HOW DO WE BECOME SOCIALLY SKILLED?

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Why study development?

“explaining [quantum physics] is child’s play compared to [explaining] child’s play”
– Albert Einstein

The rest of the psychological and behavioral sciences are algebra.
The study of development is calculus.

• To know a trait, know how it emerges
  – Example: Walking emerges in various ways, but all infants start with a tendency to alternate leg flexion/extension
Why study development?

• Real-world importance
  – Better treatment for individuals w/ disabilities
  – Potential to improve education & parenting
  – Improve lives of infants/children/adolescents at risk
Development of social skills

Complex, diverse, multivariate

What sorts of skills?

- Kin recognition
- Hunting/foraging/feeding
- Playing
- Mating
- Aggression/dominance
- Communicating
Kin recognition

Learn that some things are "like you," and some even do useful things for you.

More specifically, some people do things that make you feel better

How do you know what's a person?
How do you know which of these are caregivers?
What do people look like?

How do people move around?
What do people look like?

How do people move around?

Bertenthal et al, 1987: Do 3-month-olds discriminate biological motion?
What do specific people look like?

Do infants discriminate a parent’s face from a stranger’s?

Layton & Rochat (2007): Habituate to stranger #1; dishabituate to either stranger #2 or mother
I've just seen a face?

4 months: no clear evidence of differential response

8 months: preference for mom's face (still or moving)

So younger infants can’t recognize their parent's face??

Probably they can, using multiple cues.

The point is, even within a few months we improve at face processing
What does kin recognition buy you?

• Survival

• *Attachment* relationship
  – John Bowlby (1969): 'emotional tether'
  – Facilitates exploration and learning

• Is this enough?
  – Of course not: babies must learn to *communicate*
Communication requires "common ground"

“Do you see what I see?”

Attention-sharing

• Look where someone is looking

• Get someone to look where you’re looking

• Important for teaching & learning
Gaze-following: Early attention-sharing skill?

Around 8-12 months

Why does it matter?

Learn what’s important to other people

Figure out what they mean
A human skill?
Evidence from our cousins

- Okamoto et al (2002): Gaze-following in Ayumu, a captive-reared chimpanzee

- How widespread is gaze-following behavior among primates?

- What does this mean about the origins, and usefulness, of this social cue?
What is attention sharing for?

• Maybe for learning skills
• Watching what other primates (e.g., parents) do is a good way to learn how to interact with the world

Social skills -> More social and non-social skills
What we covered

• Infants learn what people look like, and how they move
  – Individuals as well as people in general
• to attend where others are attending
• ...and of course much more!
How do changes in the brain support the acquisition of new social skills?
How can we study this in toddlers?
What are some things the brain has to be able to do, to learn this?

- Learn patterns of cues:
  - Cortex (also deep structures)
- Decide to act:
  - Cortex, motor system
- Be sensitive to social outcomes:
  - Reward networks
Questions?

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