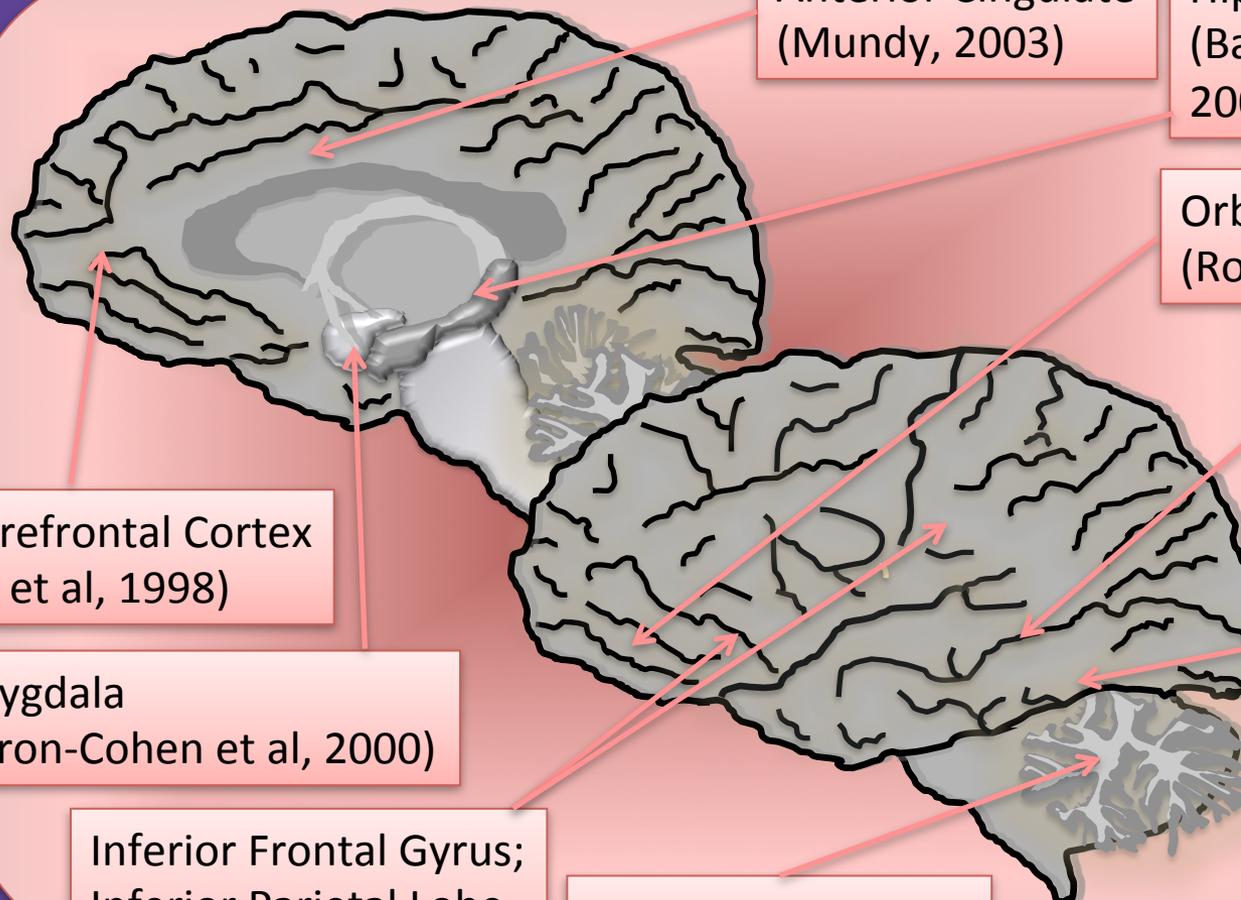




The Neuroscience of Empathy

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Social Brain Circuitry Implicated in ASD



Anterior Cingulate
(Mundy, 2003)

Hippocampus
(Bauman & Kemper, 2005)

Orbital Frontal Cortex
(Rolls, 2000)

Superior Temporal
Sulcus (Pelphrey &
Carter, 2008)

Fusiform Gyrus
(Schultz et al, 2000)

Cerebellum
(Courchesne, 1997)

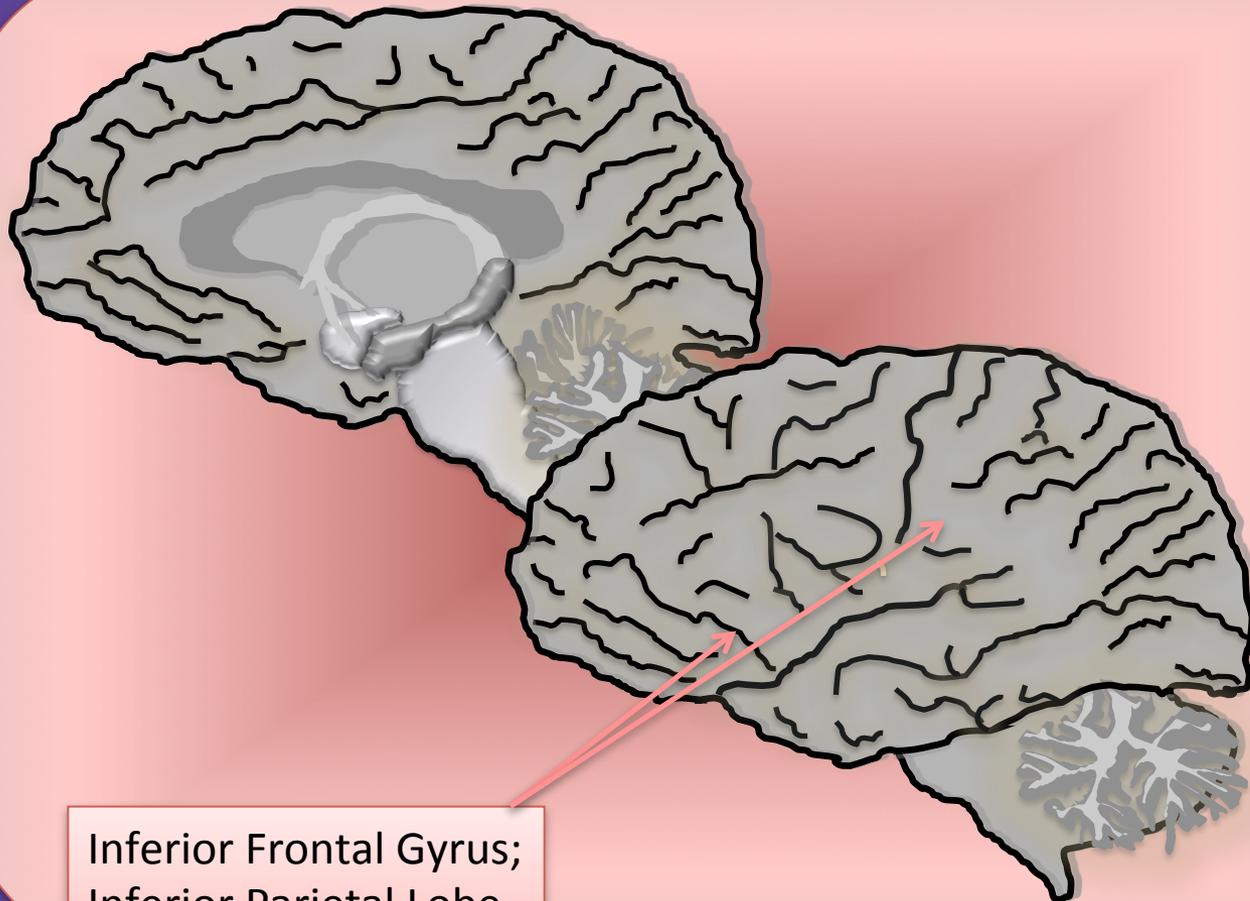
Inferior Frontal Gyrus;
Inferior Parietal Lobe
(Dapretto et al, 2006)

Amygdala
(Baron-Cohen et al, 2000)

Medial Prefrontal Cortex
(Dawson et al, 1998)



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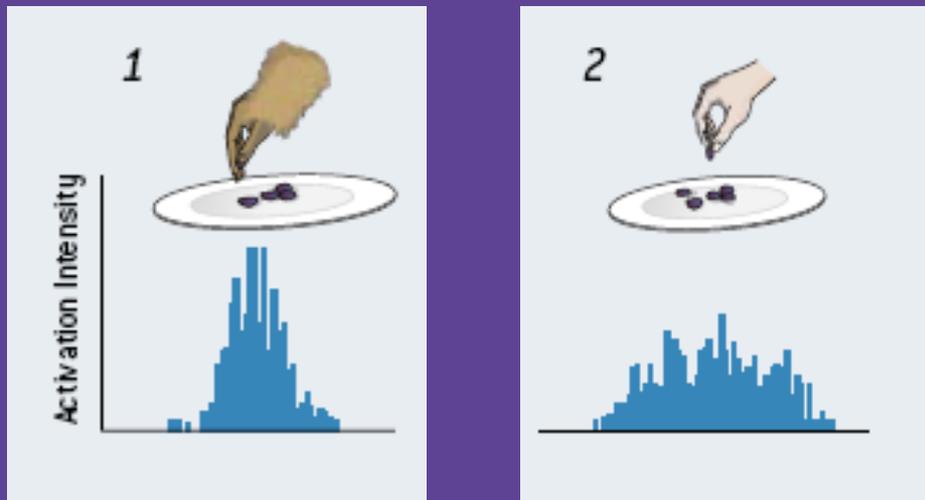
Inferior Frontal Gyrus;
Inferior Parietal Lobe
(Dapretto et al, 2006)



Mirror Neurons

- > Mirror neurons activate during the execution AND observation of actions
- > First identified in area F5 of monkeys
- > Proposed to mediate action understanding

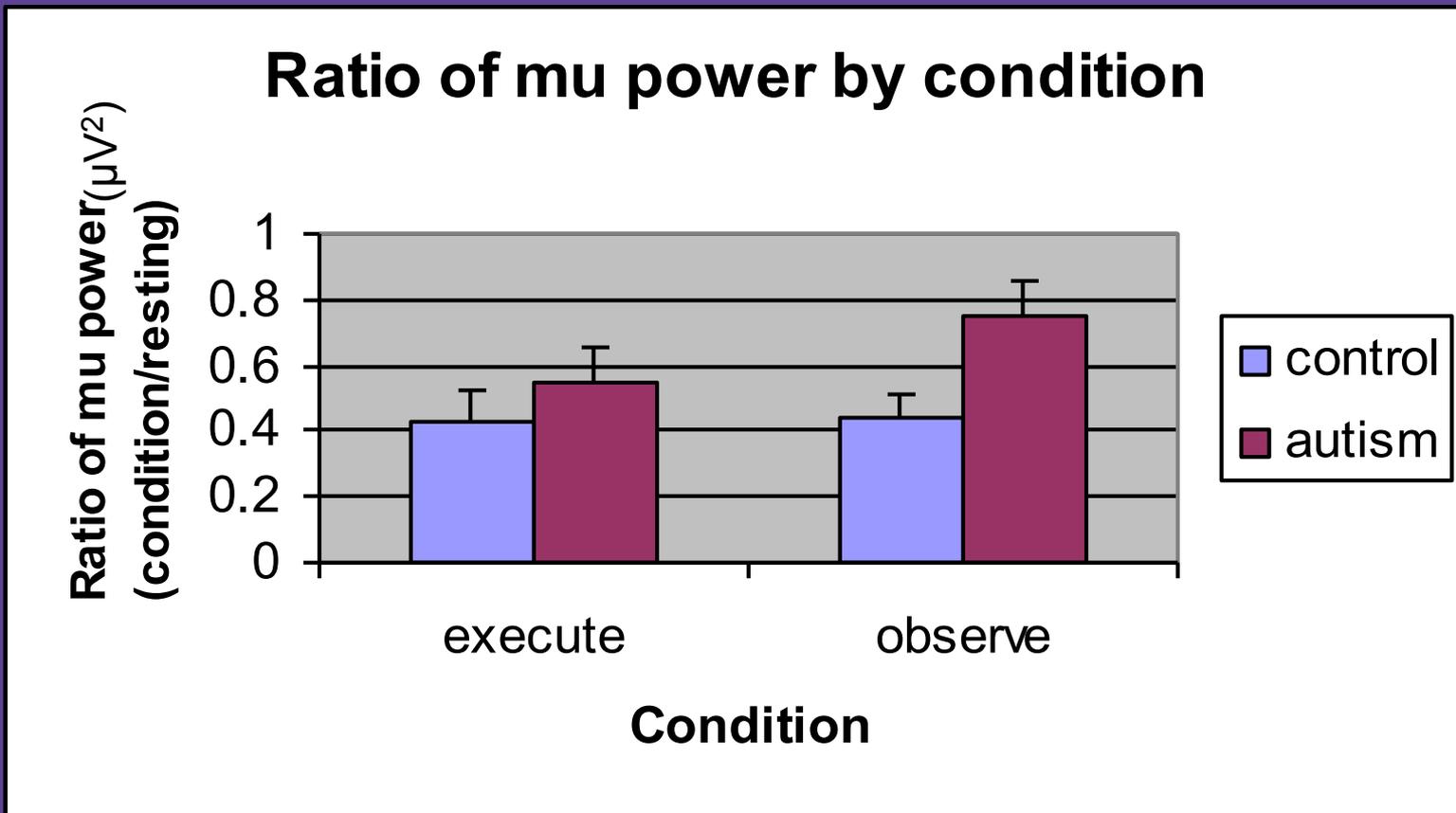
Gallese et al, 1996



Ramachandran & Oberman, 2006



Mu Rhythm in Adults with ASD

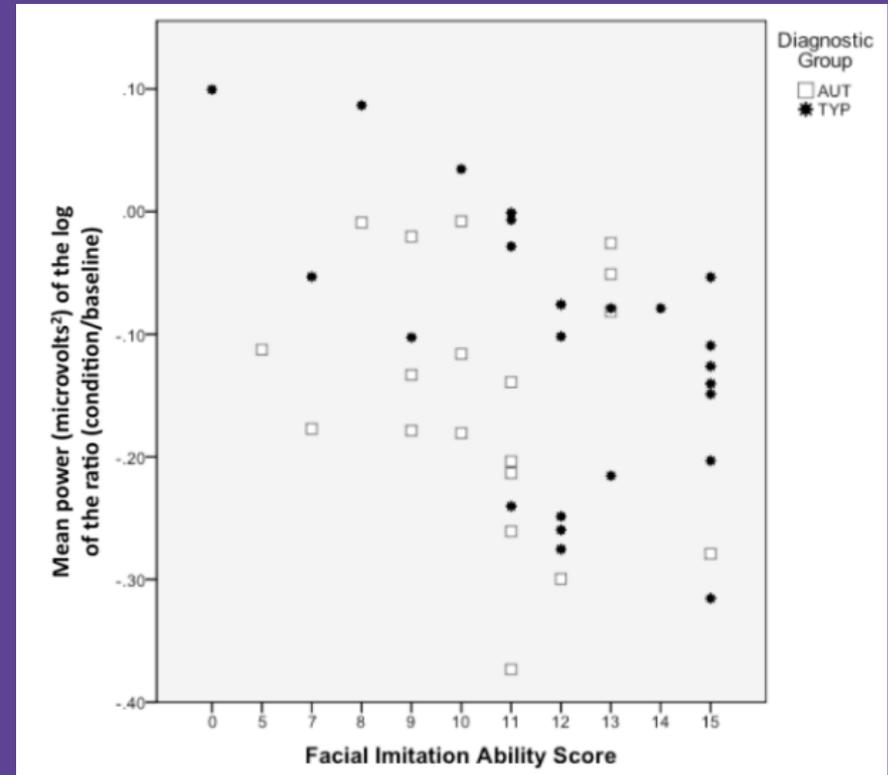
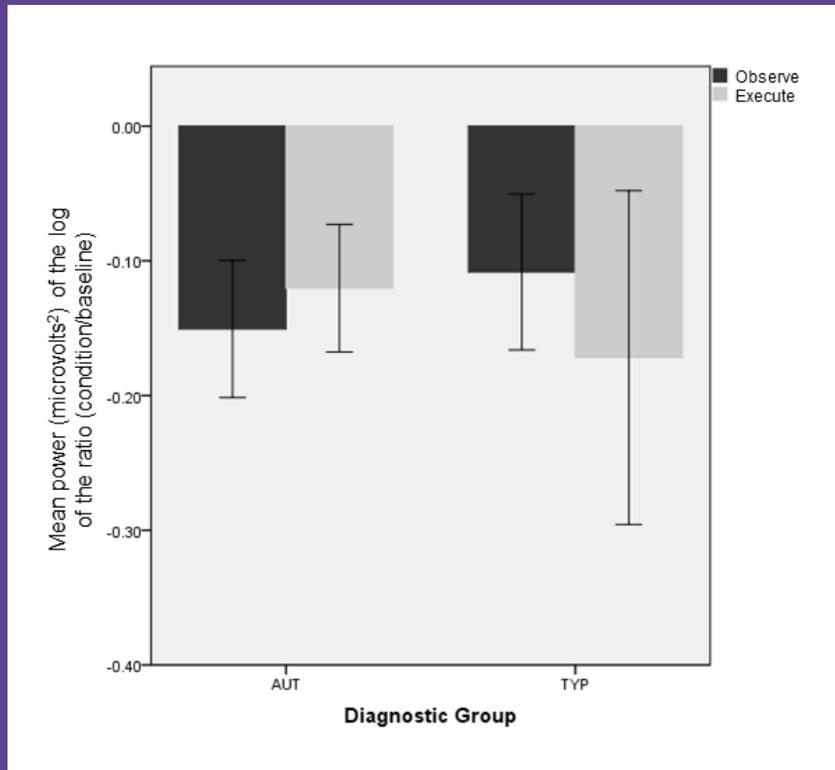


Condition X Group: $p < .05$

Bernier et al. 2007



Mu Rhythm in Children with ASD



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Questions?

