The “Reading the Mind in the Eyes” Test Revised Version

What do all these people have in common?

<table>
<thead>
<tr>
<th>Hans Christian Anderson</th>
<th>Wolfgang Amadeus Mozart</th>
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<tbody>
<tr>
<td>Lewis Carrol</td>
<td>Isaac Newton</td>
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<td>Jeffrey Dahmer</td>
<td>George Orwell</td>
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<td>Charles Darwin</td>
<td>Albert Einstein</td>
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<td>Adolf Hitler</td>
<td>Thomas Jefferson</td>
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<tr>
<td>Michaelangelo</td>
<td>Andy Warhol</td>
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<tr>
<td>James Joyce</td>
<td>Charles Richter</td>
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<tr>
<td>Stanley Kubrick</td>
<td>WB Yeats</td>
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</tbody>
</table>
What is Autism (ASD)?

Autism (wide-)Spectrum Disorder

– Signs/symptoms such as:
– obsessions
– repetitive behaviors
– lack of social skills – ‘out of sync’, atypical or offensive language
– difficulties with non-verbal communication
Bell Ringer

- Brain Man Youtube Video
- Provide five examples from this video that Daniel Tammet shows signs of Autism.
Baron-Cohen *et al.*

Simon Baron-Cohen is the leading expert in autism research

- (1985) Sally-Anne test: autistic children have delayed development of a theory of mind (ToM= theory of mind)
- (1997) “Eyes Task” for adults
Social Cognition

• **ToM = Theory of Mind**
  – being able to put yourself in somebody else's shoes, being able to imagine what's going on in his or her mind.’
  Baron-Cohen
  – Ability to do this generally appears at the end of the first year of life.
  – Deficit is believed to be core to an Autism diagnosis.

• **Important finding:**
  – *Intelligence (IQ) does not equal social understanding*
What is the Sally-Anne Test?

- **Sally-Anne Test**
  A first-order *false belief* task
- ‘normal’ children cognitive age of 4, 90%+ pass
- autistic children mental age of 5, 80% fail
Autistic Adults

Behavioral strategies

– make eye contact
– *learn* appropriate social responses, e.g. arm around crying child, tone of voice
– In 1985, Ψ (Psychology) had no test for autism in adults.
– Baron-Cohen developed the...
The Reading the Minds Eyes Test

• “The 1997 Eyes Task succeeded in discriminating adults with Asperger’s Syndrome (AS) and high-functioning autism (HFA) from controls but suffered from psychometric problems (measurement problem - not enough of a difference between autistic v. ‘normal’ children)”

• The 2001 task rectifies these problems
What is Asperger’s syndrome?

- impairment in reciprocal social interaction
- restricted & obsessively repetitive patterns of behavior
- differs from other ASDs; a relative preservation of linguistic and cognitive development
AIM

• To investigate if high functioning adults with autism or Asperger syndrome would struggle on a theory of mind test. Also if females will do better than males.
Bell Ringer

- The Reading the Minds Eyes Test Revised
Participants

- **Group 1**: Autistic/Asperger’s.
  - 16 Participants (13 male/3 female)
  - 4 Autism, 12 Asperger’s.
  - Mean IQ: 105.3

- **Group 2**: Control Group.
  - 50 Participants (25 male/25 female).
  - Cambridge University.
  - IQ: Above 85.

- **Group 3**: Tourette's.
  - 10 Participants (8 male/2 female).
  - Same age as Group 1.
  - Mean IQ: 103.5
Method

- Quasi Experiment. Quantitative Data.
  - Participants are given a standardized Eye Task.
  - Given images of Black & White eyes and shown for 3 seconds.
  - Once shown, they had a choice between two words (i.e. Concerned/Unconcerned).
  - Shows 25 set of eyes.
  - Then asked, 'Which word best describes what this person is thinking or feeling?'.
  - This was backed-up by the 'Strange Stories' task, which was used to back up the results of the Eye Task.
Method

- Two control tasks were also carried out to further back the Eye Task, these being the 'Gender Recognition' task, and the 'Basic Emotion Recognition' task.
- The order of these tasks was random.
- 'Normal' men and women
- **IV**: Personality Characteristics (*Autism, Tourette's, Normal*).
- **DV**: Performance on the Eye Task.
Results

- Group 1 scored the lowest, showing their clear lacking of Theory of Mind.
- Females clearly have a more advanced Theory of mind than men.
## Results

<table>
<thead>
<tr>
<th>Groups</th>
<th>Eye Task - Mean Score</th>
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<tbody>
<tr>
<td>Autistic/Aspergers</td>
<td>16.3</td>
</tr>
<tr>
<td>Control Group</td>
<td>20.3</td>
</tr>
<tr>
<td>Tourette's</td>
<td>20.4</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Groups</th>
<th>Eye Task - Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>'Normal' Males</td>
<td>18.8</td>
</tr>
<tr>
<td>'Normal' Females</td>
<td>21.8</td>
</tr>
</tbody>
</table>
Strengths

• Everybody carried it out in the same way = **Standardised**, easily replicable.
• Strange Stories Task/2 Control Tasks = Backs up results/concurrent validity.
• **Lab Conditions:** High levels of control, eliminate extraneous variables.
Weaknesses

• **Reductionist:** Looks only into the ToM of Autistic people and not them as a whole.

• **Lab Exp:** Low Ecological Validity, can't be generalised/not everyday occurrence.

• Only required to look at eyes, but in real life we determine emotion from the face.
Reflective

- **The Transporters - Cartoons developed to help children with Autism**
- Read the article about the cartoons developed to aid autistic children. We will then watch an example of these cartoons.