The Play of Psychotherapy

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The author reviews the role of play within psychotherapy. She does not discuss the formal play therapy especially popular for young children, nor play from the Jungian perspective that encourages the use of the sand tray with adults. Instead, she focuses on the informal use of play during psychotherapy as it is orchestrated intuitively. Because play—whether we use it consciously or not—is a major source for implicit learning within the social domain, the author considers it a nonspecific factor in therapeutic effectiveness that cuts across all modalities. She also suggests that play bears an important relationship to creativity, especially as it exists in the intersubjective space between therapist and patient, i.e., the fertile zone between two subjectivities in which shared making of meaning arises. **Key words:** clinical intuition; hide-and-seek in therapy; imaginative play; neurobiology of play; play in psychotherapy; play's purpose in animals

The very existence of a journal devoted exclusively to the multidisciplinary examination of play suggests that there is a paradigm shift afoot, away from the thinking of scholars who dismissed play as aimless expenditure, toward the neurobiologists, psychologists, sociologists, anthropologists, and other researchers who now embrace and endorse play for its manifest benefits. These benefits all emerge from the most basic mammalian endowment—the playful curiosity that spurs the cutting edge of development in all mammals, knits together self and society, and provides seeds for the creative spirit in human culture. Given that play is a vital instinct hard wired into the mammalian brain (Panksepp 1998), one especially important for the extended childhood of human beings, no wonder play constitutes a hidden layer of psychotherapy. Within psychotherapy of all sorts, play often operates at nonconscious, implicit levels. This occurs through the play of clinical intuition as it manifests at a moment-to-moment level. How and why we psychotherapists play with patients sets the tone for sessions and determines the feel of the intersubjective process.

This article draws on the interpersonal neurobiology of attachment to illustrate how the self grows, unfolds, and builds new structure through play. Freedom to play without inhibition or constriction is a key ingredient for joy,

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interest, passion, and vitality later in life. Just as children reveal their growing edge during play, so too do therapists. Because play is developmentally crucial to achieving cognitive, emotional, behavioral, and social flexibility and complexity, it remains a central part of the repertoire of clinical intuition.

Sometimes we therapists succumb to the instinct to play in order to lighten up the atmosphere. At other times, the intuitive urge to play marks an open, nondefensive attitude towards ourselves and others. Whether initiated by therapist or patient, the instinct to play encourages the experience of fun during experimentation with new possibilities. Whether initiated by therapist or patient, the invitation to play is a bid for connection that allows coordination and taking turns. Always, the capacity to play signals safety in the room, and safety is necessary for novel expression and new coping to emerge.

I demonstrate here, including clinical examples, how we therapists employ through play our clinical intuition to feel our way into the unique contours of each patient. Through the play of language, we find special terms reserved for each person alone. Through the play of different expressions across our face, the idiosyncracies of special greetings, and the innovation of unique rituals, we co-create meaning that is carried only within this particular relationship. At implicit levels, we play with our focus to guide the focus of our patients, gently leading them into new directions. At explicit levels, we play with how we frame and assign meaning to our patients' narratives, all in service of new hope, healing, and growth.

Curiosity Didn't Really Kill the Cat!

After brain plasticity, the next great development in the evolution of human knowing was curiosity. Instead of merely responding to the press of innate survival needs, as reptiles do, mammals became, through play, enterprising, adventurous, and inquisitive. Spencer (1873) viewed play as frivolous, a mere "aimless expenditure of exuberant energy" in children and young animals, while more contemporary developmental psychologists like Piaget (1962) regarded play as purposeful and even essential to human development. From a developmental perspective, the focus on play used to be a static, imitative depiction, reflecting society as it currently exists. The contemporary perspective has shifted to a more dynamic lens, viewing play's creative potential to transform both the individual and society at large (Linder, Roos, and Victor 2001).

Across all descriptive levels—neurobiological, psychological, sociological, and anthropological—investigations have identified a host of affective, cognitive, social, and motor capacities that accompany children's play (for a summary, see Marks-Tarlow 2010). These include brain growth, self-regulation of behavior and emotions, the development of imagination and symbolic representation, the making of meaning, the development of language and narrative, metacommunication (i.e. communication about communication), creativity and divergent thinking, self-transformation, social competence, gender identification, community membership, and cultural awareness and creation.

Therapists draw from the creativity that inheres in play to animate the intersubjective space between patient and therapist. Sometimes we clinicians sense the instinct to play coming to the fore, as when we consciously search for new possibilities with a light-hearted spirit or when we co-construct safe experiments with patients to try at home or in the therapy room. But more often play emerges implicitly, that is, automatically, in bottom-up fashion, as a primary tool of clinical intuition. To demonstrate how play arises spontaneously and intersubjectively, let me introduce a clinical example. From this case, I can springboard to the neurobiology of play—its emergence in the mammalian brain and its role developmentally. In particular, I will highlight the importance of play for increasing affect tolerance, offering behavioral flexibility, expanding positive emotion, creating intrinsic motivation, and broadening social skills and competencies.

A Clinical Example: Emotional Resilience through Play

The red light goes on to signal a patient's presence. I check the clock. At precisely 3:00 p.m., I open the door to my waiting room. In walks Sylvia, a stunning young woman in her midtwenties, sporting curly red hair, bohemian clothes, and work boots so old they are held together with duct tape. Sylvia greets me with a little wave and a sheepish smile as she slips past. I follow her into my office, remembering at the last minute to grab the watch off my desk. As I stand there waiting, watch in hand, Sylvia slowly surveys the room. Then she walks toward the couch and swivels in a semi-circle on her heels. She goes over to the ottoman, picks it up and sets it down between the couch and chair. Then Sylvia lowers herself onto it as if straddling a horse. I respond by walking to my desk, laying down my watch, then moving to my chair, which I turn to face Sylvia directly. I sit down. The session begins.

Before reading on, please take this opportunity to guess what just happened and why. What was this ritual all about? What made Sylvia survey the room? Why did I pick up the watch and then return it to my desk? Why did Sylvia move the ottoman? Take a couple of minutes to play with the scenario and see how many plausible or not-so-plausible speculations you can brainstorm. When ready, read on for some clinical background.

Sylvia came from a high functioning, upper-middle-class family, the second youngest of four siblings, all close to one another and to parents who conscientiously cultivated a tight family ship. Unlike Sylvia's siblings, who grew up with only minor hiccups along the way, Sylvia puzzled the family. She didn't fit the pattern, being much more emotional, unpredictable, rebellious, and untamed. While brilliant and witty, she struggled in high school and dropped out of college in the first semester. In twelth grade, Sylvia suffered a "nervous breakdown" that took the form of an existential crisis over the meaning of love. Sylvia's self-doubt and philosophical queries literally knocked her off her feet, rattling her world so completely that she became functionally paralyzed.

Sylvia's episode stunned her parents. They cared deeply about their daughter and wanted only what was best for her. But the more upset they expressed at Sylvia's condition and the more they tried to cater to their daughter's needs, the more anguished the young woman became. Bedridden for months, doctors eventually prescribed a cocktail of drugs for Sylvia. Then finally, when she emerged from the bedroom, everyone crossed their fingers and hoped for the best. Still no one had a clue what was going on—Sylvia included.

Sylvia made her way from the small, midwestern town where she grew up to Southern California, where she found her way to me. From the start, the wild rebellious child in me connected with this young woman. My own father was a *Puer Aeternus* (i.e. eternal child) and I was his confidante. My father's primary implicit message was to enjoy life to the fullest and never get trapped—not in a fixed job, not in a confining marriage, and especially not in meaningless convention. Intuitively I "got" Sylvia from the start. I understood her desire to break the mold, her leanings towards outlandish idealism, her worship of funny people, her desperation to be creative no matter who gets alienated, and her simultaneous dread of alienating anyone at all, even the busboy.

From Sylvia's perspective, I instantly served as a fabulous role model—the only adult she knew who felt free, loved her work, wore flowing clothes, moved with a light step, and roared with raucous laughter. From the start, Sylvia wanted my admiration and easily prompted the gleam in my eye. Every

time I looked at this young woman, I saw a soiled shiny gem sputtering with potential. I seemed to function as a lapidary, lightly hammering away the friable material to seek and find the precious material inside after glimpsing facets of the rough gem glinting through so brilliantly. When Sylvia said something smart, I responded in kind. When she curled into a ball, I quietly witnessed. When she sank toward the floor, my head tilted sideways. When she said something funny, I roared. Little did I suspect that the fact that I laughed was a litmus test of my worth as a therapist. Sylvia had tried therapy once before. Her previous therapist sat stiffly in the chair, receiving the young woman's every utterance with a solemn eye. Instead of trusting Sylvia's impulse to break out of her pain —and temper it with wit—this therapist interpreted Sylvia's use of humor as a defense. This was not my gut reaction. For I could feel the humor spreading between us like thick honey, gluing us together to soothe Sylvia's isolation and rough edges.

In counterpoint to these bursts of wit in my office, in general Sylvia was bound so tightly she could hardly breathe. I suggested the young woman try yoga to relax and ground herself more fully within her physical body. Meanwhile, every time Sylvia came for her twice-weekly sessions, I tried to ensure that she felt free. Sylvia could talk about anything without my judgment—fear of overwhelming others, sex as reassurance, love of brilliant shock jocks, envy for comics who wear vulnerability like a badge. Sometimes Sylvia focused on big issues, other times on tiny details. Every session had an edge of play, an element of naughtiness. No matter what topic she landed on, I eagerly followed. Yet no matter what she said, I tended to find deep meaning, sometimes on and sometimes under the surface. Meanwhile, Sylvia was all over the map emotionally.

Dear Reader, here is a second opportunity to guess what was taking place at the beginning of session before reading on.

To me, each patient is unique. No matter how many anxious people I see, no two are alike. Every patient is perfect, having found the perfect adaptation for emotional, social, and physical challenges faced. Every patient is clever, sometimes too clever for his or her own good, using cleverness to evade self-awareness. Finally, each patient offers up a mystery: Where is the pain? What are the symptoms? How do these adaptations make sense in light of current circumstances and previous history? What is the key to change, healing, and growth? Through the play of intuition, I sleuth about in search of clues to these initial questions, inviting my patients along as cosleuths.

Sylvia presented a special kind of mystery, having such severe symptoms, yet coming from such a loving, intact family with no obvious stressors. Here is what I pieced together: Developmentally, unlike her siblings, Sylvia was a difficult baby. Her emotions were so big, her parents could not hold them. Mom became disheartened at her baby's wails and tended to pass Sylvia onto Dad. Dad tolerated the narcissistic blow of the baby's inconsolability better, but eventually, when none of his tricks worked, both parents felt scared and overwhelmed. What were they doing wrong? Was there something really wrong with Sylvia? Why couldn't they make their baby feel better?

As Sylvia grew, rather than using the steady eye of her parents to become grounded inside her own body and comfortable with her range of emotions, Sylvia became far too aware of her mother's continually feeling overwhelmed and her dad's vulnerabilities. Sylvia blamed herself. She was much too much for everybody and certainly too much for herself. She could not stand the intensity of what she felt, especially her perceived impact on others, and she could not imagine feeling differently. The pressure was too great. The intense highs and lows of her internal experience were so overwhelming that she compensated by flattening her external world. At a certain point, Sylvia concluded that if you stay very low, resting very still on the ground, there is nowhere else to fall.

Enter psychotherapy as informed by Winnicott's (1971) sensibilities: "Psychotherapy takes place in the overlap of two areas of playing, that of the patient and that of the therapist. Psychotherapy has to do with two people playing together. The corollary of this is that where playing is not possible, the work done by the therapist is directed towards bringing the patient from a state of not being able to play into a state of being able to play" (44).

From the start I intuited play as a path towards healing for Sylvia. For her, everything had become too scary; the stakes were too high; every social encounter was too serious; the risks were not worth taking. Even if Sylvia succeeded one minute, everything could change the next. Without a relational frame to contain her high arousal and variability, Sylvia could not inhabit her own nature fully. Implicitly I sensed that Sylvia was conflicted about her own playful nature, which was a primary reason she was wound so tight and filled with social anxieties. Sylvia needed another playmate, one with a tolerance for great intensity. Voilà—our good-enough fit.

Within months of beginning psychotherapy Sylvia took to yoga. She slowly weaned herself off all medication under the guidance of a psychiatrist. Within a year, Sylvia had enrolled in a community college. Within two years she trans-

ferred with very high grades to a prestigious, four-year university. Within three years she took stabs at creative writing she had only dreamed about before but could not discipline herself to dare.

Last chance to guess at the opening shenanigans in my office.

I have been giving you lots of background about Sylvia to illustrate how play was vital to her healing process. As we came to know one another, Sylvia and I had developed a unique nonverbal ritual. At the beginning of each session, I made no assumptions about where and how Sylvia would sit. She was free to arrange my furniture in any way she wished; I responded accordingly. The one exception was my chair, which I retained the right to sit in, though I eventually tossed even that convention. Sometimes Sylvia landed on the couch, other times on the chair that matched mine. Occasionally she would sprawl out on the floor or would wind up at some odd angle "in the space between" various pieces of furniture. This was how she arranged the ottoman as I described earlier. It was all part of the play between us. Each session, as Sylvia entered my office, I would grab my watch from the desk in case I wound up facing away from the clock. I would then either put it on or return the watch to my desk if I could see the clock (I hate wearing watches if I do not have to).

The feel of a psychotherapy office says a lot about the character of the therapist. The traditionally dark office of psychoanalysis contrasts with my light, airy space, consistent with my not-so-hidden agenda of "enlightening" patients. Not just emotionally, but physically as well, my office functions as an intersubjective space, flexibly construed and rearranged as what Russian psychiatrist Lev Vygotsky (1978) would call a zone of proximal development for patients. At times there was consistency to Sylvia's choices of furniture arrangement. The couch started off representing vulnerability, the chair self-support. Then the couch morphed into authenticity while the chair represented counter-dependency. Part of the rules of our implicitly emerging game included flexibility for the rules to change along with Sylvia's inner world. In contrast to the inescapable quicksand of her psyche, the physical and intersubjective space of my office became a place of greater lightness and fluidity.

From a developmental perspective, Vygotsky viewed play as taking place within a zone of proximal development. This zone represents the cutting edge, the place of safety to try out new ways of being and doing. New mastery usually occurs during play; indeed, children demonstrate new cognitive, emotional, social, and behavioral abilities well before they do so in nonplay contexts (Marks-Tarlow 2010). This mastery in play certainly held true for Sylvia. The flexible

arrangement of furniture proved an outer embodiment of our relationship, which helped grease inner wheels. Over time, Sylvia came to feel more powerful while embracing a more flexible self-image.

Call of the Wild

By arranging the room according to spontaneous, immediate whim and by watching me adjust accordingly, Sylvia got a taste of self-agency at its most primitive level. Jean Knox (2010) wrote that the infant's first experience of agency comes from the capacity to move her parents in accordance with inner need. Developmentally the infant enters this world too helpless and dependent to affect anything beyond his or her own body directly. In fact, the first spark of self-agency consists in a baby's moves for care givers, establishing a safe space in which the infant then can begin to seek more direct mastery in the outside world.

Almost all parents feel the urge to stick out a tongue in hopes their newborn will imitate them—or to tickle baby's belly in search of a giggle. As I have written before (Marks-Tarlow 2010), by issuing the call to play, parents follow a universal instinct wired deeply within the nervous system of most mammalian species and even of a few birds and insects. While arising independently more than once during evolution, the instinct to play went hand-in-hand with the attachment system and care circuit by which parents bond with and nurture their children. Not only was play a major form of bonding between parents and their offspring throughout the animal kingdom, but play also went hand-in-hand with the open wiring and experience-dependent maturation of the mammalian brain (Panksepp 1998).

All social animals play, and the play among them is mostly rough-and-tumble fighting. In most species, the urge to play occurs within a critical window during the juvenile period (Beatty et al. 1982). For example, in rats the impulse towards play fighting begins just before weaning, peaks at twenty-five to forty-five days of age, and relates to normal social and sexual development. It is easy to assume that such play provides practice and skills for later fighting and hunting, but this is too simplistic. There is a host of hidden functions of play, especially related to emotional regulation. For example, early play fighting is preparation for later sexual relations.

Human play resembles the play of other mammals with a critical window for normal development. As with many other mammalian species, rough-and-

tumble play during the early-childhood years appears especially related to the cognitive capacities to settle down and focus attention. This discovery led neurology researcher Jaak Panksepp (2008) to suggest that all early elementary-school education should begin each day on the playground. Panksepp sees running, romping, and grappling as a preventative measure against increasing diagnoses of Attention Deficit Hyperactivity Disorder amid a backdrop of decreasing interest and funding for physical education.

When animals, for whatever reason, are meant to play but do not do so, the consequences can be severe. The animals can develop severe behavioral, cognitive, emotional, and behavioral deficits. Harry Harlow raised monkeys in isolation and deprived them of play. Many developed habits of severe rocking, thumb-sucking, or other signs of self-soothing in response to separation anxiety. During adulthood they failed to develop normal social and sexual relationships.

According to Dorothy Einon (1980), isolated dogs deprived of play will, as adults, actually walk into lighted flames and demonstrate other severe learning defects. Einon's own experiments involved rats raised in isolation and without play. As juveniles, rats are creatures so fond of play that play becomes its own reward, as demonstrated by their eagerness to learn a maze if permitted to play afterwards. Rats deprived of play take a long time adapting to novel environments. They frequently struggle with memory tasks. The behavior of play-starved rats is inflexible, and they have difficulty stopping or reversing courses of action that do not serve them. Rats deprived of play become very active, if not frantic. Yet they cannot harness their activity effectively. They cannot, for example, remove an obstacle by pushing or pulling a ball out of a tunnel in exchange for a food reward. As Einon concluded, "I started by asking what the functions of play might be. I now believe play is not simply practice for later social interactions, but that it affects the versatility of adult behavior and the animal's ability to learn. The young rat becomes a more intelligent adult because it plays" (936).

Stuart Brown (1998), a board-certified psychiatrist who now teaches at Stanford University's Institute of Design, is a contemporary researcher who stumbled into a professional focus on play after unearthing a chilling example of its importance. As a psychiatric resident in 1969, Brown worked within prison settings conducting clinical interviews on twenty-six young, incarcerated murderers in hopes of finding common threads. At first, Brown was puzzled by the highly diverse backgrounds of these felons. They came from such different social classes, ethnic backgrounds, and levels of trauma and deprivation, as well

as varied opportunities in life. Then Brown came across a single factor these highly violent, antisocial men appeared to have in common—the absence of normal play during childhood.

The Play of Imagination

We humans differ from other species that typically cease to play before and after their critical developmental window. We often continue playing right into adulthood. Sports like tennis or squash, hobbies like bridge or gambling, and virtual adventures like *World of Warcraft* or a Wii system all form the playground of adults. A strong connection between play and creativity leads some employers to supply basketball hoops and other imaginative props for their staffs' use. A connection between play, stress reduction, and physical resilience leads many holistically minded doctors to prescribe playful activities for adults. Meanwhile, crossword puzzles have become the latest cure for preventing memory problems during old age (Walker 2005).

Human play, along with its extension throughout the life-span, differs from the play of other species in another significant aspect. Beyond the rough-and-tumble variety common to other mammals, human play diverges into symbolic realms and imaginative landscapes. Imaginative play is so important developmentally for children that its absence during peak years, roughly between three and six, is often diagnostic of a variety of problems (Brown 2009), from specific developmental delays to severe autism.

Children's early creative play coincides with the development of symbolism through language. To a young child, the world is a shiny, magical place, and language expands opportunities for the play of imagination. Initially, young children enact their conceptual understanding in physical form. When his mother's glasses case serves one minute as a microphone and the next as a cell phone, Tommy communicates his embodied knowledge of these objects. Whether or not a verbal stream accompanies these enactments, as Tommy grows, his dramatic play will eventually be filled with words.

According to Piaget, fantasy falls increasingly to the constraints of reality as children develop from early sensory-motor play, through mastery play, to symbolic play, and finally to games with rules. Smilansky (1990) expanded Piaget's system into social realms: functional or exploratory play, a sensorimotor foundation to learn about the physical and social world; constructive play, a more active

somatically based engagement with the world where children combine elements like blocks; dramatic play, where reality is imbued with imagination and objects serve a metaphorical function, e.g., a stick becomes a sword; sociodramatic play, a more complex form of dramatic play with implicit rules and multiple players organized around a common play theme; and games with rules, the most highly organized form of cooperative play, characterized by explicitly defined rules.

These categories reflect increasing complexity as the left-brain competencies of language, logic, narrative, and conceptual self-awareness develop in the second year of life to combine with the right-brain foundation of affective processes and embody self-awareness set in place by the early attachment system. As play becomes increasingly symbolic, social, and imaginative, it moves from implicit, preconscious, and nonverbal roots to include more explicit, conscious, and verbal elements. While still facilitated by safe attachment and primary caretaker involvement, children's play develops in opposite directions simultaneously—toward greater autonomy as well as toward fuller coordination with others.

The seduction of our symbolizing side may easily give a false impression that play emerges from higher cortical capabilities. This is not the case, as demonstrated dramatically by Panksepp (1998) in a striking experiment. Panksepp's lab compared the play of normal rats to that of rats whose cerebral cortices were surgically removed. Research assistants were asked to observe and record the behaviors of the two groups, as well as to guess which group of rats was normal and which excoriated. Invariably the assistants guessed wrong, consistently mistaking the invigorated, boisterous antics of excoriated rats for normal ones, while the subdued behavior of rats whose brains were intact appeared less healthy.

Certainly humans love to use higher thinking centers to continually innovate interesting, more sophisticated games. The cutting edge of technology often manifests in this way. The bright side to this is thrilling virtual play, while the shadow side includes nightmare visions from movies like *Tron* and *Tron Legacy* (1982, 2010), *Jumanji* (1995), and *eXistenZ* (1999) where play turns deadly or technology entraps rather than frees and expands our worlds. Yet like all other emotional and motivational circuits, the urge to play derives from primitive brain structures located in the brainstem and subcortical areas. By contrast, the cortical level serves only to register, modify, or transform these deep urges, not to originate them.

If the urge to play is so ancient and deeply wired into the brain, beginning well below any symbolic content, then what is its primary purpose? To address this issue in greater detail, I have another animal tale to tell.

Monkey See, Monkey Do

Three juvenile patas monkeys are at play in the jungle. All three run up to a tree and begin climbing the trunk until they reach a long, horizontal branch. One after another they inch out towards its end then leap into space. Airborne for a brief moment, each lands on a large grassy patch of ground, quickly rises, rushes back to the tree, only to climb up and jump out into space once again. The group repeats the sequence at least ten more times.

What is this monkey business all about? One obvious explanation involves the possibility that the monkeys are exercising the motor skills necessary to survive and thrive in the jungle as adults. We see this in the imaginary play of young human children who pretend to be doctors or astronauts, mommies or soldiers. Brian Sutton-Smith (1979; 1997) is particularly interested in imaginary social play that imitates adult perspectives and roles. Perhaps the monkeys practice climbing and leaping skills that will prove useful in their future lives of seeking food, shelter, and refuge from predators.

Yet Pellis and Pellis (2010) reported this episode of monkey play in order to illustrate a different function. They argued that if the juveniles were simply practicing motor skills, they would maximize their safety by adopting a parachute stance in midair. To arch their torso and stretch their legs downwards would assure a soft landing. This is the position the Pellises claimed any "sane" monkey would assume. Yet these young patas adopted a different stance. At the height of the jump, each monkey raised its limbs laterally, assuming a spread-eagle position and landing on its soft belly with what the Pellises call a "sickening thump."

Why did these monkeys act so crazily? Pellis and Pellis speculated that the belly flops taught the monkeys having fun can involve pain, while, conversely, experiencing pain sometimes feels like fun. Improvements in motor, cognitive, and social skills do arise indirectly through this kind of play. But its primary function appears to be emotional regulation—the generation of emotional responses plus the expansion of a monkey's tolerance threshold. By playing at the edges of regulatory boundaries in the zone just beyond a monkey's safety and comfort, these animals become attuned to uncomfortable events in the world. This builds their resilience in uncertain circumstances, along with the flexibility to face novelty and risk with an attitude of adventure and gumption.

By giving monkeys the confidence to climb without falling, plus providing the experience of falling without dire consequence, play helped dampen emotional responses to frightening, potentially painful situations. Just as the

limbic system is central for the central nervous system, so is emotional calibration central for the behavioral, social, and cognitive development of all sorts. Translated into the ritual described with my patient Sylvia, the positioning and repositioning of ourselves and the furniture in my office helped this young woman tolerate her own "belly flops," while feeling motivated to get up again. In short, together Sylvia and I were attempting to build a resilient base for life experiences through play; to do otherwise, the pain was intolerable.

Playing at Regulatory Edges

Early play between care giver and baby also occurs at the edges of regulatory boundaries (Marks-Tarlow 2010). Consider tickling, one of the earliest parent-infant games. This form of touch stimulates baby while enveloping her in mother's presence. Sudden moves in and out of baby's personal space, such as my lunging my head into the belly of Macy's baby, allow parents to mimic the behavior of scary predators unexpectedly lunging in for attack. The high mutual arousal these games spark, including rapid oscillations between fear and excitement, stimulate the brain's reward circuits to provide a foundation for pleasurable flows throughout life.

Tickling takes place at that delicious edge where fear melts into pleasure. Babies are highly stimulated by early play, yet there is the risk of overstimulation if parents are insensitive to their baby's tolerance thresholds for arousal. The line between the pleasure and pain is a thin one. Play easily slips into abuse if the game is no longer mutually pleasurable. The presence of a caring and responsive other is a key feature to this kind of play. If you have ever wondered why you cannot tickle yourself, the reason is because tickling requires the presence of another (Blakemore, Wolpert, and Frith 2000). When we tickle ourselves, there is no element of unpredictability. Our actions are under our own control, and so we are not surprised. To know exactly what is going to happen next is to eliminate all alien traces of an other, of one different from ourselves. Like all early games, tickling is played in intersubjective space.

To negotiate the delicate edge between pleasure and pain requires timing. The timing of mutual coordination and turn taking is precisely where parental (not to mention clinical) intuition comes in. *Entrainment* is a term physicists use to describe synchrony in timing, which they call resonance, i.e., the tendency for two oscillating bodies to lock into phase and vibrate in harmony. Through

entrainment, information produced in various areas of the brain becomes coordinated, even in the absence of spatially connected pathways (Buzsáki 2006). In this way, the dimension of time becomes a primary means to forge new neuronal interconnectivity.

Play entrains people, their bodies, along with their brain waves (Marks-Tarlow 2010; VanderVen 1998). We easily understand how mother and baby's physiological processes become naturally coupled in the womb. Their hearts, brains, digestive systems, and even interior worlds are inseparably linked. Yet after birth, baby still relies on mother for emotional regulation and even regulation of physiological processes, such as sleep-wake cycles and digestion. Through attuned responding (Beebe and Sloate 1982; Schore 1994), early play between mother and child enables the complex coordination of interpersonal rhythms based upon safety, trust, escalating arousal, and full engagement in positive emotional states. Early dyadic play promotes mutual immersion in Stern's (1985) "vitality affects" of excitement, joy, interest, desire, and curiosity.

Prototypical Game

If there is one game all parents and children play that captures the beginnings of social coordination and discourse, it is peekaboo. Baby's delight in "now you see me, now you don't" sets the rhythm for object constancy. Through appearing, disappearing, and reappearing, baby internalizes a temporal sequence of positive engagement and disengagement, setting the stage for taking turns and for "being alone in the presence of others," as Winnicott so beautifully phrased it. As baby matures and becomes mobile, the game of peekaboo morphs into a more advanced version of hide-and-seek.

For therapists and patients, in my opinion, the prototypical game is hide-and-seek, which captures the flow of contact through the rhythms of engagement and disengagement. Patients hide for many reasons, all of them emotional. Patients hide implicitly out of fear, shame, or guilt, and then they hope, dread, or expect their therapists to find them. Patients may also hide consciously and deliberately, as when addicts lie or psychopaths conceal information. Patients often hide when severely contracted and constricted with guilt or shame. Consider the plight of Suzette, a patient who had inadvertently descended to the edges of the netherworld of prostitution after moving to California. Instead of fulfilling her dream of becoming a movie star, she wound up instead acting in

real life. Suzette sought therapy to address and break out of her life patterns. When she first entered my office and mentioned wanting to feel safe, with no need to lie to a therapist, I immediately asked her whether she tended to lie to others. This opened up all the desperation she had been hiding from everyone by living a lie. Suzette was so used to concealing the truth, that she may not have told me about her life circumstances at all, had I not so quickly penetrated her veil of fear, shame, and denial. This was a case of conscious hiding, though more often patients seem to hide out of dissociated emotion. When this occurs, patients hide as much from themselves as they do from therapists and others around them. They then require our assistance to break through their own defensive barriers.

The impulse to play hide-and-seek is not limited to patients; it also applies to therapists, in what, by nature, is a reciprocal game. Every clinician must negotiate the dilemma of how much of herself to reveal or conceal. There is no fixed answer to this question, only ever-shifting boundaries that must be sensitive to the dynamics of the moment. Do I speak of the horror I now feel, for example, in response to this patient's lapse of judgment? Do I simply let him read my emotion implicitly, as advertised on my face and in my body language? Perhaps I go a step further in an attempt to conceal my emotions from the patient's detection, knowing how prone to shame this patient is, shame that can be triggered by the tiniest signs of disapproval? I once saw a young man for therapy who faked a suicide attempt in front of a young lady in the midst of her recovery from her own suicide attempt. If I could have hidden my disgust and contempt, I would have. I became convinced that Bill left treatment prematurely precisely because he was able to read my emotions, and that this was not helpful to him.

The role of self-disclosure during psychotherapy has always been controversial. Every school of psychotherapy agrees on the "seek" part of hide-and-seek. Virtually all therapists seek out their patients to help them feel known and as a means of knowing themselves more fully. That said, I recently learned of a marriage counselor who bases her technique upon a twelve-step model by telling couples, "I'm not interested in hearing your story. Every person wants either respect or adoration. You tell me which you want; I'll tell you what to do." But this is the exception; most of us do take great interest in what our patients have to say. Some of us are more active in the seeking pursuit. I, for one, often ask questions while making probing observations. Others therapists assume a less vigorous stance by letting their patients take the lead. Most of us vary how active or passively we attempt to engage patients based on who the person is and what is happening at the moment.

In contrast to a general agreement that patients should be sought out and fully engaged, the "hide" side of hide-and-seek proves more controversial. Schools of therapy disagree about how much of their full selves therapists should hide during psychotherapy. In fact, this may be one of the biggest differences between theoretical schools. Classical Freudian analysts conceal the self to grant plenty of room for patient projections. Gestalt therapists go to the opposite extreme by readily revealing the therapist's self in service of honest feedback and full contact. Self-psychologists track how the therapist's real self either facilitates or interferes with emotional-need satisfaction in patients. In cognitively oriented therapists, the therapist's self is often invisible, considered a nonfactor in treatment. At the other extreme, relationally oriented therapists often highlight the importance of self-revelation, at least as it concerns authentic emotional exchanges with patients.

Despite the theories we hold, ultimately in the heat of the moment, clinical intuition dictates when and how much to reveal or conceal the true self of the therapist. While most clinicians believe it unwise to reveal many facts about a therapist's life, a highly personal revelation delivered at an opportune moment can provide a turning point. Consider the case of Daphne, an accomplished doctor prone to depressive collapses into self-doubt and hopelessness. Daphne cultivated her career before she was ready or able to attend to her intimate relationships. As she crept towards her late thirties, Daphne panicked, worrying she would never marry or have children. At the same, time Daphne's many years of personal psychotherapy allowed her greater openness while seeking a mate. As she began to date more, one day Daphne met Philip through a mutual friend. She was thirty-nine at the time and he was forty. Neither had ever been married. From the moment he laid eyes on Daphne, Philip was crazy about her.

After going out on a couple of dates with Philip, Daphne announced during psychotherapy, "I really don't think this is going to work out. Philip acts *so* certain about our relationship. He is *so* positive about our potential together. But it's too soon. How does he know things can work out? Especially when I feel so uncertain? Philip doesn't know me yet. I'm not clear he even wants to. He's feeding me a line. His actions are based more on who he wants me to be than on who I am. I don't think I want to see him again."

"Can I tell you a personal story?" I asked.

"Sure," she said.

"The first time my husband came to my door, he stepped inside my apartment and immediately declared his love for my taste in art. He stated that his

taste was *exactly* the same. I was a bit taken aback by his strong feelings, but from that moment forward, he never wavered in his interest in me. That was nearly twenty years and two children ago. Many men experience full appreciation for a woman at the first glance. They are going by intuition. This doesn't mean they don't want to know us more deeply. What it sometimes means is that they are truly available for commitment and their hearts are sprung open from the start."

Daphne received my highly personal disclosure with great interest and a sideways cock of her head. She returned the following week to declare, "I had a huge insight during the week. *I have never been attracted to a man who was not depressed before*. I don't know what it feels like. I'm so used to being with self-absorbed men so wrapped up in their pain and the intricacies of their problems that they can hardly look up. My ability to understand these men and resonate with their suffering has always been my primary connection. Philip is so upbeat. He's so naturally outgoing. He's an entirely different guy from any I have ever been with. He's so outside my frame of reference. No wonder I automatically felt so much resistance and mistrust! As soon as I realized this, I started to relax. Now I'm in no hurry to leave."

Indeed, Daphne and Philip have recently celebrated their third year of marriage along with the birth of a healthy, beautiful baby boy.

This game of hide-and-seek within psychotherapy is primordial. I believe many individuals become therapists out of a love for detective work and spy games, a more sophisticated variation of the hide-and-seek motif. Consider the early history of Jerome Singer, as revealed in *The House of Make Believe* (Singer and Singer 1990), a book that celebrates the importance of children's play for the developing imagination. Singer grew up in New York City during the early 1930s when boys liked to band together into "gangs" on the streets. Often while in one gang, Singer was "assigned" as a scout to spy on a rival one. Years later during World War II, Singer experienced resonances of his early play when he received military training and once again was assigned to be a scout on assignment as a special agent in military intelligence. By subsequently becoming a psychoanalyst and researcher, Singer viewed himself to be continuing his investigative work, albeit moving it from external to internal domains. And with this perspective, Singer identified with Sigmund Freud, whose own military experience became a rich source for metaphor. This is readily apparent within Freud's central concepts of intrapsychic conflict, defense, repression, alliances, and resistance (see Berkower 1970).

As I wrote recently (Marks-Tarlow 2010), I became riveted by Singer's story because of the resonances it held with my own early history of play. I grew up

in the suburbs of New Jersey where I, too, was captivated by the spy motif. Two television series, *The Man from U.N.C.L.E.* and *I Spy*, inspired countless hours of imaginative play with my best friend. *Harriet the Spy* was my favorite book. And after reading Singer's account of his childhood, I suddenly detected these parallels between my own early history and the degree to which I remain a voyeur, sneaking in on patients as close as I can, now emotionally rather than physically. I remain drawn to solving the mystery of people's problems. This is highlighted within my specialty of helping to free people from the binds of creative blocks.

Developing Emotional Resilience through Play

Here is a clinical story of a serious form of play during psychotherapy that indirectly relates to hide-and-seek. Rita was the child of a depressive mother who took to her bed when Rita was about three years old. Rita's mother suffered a slow emotional and physical decline and died just after Rita turned six. Rita and her half-brother (same mother, different father), ten years older than she, were subsequently raised by a well-intentioned but thoroughly absent father who struggled to make ends meet and was rarely around. The two became latchkey kids, left to fend for themselves. Not long after their mother's death, Rita's half-brother approached his little sister in a bid for sex. Taking advantage of the huge age difference and Rita's desperate loneliness, her half-brother readily manipulated his sister into an ongoing physical relationship consisting mostly of oral sex, but also occasionally involving full penetration. These affairs lasted several years, and the sexual forays were conducted in secrecy by mutual consent.

When Rita first sought psychotherapy with me, she was so thoroughly dissociated from her body that for many years she had taken to referring to herself in the third person, either as "she" or by her own name, having abandoned the use of the word "I" altogether. I came to learn of Rita's history of sexual abuse by her brother as follows. One day, when I opened the door to my waiting room, Rita was sitting on the floor amidst a series of tiny figurines. The figurines appeared to be engaged in battle. I asked Rita to bring the figures inside my office and re-create the scene. Thus began a slow progression of figurine depictions over the next several months that moved from symbolic to quite literal depiction of the abuse.

Through the play of these characters, Rita felt safe enough, emotionally distant enough, to depict—and, later, to describe—events she felt gagged by

when she tried at first to recall them, just as she had been literally and figurative gagged by her brother for years. Because trauma is held in the body and maintained by the neural circuitry of emergency, it tends to be preserved at subcortical levels, far removed from higher thinking and symbolic processes of the cerebral cortex. By relaxing through play and letting her defenses down, Rita was able to achieve a breakthrough in overcoming disassociation and numbness. Through play, Rita made a soft enough landing, such that her traumatic history became safe enough to address.

The Nature of Defense

According to the hierarchy developed by Irving Maslow in 1943, basic bodily and emotional needs for shelter, food, and comfort must be filled before higher-order desires of growth and self-fulfillment can be considered. Maslow's was an existential point of view, but his idea of a hierarchy finds support in the underlying neurobiology. A frightened hungry cat will not eat, and a fearful, hungry or cold animal will not play (Panksepp 1998). Under stress, an animal siphons off too much energy to survive, leaving it unable to engage its full emotional, cognitive, and behavioral capacities.

Interpersonal neurobiology (Badenoch 2008; Cozolino 2005; Schore 1994; Siegel 2010) helps shift how we therapists conceive of the nature of psychological defenses. The cornerstone of Freud's early psychoanalytic conception of defense was repression. According to Freud, during the Oedipal phase of psychosexual development, children between the ages of three and five erect a repressive barrier against forbidden desires to murder the same sex parent in order to copulate with the opposite sex parent. These forbidden impulses form within the territory of the id, the ground level or backdrop against which the superego erects higher-order defenses, while the ego mediates. Contemporary thinkers now consider dissociation, not repression, as the primary psychological defense (Schore 2009). This concept emerges from trauma studies combined with increased knowledge about the dynamics of arousal within the autonomic nervous system. Whereas repression defends against knowing something, dissociation defends against feeling something too overwhelming to bear.

Allan Schore (2009) conceptualizes differences between repression and dissociation in psychoneurobiological terms. He thought about it this way: Whereas repression represents a *vertical split* between the verbal, conscious workings of

the left hemisphere and the emotional, embodied, and experiential foundation of the right hemisphere, dissociation represents a more serious *horizontal split* between subcortical regions of the reptilian brain and higher-level limbic and cortical areas of the mammalian and neomammalian brain. Because rage and fear are aspects of the reptilian layer that evolved in service of basic survival needs, these primitive emotional circuits serve inherently defensive purposes against predators and environmental threats. When fear or rage circuits are habitually triggered, as when infants suffer repeated relational trauma or adults suffer from chronic work stress or physical danger during war, a horizontal split can occur that blocks access to higher-order social emotions.

This formulation aligns with Stephen Porges's phylogenic view of the autonomic nervous system outlined in his polyvagal theory (Porges 2011). He identified three levels of *neuroception*, i.e., perception through the nervous system of the external environment—safety, slight danger, and severe danger. Each corresponds to aspects of our physiology developed during the evolution of the triune brain, with its reptilian complex, paleomammilian complex (i.e. the limbic system), and neomammalian complex (i.e. the neocortex). Within green zones of safety, we engage an aspect of the mammalian circuitry, related to social engagement, including relaxation and play. This circuit connects the heart, lungs, and brainstem to the striated muscles of the face and head, especially surrounding the mouth, giving rise to vocal gestures and speech. Porges's yellow zone of danger stimulates the sympathetic nervous system, causing us to become more vigilant of our environment in preparation for fight, active avoidance, or flight, allowing us to disengage socially. Finally, the red zone of extreme danger engages an aspect of the evolutionarily oldest circuit of the reptilian circuit. This circuit connects the brainstem to lower centers of the gut, responding to life-threatening circumstances through primitive means by feigning death and shutting down operations. Dissociation is a form of passive avoidance we engage when all active paths become blocked, and the only "escape when there is no escape" becomes an inward one from experience itself.

Porges's hierarchy of arousal and response sheds light on how the care and play circuits go hand-in-hand in mammals. Whereas both realms of danger and life-threatening situations elicit defensive strategies, the realm of safety elicits spontaneous social engagement through eye contact, facial expression, prosody, posture, and other means of seeking connection to others—partly through the realm of play. Through nurturing instincts, parents protect their young from danger and simultaneously provide a safe zone in which play becomes a vehicle

for social growth and self-development. Consider Porges's words: "Our physiology is a bi-directional system from our periphery to the brain, but our brain can also influence how our periphery works. Most therapies work on trying to get cognitions to organize physiological state. And sometimes that's very, very difficult. It's often better or easier to try to get physiology to allow accessibility to cognitive structure. With that, I want you to think about play or group play as something extremely important in shifting physiological state."

Jaak Panksepp, who has done the lion's share of research on animal play, agrees heartily that models of psychotherapy need to conceptualize the importance of the safety plus positive emotions and motivations associated with play (Bergdoff, Panksepp, and Moskal 2011). The incident with Rita demarcated the shift from the realm of danger to that of greater safety. Whereas the neuroception (implicit perception of the environment through the autonomic nervous system) of danger leads to self-protection and defensive constriction, the neuroception of safety leads to self-expression and expansion. Rita began therapy from a purely defensive stance—of fearful hiding and dissociative shutdown. From this platform of defense, Rita's instinct to hide was not an invitation to be found so much as an attempt to ward off demise by hungry predators in a game centering on power, control, and dominance. Over time, as Rita sensed the safety afforded by our relationship, she moved into the realm of self-expression through play. Her figurines allowed Rita to play a game that was no game at all.

The Play of Positive Emotion

Children's play is punctuated with exuberance of interest, the discovery of novelty, a passion to learn, and an intrinsic motivation to engage others—plus the sheer joy of being in the moment. Through play, the pain, risks, ambiguity, and uncertainty inherent in existence are all more easily and flexibly folded into experience without severe internal disruption. We saw in the patas monkeys how play became a powerful integrator of inner resilience with outer experience. Play maximizes interconnectivity of organism with context, self with other, past with future through an eternal present, through inner with outer processes, through receptive with active facets of physiology, and through expansive with reflective capacities.

Play is self-organizing, involving a bottom-up immersion in the moment that is full of vitality. Play enables practicing and internalizing new rules, roles,

and relationships. Social play teaches shared imagination, mutuality, agency, creativity, taking turns, give and take, social hierarchies, and leadership. As applied to psychotherapy, a play model widens the window of affect tolerance partly through affording a positive spectrum of emotions, motives, and experiences to integrate with the negative.

When people's positive sentiments outnumber negative feelings by three to one, they reach a tipping point beyond which they become more resilient in life and love (Fredrickson, 1998; 2001). Frederickson argued that while negative emotions narrow people's perspective and keep them focused on the specific problem at hand, positive emotions broaden people's available repertoire of thoughts and actions as well as their behavior. In this way, positive emotions grant more behavioral flexibility, allowing us to build intellectual and psychological resources.

I believe a central function of clinical intuition is to strike a productive balance between negative and positive moments in therapy. With issues of emotional regulation at the heart of psychotherapy (Schore 1994), when patients feel overwhelmed, unsafe with their own experience or cut off from negative emotion, we are careful to allow full expression of negative emotion during sessions. But if the expression of distress becomes repetitive and lifeless, or needlessly traumatizing or it sends therapy down the road to impasse, intuitively we may be inclined to guide patients towards novel, more positive experiences.

This encompasses what might be called the ordinary magic of therapy, where psychotherapy sometimes involves an emotional sleight of hand to move patient attention away from the obvious in order to produce something novel. Sometimes this shift in attention is top-down and intentional. Sometimes it is bottom-up, which is called sensory capture, when something in the environment is so compelling, we cannot help but notice it. Trevarthan (2001) writes about the importance of joint attention as a precursor to intersubjectivity during development, when babies follow caregivers' eyes towards salient objects in the environment as a primary way to learn.

Therapists are masters of working with joint attention. We pull our patients into seeing what we are seeing. They see us looking at them and then borrow our eyes to look at themselves. This is not the same thing as manipulating attention purposefully, for most of the time these processes work implicitly and automatically, as guided by clinical intuition, flowing holistically and organically from the shared intersubjective space.

Whether or not we are aware of it, through the play of joint attention, we help patients try on new inner perspectives the way they might go into a store

and try on a new outerwear. Through play, we bypass ordinary defenses connected with survival-level processes, e.g., fear and self-protection or anger and rejection. Play occurs in a safe zone that inspires us to come out of hiding and come forward to engage with others and the environment. To see an old topic from a new vantage point by borrowing our eyes often brings greater depth, much like stereoscopic vision.

Conclusion

To bring home the themes of this essay, I ask you to consider the following questions.

1. How does the game of hide-and-seek relate to you and your relationships? How do you seek? How do you hide? Do your rhythms of engagement and disengagement differ from relationship to relationship?
2. How is it for you to be found? In other words, how do you feel about revealing yourself intimately to others? Do you believe friends and relatives should reveal the content of their feelings and subjectivities to one another? How do you feel when others reveal themselves intimately to you?
3. Do you hold a general position on these matters related to self-disclosure or do you ascribe to more of a person-by-person determination? If your self-disclosure is person specific, how do you discern when to disclose and when not to?
4. Aside from your own variations of hide-and-seek, what other games or ways do you tend to "play" with the people in your life?

There is one game I especially like to play with patients. I take what I call "therapeutic license," akin to the poetic license taken by writers. I wave my magic therapeutic wand in order to change some facet of reality. This is not unlike a thought experiment in science, such as Einstein's proclivity to ride a light beam or drop with gravity in an elevator. By suspending certain existential truths, it can become easier to cut beneath the surface. For example, let's say a patient is considering leaving psychotherapy due to a scarcity of funds. I might take therapeutic license to magically eliminate money from the equation. By then

inquiring whether the patient still wants to leave treatment, I can find out what lurks beneath circumstances, logistics, and excuses. So as a final playful gesture in this essay, Dear Reader, let me grant you the same powers. Are there some ways in which you might take therapeutic license? More broadly, how might you play more freely within your own personal and professional lives to explore new frontiers?

References

Badenoch, Bonnie. 2008. *Being a Brain-wise Therapist: A Practical Guide to Interpersonal Neurobiology*.

Beatty, William W., Anthony M. Dodge, Laura J. Dodge, Kathy White, and Jaak Panksepp. 1982. "Psychomotor Stimulants, Social Deprivation, and Play in Juvenile Rats." *Pharmacology, Biochemistry and Behavior* 16:417–22.

Beebe, Beatrice, and Phyllis Sloate. 1982. "Assessment and Treatment of Difficulties in Mother-Infant Attunement in the First Three Years of Life: A Case History." *Psychoanalytic Inquiry: A Topical Journal for Mental Health Professionals* 1:601–23.

Berkower, Larry R. 1970. "The Military Influence upon Freud's Dynamic Psychiatry." *American Journal of Psychiatry* 127:167–74.

Blakemore, Sarah J., Daniel Wolpert, and Chris Frith. 2000. "Why Can't You Tickle Yourself?" *NeuroReport* 11:11–16.

Brown, Stuart. 1998. "Play as an Organizing Principle: Clinical Evidence and Personal Observations." In *Animal Play: Evolutionary, Comparative, and Ecological Perspectives*, edited by Marc Bekoff and John A. Byers, 243–59.

———. 2009. *Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul*.

Burgdorf, Jeffrey, Jaak Panksepp, and Joseph R. Moskal. 2011. "Frequency-Modulated 50 kHz Ultrasonic Vocalizations: A Tool for Uncovering the Molecular Substrates of Positive Affect." *Neuroscience and Biobehavioral Reviews* 35:1831–36.

Buzsáki, György. 2006. *Rhythms of the Brain*.

Cozolino, Louis. 2006. *The Neuroscience of Human Relationships: Attachment and the Developing Social Brain.*

Einon, Dorothy. 1980. "Spatial Memory and Response Strategies in Rats: Age, Sex, and Rearing Differences in Performance." *Quarterly Journal of Experimental Psychology* 32:473–89.

Frederickson, Barbara L. 1998. "What Good Are Positive Emotions?" *Review of General Psychology* 2:300–19.

Frederickson, Barbara L. 2001. "The Role of Positive Emotions in Positive Psychology: The Broaden-and-Build Theory of Positive Emotions. *American Psychologist* 56:218–56.

Knox, Jean. 2011. *Self-Agency in Psychotherapy: Attachment, Autonomy, and Intimacy*.

Linder, Marc-Olivier, Johan Roos, and Bart Victor. 2001. Play in Organizations. *Working Paper 2*, Imagination Lab Foundation. http://www.imagilab.org /pdf/wp01/WP2.pdf.

Marks-Tarlow, Terry. 2010. "The Fractal Self at Play." *American Journal of Play* 3:31–62.

Panksepp, Jaak. 1998. *Affective Neuroscience: The Foundations of Human and Animal Emotions.*

———. 2008. "Play, ADHD, and the Construction of the Social Brain: Should the First Class Each Day be Recess?" *American Journal of Play* 1:55–79.

———. 2011. "Cross-species Affective Neuroscience Decoding of the Primal Affective Experiences of Humans and Related Animals. *PLoS ONE* 6 e21236:1–14. http://www.plosone.org/article/info:doi/10.1371/journal.pone.0021236.

Pellis, Sergio M., and Vivien C. Pellis. 2010. *The Playful Brain: Venturing to the Limits of Neuroscience*.

Piaget, Jean. 1962. *Play, Dreams, and Imitation During Childhood*. Translated by Caleb Gattegno and Frances M. Hodgson.

Porges, Stephen. 2009. "Polyvagal Theory 1: Basic Principles (Phylogny, Neoception, Dissolution, Social Engagement System)." Lecture recorded at NSW Service for the Treatment and Rehabilitation of Torture and Trauma Survivors, New South Wales, August 2009. http://www.psychevisual.com/Video_by_Stephen_Porges_on_Polyvagal_Theory_1_Basic_principles_phylogeny_neuroception_dissolution_social_engagement_system.html.

_____. 2011. *The Polyvagal Theory: Neurophysiological Foundations of Emotions, Attachment, Communication, and Self-regulation.*

Schore, Allan. 1994. *Affect Regulation and the Origins of the Self: The Neurobiology of Emotional Development*.

_____. 2009. "Right-brain Affect Regulation: An Essential Mechanism of Development, Trauma, Dissociation, and Psychotherapy." In *The Healing Power of Emotion: Affective Neuroscience, Development,& Clinical Practice,* edited by Diana Fosha, Daniel J. Siegel, and Marion Solomon, 112–44.

Siegel, Daniel J. 2010. *The Mindful Therapist: A Clinician's Guide to Mindsight and Neural Integration*.

Singer, Dorothy G., and Jerome L. Singer. 1990. *The House of Make-Believe: Children's Play and the Developing Imagination*.

Smilansky, Sara. 1990. "Sociodramatic Play: Its Relevance to Behavior and Achievement in School." In *Children's Play and Learning: Perspectives and Policy Implications*, edited by Edgar Klugman and Sara Smilansky, 18–42.

Spencer, Herbert. (1855) 1873. *The Principles of Psychology*.

Stern, Daniel N. 1985. *The Interpersonal World of the Infant: A View from Psychoanalysis and Developmental Psychology.*

Sutton-Smith, Brian, ed. 1979. *Play and Learning.*

———. 1997. *The Ambiguity of Play*.

Trevarthen, Colwyn, and Kenneth J. Aitken . 2001. "Infant Intersubjectivity: Research, Theory, and Clinical Applications." *Journal of Child Psychology and Psychiatry* 42:3–48.

VanderVen, Karen. 1998. "Play, Proteus, and Paradox: Education For a Chaotic and Supersymmetric World." In *Play from Birth to Twelve and Beyond: Contexts, Perspectives, and Meanings*, edited by Doris Pronin Fromberg and Doris Bergen, 119–32.

Vygotsky, Lev. 1978. *Mind in Society: The Development of Higher Psychological Processes*. Edited by Michael Cole, Vera John-Steiner, Sylvia Scribner and Ellen Souberman. Original work published 1930–1935.

Walker, Alan, ed. 2005. *Understanding Quality of Life in Old Age*.

Winnicott, Donald W. 1971. *Playing and Reality*.