

Neuroscience and the Magic of Play Therapy

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Neuroscience research has provided support for the potential of play therapy to create new neural pathways. Recent studies also have identified the impact of mirror neurons and oxytocin on the therapeutic relationship. Using the metaphor of magic, we discuss how magicians take advantage of these neurological processes to trick audiences and contrast how play therapists use similar dynamics to enhance neuroplasticity. Whereas magicians rely on techniques that narrow or misdirect attention to create their illusions, the magic of play therapy is a powerful and developmentally appropriate method of directing attention to the child's environment, expanding awareness and transforming children and adolescents.

Keywords: neuroscience, play therapy, attention, magic

Magicians are entertainers whose tricks amuse and mystify their audiences. Researchers have discovered that these illusions involve exploiting neurological processes by taking advantage of mirror neurons and oxytocin. In fact, magicians practice both sleight of hand and sleight of mind (Macknik & Martinez-Conde, 2010; Macknik et al., 2008). Whereas magicians are tricksters, play therapists are committed to authenticity and transparency—no gimmicks, no deceptions. Nevertheless, magicians and play therapists have a great deal in common. They both are professionals who are dedicated to honing their skills, gifted in quickly developing rapport, and talented in creating transformative experiences. In this article, we discuss the neurological principles that both magicians and play therapists apply to their work. We summarize the neuroscience findings

that relate to both, and describe how play therapists, using the healing powers of play, promote the neuroplasticity of their clients. A clinical vignette is provided to illustrate how neuroscience knowledge can help therapists to explain and parents to understand the magic of play therapy.

Neuroscience Principles of Magic

Neuroscientists have demonstrated that the fundamental principle of magicians is to direct the attention of others (Macknik & Martinez-Conde, 2010). They artfully manage attention and use the shortcomings of human awareness by a variety of sensory capture processes, such as framing, top-down attention, bottom-up attention and change blindness.

Framing is a common strategy that magicians use to localize the audience's attention, and, in the process, divert it from noticing a surreptitious action. Patter is one framing technique that holds the spectators' interest with ongoing commentary and jokes while the magician is busy with illusive maneuvers. Magicians also can immediately narrow our frames by displaying, with a flourish, a deck of cards to the audience in one hand. Having captured the spectators' attentional spotlight, they can secretly palm a card in the other.

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Top-down attention is a voluntary process in which one chooses to focus the awareness spotlight on a particular stimulus. Neuroscientists have identified the frontal lobe as the origin of this executive function, which is then mediated through the basal ganglia (Buschman & Miller, 2007). An example of manipulating attention through top-down processing is when a magician merely instructs the audience to observe carefully an object that a volunteer is holding, while carrying out a secret action behind the volunteer's back.

Bottom-up attention is a rapid and automatic form of selective filtering that is evoked involuntarily by emotional arousal (Connor, Egeth, & Yantis, 2004). Neuroscientists have identified the origin of this processing in the brainstem, parietal, and temporal cortices, so the direction is upward. One way in which a magician controls this ascending sensory system is by suddenly producing an unexpected spectacle, such as a flying dove or oversized bouquet. Involuntarily and automatically, the spectators' gaze and attention will focus on the unanticipated action, giving the magician a few unattended seconds to carry out the mechanisms involved in the next trick.

Another important perception principle that magicians rely on to trick the audience is change blindness, the well-documented failure to notice significant transformations that take place right before our eyes (Levin, 2012). Neuroscientists recognize that change blindness happens because, contrary to popular myth, multitasking is impossible. Instead, individuals are actually switching their attention, however briefly, from one task to another.

Neurobiological mechanisms are also used by magicians as they create an atmosphere of wonder and surprise. A great deal of exciting research has found the neuropeptide oxytocin to increase interpersonal trust (Bartz, Zaki, Bolger, & Ochsner, 2011). Studies have demonstrated that oxytocin levels quickly rise when individuals laugh together, display affection, and show empathy (Feldman, 2012). Magicians rely on humor and affability to establish rapport and trigger the release of oxytocin. Consequently, the higher levels of trust increase the susceptibility of the spectators to being misled during the performance.

Mirror neurons are present throughout the human brain and are considered the building

blocks of empathy (Iacoboni, 2012). Our mirror neurons enable us to imitate the actions of others and understand their intentions. However, they also allow us to be easily bluffed by the decoys of magicians. A skilled magician constantly makes use of seemingly innocent actions to hide ulterior moves.

The Neuroscience and Magic of Play Therapy

Play therapists can also rely on neuroscience to create a sense of magic, without trickery, in their work with children. Play is an emotionally engaging and creative experience that increases levels of oxytocin. As noted earlier, this hormone enhances feelings of emotional well-being and trust, thus supporting the creation of a therapeutic relationship between the child and play therapist. Mirror neurons are also activated in play, helping the therapist accurately read and connect with the child's emotional state. Cozolino (2010) proposed a bio-behavioral view of therapy as a specialized type of enriched environment and asserted that "psychotherapy is a means of creating or restoring coordination among various neural networks" (p. 25). He argued that therapists can use their knowledge of neuroscience to design interventions that support the creation of new neural pathways, in other words, to promote neuroplasticity (Cozolino, 2010).

Promoting Neuroplasticity

Cozolino (2010) has identified four factors of therapy that enhance neuroplasticity. First, the empathic attunement of a therapeutic alliance provides the optimal chemical environment for creating new neural pathways. The importance of a strong alliance comprised of goals, tasks and bonds, which has been supported in numerous studies and typically accounts for 30% of the variance in child, adolescent, and adult psychotherapy outcome research, now has support from the field of neuroscience (Lambert & Barley, 2001; Shirk, Karver, & Brown, 2011). Second, a certain level of emotional arousal is ideal for consolidation and integration of neural pathways. The context of client-directed play may permit the child to determine her personal "sweet spot" for promoting neuroplasticity. Millions of neurons are firing in both the child's

and the therapist's brains as they engage in the emotionally and physically enriched playroom environment. The integration of affect and cognition is the third therapeutic factor. In the playroom, the child and therapist collaboratively create conditions where the brain has an optimal amount of arousal, setting the stage for change and learning to take place. Complex, elegant neural patterns emerge when clients engage in practices that are both expressive and mindful (Siegel, 2007). Finally, play therapy involves co-constructing wordless narratives of self-awareness and transformation. Play has the essential characteristic of honoring the child's emotional world and private logic while simultaneously providing the conditions to author a healthier, more adaptive narrative. These four factors not only promote neuroplasticity, but also they allow the play therapist to use the same neurological processes that magicians rely on to perform tricks. However, in the hands of play therapists, these same processes can enhance relational connectedness, deepen consciousness, and promote conditions for change.

Enhancing Attention and Expanding Awareness

The findings of neuroscience support the centrality of attention, awareness, and consciousness in the dynamics of successful play therapy. In contrast to the magician who uses a gimmick to narrow or misdirect attention, the effective therapist helps to expand awareness. The processes that exist beneath conscious awareness are vitally responsible for a child's fundamental way of being, sense of self, and worldview (Lux, 2010). However, because such aspects of functioning are unconscious, they are outside the range of deliberate cognitive analysis. Nevertheless, they are reachable through the "magic" of the interpersonal encounter that takes place in the play therapy relationship. Building on the transformative power of the therapeutic alliance, play therapists can rely on the processes of framing and reframing, top-down attention, and bottom-up attention to expand the client's awareness.

Magicians often lull audiences into false senses of security through small talk and discussion while performing the magic trick. In contrast, play therapy provides a unique framework for the child to explore life circumstances

by establishing security through a safe interpersonal haven. The empathic, resonating therapeutic relationship provides an unspoken reframing of the child's windows of awareness. In the safety of the therapeutic relationship, the child can express and encounter worries, hopes, fears, anger, and joy. By engaging in play activities, therapists rely on the principle of top-down attention to enable children to focus their awareness on previously unacknowledged personal strengths, emerging competencies and unexplored emotional terrain. Simple, well-timed tracking statements, comments that acknowledge the child's decision-making and creative capacities, and meaningful reflections are opportunities for children to see themselves in different, more positive ways. The play therapist can also facilitate a bottom-up process, which is rapid and automatic, by several techniques that capture the client's attention and arouse emotion. The client's body language, tone of voice, and facial expressions are often outside of awareness. Therefore, one play therapy strategy is to use immediacy by tracking the behavior and feeling state of the child, making evident both actions and affect. Another strategy is to honor the child's transderivational searches (Erickson, Rossi, & Rossi, 1976)—those mindful, introspective pauses during which children may tilt their heads and defocus their eyes as they explore their inner experience. At such moments, the play therapist can allow time for the child to access unconscious processes through expressive and symbolic play.

Overcoming Change Blindness

In change blindness experiments, one person or object is often switched with another, outside of the viewer's conscious awareness. The fundamental lesson of the change blindness studies is that to truly see, we must pay careful attention. Gradual changes, which are typical in play therapy, can be especially difficult to notice. The process usually takes place imperceptibly when children experience more satisfying interactions, an expanded range of emotions, and enhanced regulation. Nevertheless, when they turn their focus from inadequacy to competency, from victimization to resilience, and from agony to hope, they change in heart, mind and brain.

Researchers have found communication and collaboration can overcome change blindness (Tollner-Burngasser, Riley, & Nelson, 2010). The therapist has a unique opportunity and responsibility to bear witness to the process of a new person gradually appearing from the former self—much the same way that the change blindness experiments switch one person for another. Frequently, the therapist can track change by combining a there-and-then recollection with a here-and-now observation. For example, the therapist might say, “You know, back when we started working together, you looked really sad. Now, I see you smiling as you draw this picture.”

Using Oxytocin for Enhancing Therapeutic Trust

Magicians rarely rely on interpersonal trust from their audience to perform tricks. In play therapy, the relationship between therapist and client is characterized by unconditional positive regard and genuineness (Landreth, 2012), whereby both the therapist and the child establish a trusting therapeutic bond. Numerous studies indicate that oxytocin plays a key role in social behavior and social understanding. Oxytocin secretion is typically correlated with increased trust, reduced fear, and improved emotional recognition. Because of the lessening of the fearful effects produced by the amygdala, the child will be able to address previously threatening aspects of trauma or loss. Formerly automatic defensive responses will be relaxed so that maladaptive somatic markers can be unlearned and new patterns of engagement, responding and problem-solving can be tried. As James (1996) stated, “In the safe disguise of play, (the child) can balance power, reward himself or herself with fabulous riches, vanquish those who do not do his or her bidding, and devour his or her enemies” (p 163). Symbolic play in the context of a caring relationship provides safe opportunities for the child to practice creative exploration, reenactment, and rehearsal for dealing with challenging emotions, people and events.

Using Mirror Neurons for Empathic Attunement

An attuned play therapist, who seeks to understand what it is like to experience oneself

and the world as the child does, achieves this understanding by attending to information received from his or her own mirror neuron system. This understanding is first an implicit sensation that emerges as an intuition. The therapist then feels the child’s emotion. In return, this magical moment of connection can help the child to feel truly felt. Such an exchange of emotional contagion is the heart of the therapeutic encounter.

Neurologists have discovered how the simple act of making eye contact is another example of how hard-wired humans are for connecting with others. A magician uses eye contact to distract and deceive, but a play therapist uses it to attune with the child and create a therapeutic alliance. This interpersonal fusing of experience involves the right hemisphere of the play therapist’s brain connecting implicitly to the child’s right hemisphere (Schore, 2012). This reciprocal connection on an unconscious level allows for a mutual communication that creates relational magic. A magic performance can leave a spectator mystified, but the real magic of play therapy is that it can leave a child transformed.

Play Therapy as a Developmentally Appropriate Method

For many children, magic tricks are a popular form of play, in part because unexpected events spotlight attention and interest and because many children respond more to nonverbal signals than verbal discussion. Play therapy has been established as a developmentally appropriate intervention for young children and preadolescents, in contrast to the traditional counseling approach of talk therapy (Goodman, Reed, & Athey-Lloyd, 2015). Studies of brain functions and development provide an additional evidence base to help explain why talk therapy is less appropriate during early developmental periods. The prefrontal cortex is the one of the last brain regions to fully develop (Field, Beeson, & Jones, 2015), usually not until a person is in his or her mid-20s. The ability for executive functioning, also known as planned behavior or organizational ability, is still “under construction” earlier in life. Furthermore, the capacity for metacognition, also known as “thinking about thinking,” is continuing to develop in childhood. The ability to hold and reflect on complex perspectives is considered a foundational ability

for psychological mindedness, mindsight, or insight into a person's own mentalization and motives (Fonagy & Target, 2002).

Talk therapy is a modality that relies on the capacity for insight, self-awareness, the ability to express oneself through language in addition to nonverbal communication, and the ability to sit in a chair for an extended period of time. These abilities are at a different stage of development in young children, who often communicate nonverbally and kinesthetically (Kestly, 2014). In other words, children communicate through play. Because it is believed that 60% of communication is nonverbal (Burgoon, 1985), even adults primarily interact nonlinguistically with each other. Neuroscience can also be used to help explain how play therapy works to adults who are themselves participating in play therapy as an intervention.

Especially relevant for our work is that play is an excellent vehicle for promoting children's emotional development and affective regulation (Andrews, 2012). Researchers and theorists have long proposed that play affords the child an optimal level of arousal (and satisfaction) by providing activity that is not too challenging or too easy (Andrews, 2012; Bruner, 1986; Csikszentmihaly, 2002; Vygotsky, 1935/1978). Bruner hypothesized that play has the ability to reduce stress and allow the child to be in control, which, interestingly, supports the child's engagement in increasingly complex activities.

Symbolic play, also known as pretend play, is considered essential to a person's social, cognitive, emotional, and physical development (Lillard et al., 2013). The pioneer of psychoanalysis Sigmund Freud postulated that all play releases internal tension; the empirical research seems to suggest that symbolic play may have a causal impact on reasoning, language, narrative, and emotional regulation, though further research is needed (Lillard et al., 2013). Fiorelli and Russ (2012) found that affect or emotional themes in play related to positive mood in daily life and that imagination and organization in play related to coping ability.

Using Neuroscience to Explain the Process of Play Therapy

In practice, it is common for parents, teachers, physicians, and other care providers of children receiving play therapy to ask about what

the clinician is doing and to wonder how play therapy can be healing. These questions can be disconcerting if the practitioners have not wondered deeply about their role and considered how play therapy facilitates growth and change. In contrast to magicians who intentionally avoid revealing the "secrets" of their trade, play therapists can use neuroscience concepts to provide information to parents about child development and expected responses to play interventions (Fine & Sung, 2014). We believe it is crucial for play therapists to share the robust research base regarding the importance of play for all aspects of development, including cognitive, language, social, and motor domains with the parents and community providers. Two meta-analyses have provided support for the effectiveness of play therapy for children with externalizing and internalizing behavior problems (Bratton, Ray, Rhine, & Jones, 2005; Leblanc & Ritchie, 2001). Referencing these and other articles to advocate for the use of play therapy is recommended practice for clinicians. We encourage practitioners to use the information in the article to reflect on how to respond and offer some ideas from our own clinical experience. In addition to providing information about the role of play for healthy, positive developmental outcomes, here are topics we typically share to convey the neuroscientific basis of play therapy.

Play is the child's language and the brain's language. Play is evolutionarily adaptive. Across cultures, play provides developmentally appropriate opportunities for attuned interpersonal interactions—interactions that actually shape and reshape brain circuits. These circuits lay the foundation for later developmental outcomes, from academic performance to mental health and interpersonal skills (Cozolino, 2010; Siegel, 2007). Gradually, one playful, responsive interaction at a time, a secure attachment pattern is created, an artifact of the neural connections. Renowned neuroscience researcher and clinician Bruce Perry has avowed that a safe relationship is our most powerful neurobiological intervention (Perry, 2006).

Hurt and healing happen in relationships. Play facilitates the creation of a strong and trusting therapeutic alliance with the child, resulting in a secure, corrective relationship. Leaders in the field of interpersonal neurobiology have written about the importance of the therapist's ability to attune to the inner world of

the client (Schore, 2012; Siegel, 2010). Empathic attunement is reflected in interpersonal child-directed play when the therapist contingently and sensitively responds to the child's play by offering supportive comments, expressing interest verbally and nonverbally, conveying warmth, and setting limits when needed. When the therapist tracks the nonverbal behavior, verbal behavior, and feeling state of the client, they demonstrate resonance which increases oxytocin and supports social bonding (Badenoch, 2011).

Play regulates emotions. Researchers have compelling evidence about the disruptive impact of emotionally overwhelming events on the functioning of our brain and body. Chronic stress and trauma can result in a brain trained to exist in a state of hyperarousal. In such a state, children cannot concentrate and become easily frustrated, more impulsive, and moody. Their sleeping and eating patterns may become irregular. In the context of play-based interventions, the child benefits from the therapist's healthy emotional regulation through mirroring, helping to calm the child's overactive nervous system. When the therapist models a calming presence, mirror neurons connect the two intersubjective experiences of therapist and client, granting the client greater capacity for self-regulation in a similar way to how a baby's heart rhythm adapts to the rhythm of the attachment figure when held (Badenoch, 2008). The therapist's rate of breathing may even synchronize with the child's at those times. With repeated exposure to such self-regulation and acceptance of emotion, children can use the safety of the therapeutic relationship to approach rather than avoid difficult emotional states, revisit hurtful experiences, and develop more adaptive coping responses (Perry, 2006; Siegel, 2010). However, it is crucial that therapists conduct a thorough developmental trauma assessment to design targeted interventions that can address symptoms deriving from different brain regions (Gaskill, 2010).

Clinical Vignette of Neuroscience Principles in Play Therapy

The following clinical vignette is provided to illustrate how to use neuroscience-informed play therapy techniques and provide neuroscience-informed psychoeducation to parents

when working with families of children receiving play therapy.

Michael is a 6-year old African American boy in kindergarten. His parents state that they brought him to therapy at the suggestion of the school counselor.¹ Since returning from winter break, Michael has had difficulty following directions, sitting still, and maintaining appropriate boundaries with his fellow students. Most notably, he has had episodes of sobbing and shutting down when he makes errors in his work. After obtaining a release of information for the school from the parents, Michael's classroom teacher validates this information and adds that she is concerned Michael may be displaying hyperactive behavior. Later scores on a screening inventory for hyperactivity are nonconclusive; though the classroom teacher rated Michael within the clinical range, neither parent rated Michael's hyperactivity as clinically significant at home. Michael's parents divorced several years ago, and Michael alternates weeks with his parents. Transitions between households are reportedly the most difficult day of the week for Michael. It is mentioned in passing that Michael has been playing with a dollhouse at school that he found in the classroom.

After both parents give consent, play therapy is initiated with Michael. The playroom is equipped with real-life toys (e.g., doll families, dollhouse, vehicles, phones), aggressive toys (e.g., soldiers, aggressive animal puppets, handcuffs), and creative expression materials (e.g., crayons, paint, paper, clay, sand). During the initial session, Michael engages briefly in exploratory play and then concentrates his attention on the dollhouse. It is interesting to note that this dollhouse is one with detachable rooms, allowing the child to create several different configurations. Michael constructs a single dwelling, selects furnishings for the room, and invites the therapist to join him in cooperative play. He plays out everyday routines, with no disruptive events, using two African American family figures. By the third session, Michael begins constructing more complex, creative, and somewhat fragile houses, prone to collapsing abruptly. A notable theme emerges

¹ Identifying information was modified to preserve client confidentiality.

in his play, of setting up stations around the room where the action of the play occurs. When Michael transitions from one station to another, he displays agitated behavior such as trying to throw objects and smash toys. Initially, Michael has difficulty regulating his emotions and inhibiting his actions as the therapist used the ACT model (Landreth, 2012) to maintain the psychological safety of the playroom. However, after two sessions he expresses his agitation in ways that conform to the set limits.² Midway through the therapy, the therapist's office is abruptly moved to another room in the building. Not surprisingly, Michael's first session in the new office is marked by agitated behavior and significant struggle to follow the rules of the playroom.

After approximately 10 sessions, the parents and teacher both report that Michael's behavior at school and at home has drastically improved. Michael is focusing better, and able to cope when he makes mistakes in his schoolwork. He looks forward to his therapy sessions each week and has established a trusting relationship with his therapist. At one point in therapy, Michael draws his therapist a portrait, writing that the therapist is "special." At the therapist's suggestion, the parents move to biweekly transitions between households to reduce the frequency of transitions. This appears to be well received by Michael.

To prepare for filial therapy, one parent at a time joins the play therapy session at Michael's assent, to see how to support Michael's play in his home environment. They initially try to limit Michael's play, for example, by reorganizing the house structure so that it does not collapse. However, they are open to learning an alternative way to interact. The therapist explains that play therapy may seem like a strange activity to a parent because the child is allowed to lead the play and has limited rules for play behavior compared with those of the home environment. At one point, a parent becomes worried about a theme in Michael's play, which seems to indicate that Michael is taking responsibility for events that are outside of his control (i.e., parental divorce). In response, the therapist reviews Piaget's (1954) observations that young children engage in magico-phenomenalistic causality, believing that their own desires and actions, through some mysterious and powerful process, are the primary causes of events in

their lives. In response to this psychoeducation, the parents are active participants in the therapy, successfully cooperating and learning the principles of child-centered play therapy and corresponding facilitative techniques (Landreth & Bratton, 2006). Gradually, the parents become more attuned at following Michael's lead, verbally tracking his behavior, and allowing his structures to smash and collapse on the ground.

During the course of play therapy, both parents inquire about how and why play therapy appears to be successful with Michael, exclaiming: "It's having such a magical effect on him." The therapist provides the following explanation: As with all children, Michael's ability to use executive functioning (associated with frontal lobes) to consistently direct his behavior and help modulate his emotions is not fully developed. He is more likely to communicate through play, body movement, and nonverbal expression than through spoken language. When he first came to therapy, Michael was struggling with adjusting to transitions, most notably his return to school after winter break. He also struggled on the day when he transitioned between parents during the week. Through play, Michael has expressed his difficulties with transitions while the therapist has demonstrated nonjudgmental acceptance of this experience through empathically verbally tracking Michael's play behavior and setting therapeutic limits. A strong bond has developed between Michael and his therapist, who has helped Michael with self-regulation when transitions occur in his play through being a soothing presence. Through mirror neurons, Michael has attuned to the therapist's internal calm during transitional moments. As a result, Michael has displayed less difficulty with transitions at both school and home. Play therapy provides Michael with the environment to work through his issues using the tools and skills that come most naturally to him: nonverbal communication and creative self-expression. Both parents were thankful for this explanation, which made logical sense to them.

As Michael's treatment begins to reach a close, the therapist explains to the parents that

² ACT stands for Acknowledge the feeling, Communicate the limit, and Target an acceptable action (Landreth, 2012).

future transitions will be a challenge for Michael, and they can help Michael prepare for future transitions by discussing them and even playing them out ahead of time. As expected, Michael's 18th and final session is a struggle for Michael, even though the therapist provided a countdown calendar for 3 consecutive weeks, illustrating that therapy would be ending. Agitated at various times during the session, Michael has difficulty remaining on task, transitioning frequently from station to station. He rebuffs the therapist's suggestion of a closing activity (create a book of drawings Michael had made throughout the therapy experience). At the end of the session, Michael seems hesitant to say goodbye to the therapist and paces the room. Yet even in the storm of his emotional turmoil, Michael manages to ask the therapist, "Why can't I keep coming?" The therapist reflects in an age-appropriate and understanding tone that Michael wants to continue coming to therapy and finds change to be stressful and difficult. The therapist adds that even when Michael is upset, he has learned to communicate with the therapist about his wants and needs. To the therapist, his teacher, and his parents, this means that Michael is better able to cope with change at school and home, and hence it is time to take a break. After learning that he is welcome back anytime, Michael seems to accept this explanation. After giving the therapist a high-five, Michael leaves the session with his parent.

The therapist asks both parents to attend one more final session without Michael present, to review their son's progress and explain what occurred in the previous session. The therapist explains that tolerating significant transitions will take time and practice for Michael, as the brain needs repeated exposure to smooth and low-stress transitions before implicit memories can be formed which will assist Michael to approach transitions with less fear and anguish. Through repetition, positive coping behavior can become overlearned, automatic, and ingrained as new neural pathways are developed. The therapist uses the example of how learning to ride a bike, drive a car, or play a musical instrument requires repetitive practice before fluency and mastery develop. Consistent with their learning in filial therapy, the therapist reviews with the parents how reflective listening can be used to validate their son's internal state

when he is stressed through verbal tracking of his nonverbal behavior and verbal reflecting of content, feeling, and meaning. This grants Michael the opportunity to rely on his parents to support his regulation as he develops his ability to express his emotions appropriately. Over time this will result in Michael self-regulating his emotions more successfully when faced with transitions and change. An excellent opportunity to practice appropriate emotional expression and self-regulation during transitions is Michael's transition between households every 2 weeks. Both parents engage in role-playing how to empathically respond to their child's verbal and nonverbal behavior during transition days by verbally tracking the therapist's simulation of Michael's nonverbal behavior and verbal speech. In addition, they create a routine for the transition and illustrate a description of the steps with family and home photos. The therapist also suggests that the impending summer break from school and return to school in the fall are also both excellent practice opportunities for Michael. By the conclusion of the session, both parents report a greater understanding of their son's behavior during the final session, and feel prepared to face future challenges with transitions.

Conclusion

The professional code of magicians prohibits performers from revealing how they create the illusions that trick audiences. Play therapists, on the other hand, are committed to authenticity and transparency with their clients. Not only does the recent research in neuroscience support the efficacy of play therapy, the findings also offer a rationale for explaining the "magic" of its power to parents and allied professionals. In contrast to magicians, play therapists do not portray themselves as possessing hidden or special powers. We do not have a "bag of tricks." Rather, the neuroscience evidence suggests that it is more appropriate to explain that play therapists have a "tool kit" of practices for promoting lasting and meaningful change.

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