

# Conjunctive versus single-feature visual processing in relation to Autistic traits.

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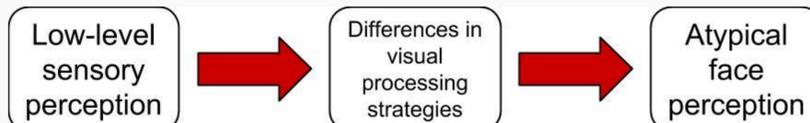
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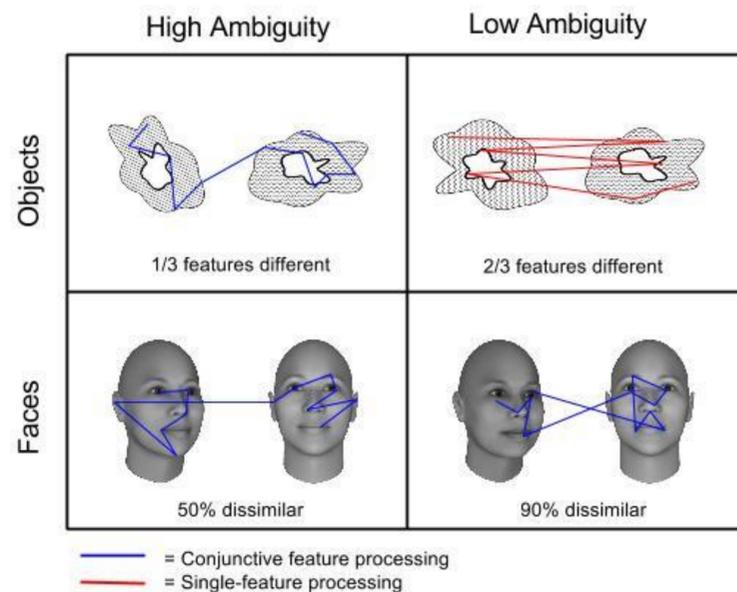
## Background

### Autism Spectrum Disorders

- Characterized by atypical sensory processing
- Differences in low-level perception may feed forward into atypical social behaviours
- Atypical face processing also a defining feature of ASD
- Face perception typically requires a conjunctive feature processing strategy



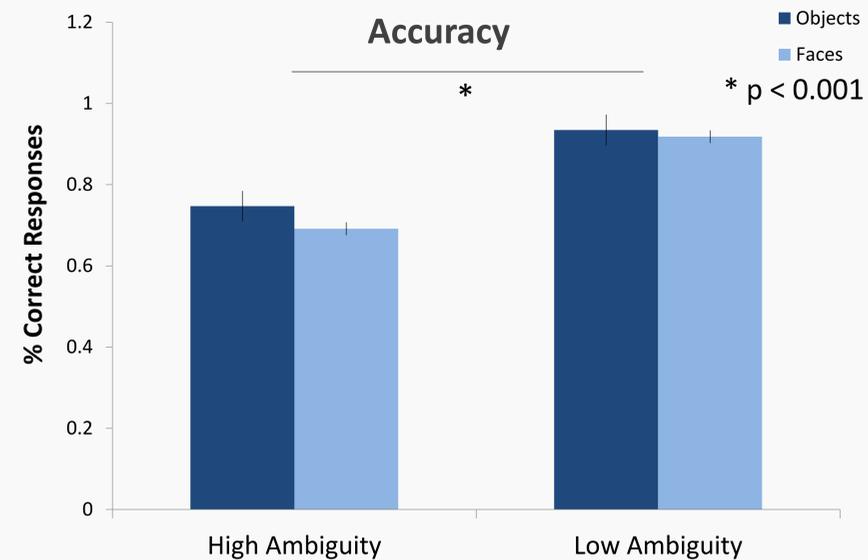
## Methods



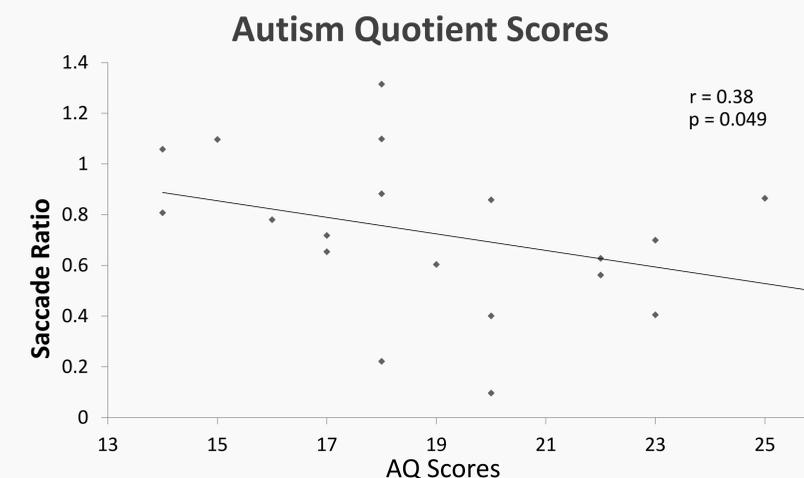
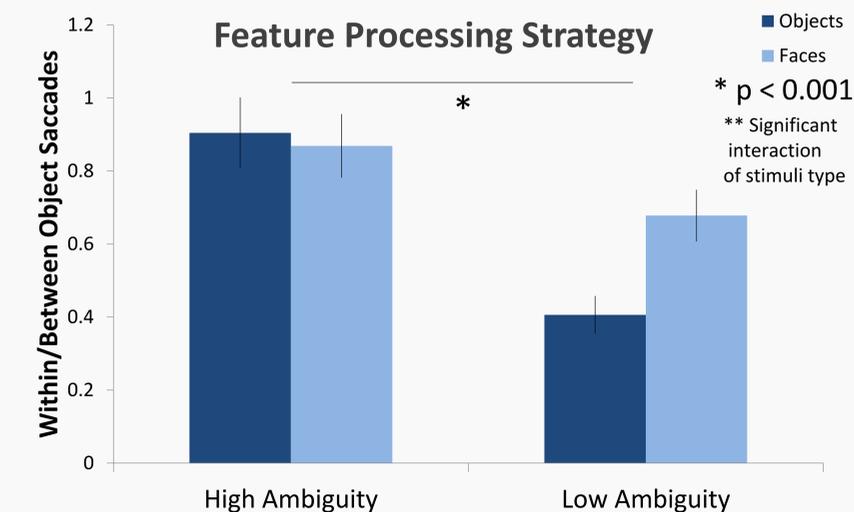
- Eyetracking equipment was used to record eye movements in a same/different comparison
- A higher within to between –object saccade ratio was indicative of a conjunctive feature strategy, while the opposite indicated a single feature strategy
- Participants also completed self-report measures of Autistic traits

## Results

n	Male	Mean Age	Mean AQ
20	35%	20	19.3



- Stimuli were matched for accuracy in a pilot study



## Conclusions

- Stimulus type was successfully matched for accuracy levels.
- A stimulus-by-ambiguity interaction was observed, where configural processing of faces was less impacted by the level of ambiguity.
- The interaction between self-report measures of Autistic symptomatology and feature processing strategies are approaching significance, with individuals with more Autistic traits exhibiting less conjunctive feature processing overall.

**Social stimuli, i.e. faces, provoke the use of a conjunctive feature processing strategy independent of level of ambiguity. Individuals higher in Autistic traits tend to use less conjunctive feature processing, which aligns with accounts of atypical visual processing in ASD.**

## Discussion

- Our results indicate that, while stimuli of higher ambiguity more often engender a conjunctive feature strategy, face processing benefits from the use of such a visual strategy more so than objects of comparable ambiguity.
- Results indicate that individuals with high ASD symptomatology demonstrate an atypical visual processing strategy.
- Atypicalities in visual processing may result in more difficulty processing social stimuli such as faces.
- Difficulties in processing faces may lead to the social difficulties that individuals with ASD exhibit.
- Interventions for individuals with ASD that work towards promoting a conjunctive feature strategy may promote more typical social behaviours.