



## City Research Online

### City, University of London Institutional Repository

---

**Citation:** Korolkova, O., Tsantani, M., Lavan, N. & Garrido, L. (2019). Brain Regions That Respond to Faces, Voices, and People. *Perception*, 48(2), doi: 10.1177/0301006619863862

This is the accepted version of the paper.

This version of the publication may differ from the final published version.

---

**Permanent repository link:** <https://openaccess.city.ac.uk/id/eprint/23707/>

**Link to published version:** <https://doi.org/10.1177/0301006619863862>

**Copyright:** City Research Online aims to make research outputs of City, University of London available to a wider audience. Copyright and Moral Rights remain with the author(s) and/or copyright holders. URLs from City Research Online may be freely distributed and linked to.

**Reuse:** Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge. Provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

# Brain Regions That Respond to Faces, Voices, and People

**Olga Korolkova<sup>1</sup>, Maria Tsantani<sup>2</sup>, Nadine Lavan<sup>3</sup> and Lúcia Garrido<sup>1</sup>**

<sup>1</sup>Brunel University London, UK

<sup>2</sup>Birkbeck, University of London, UK

<sup>3</sup>University College London, UK

We aimed to identify brain regions that respond to people, independently of the modality (auditory/visual). In two functional magnetic resonance imaging studies, participants completed three functional localizers: visual (silent videos of nonspeaking faces vs. scenes), auditory (voices vs. environmental sounds), and audiovisual (videos with speaking people vs. scenes with sounds). Using data from Study 1 ( $N = 30$ ), we conducted a conjunction analysis of the three localizers to identify regions that responded more to faces, voices, and audiovisual faces voices than to control stimuli. The right posterior STS showed most consistent people-selective activation in 24/30 participants. In Study 2 ( $N = 22$ ), we identified the people-selective rpSTS in each participant, and extracted mean activation and multivoxel response patterns in this region from independent data. The rpSTS responded significantly more to audiovisual stimuli than to faces or voices and more to voices than faces. While face- and voice-responsive patterns correlated moderately, the correlations were significantly higher between the audiovisual patterns and the face- or voice-responsive patterns. These results suggest that not all voxels in the people-selective rpSTS respond to faces and voices similarly. The rpSTS may contain multimodal voxels that respond to people independently of modality, but also unimodal voxels that respond only to faces or to voices.