

High School Reflections on Mirror Neurons

Kirke Olson, PsyD

Being among teenagers in a high school gives one the opportunity to see mirror neurons at work daily. It is fascinating to watch the interaction of teenagers in couples or small groups of friends as their mirror neurons read their peers and then trigger responses to the other's perceived state of mind. However, sometimes the egocentric point of view of some teenagers may lead one to the erroneous conclusion that some teens have no mirror neurons and cannot respond to their peers.

There is some truth to teens being challenged in the attunement department. With the burst of new neural growth in the prefrontal cortex that occurs at the onset of puberty, the neural pathways that allow people to read others and offer an attuned, empathic response are sometimes scrambled. This is particularly true when a history of insecure attachment complicates the picture, and/or when stress further disturbs the confused neural pathways. In addition, mirror neurons are part of more complex resonance circuitry, some of which runs through the amygdala, home of our perceptual biases. As a result, for kids who have not had optimal attachments, experienced trauma, or struggle with learning disabilities, the information from mirror neurons can become dramatically distorted through

the lens of previous life history. For example, if a child has lived in a chaotic household, any kind of intensity in his vicinity may provoke an out-of-proportion response because his previous experiences with intense emotion get triggered. Our school works with kids who have often experienced difficult life situations, so it isn't surprising when our adolescents sometimes act out of bounds, or are sometimes particularly sensitive.

All of these circumstances came into play around three teenage boys who swore, rough-housed in the halls, and called other students derogatory names. It is easy to imagine how mirror neuron activity among these boys helped maintain their treatment of the other kids, while their previous difficulties made them blind to their impact on others. While this is not unusual teenage boy behavior, it can't be tolerated with our vulnerable kids. Some of the physically smaller and younger students complained they were scared when these larger, older boys would rough-house; others were offended by their swearing; and many felt the bitter sting of their name-calling. The boys' behavior was creating a negative school atmosphere, so we decided to spend a week intensively focusing on teaching them to act



differently. They were separated from the other students to a different school building; given one-to-one tutoring for their academics; and taken to visit other schools they might attend if they were asked to leave. In addition, the director and I met with them daily to see what we could discover about the roots of their behavior.

In spite of all this, with our mirror neurons radiating our conviction that they could do better, they did not appear to recognize their negative impact on their classmates. Our attempts to explain were dismissed, and they minimized or defended their actions—no doubt egged on by the solid resonance between the three of them. Desperate to make a positive impact, we decided to try an unorthodox approach. We gathered the other students in the school, and gave each one three-3X5 cards, one for each of the boys. On one side of the card, each student wrote a specific positive behavior or strength they had seen in the boy; on the other side, a specific behavior they did not like. After the exercise, we had three decks of about fifty cards. I read them all and was impressed by their classmates' honesty, specificity, and kindness.

The director, a teacher, and I met with the three boys, six males together in one classroom. Each boy had his deck and took his turn reading one card aloud, first the positive and then the negative. They began by defiantly joking, but as they continued reading one card after another, the mood in the room gradually changed. The impact of their peers' honest comments showed in their bodies, their heads slowly nodding, their rate of speech becoming slower, their voice tone softer, their complexions becoming ashen. The tears began to flow as they realized the impact of their behavior. As the boys' pain became evident in their tone of voice, facial expression, and posture, I felt my own emotional response triggered by my mirror

neurons. As I looked around the room through eyes clouded with tears, I could see all six of us were responding the same way. We were reflecting each other's response to the pain triggered by the boys' growing awareness of the *meaning* of the comments on the cards. I believe they began to experience connection with their classmates in a way that had eluded them before. While the cards contained painful information, the words also reflected the goodness their mates saw in these boys, and their care for them could be felt through the honesty of the feedback. We know that such connections actually build the neural circuitry connecting the middle prefrontal region to the limbic areas, and the fruit of these integrative fibers is empathy and attunement with others.

In hindsight, it brought to mind childhood memories of sitting in a barbershop with mirrors facing each other on opposite walls. Each mirror reflected the image in the other, ad infinitum. Like the opposing mirrors of the barbershop, each of our resonance circuits transmitted the feelings of the other, triggering a response that was then picked up by another and another. Then, by virtue of the presence of the other students in the room through their care, these feelings built and echoed, ad infinitum. At the end of the reading, there was a powerful, silent pause, finally broken when one man shook his head and smiled through his tears.

I'm happy to report the boys are back among their peers, much more sensitive to the impact of their behavior, and better able to pay attention to the messages coming to their mirror neurons from their classmates. More significant, I believe, than the behavior changes are the budding connections between the boys and both the staff and their mates. Because of this, their brains will have ongoing opportunities to be shaped in the direction of healthy attachment, perhaps the best gift we can give one another.

Kirke Olson is a New Hampshire licensed clinical and school psychologist, who sees himself as an "IPNB applicator." He applies neuroscience (IPNB) and positive psychology in his individual and family sessions with clients and in his school consultations with students, staff, parents, and administrators alike. With his wife, Sher Kamman, (also a NH licensed psychologist), he offers workshops that apply neuroscience, positive psychology and EMDR to help people create a life they would love to live. For more information about Kirke, check out his website www.ThePositivityCompany.com or email him at kolson@wsfca.net.