
Empathy in Practice:

The Case of Autism Spectrum Disorder

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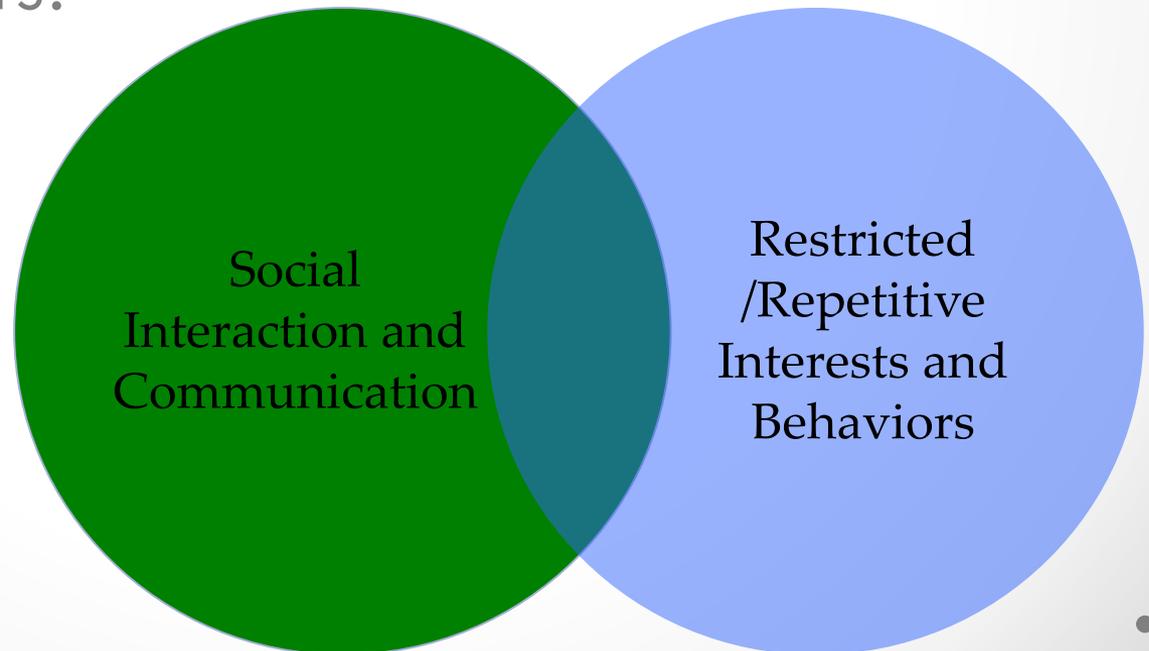
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Autism Spectrum Disorder (ASD)

- Deficits in social communication and social interaction.
- Presence of restricted or repetitive interests and behaviors.



Social Cognition

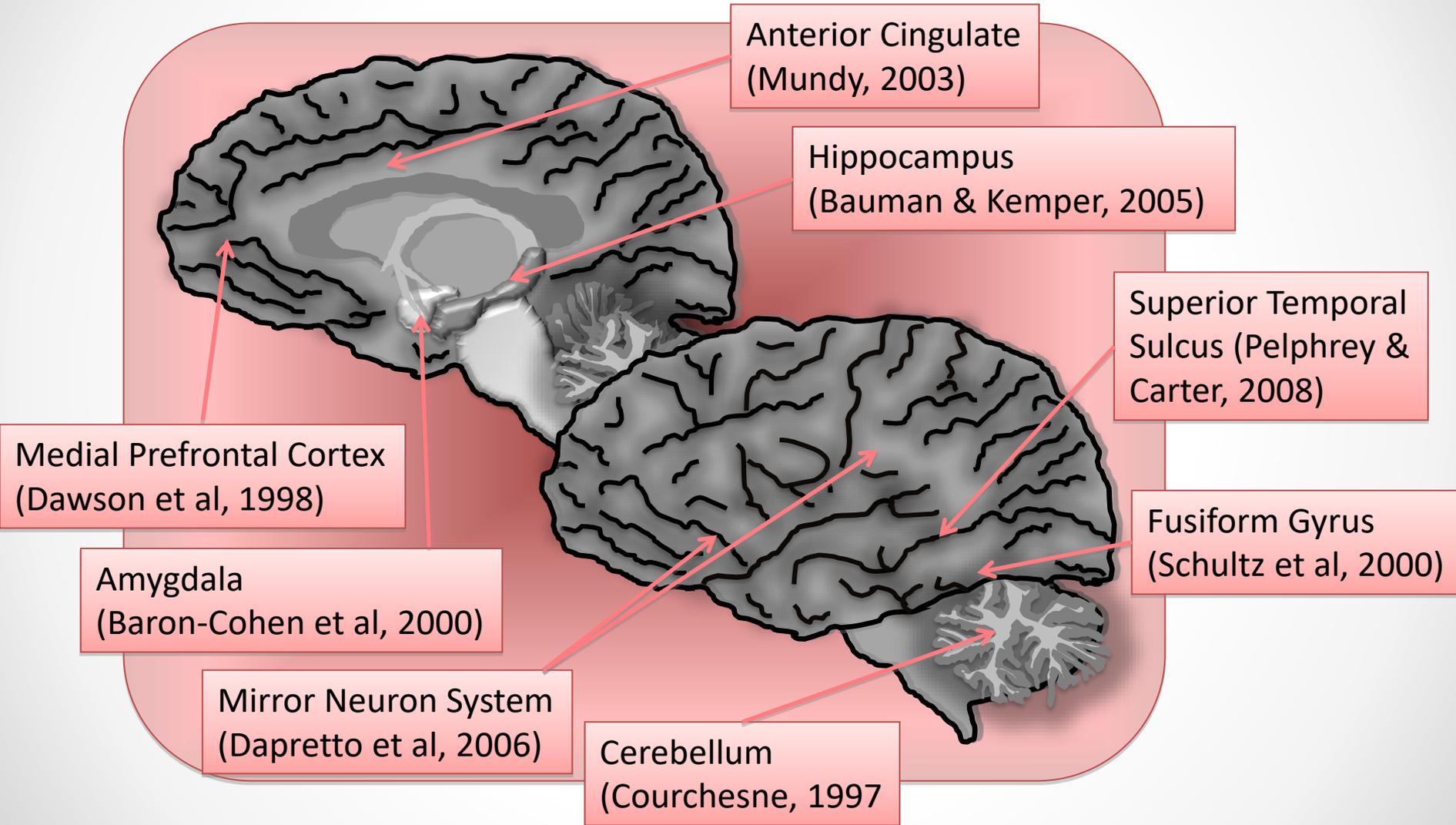
- The ability to detect, attend to, and process social information in the environment, and to use this information to guide behavior
- Perception of social interactions different from other stimuli because we witness actions and emotions (of others) that we ourselves perform and experience (self).
- Biological motion perception, affect perception, face perception, action understanding, theory of mind, imitation, empathy, etc

Empathy in ASD

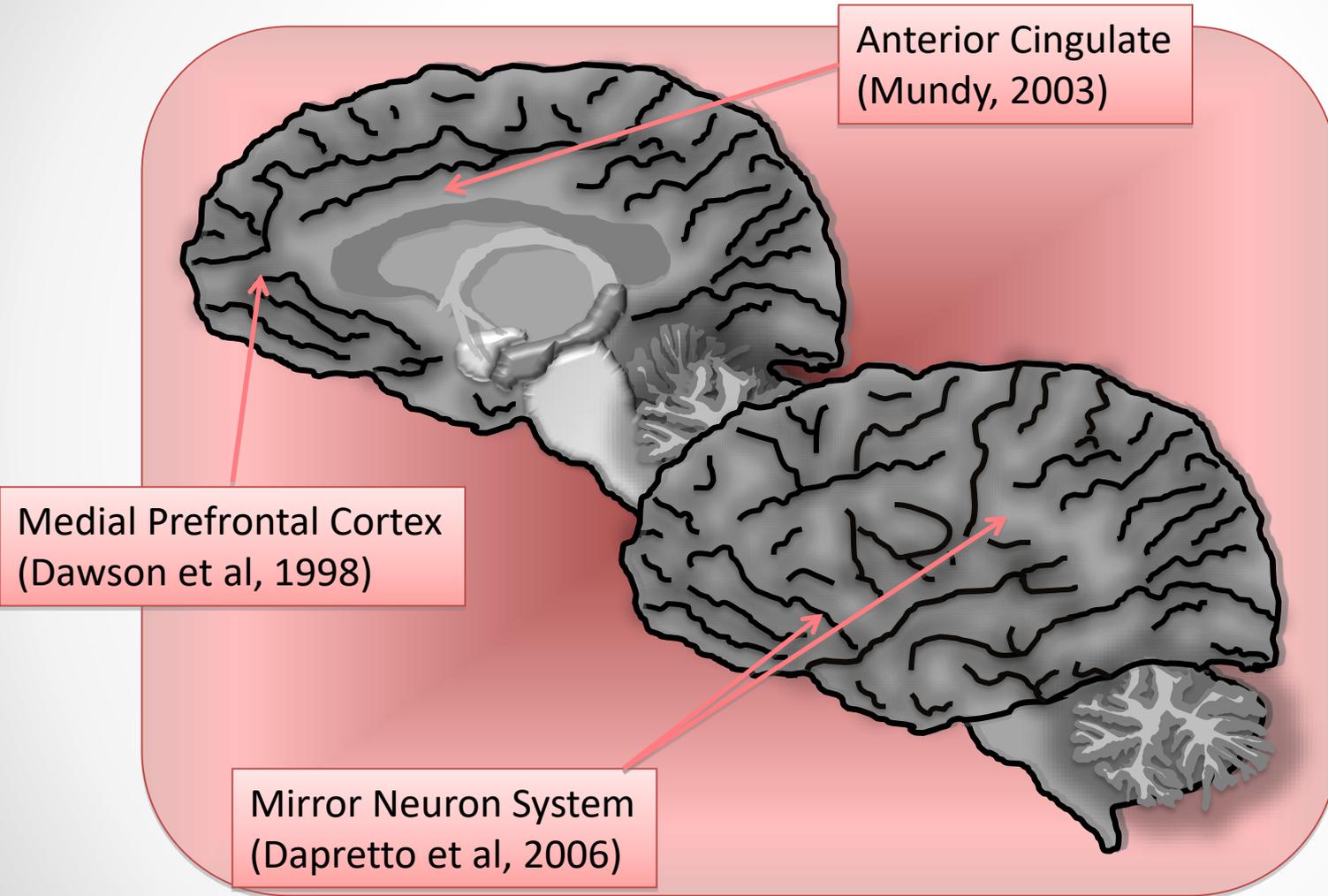
- Individuals with ASD attend less to faces and to emotional expressions.
 - Response to distress task
- Individuals with ASD show imitation deficits.
 - Coded behaviors show poorer skills and more errors
- Individuals with ASD have deficits in empathy
 - Self report questionnaires, parent report questionnaires



Social Brain Circuitry Implicated in ASD

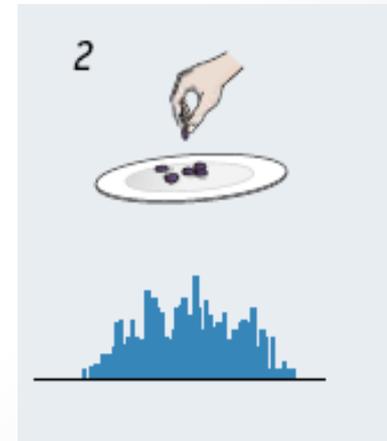
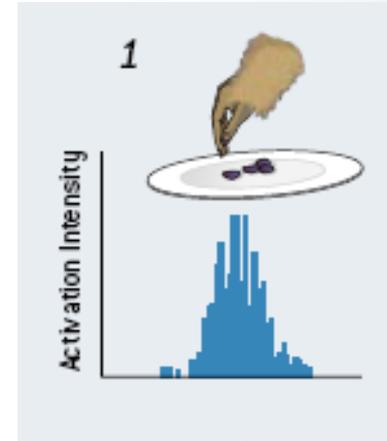


Circuitry involved in empathy



Mirror Neurons: non-human primates

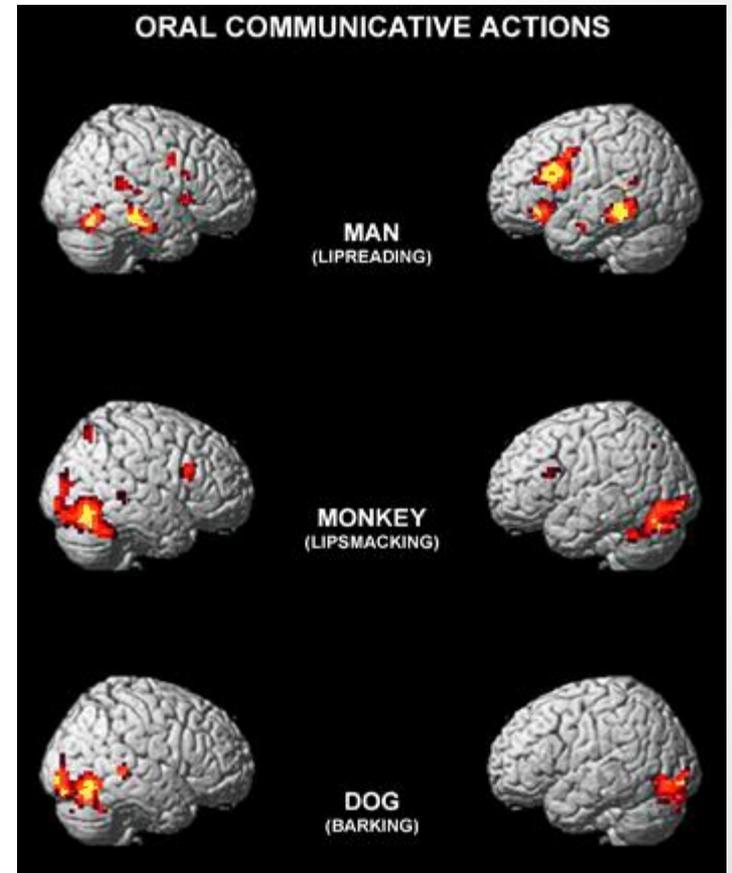
- Mirror neurons activate during the execution AND observation of actions.
- Proposed to mediate action understanding.



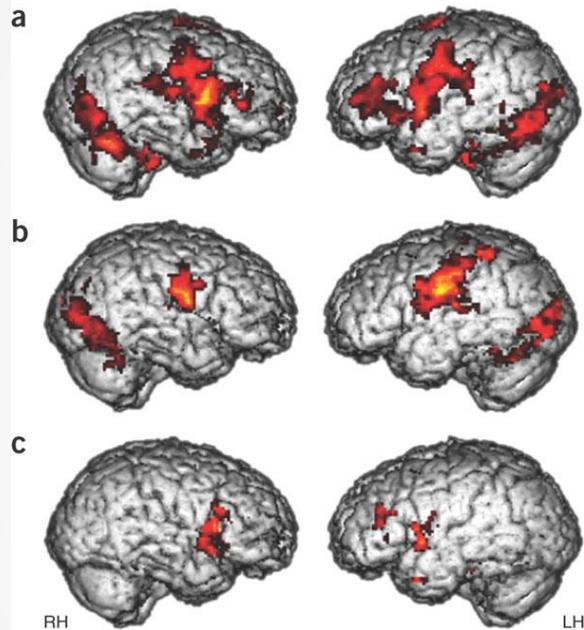
(from Ramachandran
& Oberman, 2006)

Mirror Neurons: humans

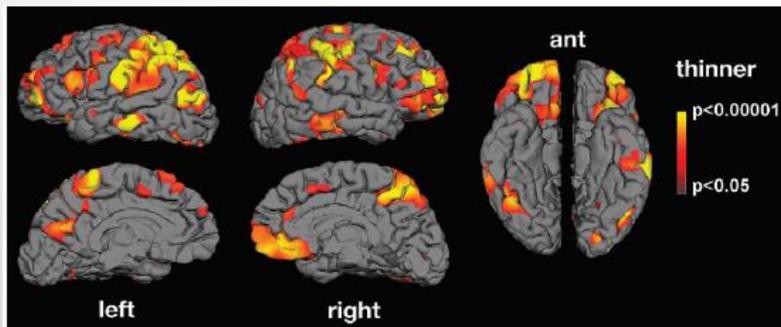
- Provide the ability to understand others' actions and emotions through internal representation without reflection.
- Imitation, empathy, theory of mind, metaphor, and evolution of language.
- Only species specific actions result in MNS activation.



Mirror Neurons: Autism



- Promising initial work in MRI, fMRI, EEG, MEG suggesting atypical function.
- Failures to replicate with stricter controls and different samples.
- Mirror Neuron hypothesis of autism not holding up.



Interventions addressing empathy in ASD

- ABA based therapies
 - Attention to faces and facial expressions, decreasing challenging behaviors, shared attention, development of language, imitation skills
 - Over time scaffolding of prompts is decreased
 - Skill is taught in multiple contexts to increase generalizability
- Social Skills training
 - Didactics regarding the social skill (e.g., emotion recognition, eye contact)
 - Structured practice of task where use of skill is reinforced (e.g., silent video task, emotional charades)
 - Opportunity to practice in naturalistic setting (e.g., snack)
- Live and video modeling
 - Modeling of social skill (e.g., empathic responses)
 - Generic model, peer model, videotaped self performing skill

Take away

- There are lessons from the world of autism that can inform practices to promote learning empathy skills and practices regarding behavior change.

Thank you

The Bernier Lab at UW:



The Children's Autism Center:

