

9.916
Empathy & Helping

Today's Lecture

Why do people “cooperate”?

- Evolved cooperator genes
- Acquire normative beliefs
- *Caring* about others welfare

- (1) Proximal mechanisms for sociobiology
- (2) Attempt at multi-level explanation

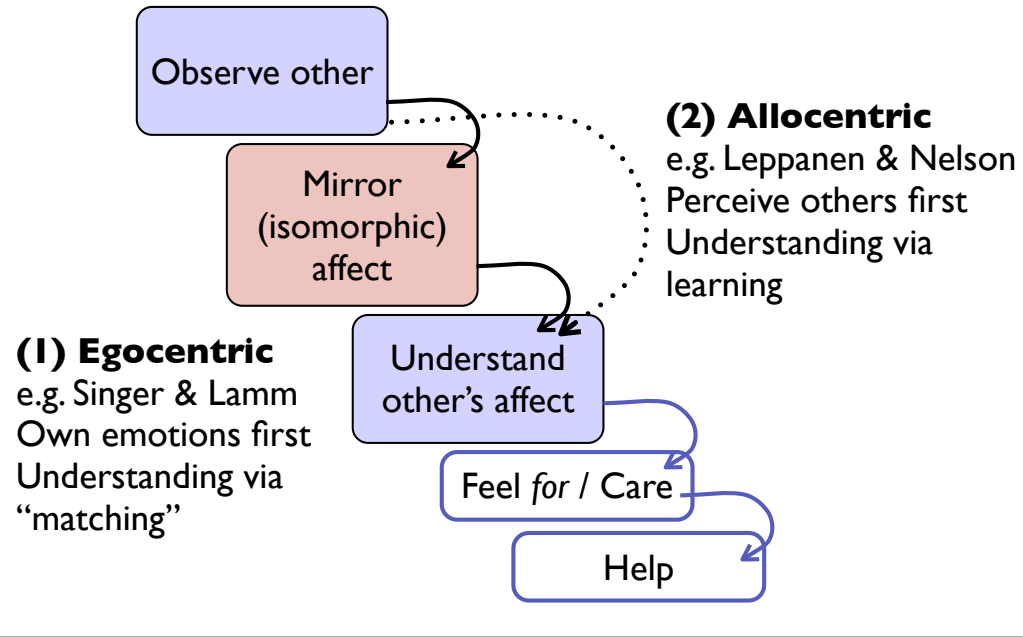
“A high level concept that appears to have great potential utility in bringing together neural and psychological data is that of empathy.”
Leslie Brothers, 1989

- (1) How do we know what others are feeling?
- (2) When & why do we respond by caring / helping?

[NB revisited on social perception, ToM, Aggression days]

How do we know

I. Two views

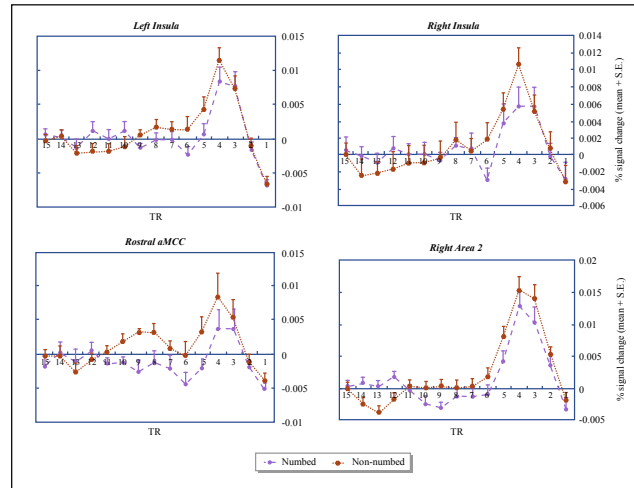


How do we know

2. Evidence of “matching”?

(I) Pain: ACC / Insula

Not Numb Numb



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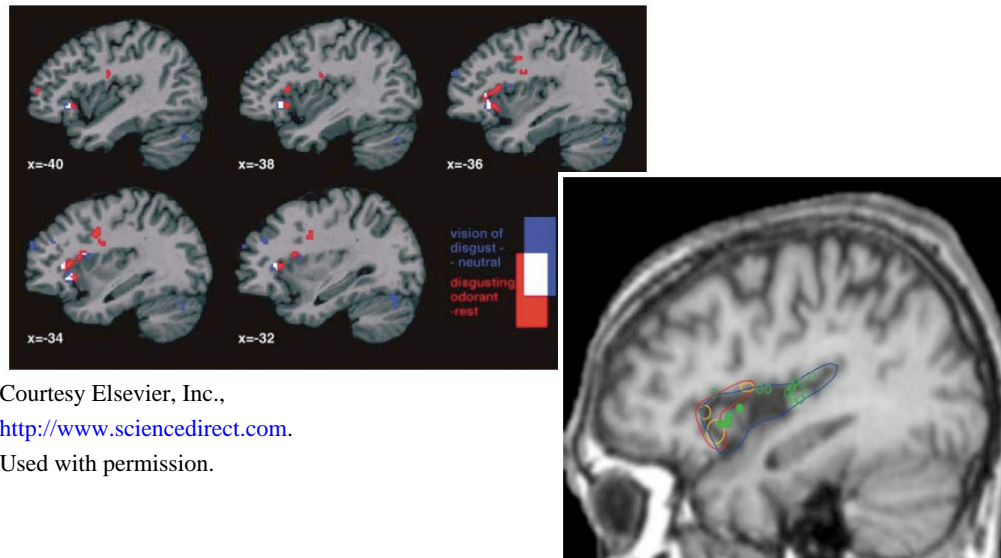
Singer et al 2004, Lamm et al 2007

Figure by MIT OpenCourseWare.

How do we know

2. Evidence of “matching”?

(2) Disgust: Insula



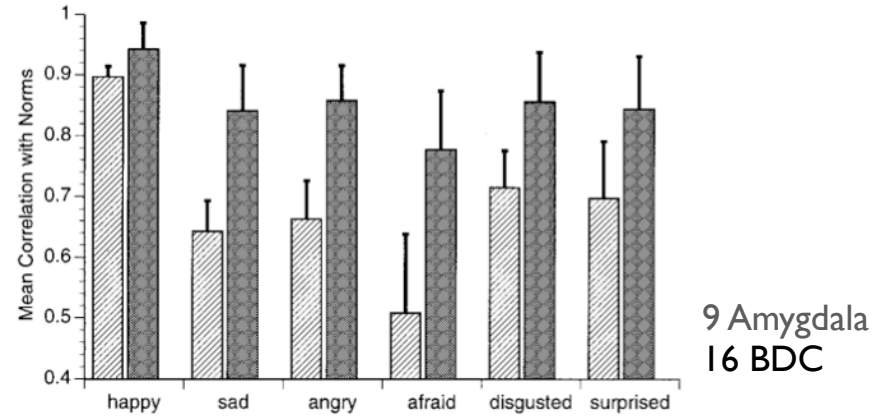
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Wicker et al 2003, Calder et al 2000

How do we know

2. Evidence of “matching”?

(3) Fear: Amygala

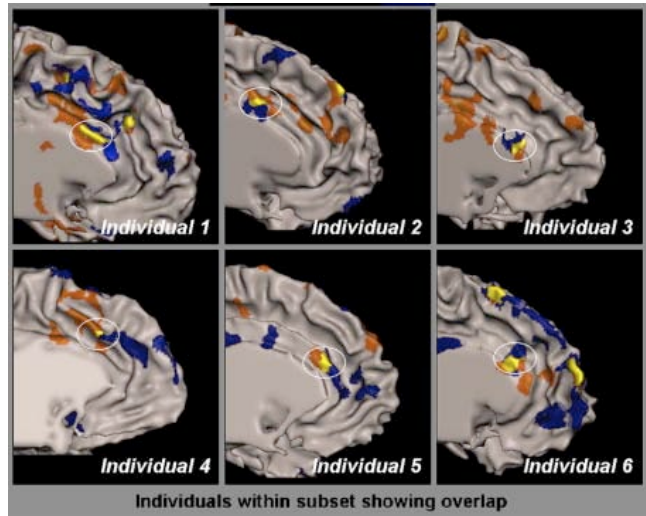


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How do we know

2. Evidence of “matching”?

(I) Pain: ACC / Insula?



Morrison & Downing 2007 Courtesy Elsevier, Inc., <http://www.sciencedirect.com>. Used with permission.

How do we know

3. Evidence of "learning"?

Learn emotion you see,
Not the one you feel:

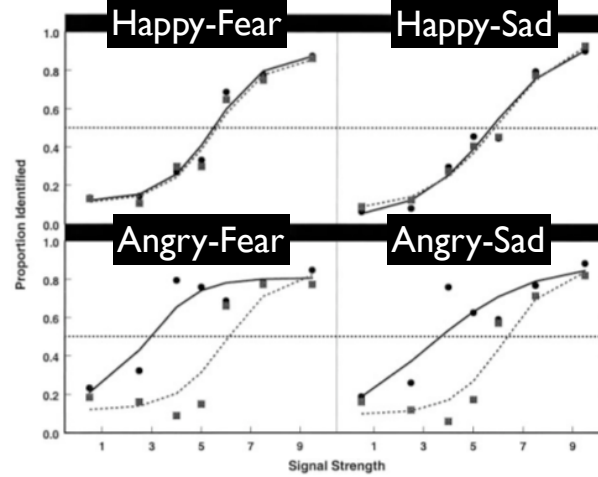


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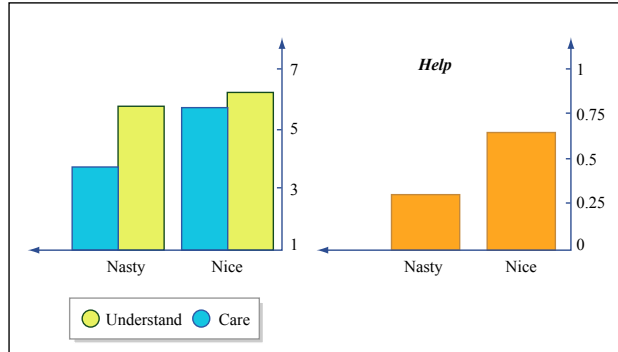
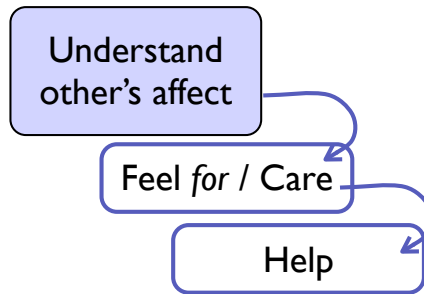
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Source: Fig. 2 in Pollak & Kistler. "Early Experience is Associated with the Development of Categorical Representations for Facial Expressions of Emotion." *PNAS* 99, no. 13 (2002): 9072-9076.

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Leppanen & Nelson, Pollak & Kistler 2002

Why do we help



Batson et al 2007

Figure by MIT OpenCourseWare.

Why do we help

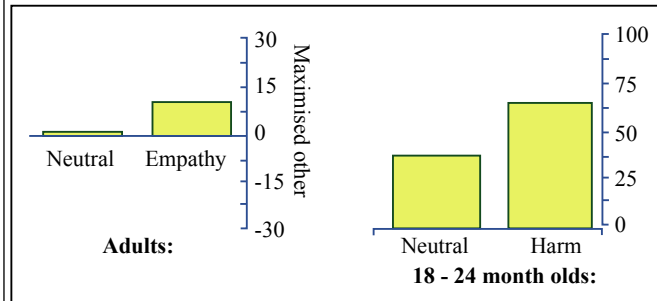
Empathy Induced Altruism

Feeling *for*
motivates
improving other's welfare

Egotistical Altruism

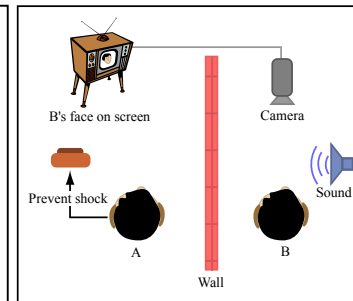
Feeling *with*
motivates
reducing own distress

Adults:



18 - 24 month olds:

Monkeys & Rats:



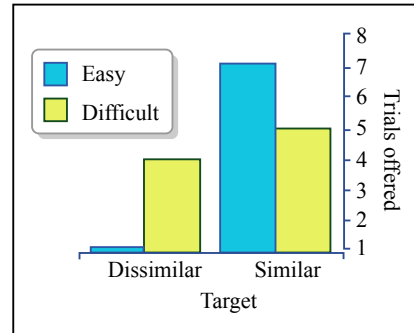
Van Lange 2008, Vaish et al 2009, Miller et al 1963

Figures by MIT OpenCourseWare.

Why do we help

Empathy Induced Altruism

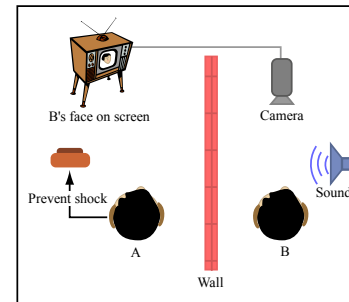
Feeling *for*
motivates
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Egotistical Altruism

Feeling *with*
motivates
reducing own distress

Monkeys & Rats:



Miller et al 1963, Batson et al 1981

Figures by MIT OpenCourseWare.

Empathy

- (1) Proximal mechanisms for sociobiology
- (2) Attempt at multi-level explanation

“A high level concept that appears to have great potential utility in bringing together neural and psychological data is that of empathy.”

Leslie Brothers, 1989

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