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Can kids ignore what they are hearing when it comes to emotion recognition?

Background

In the 1970s, Colavita performed an experiment using flashes and beeps. The task was to push a button when a flash occurred, and a different button when a beep occurred. Sometimes both stimuli would happen simultaneously. When this happened, they found that adults would push the button for the flash (coined the Colavita effect and a sign of visual dominance in adults), whereas children would push the button for the beep (the reverse Colavita effect or Auditory dominance).

Recently we have been exploring this effect, showing that it still holds for emotion recognition (Ross et al., 2021, 2023, 2025). If participants are presented with a person acting in a fearful way visually, but they hear a laugh, adults will say the person is scared but children will say they are happy. (Fig 1).

This effect also holds when we use emotional music instead of emotional voices. So, it could be the case that any positive or negative aural environment affects how children perceive what they are seeing.

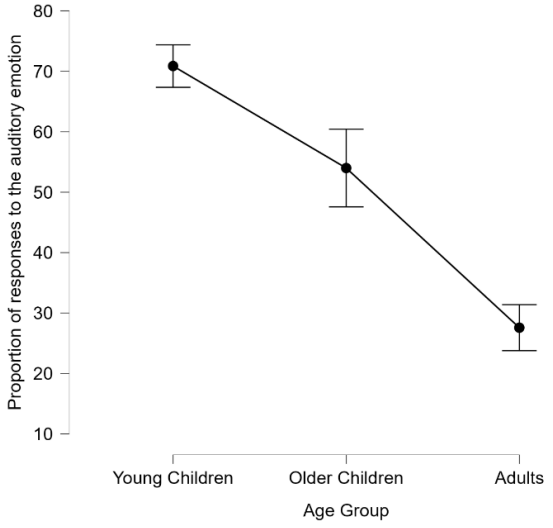

Fig. 1. Proportion (%) of responses to the auditory emotion in a bimodal stimulus (e.g. Fearful Body / Happy Voice)

Aims and Methods

The suggested project will investigate this phenomenon further, probing the mechanisms behind this effect and how they develop. We are currently developing methods in Virtual Reality (VR) which will allow for much more flexibility in experimental manipulation as well as creating a more 'true-to-life' emotion recognition experience.

Relevance

The project has the potential to impact several key areas, in education, child communication and has the potential to impact overall wellbeing. If a positive aural environment affects children's perceptions, then it could be used to improve education, or lower stress in emotionally negative situations.

Training

The candidate's research activity will be based in Durham University's Psychology Department. Besides training in general research skills, the candidate will develop a deeper understanding of the development of emotion recognition as well as the novel and emerging use of VR in research.

Suitable for

PhD and MSc by Research students.

References and Further Reading

Ross, et al. (2021). Children cannot ignore what they hear: Incongruent emotional information leads to an auditory dominance in children. *Journal of Experimental Child Psychology*, *204*, 105068.

Ross, et al. (2023). Turn that music down! Affective musical bursts cause an auditory dominance in children recognizing bodily emotions. *Journal of experimental child psychology*, *230*, 105632.

Ross, et al. (2025). The (reverse) Colavita effect in emotion recognition: Children and adults come to different conclusions when categorizing incongruent emotional audio-visual stimuli. *PsyArXiv.*