Propositions

A network approach to response inhibition and aggression

Combining functional imaging and Non-Invasive Brain Stimulation in the study of impulse control

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1. A ‘general inhibition system’ comprising anterior insular cortex, inferior frontal cortex, pre-supplementary motor area, anterior cingulate cortex, and thalamus is monitoring response inhibition across different inhibitory domains.

2. The superior frontal gyrus is specifically involved in action restraint, but not in action cancellation.

3. Response inhibition and aggression are inversely correlated: response inhibition as measured with better performance in a go/no-go task is correlated to the display of less pro- and reactive aggression measured by the Taylor Aggression Paradigm.

4. Activity in the right posterior insular cortex modulates with the intensity of aggression displayed.

5. Transcranial Direct Current Stimulation enhancing the right dorsolateral prefrontal cortex reduces proactive aggression in men by increasing avoidance motivation.

6. Non-Invasive Brain Stimulation techniques will revolutionize how we are will deliver psychotherapy.

7. We know much more about Transcranial Magnetic Brain Stimulation than Transcranial Direct Current Stimulation. The mixed results regarding the effectiveness of Transcranial Direct Current Stimulation are due to an undifferentiated usage of stimulation parameters and insufficient knowledge of the underlying physiological mechanisms.

8. We are what we are not because of what we do, but because of what we do not do.

9. In ‘A clockwork Orange’ (by A. Burgess) the Prison Chaplain states: “Goodness is something chosen. When a man cannot choose he ceases to be a man.” However, research shows that society, scientists, and therapists can help people to choose. Even if we cannot help a specific person in specific circumstances, there might be a way to do so in the future. Thus, no one ever ceases to be a man.

10. Aggression is not to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less.

— adapted from Marie Curie, cited by Melvin A. Benarde in Our Precarious Habitat