Social Cue Integration in Perception of Social Interactions

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Background

• Directional information from a person’s eyes, head, and body are integrated to inform where another person is looking\(^1\) and who they are interacting with.

• Research has found differences in social cue integration in individuals with Autism Spectrum Conditions (ASC)\(^2\), and cues are integrated differently when making egocentric (self-referential) compared to allocentric judgements about the direction of another person’s gaze\(^1\).

• However, to date, social cue integration research has focused on the perception of isolated individuals, and little is known about the integration of body cues with head and eye region information during the perception of social interactions.

Aims

• This study investigated whether observers integrate directional cues from the body with eye region and head information when determining whether two people are interacting.

• We manipulated eye visibility and frame of reference (egocentric: dyad facing observer vs. allocentric: facing away from observer), and measured autistic traits via the Autism Spectrum Quotient (AQ)\(^4\).

Methods

Participants:

<table>
<thead>
<tr>
<th>Condition</th>
<th>N (f females)</th>
<th>Mean Age (SD)</th>
<th>Mean AQ (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Eye Region Obscured</td>
<td>120 (61)</td>
<td>37.9 (7.4)</td>
<td>20.1 (8.7)</td>
</tr>
<tr>
<td>2) Eye Region Visible</td>
<td>104 (48)</td>
<td>37.1 (7.1)</td>
<td>19.9 (7.8)</td>
</tr>
</tbody>
</table>

Stimuli:

- 1) Eye Region Obscured
- 2) Eye Region Visible
  - A) Allocentric
  - B) Egocentric
  - C) Allocentric

Online Task:

- Are these 2 people interacting with each other?

Results & Conclusions

• Body, eye region, and head information are integrated during social interaction perception. Perceived interaction is shifted in the direction opposite the body, demonstrating the overshoot effect\(^1,2\).

• Body cue has stronger influence on interaction perception in egocentric compared to allocentric frame of reference when eye region is obscured.

• Observers with more autistic traits are more influenced by the body during interaction perception, particularly when the eye region is visible during an egocentric frame of reference.

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References
