

Opening Plenary at the 64th Annual Conference in San Francisco, CA

## **Neuroscience and Psychodrama:**

### **Validating the Mind/Body Approach of Psychodrama**

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"The body remembers what the mind forgets." J.L. Moreno

Neuroscientists are currently validating principles that have been guiding psychodramatists for nearly a century. One example of this is Moreno's philosophy of co-creation, that is, that we are beings who develop not in isolation but within a relational context. Another is that that creation is corporal as well as mental, that emotions live in and are processed by both the mind and the body. Our early relational experiences inscribe themselves onto our neural systems. Each tiny interaction between parent and child actually hardwires itself into our brain/body system and in turn wires our limbic system. The limbic system sets the mind's emotional tone, filters external events through internal states (creates emotional coloring), tags events as internally important, stores highly charged emotional memories, modulates motivation, controls appetite and sleep cycles, promotes bonding and directly processes the sense of smell and modulates libido. (Rosenthal 2002). Our senses are the gateways through which we take in all the information that is then processed by the brain/body system. The more senses that are involved in an experience, the more the brain remembers that experience. For example, the first responders on the scene at 9/11 were more likely to develop PTSD because so many of their senses were immediately involved in the experience. They saw, smelled, heard and touched the people and events at The World Trade Center. There was even a taste in the air that all New Yorkers probably remember.

Similarly, grandma's house with the evocative smell and taste of food, the sight, sound and feel of familiar scenes, people, objects and places, all engrave themselves on our memory system. Living in any home is a sensorial experience. Children take in this sensorial input and learn from it at a dizzying speed. A child is born with over 100 billion neurons or brain cells. That's enough neurons to last a lifetime, since no more neurons will develop after birth. These neurons form connections, called synapses, which make up the wiring of the brain. At age eight months, an infant may have 1,000 trillion synapses. However, by age 10 the number of synapses decreases to about 500 trillion. The final number of synapses is largely determined by a child's early experiences, which can increase or decrease the number of synapses by as much as 25 percent. Each experience that a child has, such as seeing a mother's smile or hearing a parent talk, strengthens or forges the links between cells. Pathways in the brain that go unused eventually wither away. Thus, a child's early experiences can help determine what that child will be like in adulthood.

The family, our first social atom, is our first significant classroom on relationships. If the family has caused emotional and psychological damage through creating an environment that either does not support healthy emotional growth or contains the kinds of problems that actually traumatize children and undermine or interfere with sound emotional development, repair needs to occur after the fact. If the trauma defenses of numbing and dissociation have been repeatedly mobilized by the child, their genuine feelings surrounding a situation may remain out of reach and symptoms may lie dormant for many years. By the time the traumatized child, for example, is even aware that problems from their past

are interfering with their present, they may be well into adulthood. This makes a therapeutic approach that allows the child within the adult, at any point along the developmental continuum, to reemerge all the more important. That is, the child inside of the adult will need to revisit the emotional and psychological milieu in which learning took place to begin with in order to resolve blocks and learn new emotional and psychological skills.

Growing up in a less than optimal early environment can cause problems deep in the limbic system that may resonate throughout life. These problems may emerge as mood disorders, depression, and anxiety to name a few; and can lead to acting out through substance or behavioral addictions. The body can't tell the difference between an emotional emergency and physical danger. When triggered, it will respond to either by pumping out stress chemicals designed to impel someone to quick safety or enable them to stand and fight. In the case of childhood them to get through a painful situation, they may also teach them, slowly over time, to foreclose on, deny or reject their authentic reactions. In so doing, they may lose access to valuable information that could help them to navigate their relational world and accurately evaluate social cues. They may have trouble regulating their own emotional and psychological responses to life situations. The ability to "escape" or take one's self out of harm's way is central to whether or not one develops long term the trauma symptoms of Post-Traumatic Stress Disorder (van der Kolk 2006). If escape is possible, the person experiencing trauma is less likely to become symptomatic as they were actually able to act on their biological urge to flee. If escape is not possible, the intense energy that has been revved up in one's body to enable fight or flight becomes thwarted or frozen (Levine 1997). Because the urge to flee is thwarted, it lives within the self system as a thwarted intention similar to what we, in psychodrama, refer to as act hungers. Symptoms related to the original event or cumulative events may manifest after the fact, even well into adulthood, as a post traumatic stress reaction.

The discarded contents of these unconscious memories can fuel problems in thinking, feeling and behavior throughout life. Traumatized people live, in part, as if the stressor is ever-present, as if a repeated rupture to their sense of self (van der Kolk 1996) and their world lurks just around the corner, i.e. they become hyper vigilant. Psychodrama, allows for these act hungers and their emotional contents, to find their way into action through role play; to have both a voice and a physical expression. Additionally, psychodrama allows for the full social atom, rich in its relational structure, to be concretized on the therapeutic stage. Through role-play, scenes containing act hungers and open tensions that haven't been brought to adequate closure can be restructured within the relational context of the protagonist.

The part of the brain that is responsible for reasoning and long range planning, the cortex, shuts down when we're in survival or fight-flight mode. Consequently, we're often unable to make sense of traumatic events when they're occurring, that is to say, we get and record pieces of the picture but not the whole picture. The sense we make out of a situation through thought and reflection may be missing. As a result, when trauma related memories get triggered they often return as body sensations and flashes of memory. Because the emotional contents of these memories are at least partially unconscious, it may get mindlessly projected onto the situation that triggered the memories. And because trauma responses are fear based, when they are triggered, they may make current life circumstances feel threatening even if they aren't. This is one way the past unconsciously impacts the present.

Emotions are physical. They are processed by the body as well as the mind and heart. If we want to know what's going on in the mind and heart, we need to know what's going on in the body as well. What is our body telling us? What does it want to say? What does it want to do? Through role play, the body can actually lead us toward a fuller experience of our previously internalized reality. It can move through its fear so that feeling memories can surface and be felt in the here and now. Once frozen emotions can be experienced, they can be understood and made sense of in the light of today. And the body can be freed up to act in the manner it wishes to, i.e. the thwarted intention can move into some form of action and the fear, anger, and pain associated with these memories can be linked to the situations that originally caused them. If we can't feel our feelings, we can't think about them. If we can't think through what we're feeling we can't make sense of and grow from experience.

Psychodrama with its dictum "show us don't tell us" allows, as Zerka Moreno describes, for the inner world to "be first concretized and then reflected upon after it can be experienced on stage." Within a contained healing space i.e. the stage and in the presence, comfort and security of therapeutic allies, the protagonists are allowed to meet their inner worlds in a manner that slows reality down so that it becomes more available. Experience can be felt, understood, and reintegrated into the self with new insight and meaning infused into it. It is this experiential, relationally oriented approach - which fosters a fuller mind/body integration - that makes psychodrama a method for the future.

Through psychodrama and sociometry we can have an encounter with the self and an encounter with others. We can visit any point along our social atom; the world we used to live in, the world we live in now or the world we may live in, in the future. Those who have experienced trauma may live with a sense of a foreshortened future (Van der Kolk, 1996). They may have trouble conceptualizing, planning for and moving toward their future in a realistic manner. Psychodrama allows them to visit their future in order to retrain this lost ability. It is a method with maximum flexibility to work with and resolve past, present or future issues. It is the method we all love dearly, the one that has opened the door to personal healing for so many of us and the method we are collaborating in and committed to bringing to the various worlds we live in.

The field of neuroscience, then, is validating what, we, as clinicians who use psychodrama, sociometry, and experiential group therapy have come to understand well over the years. That the "body is," in fact, "the unconscious mind." That it holds the story of our lives that has been learned and lived in action and relationship. This highly sensorial method of role play creates a healing environment that allows for a fuller expression of all aspects of self and other. It is a method that can extend itself towards and adapt to any level of society, a method for the future.

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