The first comprehensive case study of developmental prosopometamorphopsia (D-PMO)
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What is PMO?
• Visual perception disorder in which faces appear distorted.
• 99/100 cases reported in literature are acquired (via stroke, TBI, migraine, etc.).
• Only one brief case report of developmental PMO (D-PMO) in literature.
  • D-PMO = lifelong symptomology with no evidence of acquisition

Participant
• 15-year-old male (Zed), right-handed, lifelong distortions and no known neurological events. Dyslexic, color blind, aphantasic.
• Reports seeing dynamic, complex, and varied distortions (as seen on right) to faces and bodies in everyday life.

Methods
• Multi-method exploratory case study.
• Completed 20 neuropsychological assessments of face recognition, perception, and detection.
• Created and administered 12 distortion severity assessments.
• Neuroimaging with DWI and fMRI.

Questions

Does distortion severity vary over viewing condition?
Significant reduction in distortion severity for individual features when compared to full face. (p < 0.001)

Do eyeglasses impact distortion severity or onset time?
Significant reduction in distortion severity when perceiving faces with eyeglasses. (p < 0.001)
Increase in distortion onset time when perceiving faces with eyeglasses. (p = 0.059)

Are Zed’s face recognition, perception, or detection impaired?
Scores normally in tests of face perception and face detection (see discussion).
Scores significantly below controls in tests of face recognition.

Does Zed possess abnormal white matter tracts or lesions?
Zed’s left inferior fronto-occipital fasciculus is significantly different from controls. No lesions detected in fMRI.

Discussion
Zed sees distorted faces BUT scores normally in tests of face perception → two separate streams of face processing?

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