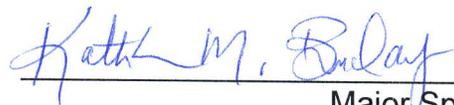


What Words Cannot Say: The Power of Art and Play  
in Children's Expression and Mental Health

By

Boston Portner

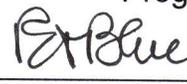
A Thesis Submitted to the  
Graduate Faculty in Partial Fulfillment  
of  
the Requirements for the Degree of  
M.A. in Art Therapy



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### Abstract

Helping children foster therapeutic change requires tools that effectively address a child's developmental needs. Through a review of child development theories and the neuroscience of brain development, it becomes clear that cognitive talk therapies do not always meet the therapeutic needs of young clients. Art and play therapies naturally address children's developmental needs by stimulating brain systems from the brainstem, continuing up to higher cognitive areas. Furthermore, art and play are methods children are accustomed to expressing with. These statements are illustrated through two case studies from the author's practicum experience. While there are biological and environmental limitations to play and art therapies, they are highly effective methods to helping children create lasting emotional and behavioral change.

*Keywords:* child development, art therapy, play therapy

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## What Words Cannot Say: The Power of Art and Play in Children's Expression and Mental Health

In a world where children are expected to sit still and excel at reading and math earlier and earlier in their lives, what is the role of play and art making (Beresin, 2014, pp. 25-52)? Can children with behavioral problems, post-traumatic stress, or depression make healing progress with their mental health through words alone, or do we need another vehicle, more innate to the childhood experience, to communicate and form healing relationships (Perry, 2009, pp. 240-241)? In this paper I will explore these questions in an effort to outline the therapeutic practices that are advantageous to helping children adapt and heal. This paper will focus on neurodevelopmental approaches and how art and play meet children's neurodevelopmental needs, using both existing literature on the topic and the writer's personal experiences with children. Finally, the role of the environment in art, play, and development will be discussed, and how further research is needed in this area to create lasting behavioral and emotional change for children in need.

### **Literature Review**

Child Development Theories. To properly address appropriate therapeutic practices with children, it is helpful to start with a discussion of child development theories. The developing brain of a child is different than the brain of an adult, and therefore the behaviors and abilities of children are different. For the purpose of this paper I will discuss the theories of Erik Erikson, Jean Piaget, and Lev Vygotsky.

Erik Erikson was an artist and teacher who later specialized in child psychoanalysis and human development in the 1900's. His work in psychosocial development is most famously recognized by his *Eight Ages of Man*, which sum up the human psychosocial developmental

stages. Erikson's stages illustrate the developmental struggle a person faces during a particular phase of life, and discusses how success or failure at each stage affects the person's psychosocial growth and ultimately their mental health. Though Erikson lays out his theory in stages, they are not set in stone, and each person may experience each stage with some variance in timing. Furthermore, he held that a person is able to go back and amend issues from previous stages, which is highly important to mental health and the structure of therapy with children. In fact, Erikson believed that particular aspects of each stage resurface for a person during times of crisis in one's life. Therefore, an understanding of Erikson's stages, particularly the first four, is especially helpful when working with children's mental health (Mooney, 2013, pp. 53-55).

Erikson's first four stages are Trust vs. Mistrust, Autonomy vs. Shame and Doubt, Initiative vs. Guilt, and Industry vs. Inferiority (Erikson, 1963, pp. 247-261). These stages are traditionally negotiated through the age of 11, though as previously stated, are continuously renegotiated at later times in life, especially if the stage was not successfully resolved. These are also especially important stages because the experiences involved in these stages literally shape the developing brain (Mooney, 2013, pp. 54-56). As a result, even though these stages are traditionally navigated from birth to middle childhood, they have relevance to teenage years and beyond.

While an in-depth discussion of each stage and its manifestations in real life is not necessary, I will address each stage briefly and outline what results from successful navigation of each stage versus the weaknesses that result from a failure to resolve a particular stage. Trust vs.

mistrust refers to the quality of attachment the infant has with their primary caregivers in the first year of life. The strength developed from a trusting relationship during this first 12 months of life is the ability to have hope. If interactions with primary caregivers create mistrust because the child's needs are not adequately or consistently met, the child will have a much harder time with relationships and with the development of characteristics such as empathy (Mooney, 2013, pp. 54-57).

The second of Erikson's stages is the struggle between autonomy vs. shame and doubt (Erikson, 1963, pp. 251-254). Children who successfully navigate this second stage throughout their second and third years of life develop a sense of willpower. This is the stage where children constantly work to find balance between holding on and letting go to assert their independence. Caregivers who struggle with accepting these normal developmental behaviors often shame the child, which results in short term resistance and long term modeling of controlling and unyielding behaviors (Mooney, 2013, pp. 54; 62-63).

Erikson's third stage, which takes place between the third and sixth years of life, is initiative vs. guilt (Erikson, 1963, pp. 255-258). Navigating this stage effectively results in the child developing the strength of purpose. Success in this stage means that children are able to plan and complete tasks, but are also able to cope if the task does not go as planned without feeling guilt. However, if adults do everything for the child instead of letting them do things for themselves, or focus on the child's mistakes, the child's sense of initiative disintegrates into guilt and discouragement (Mooney, 2013, pp. 54; 68-69).

Children in middle childhood, from ages 6-11, navigate the stage of industry vs. inferiority. Positive navigation of this stage results in the child developing a sense of

competence (Mooney, 2013, p. 54). In this stage the child is working towards finding ways to be productive in their community and society, as they realize that they cannot stay within the protection of their family forever. Here the child learns to focus attention and diligence toward productive goals while also learning the practical use of tools required by the culture. If done successfully, a sense of competence is fostered. However, if circumstances result in an inability to foster competence in these areas, the child will develop a sense of inadequacy and inferiority in relation to being capable of being a productive member of society (Erikson, 1963, pp. 258-261).

In the way that Erikson provided us with the psychosocial stages of development, we look to Jean Piaget to discuss cognitive stages of development. Cognitive theories of development are important to the application of therapies for children because we need to understand what a child is and is not capable of thinking in order to plan appropriate meaningful and transformative interaction. Piaget's theory of cognitive development addresses stages of thinking which he believed all children go through. Each child masters each stage at a different rate, so Piaget's age ranges for stages are fairly wide to accommodate for individual developmental rates. These stages include the sensorimotor stage, which takes place from birth to age two; the preoperational stage, which takes place from age two to age seven; the concrete operational stage, which takes place from about age seven to age eleven; and finally the formal operational stage, which takes place from age eleven or twelve and older (Mooney, 2013, pp. 80-81).

A brief description of each stage will be useful for later discussions of the appropriate use of cognitive directives in therapy. The first stage, sensorimotor, is posited to be largely reflexive,

without planned thought. In this stage babies use their senses and physical activity of manipulating their bodies and materials around them to learn about the world (Wadsworth, 2004, pp. 33-34). Towards the end of this stage, we see children develop an understanding of object permanence, and some resulting separation anxiety, as they are able to think about their world. Object permanence means that the child now starts to understand that an object (or toy or person) exists even when it is outside of the child's view. Separation anxiety is normal once object permanence is developed, because the child now knows that when their caregiver leaves them with someone else, they have not just stopped existing, but are actually somewhere else. The goals of caregivers at the sensory motor stage of cognition are to keep the baby safe but engaged, and to provide reassurance during times of separation anxiety (Mooney, 2013, pp. 81-83).

The preoperational stage follows the sensorimotor stage. If you have ever spent time in a preschool or kindergarten classroom, you can appreciate that this is a time in which a child's mode of thinking differs greatly from adults. During this stage,

Children are egocentric (think of everything only as it relates to them), can focus on only one characteristic of a thing or person at a time (for example, take words at their exact meaning), gather information from what they experience rather than what they are told, and overgeneralize from their experience (Mooney, 2013, pp. 85-86).

During this stage, it is more effective to help a child think their own way through a problem than to tell them how to do it, because they form cognitions directly from their experiences (Mooney, 2013, p. 86). This will be particularly important in the discussion of appropriate therapies for

children because in the preoperational stage, they are not able to really think about their own thoughts, as they learn by doing, not by talking about it.

When children move into the concrete operational stage, their thinking is markedly more advanced than the preoperational stage. These school aged children develop the ability of reversibility, or the ability to reverse the direction of their thoughts to do things like retrace their steps (Wadsworth, 2004, pp. 91-96). They are also able to distinguish classes of objects on a more descriptive level. Concrete operational thought also allows children to hold more than one characteristic of an object in their mind at the same time, broadening their field of concentration. At this stage, the child is clearly developing a much more flexible and less egocentric way of thinking about their world (Mooney, 2013, p. 95).

The final stage of Piaget's cognitive development theory is formal operational thought. In this stage, the child develops more sophisticated methods of thinking which they will carry with them into adulthood. Children who have reached formal operational thought develop abilities to think logically and hypothetically. It is finally in these early teen years that children develop abilities to do things like think about their own thoughts, and hypothetical situations (Mooney, 2013, p. 95).

The final theorist I would like to discuss in terms of child development is Lev Vygotsky. Unlike Erikson and Piaget, Vygotsky did not develop a set of developmental stages outlining a facet of children's growth through the life span. (Smidt, 2009, p. 94) However, his ideas on development from a sociocultural perspective are important to therapists who are looking to help children learn and grow from a mental health perspective. The theories I would like to briefly

touch on are the zone of proximal development and scaffolding, language development and learning, and social interaction.

Vygotsky's theory of the zone of proximal development is one that is central to his discussions of child development. He described the zone of proximal development as "the distance between the most difficult task a child can do alone and the most difficult task a child can do with help" (Mooney, 2013, p. 101). Learning, in Vygotsky's theories, has a lot to do with how the people in the child's environment can help facilitate the accomplishment of these difficult tasks (Smidt, 2009, p. 87). In his writing, he refers to this assistance from a teacher or peer as scaffolding, as they aid the child in accomplishing tasks they could not originally do on their own. Using keen observation of children's actions, teachers, caregivers, and therapists can pick out situations in which the child would benefit from scaffolding to accomplish new tasks (Mooney, 2013, pp. 101-102). These facets of Vygotsky's developmental theory are also integral to the discussion of children developing executive functions, or the ability to apply cognitive control. The more researchers learn about the brain, we are finding that this ability to self-regulate through social skills, self-discipline, and mental flexibility is actually fostered within the first five years of a child's life. Therefore, Vygotsky's ideas about the zone of proximal development and scaffolding are highly important to the child's ability to develop effective executive functions (Mooney, 2013, pp. 110-111).

Language and social interaction are also integral to Vygotsky's theories of development. Vygotsky believed that children should not be expected to sit still and be quiet at school all day, because through language they not only clarify information (Smidt, 2009, p. 67), but also learn about communication. Giving children the opportunity to talk also gives adults information about

what they understand and what they are confused about (Mooney, 2013, p. 106). This may seem obvious to those of us in the teaching and helping professions, but truly, active listening takes patience and skills we often have to practice. Along with language, Vygotsky stressed the importance of social interaction in general in the promotion of cognitive development in children. In particular, he emphasized that children can help each other learn and develop social skills. His theories about child development stress the idea that “children learn not only by doing but also by talking, working with friends, and persisting at tasks until they ‘get it’” (Mooney, 2013, p. 106-108). These theories will be later supported in this paper by a discussion of brain development, and will be informative in the discussion of effective therapeutic practices.

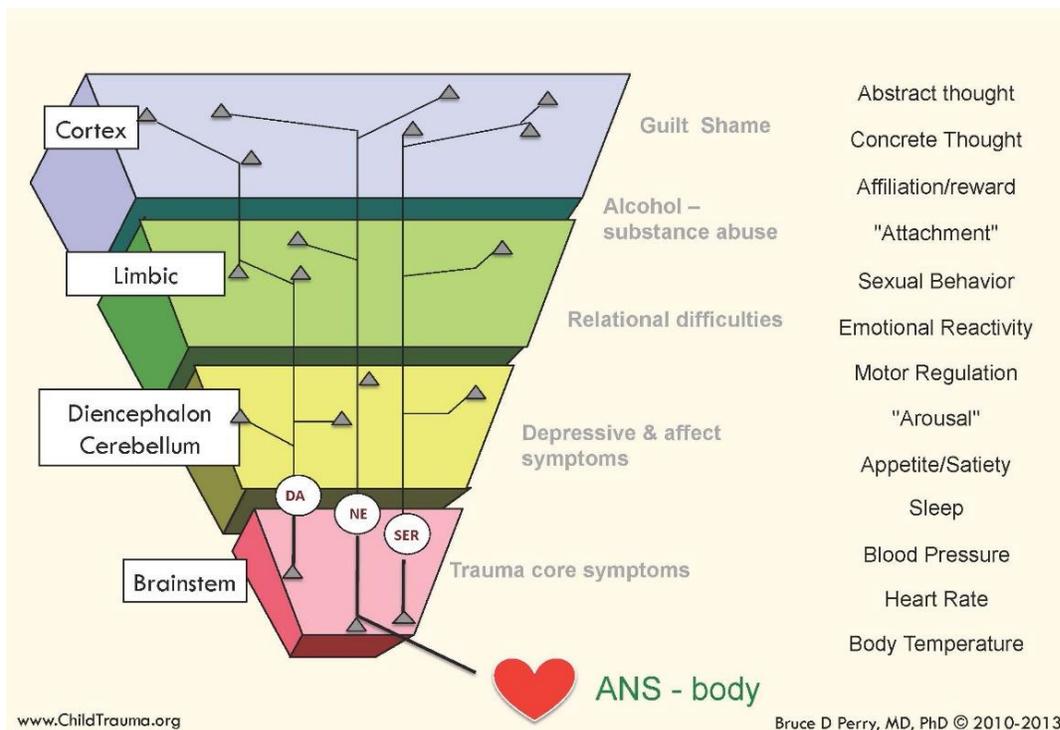
Neuroscience of Brain Development. So far we have looked at widely accepted developmental theories as a way to gauge where children are at socially and cognitively and to learn what sorts of struggles they might face at certain ages. Now we will take a look at what we know about the developing brain and how this both supports developmental theory and also informs therapeutic practice.

In order to outline areas of brain development that are relevant to this discussion of appropriate therapeutic practice with children, I am going to present some of Bruce D. Perry’s key principles of neurodevelopment and neurobiology. These principles are:

1. The brain is organized in a hierarchical fashion, such that all incoming sensory input first enters the lower parts of the brain.
2. Neurons and neural systems are designed to change in a “use-dependent” fashion.
3. The brain develops in sequential fashion.

4. The brain develops most rapidly early in life.
5. Neural systems can be changed, but some systems are easier to change than others (2006, p. 30-44).

The first principle of neurodevelopment, which is the idea that the brain is organized hierarchically and therefore sensory input starts in the lower parts of the brain, essentially explains the idea of bottom up processing. Our brain is divided into specialized parts with specialized functions, connected by neural networks that allow for communication between brain structures. The ‘lower’ portions of the brain, the brain stem and diencephalon, are responsible for regulatory functions such as heart rate and temperature. The cortex, which is responsible for the ‘highest’ brain functions, is responsible for conscious thought, language, and abstract thinking (Perry, 2006, p. 30; Siegel, 2012, pp. 17-19).



When our senses take in information, it is transformed into the patterned activity that our sensory neurons use to communicate. Both external and internal information begins to be processed by the brain in the lowest brain region, the brainstem. It is important to note here that the brain stem is a regulatory area of the brain and though it processes information that leads to action, it does not do so on the level of conscious perception. As the information passes through each brain structure, it is compared to stored memories associated with that region of the brain to identify familiar, novel, or threatening information. When information is either novel or threatening, the brain will respond by activating alarm responses. This triggers a high amount of brain stem and diencephalic activity that prepares the body to react to the threat. The information is also passed to higher brain regions, but the lower regions are already reacting to the perceived threat, initiating reflexive fight, flight or freeze responses before your cortex ever has a chance to consciously think about it. After high stress experiences that require lower brain level responses to threat, this experience is stored as a *state memory* or “memories of previous patterns of sensory input that were connected with bad experiences.” (Perry, 2006, p. 33). These memories are the root of trauma symptoms, therefore any therapeutic work with trauma must be cognizant of and address the brainstem and the state memories created by the traumatic event. Perry notes that high states of fearful arousal change the way a person’s brain functions, no matter the age of the person.

If this shift is dramatic enough, the person will essentially be so anxious and regressed that his or her functioning will be ‘brainstem-driven’. The individual will think and act in very primitive ways, and therefore will be less accessible to academic or therapeutic

interventions using words or therapeutic relationships as the mutative agents of change (Perry, 2006, p. 34).

This idea is why understanding the hierarchical organization of the brain is so important to creating effective therapeutic interventions.

The second principle related to effective therapeutic practice is the notion that neurons and neural systems require use to change. Any brain structure or capacity is developed in a use-dependent fashion (Siegel, 2012, p. 22). If a child is spoken to, their language portion of the brain is stimulated to organize in a normal fashion, but a child who experiences neglect and does not hear regular use of language will not develop proper language skills because such a brain has not been organized to do so. This is true for all brain functions; they require some form of properly timed, patterned signals that engage the neural system responsible for that function in order to develop normally. If instead of patterned and repetitive, the child's experiences are chaotic, episodic and improperly timed, that brain function will be developmentally delayed and dysfunctionally organized (Perry, 2006, p. 36).

This is a fairly straightforward concept, but has huge ramifications for a child's development, and is vital for therapists to understand in order to know what has happened to the child and what can be done, if anything, to fix it. A child's symptomology will directly reflect the environment in which they developed. Therapists can learn a lot about what happened to the child and at what time based on a simple knowledge of brain development and what areas of the brain correlate with the symptoms they are expressing, particularly with maltreatment and trauma survivors. The second and more proactive reason that an understanding of use-dependent brain functioning is important is that children and their neural pathways will only change with

vigorous repetition. This means that in order to make real change in symptomology, the therapy must directly activate the portion of the brain that mediates the symptoms, and it must be repetitive in order to reorganize neural pathways. Again, to use the example of trauma symptoms which originate in the brain stem, it is highly unlikely that strictly cognitive therapy would be effective without first addressing brain stem symptoms, because this is the area of the brain that needs reorganization (Perry, 2006, pp. 34-37).

The third principle of neurodevelopment and neurobiology is that brain development is sequential. This principle builds off of the first two, using the understanding that the brain develops in sequential fashion and relies on use-dependent organization. What this principle adds to our knowledge of neurodevelopment is that because “stress response systems originate in lower parts of the brain and help regulate and organize higher parts of the brain, if they are poorly organized or regulated themselves, they dysregulate and disorganize higher parts of the brain” (Perry, 2006, p. 38). The complex integration of brain systems means that they effect each other, so poor regulation in one area effects the brain as a whole (Siegel, 2012, p. 19). This is clinically important to understand because cognitive and affect-based therapy interventions will be unsuccessful if the brainstem is not well regulated. Symptoms such as extreme anxiety, hypervigilance, and chronically activated threat responses should be addressed before moving into affect or cognitive-based symptoms. These symptoms may undermine academic, therapeutic, and social emotional learning opportunities, (as this principle illustrates), because the brain both grows and processes sequentially from the bottom up. Because of this principle of neurodevelopment, therapies should be designed to reflect the normal progression of brain development (Perry, 2009, p. 252). For clients with poorly regulated brain stems, early

therapeutic interventions must be patterned, repetitive, and rhythmic to stimulate this gateway brain structure (Perry, 2006, p. 39).

The fourth principle related to neurologically effective therapy is that the most rapid brain development occurs early in life. By the time a child has reached the age of four, their brain has grown to 90% of its adult size. Because of this, the experiences a person has in early childhood have the largest impact on the brain's organization and subsequent functioning. This is extremely important, because though the brain can be changed later in life, it is much easier to healthily organize the developing brain than it is to reorganize a poorly adapted neural system later on. This has clinical significance because it shows a clear need for early intervention with children who experience adverse environments, as well as the need for therapies that effectively communicate with these young children (Perry, 2006, pp. 40-43).

The final principle of neurodevelopment and neurobiology that is necessary for discussion on developmentally appropriate therapies for children is that the brain can be changed, but different systems are easier to change than others. As stated in the previous principle, the brain is most malleable during the first few years of life. After this window, the brain can still be changed. However, it is much harder to reorganize an already organized brain than it is to organize it in a healthy pattern from the start. Some brain areas, such as those structures in the cortex, remain fairly plastic throughout life, so it is easier to change cognitions. The lower areas of the brain however, such as the regulatory functions of the brain stem, are much less plastic after initial organization in the first few years of life. This has clinical implications for the length of time needed to change mental health symptoms based on what part of the brain they originate from. Trauma-related organization of the brain stem will

take longer to change than symptoms related to cortical organization (Perry, 2006, p. 43). As Perry puts it, “it is easier to change beliefs than feelings” (Perry, 2006, p. 43). This is not to say that change to brain stem functions cannot occur. It is, however, important to understand that this change will not happen without significant repetitions activating the brain stem to reorganize it, and this will take a greater amount of time than it would to change cognitive beliefs (Perry, 2006, p. 43).

## **Methods**

To this point I have discussed social, cognitive, and neurological aspects of child development and some of the implications for mental health. I will now discuss therapeutic methods that address these developmental needs in an effort to provide developmentally appropriate child therapies. Specifically, I will discuss how art and play methods are used in therapy to access feelings and experiences not readily verbally accessible to children for various developmental reasons.

To understand the usefulness of art in child mental health, I will first briefly discuss what art therapy is and general ways it can be used with children. Human’s use of symbols and art as a form of communication and expression is an ancient practice (Malchiodi, 2012, pp. 5-6). The modern version of art therapy as a separate field of work and study came to be in the 1940s (Malchiodi, 2012, p. 9). Today, the American Art Therapy Association defines art therapy as:

a mental health profession in which clients, facilitated by the art therapist, use art media, the creative process, and the resulting artwork to explore their feelings, reconcile emotional conflicts, foster self-awareness, manage behavior and

addictions, develop social skills, improve reality orientation, reduce anxiety, and increase self-esteem (2013, p. 1).

As art therapy is really a marriage of art and psychology, it is practiced from a wide range of psychological perspectives; from psychoanalytic, to humanistic, to cognitive-behavioral to name a few (Rubin, 2001). Each approach has its merits, and art making can be very similar or very different depending on the approach used. Regardless, each approach uses some form of art media manipulation to facilitate change. What makes art so important to the discussion of child mental health is that art has the ability to stimulate the client in a ‘bottom-up’ fashion in ways that a talk-centered therapy cannot. These are often ‘top-down’-orientated therapies, or therapies that first focus on cognitive abilities, and either continue working cognitively or later move to more limbic or brainstem oriented processes, working from the top of the brain downward. In my use of art and play, I often try to work from a humanistic or psychoanalytic approach, and move on to more cognitive approaches later in the relationship, depending on the client’s developmental age and progress in the therapy itself. This may mean that in the first few sessions, I let the client choose the media, or provide a specific media but leave the art making fairly open ended. As we get to know each other, I can assess if a certain media is needed depending on the child’s emotional and behavioral state coming into session. I am also able to learn more about what is going on in their life, and create cognitive directives that they can first process with the art medium, which is either simultaneous with or followed by verbal processing and discussion of the work. Art is a very flexible way to facilitate change, as no matter what state the child is in, we can find a medium or movement or directive that meets their current level of processing.

Play therapy is similar to art therapy in that it can be practiced from different theoretical perspectives, but always involves some form of play medium as a way for the child to express as opposed to focusing on verbal communication (Yanof, 2013, p. 262). As Virginia Axline so succinctly describes it, “[p]lay therapy is based upon the fact that play is the child’s natural medium of self-expression” (1969, p. 9). In play therapy, the therapist’s mediums include sand trays, doll families, doll houses and furniture, toy soldiers, toy animals, toy food and cooking utensils, puppets, art supplies, water, dress up clothes, tools and so on (Axline, 1969, p. 54).

### **Case Studies**

To illustrate how art and play tap into different parts of the brain and promote mental health in ways that words alone may not, I will now present two case studies and directives that took place as a part of individual play and art therapy sessions. These children consistently met with me over the course of one school year, for about 7 months. Their names have been changed to protect their privacy.

Chris was a four year old boy, originally referred to me by his parents for his increasingly defiant behavior at home. For almost two months, I worked with him from a client-centered perspective, allowing Chris to lead the play, and mostly observing his behaviors, though capitalizing on opportunities to label and discuss feelings and clarify his play narratives when appropriate. Much of his play was non-verbal, expressing instead with toys such as the trains or dragons, and with emotive sounds. For many of the sessions, he would start out in this non-verbal manner, using the trains and making noises to indicate the direction the train was going, or if they needed to back up because they were going the wrong way, and eventually progress to being able to verbalize the story to me as he became comfortable in the room. Throughout these

early sessions, I did not observe really any of the defiant behavior that his parents were experiencing, aside from a resistance to end the play and return to the classroom, which dissipated with time as he became used to the routine.

After about a month and a half of meeting with Chris on his own, his mom called to talk about frustrations she and his dad were having with him. I asked them to come in and meet with me the following week. Both Chris's mom and dad attended the meeting, and in the weeks following, Dad came in each week to check in with me. From these parent sessions, I learned a lot about Chris's home life, which was often loud, unpredictable and confusing. Mom and Dad were never married, and did not live together. Dad was now married to another woman. Though they were not together, they shared responsibility for Chris and his twin autistic brother throughout the week. Though Chris's twin was autistic, Chris showed no signs of being on the spectrum. This created confusion and tension for Chris at home, because he seemed to have a hard time understanding why his brother was not always treated the same way as him. His family issues were further compounded by the fact that Mom had an older son who had been aggressive and violent towards her, and had been moved to a residential treatment facility over the previous summer. Whether or not observing the older brother's actions had an effect on Chris, it became clear that it had had an effect on both Mom and Dad, as they continued to bring up their fear that Chris would end up like his older brother, even though the behaviors he was exhibiting were generally developmentally appropriate. Furthermore, Mom and Dad did not have set schedules, so they often could not even plan out who would have the boys from week to week. Even though they seemed to understand that having a set schedule would be beneficial to the boys as a way of

creating some stability, they maintained that they were not able to set up a consistent routine around all of their appointments.

In the weeks that followed, I continued to learn about Dad's struggles, as well as general family difficulties that made up Chris's life. After checking in with Dad individually, we would go pick up Chris from the classroom and have a joint parent and child play session. This served multiple functions. First, it allowed Chris to have individualized time with his dad, which was important considering it was often his brother who needed more attention, and who Dad better identified with. This hour not only gave Chris one on one attention, but provided Dad with opportunities to see positive aspects of his son. Secondly, these sessions also gave me a better understanding of how the two interacted, and how this might have been playing into the defiant behavior that was happening at home. While Dad showed that he was a creative storyteller during this play, I also learned that he was often stubborn and defiant himself, having a hard time letting Chris take the lead in the play. Though he seemed to identify that Chris was a smart and creative child, he could not step outside of himself and see things from Chris's perspective in order to react more appropriately to his emotions and behaviors. This was demonstrated during multiple instances, one in which Dad exclaimed, "It's all about you, huh?" when Chris wanted to use one of the sand toys his dad was using. Dad seemed to have lost sight of the fact that the hour was specifically set up to be all about Chris, and that there was no real reason why Chris should not use the sand toy. In another instance, Dad demonstrated defiance and lack of cooperation by refusing to accept Chris's pretend Diet Coke tea as a part of a tea party game. Dad insisted that he did not like Diet Coke, and that he had hot chocolate instead, completely missing the opportunity for providing Chris with acceptance and positive affirmation. Though Dad

appreciated the time with Chris and seemed to truly care about him, he was unable to see how these subtle acts of stubbornness and defiance were actually confusing and distressing for Chris, as he was not developmentally ready to understand sarcasm, or that Dad was supposedly “playing the devil’s advocate”. Instead, Dad was modeling the defiant behaviors he was so concerned about in his son.

As Dad continued to make the check in’s more about himself and less about Chris, and the play started to stagnate, I decided to move back to one-on-one sessions between Chris and me. It became clear to me that in the last two to three months I had left with him, I would make more progress as an empathic listener and model of stability and cooperation for Chris rather than trying to break Dad of his ingrained patterns. As Chris moved back into the routine of meeting with just me, he naturally used neuorsequential play patterns, starting again by playing with the train set, which offered a set pattern and rhythm, and helped him regulate his brain stem. He would use the train play with Dad as well, but had a hard time moving beyond it, as Dad would often interject his own thoughts about how the track should go, disrupting the play rhythm. Left to lead the play again, Chris was able to set up the trains, use them, and then integrate them into more complex play narratives using the castle, dolls, blocks, and toy animals.

As we continued to work over the next few months, Chris was increasingly able to use the toys to illustrate things that happened in his life. Because he was able to regulate lower brain areas and create a sense of safety with me in the play room, he was able to address confusing and distressing issues in his life through the play toys. One such instance occurred when we pulled out the Cootie game, and were building different bugs together. I had put a green head on a red body, and Chris told me that was not how they went. However, he became engrossed in adding

eyes and legs to his own bug, so I continued to keep mine with different colored parts. Chris and I continued to put together bugs for a while, working separately as well as together. He had fun turning the heads upside down on his bugs, making them fly with their feet in the air. After putting together most of the bugs, he again noticed that my bug still had a different colored head, and he said that it was not the right one. I said that I thought it was funny and wanted to keep it like that. Chris said that I was going to piss him off, and that I was being ridiculous, and not in the funny way. He was not getting overtly angry, as he did not seem to know what ridiculous actually meant, but he was instead reciting something a parent had said to him. It was clear from these words though, that he was uncomfortable with this obvious situation of not doing things the way they were supposed to be done. I felt this was a fairly clear reflection of Dad, having watched Dad play with Chris before, and witnessing him continually saying what the right way to play was, whether it was the right way to put together the train tracks, or the right name to call a certain toy. I asked if Dad sometimes said Chris was ridiculous, and Chris said yes. I then pointed out to Chris that turning the heads upside down was a little ridiculous, but it was still funny and ok to do. Chris seemed to appreciate that, and became less visibly distressed, though I did allow him to switch the colored heads and finish making all the bugs for the end of the session.

A second instance in which Chris used the play to express family issues occurred a few weeks later during play with the bin of toy animals. At one point his play focused on a hippo family. One hippo had its mouth always open, and Chris explained that this was the mom and her mouth was open because she is always yelling at the son “behave son”. The dad hippo was mad at mom hippo, saying, “It is my son too”. Chris explained that the dad was mad at the mom

because she was yelling at the son. At one point Chris said this was “bullshit” and “poopy head”. He looked at me to see how I would react to this, and I laughed a bit and asked why they were poopy heads. As he did not get much of a reaction, he giggled a bit and said poopy head a couple more times but then moved back to playing with all of the animals. Chris continued building homes for the animals to be safe in and to sleep. The animals would get mad if they were awakened. He ended the session wanting to put all the animals and blocks in containers so they were safe before we left. This interjection of family life into the play offered a spontaneous and safe way for him to tell me about what his home was like. Being able to share this and have his experience accepted, and then to continue on with the play seemed to be an emotional release for Chris.

Chris’s experiences in sessions illustrate the power of play to both help children regulate lower brain functions related to anxiety, as well as to give voice to the child’s experiences. Though I highlighted particular verbal instances in the therapy which represented insight into Chris’s world and his ability to process his experience, it cannot be stressed enough the importance of rhythmic patterned play and the months spent building non-verbal trust that allowed Chris to be able to share about his life in this way. This is especially important when considering that Chris was only four years old. Direct talk therapy would very likely never have gotten Chris to this point of sharing his experience of family. As anyone who has ever worked with four year olds can attest, the brains of those in the preoperational stage do not follow the same types of thought patterns as adults, and therefore it is not easy to direct a conversation in a specific therapeutic direction to get information, let alone create meaningful change for the child.

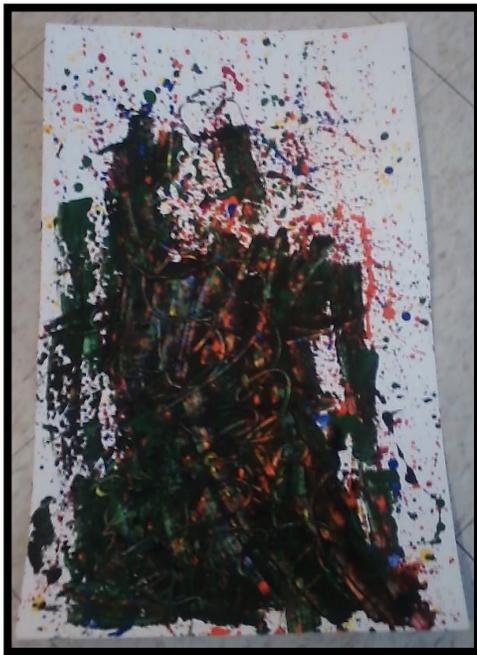
By using the natural play mediums of Chris's environment, he was able to tell his story in his own way, in a neurosequentially appropriate method.

While Chris's story illustrates the power of play in therapy, I also want to provide evidence for the power of art, and to do so I will use the case of Peter. Peter was an 11 year old boy who had been coming to the Child Development Project for years before I met him to work with his ADHD, anxiety, and various other problems that presented on and off over the years. I first met him early in the school year with his mom. They came into the room and sat down in the two chairs near the desk while his younger sister played with the toys in the room. Peter was visibly nervous, not making much eye contact, hunching over, and just seeming very uncomfortable. Mom was also distressed, and seemed to be under the impression that we would spend the entire hour talking about what was wrong with her son. When I later learned that their previous therapist had focused heavily on cognitive behavioral therapy, their actions in the first session made sense. However, it did not make sense to start with a talking-based, cognitive approach, as it was clear that Peter was highly anxious and that cognitive work would not do him any good in that state because his lower brain functions were poorly regulated and interfering with cognitive functions. Peter was a clear illustration of Bruce Perry's sequential brain development principle of neurodevelopment, specifically that "an overanxious, impulsive, dysregulated child will have a difficult time participating in, and benefiting from, services targeting social skills, self-esteem, and reading" (2009, p. 243). Slowly, I introduced him to different art mediums and projects, finding he was drawn to making rhythmic movements with media that were not too messy. He also loved to play basketball with the nerf ball and hoop in the room. I learned that this was one area where he felt competent, and that his constant need to

move around and think quickly was an asset in this game. We therefore built sessions around making process-focused art, and playing basketball.

In the months we worked together, we did a lot of different activities. Two in particular illustrate the power of art and movement in mental health, and how these methods, though not always verbal, were powerful and informative in and of themselves. The first activity was a Jackson Pollock inspired splatter painting. I spread out tablecloths on the floor, and laid out half a sheet of poster board for each of us to use. With some quiet music on in the background, I explained that Peter was free to use any of the colors of paint, and that he may use a brush, the stir stick, or the popsicle sticks to drip and splatter paint over the paper. Peter was tentative at first, slowly dripping one color of paint. After a few minutes though, he seemed to relax, accepting that he could be messy and experiment using greater amounts of paint and various colors, and he got into the rhythm of painting. I also created a splatter painting alongside him, dripping paint and experimenting, and getting a little messy myself, to show him that it was ok to do so here, and also to show that it was ok to make more aggressive strokes with the paint. We spent half an hour, working mostly in silence, simply experimenting with movement and paint. We then let the painting dry for a bit, and Peter played basketball for about 10 minutes before we looked at the paintings again. While we looked at his painting, I asked Peter if he saw anything in it (Figures 1 & 2). To assist him in communicating about art, I pointed out different textures and colors, but allowed him to say what he thought it looked like. As he felt his paintings looked like things in space, we had interesting discussions of planets and how the different sections of the painting reminded him of them. We spent three sessions in this manner, splatter painting with some discussion about his life, but mostly enjoying the atmosphere created by our side by side

exploration of non-representational painting. Later, we returned to this method after a few weeks of missing sessions for various family reasons. Again this type of session allowed us to rebuild a sense of comfort working together, and gave Peter something to work on and to express with while talking about what had been going on in his life. I also pulled out his old paintings, and he was surprised at how different they all looked from one another, and was able to talk more about different textures and techniques that appealed to him. Having the art as a record of our time together seemed to be a positive experience for him, and when I asked if he would like to mount the pieces onto black poster board and take them home at the end of our time together, he was excited to do so.



*Figure 1*



*Figure 2*

So why was throwing paint at the floor a therapeutic exercise? This method of painting was therapeutic for Peter in a number of ways. Because his ADHD and anxiety symptoms stem

from lower brain areas, it was important to do therapeutic activities that helped regulate these areas before moving on to talking. This activity required movement and engagement of various senses, and allowed for aggressive movement in a safe space, followed by more relaxed and calculated movement. This activity also allowed Peter to stay quiet and contemplative for a while. The side by side existence of therapist and client working without talking can create a powerful atmosphere of acceptance and understanding. Furthermore, the end discussion of Peter's art works helped him to talk about shape, color and texture, and gave him an opportunity to share what he was thinking after being given time to process the experience. Finally, having an end product that he could feel proud of afforded Peter a sense of mastery and worth. This was very important for Peter because so much time at home seemed to be spent focusing on his downfalls and the problems his ADHD caused for him, his family, and school, as evidenced by the things Mom chose to discuss during check ins. By making these paintings, he was able to focus, harness his energy, and create an engaging work of art that he could feel positive about.

The second activity Peter and I did together that illustrated the usefulness of bottom-up therapy techniques involved playdough. For another session with some of the younger children, we made homemade playdough for the room. Peter was curious about it, and decided to pull it out and squish it around. This purely sensory experience seemed to greatly appeal to him, as he manipulated the playdough around in his hands for quite a while. He then started tentatively throwing it up in the air to see how it would hold up. Since I did not object, he continued to throw and catch the playdough. This developed into a game of catch between the two of us using the playdough, exploring the material, and the relaxing atmosphere of a rhythmic game of catch paired with the excitement of using art media in a new, and usually unacceptable way.

In a later session, I brought in materials for Peter to make his own playdough. He came in that day very agitated, explaining that he had gotten into a fight at school just a half an hour ago, and was still angry and frustrated about it. He was very agitated, and was trying to explain what happened, but had a hard time putting a sequential story together as he was still so mad, and anxious about what would be the consequences of his fight. I decided to redirect him to the project of making playdough to give him a chance to gather his thoughts and calm down a bit before discussing what had happened. We shifted the focus for a while, discussing how to read the playdough recipe and make half of it, and then talking about different colors and the consistency of the dough. As we re-directed with this activity and Peter let out some of his energy stirring the dough, the action soothed some of his lower brain functions, and he was able to more coherently discuss what had happened at school. He explained to me that a boy who he had trouble with before in school had thrown Peter's things down the hall at the end of the day as they were packing up, and because of this, the two boys ended up in a physical fight. This incident brought out a lot of feelings for Peter, including feelings about his lack of control, his inability to defend himself, and feeling like he was alone and that no one was on his side. While these were clearly underneath all of the anger he was expressing, it was too raw yet for Peter to directly discuss these feelings.

Instead, Peter needed a way to let out his aggression and anger in a safe manner, and so he used the playdough he created as this outlet. I assured him that it was alright to hit the playdough or to throw it at the floor or the wall if he liked. Having met with Peter for months before this, I was fairly certain he would not use the playdough to try and break anything, but it was clear that he needed a physical outlet. Peter seemed freed by this ability to be physically

aggressive with something, and smacked the playdough into the floor and threw it at the wall a few times. When thrown onto the floor, the playdough made a very satisfying crack, but still held its shape for the most part. After some time of this aggressive use of the playdough, he seemed to have calmed down some, and invited me to play catch with him using the playdough again. There was still some aggression involved, as the playdough made a loud smacking noise as we each caught it, however it had evolved into a relationship of give and take and acceptance. I asked him things like how he felt about having to meet with the principal later in the week, and what he would want to say to the boy who he fought with. He was able to talk about these things with a bit more clarity, but his thinking was still clouded by hurt and anger. This was understandable, and we ended the session continuing the game of catch and squeezing the playdough. It was clear in this session that sitting and talking would not have been as helpful as movement and creating a physical outlet for all of Peter's anger and frustration. Doing a bottom-up activity like making and playing with playdough addressed Peter's immediate needs of physically relieving tension and expressing overflowing emotion. It allowed us to also create a better understanding of the situation, as he was able to explain what happened in a more sequential, cognitive fashion once he was able to gain a bit more control of his body and emotions.

### **Limitations of Therapy.**

While play and art are conducive to emotional and behavioral change, therapy is limited in a number of ways by the nature of the brain, the therapeutic environment, and the environment the child is immersed in during everyday life. While this paper is not meant to be an in-depth discussion of the effects of the environment on therapy, it is important to keep in mind that

therapy takes place within the micro environment of the child's biology, and the macro environment of the child's relationships. Art and play are not magical cures; they operate within systems to create change over time.

First, because the brain must create new neural pathways in order to create lasting change, it takes time and repetition to change behaviors, emotional reactions, and cognitions. As Perry states, "Repetition, repetition, repetition: Neural systems -and children- change with repetition" (Perry, 2006, p. 37). Again, lower brain systems require a greater number of repetitions in order to change, or rewire, than higher, cognitive systems (Perry, 2009, p. 43). These basic principles of development indicate that even when using rhythmic and repetitive methods of art and play therapy, change will still take time, especially if the child is older and has brain stem related symptoms, such as those related to trauma.

Secondly, there are limitations to the therapeutic environment itself, depending on the resources available. Supplying an ideal play and art room can often be limited by location, space, and budget. This can be a real problem for therapists working within limitations of an institution. However, if one can build a significant rapport with the client, the therapist is truly only limited by their imagination. A greater therapeutic environment limitation is time. The time spent in the therapy room limits the development of art projects, play narratives, and ultimately, neural pathway repetitions. Time limits are often imposed by the child's environment outside of therapy.

Finally, the child is greatly impacted by the family they live with and their general environment outside of the therapy room. As Daniel Siegel so elegantly describes, "... mental

processes are a product of our inner neural connections as well as our interpersonal communicative connections with others” (2012, p. 5). Because the therapist often only sees the child for an hour once a week, and the family and school staff spend countless hours interacting with (or neglecting) the child between sessions, it would be naive to think that the child’s outside social environment does not have an immense impact on the success of therapy. In some cases the child may have supportive and healthy relationships, but for other children, their relationships and environment outside the session may be chaotic and unpredictable, as in the case of Chris. For those living in chaotic environments, it will be harder for them to improve, even with developmentally appropriate therapies (Perry, 2009, pp. 252-253). To make progress with children in these types of environments, an effort must be made by the therapist to help foster change not only in the child’s inner world but also in their outer environment (Gutman, McCreedy, & Heisler, 2004, pp. 20-21).

**Conclusion.**

Art and play are not magical cures, but they are neurologically compatible therapeutic methods for promoting emotional and behavioral healing. Because these methods are naturally conducive to bottom-up processing, they have the potential to create lasting mental health changes in young clients by facilitating the change of lower brain neural pathways. This is particularly important for younger clients who are still developing these areas of the brain, and who often are not yet fully utilizing their frontal cortex on a cognitive level. Blending these two therapeutic methods provides child mental health practitioners with a highly effective and adaptive arsenal of therapeutic techniques, which allows them to speak the language of children and facilitate their natural sequence of healing.

## References

- American Art Therapy Association. (2013). What is Art Therapy? Retrieved April 6, 2016, from <http://www.arttherapy.org/upload/whatisarttherapy.pdf>
- Beresin, A. R. (2014). *The art of play: Recess and the practice of invention*. Philadelphia, PA: Temple University Press.
- Mooney, C. (2013). *Theories of childhood: An introduction to Dewey, Montessori, Erikson, Piaget and Vygotsky* (2nd ed.). St. Paul, MN: Redleaf Press.
- Erikson, E. H. (1963). *Childhood and society*. New York: Norton & Company.
- Gutman, S., McCreedy, P., & Heisler, P. (2004). The Psychosocial Deficits of Children with Regulatory Disorders. *Occupational Therapy in Mental Health, 20*, 1-32.
- Malchiodi, C. (2012). *Handbook of art therapy* (2nd ed.). New York, New York: Guilford Press.
- Perry, B. (2006). Applying principles of neurodevelopment to clinical work with maltreated and traumatized children. In N. Webb (Ed.), *Working with Traumatized Youth in Child Welfare* (pp. 27-50). New York, NY: Guilford Press.
- Perry, B. (2009). Examining child maltreatment through a neurodevelopmental lens: Clinical applications of the neurosequential model of therapeutics. *Journal of Loss and Trauma, 14*, 240-255.
- Rubin, J. (2001). *Approaches to art therapy: Theory and technique* (2nd ed.). New York, New York: Taylor & Francis Group.
- Siegel, D. J. (2012). *The developing mind: How relationships and the brain interact to shape who we are* (2nd ed.). New York: Guilford Press.
- Smidt, S. (2009). *Introducing Vygotsky: A guide for practitioners and students in early years education*. London: Routledge.

Wadsworth, B. J. (2004). *Piaget's theory of cognitive and affective development* (5th ed.).

Boston, MA: Pearson Education.

Yanof, J. A. (2013). Play Technique in Psychodynamic Psychotherapy. *Child and Adolescent*

*Psychiatric Clinics of North America*, 22(2), 261-282. doi:10.1016/j.chc.2012.12.002