**RE: Submission of the manuscript “Differences in the Perceptual Processing of Unfamiliar and Familiar Faces”**

Dear Editors,

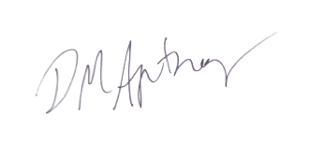
I wish to submit the manuscript entitled “Differences in the Perceptual Processing of

Unfamiliar and Familiar Faces” for consideration as a full experimental paper in *Cognition* on behalf of myself and my co-authors Kasey McGinness and Jessica Taubert.

Although it is widely believed that familiar faces are processed differently from unfamiliar faces, most research in the field of cognitive science has focused on understanding how participants process the faces of strangers, simply because it is more difficult for a researcher to find face stimuli that are equally familiar to a number of different people. Thus, information about familiar face processing and how it differs from unfamiliar face processing is scarce. Here we address this knowledge gap by including the participant’s own face as a stimulus, together with the face of the experimenter, to represent the familiar categories. To compare performance with unfamiliar faces, we employed face stimuli from a conventional database. To properly characterise perceptual processing time, in addition to participant reaction time, we used a two-alternative forced choice recognition task; stimulus presentation time was varied in a staircase procedure to measure the minimal number of frames required to recognise one’s own face, a familiar face or the face of a complete stranger. **The results revealed that average recognition time, not average participant reaction time, varied with familiarity.** This provides strong behaviour evidence that the recognition of familiar faces, especially one’s own face, is unique and extremely efficient compared to the recognition of unfamiliar faces. We also show that turning face stimuli upside down was more detrimental to unfamiliar face recognition than familiar face recognition – which also supports the conclusion familiar faces undergo qualitatively different cognitive processes than unfamiliar faces, and that these processes are more efficient and more tolerant of image transformations.

We have adhered to all of the guidelines associated with *full articles*; these data represent a substantial conceptual advance that will have an immediate impact on studies of how familiarity changes sensory and cognitive processing. This research was conducted with the highest ethical and scientific standards - all materials and data will be made openly available to scientific community via the Open Science Framework, and the study was also preregistered on the same platform.

Yours sincerely



A/Prof. Deborah Apthorp

(on behalf of all authors)