



Mirror Neuron System in SPT

Paraphrasing from Daniel Siegel's "The Developing Mind" and "Pocket Guide to Interpersonal Neurobiology"

- Mirror Neuron System was discovered at end of last millennium
- A set of neurons was found that activates when a purposeful action is taken or when the same type of action is perceived. Only respond to acts with intention- revealing that the brain makes neural maps of other's actions that symbolize their intentions. Since intention is part of the mind of other, the research now shows that the brain makes an image of the mind of another, even before it can form words.

Steps in the Mirror Neuron System:

- 1.
- 2.
- 3.
- 4.

Somatic Maps: We take in what we see expressed, mostly from nonverbals, and then drive that perception down in the subcortical regions where we change our bodily state, our brainstem activation, and our limbic firing. These subcortical shifts are then sent back upward, through the insula in the middle prefrontal cortex with which we can become aware of our internal states through a representation of the body's state called a somatic map.

Observation Notes:

The Neurobiology of “We”:

- How do we know who is who? Are these feelings mine or yours?
- “We is a part of me”

Draw picture:

Experiential Notes:

Mirror neurons are also part of a larger resonance circuit that enables us to feel another's feelings and not get lost in their internal states. We can resonate and not become fused and that person can feel felt by us. We can't do this without integration- we will get lost in our experience of other, lose ourselves.

Interoception is the key to self awareness. Applying various mindful awareness practices to support the activate of the growth of the insula as part of the resonance circuit can be a direct way to increase the capacity to become part of a we without becoming lost as a me. This means learning to be open to whatever arises in our sensory world- not only do we have to become aware of the incoming stream of signals from the outer world, but you have to become open to the signals of our internal world, which ground us in ourselves (interoception)

Mirror neurons can be thought of as sponge neurons because they help us sponge up the feelings of other – not to literally mirror them back and become an identical reflection. Resonance involves connection, not fusion.