Theory of Mind - Lifespan development 2

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Today

- Continue where we left off last week
- ToM in adults
- ToM in old age

Seminar:
- Class activity
RECAP!

- What is ToM?
- Name ways to measure it
- What are the cultural differences that might affect ToM development?
Differences between behavioural sensitivity and mentalising

(ADD VIDEO!!!!) http://www.youtube.com/watch?v=nSwGe55dD70
| Behavioural sensitivities / IMPLICIT (automatic unconscious) ToM | Mentalising/ EXPLICIT – (conscious, effortful) ToM |
How would you test an infant?

Eye tracking
http://www.youtube.com/watch?v=FfOtEjZFaq4
• Onishi & Baillargeon, 2005

“Violation of Expectation” method
Condition 1.1: TB GREEN, test GREEN

Familiarisation (8 sec and pause)

Belief Induction (8 sec and pause)

Test- Green
Action Anticipation- anticipatory looking
Southgate, Senju, Csibra, 2007
BUT...


- 3-way actor-object-location association
- Behavioural rules - people look for an object where they last saw it
- Changes in latent activation in non-frontal regions

Knowing about BEHAVIOUR versus knowing about mental states MEDIATING BEHAVIOUR
What can do to overcome these challenges?

- Range of belief tasks
- Testing predictions and explanations
- Longitudinal studies
- ‘Pure’ tests of false beliefs
Real life scenarios...

1. Hide and seek
2. Understanding fairy tales and stories
3. Pretend play: tea party
4. Protodeclarative pointing
5. Social referencing
6. Eye gaze: will follow eye gaze of adult IF joint attention was established prior to the adult looking away
What other skills are necessary?

Executive function- mental capacity

Language
Acquisition of false belief understanding coincides with significant changes in EXECUTIVE FUNCTIONING
WHY?

This is Sally

This is Anne

Sally puts her ball in the basket

Sally goes away

Anne moves the ball to her box

where will Sally look for her ball?
LANGUAGE
What are the social implications of ToM change across development?
Consequences of ToM

• Social relationships: prosocial and anti-social

Emotional Regulation:
links with problems in peer relationships
Ring leader bullies have been found to have exceptional ToM!

Victims however have been found to have poor ToM!
Preschool development in ToM may increase sensitivity to criticism and lead to later:

Low self esteem
Testing adults

- Advanced ToM tests:

Advanced ToM- Strange Stories (Happe, 1994)
Discussion

Does ToM increase, decrease or stay the same as we grow older?
ToM in old age

Crystallised versus fluid intelligence
Crystallised intelligence

“knowledge that comes from prior learning and past experiences.”
Fluid intelligence

Cattell:

"...the ability to perceive relationships independent of previous specific practice or instruction concerning those relationships."
Gender differences in ToM
HOMEWORK FOR NEXT WEEK

MUST read Mechanisms of Social cognition:


This reading will be included in your test in Week 5
Examples of domain specific input systems

- Gaze Processing
- Voice Processing
- Emotion Recognition
- Goal detection
- Visual Spatial Processing
- Motor Representations
- Perceptual Representations

MENTAL STATE INFERENCES WITH A TOM MODULE

- Higher order Amodal Processes
- Explanatory Inferences

THEORY OF MIND MODULE

- Working Memory
- Executive Function
- Recursion
- Metarepresentation
- Secondary Representations/ Collation
- Language Module

Mental State Inferences

Stone & Gerrans, 2006