words, there is a drive to play and we are built to play. Brown ends his book by offering a number of interesting suggestions for how we might recapture our playful spirits. And, as his study of the Charles Whitmans of the world suggests, we ignore this aspect

of our humanness at more than a little of our own peril.

Although I found the book well written, interesting, and informative, I question Brown’s use of the concept of play itself. Brown begins by acknowledging the difficulty of defining play because the manifestations of play are so varied. He also provides some operational dimensions of play (e.g., finding novelty, embracing risk, using the imagination) and pronounces that “play is a *state of mind*, rather than an activity” (p. 60). But some of his descriptions of play activities throughout the book led me to write in the margins: “not sure this is play.” For example, he writes that, “For one person, dangling hundreds of feet above the ground, held there by only a few callused fingers on a granite cliff face, is ecstasy. For someone else, it is stark terror” (p. 15). I could imagine the rock climber experiencing ecstasy in such an activity, but I’m not sure he or she would consider it play. Brown also relates the story of a physician who turned to bread making, first as an avocation and then as a vocation, as an example of an adult finding play in his life. It was not obvious to me, however, why bread making qualified as play. The activity of climbing cliffs or baking bread may be satisfying, rewarding, enjoyable, intrinsically motivated, and capable of fostering Mihaly Csikszentmihalyi’s state of *flow*—all qualities that can be associated with play—but are they necessarily examples of play? They may be examples of enjoyable (and perhaps playful) work, challenges, or activities, but what is missing from Brown’s descriptions is a logical mapping of these activities onto a definition of play. I do not think that this is a trivial point. If the concept of play is extended too broadly, we may lose sight of important defining

characteristics that distinguish play from other types of activity. For example, a commonly cited defining characteristic of play is its nonliteral quality, the fact that play embodies a suspension of reality or what is often referred to as its as-if nature. It is not obvious to me how rock climbing or bread baking involves a suspension of reality. It may be ultimately impossible to achieve consensus around one operational definition of play but the danger in not working towards one is that the concept becomes too general and therefore loses any real defining power.

I think the book would also have benefited from the inclusion of some references. I recognize that this book was written for a popular audience as opposed to an academic one, but I found myself wanting some bibliographical information, not to evaluate the credibility of Brown's arguments but to follow up on the interesting research he was discussing. It may be true that the book would be somewhat less readable if it were peppered with references but some list of resources and references would be helpful for the reader.

Stuart Brown has written a book that is wide ranging in its scope, thoughtful, and somewhat inspiring. What stands out for me, however, is the author's obvious passion. After reading the book, I came away with the strong sense that the writing of this book was not simply an academic exercise for the author or his jumping on some marketing bandwagon. Stuart Brown cares deeply about the value of play for both children and adults, and this book, an embodiment of this passion, provides strong support for others who believe that play is a necessary part of the human experience.

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Wild Justice: the Moral Lives of Animals

Marc Bekoff and Jessica Pierce

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The last several years have seen an enormous growth of interest in many aspects of animal cognitive and emotional capacities. Animals, it has been shown, can learn to solve problems by observing others, can experience complex emotions, and can communicate with others about resources and danger, sometimes deceptively. Dogs and parrots can understand the meaning of human words, and chimpanzees can solve memory-retrieval tasks at rates faster than most people. Nonetheless, those committed to an essential discontinuity between the human and nonhuman often point to the supposed lack of moral and ethical behavior among animals. Although many humans pay attention to our ethical responsibilities to other species, no one has much studied whether other species have moral and ethical codes that may operate in their lives and serve as evolutionary precursors to the purportedly advanced moral behavior of human beings.

On page 1 of *Wild Justice*, authors Marc Bekoff and Jessica Pierce make their position clear and chart the outline of the book: “. . . animals feel empathy for each other, treat one another fairly, cooperate towards common goals, and help each other out of trouble. We argue, in short, that animals have morality.” The key point here is that we need to judge the codes of conduct in other species on their terms, not on ours. We need to apply to the analysis all that we know and can learn about their normal behavior, their social organi-