Attention modulated by in-group vs out-group status in a cueing task (#5665)

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1) Have any data been collected for this study already?
No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?
The goal of this study is to test the hypothesis that in-group members, as compared to out-group members, can drive attentional biases similar to those elicited by the self (as in Liu et al., 2016).

3) Describe the key dependent variable(s) specifying how they will be measured.
The afore-mentioned hypothesis will be tested by using an adapted version of the Posner cueing task, similar to the one in Liu et al. (2016). Two dynamically orienting faces, one of an in-group and one of an out-group member, will be used as a cue for a following target to which a response needs to be given (i.e., is the target letter upright or inverted?).
Crucially, one third of the trials will consist of invalid-cue trials (i.e., faces dynamically orienting towards the opposite direction of where the target will be presented), another one third of the trials will present neutral cues (i.e., frontal non-turning faces), and, finally, the remaing trials will show valid cues (i.e., faces orienting towards the correct direction). Please, note that the neutral condition was not present in Liu et al.'s study and that it has been included in the current one to provide a contrast for both the valid and invalid cue conditions and to be able to tease apart potential inhibitory and facilitatory effects.
Following Liu et al., the SOA between the cue and the presentation of the target will also be manipulated (250|350ms, plus extra 40 ms of an initial frontal face in both valid and invalid cue conditions to ensure deep processing of the faces).
Looking at RTs, we expect to see a pattern which confirms our hypothesis that automatic attention is allocated to the in-group face, as compared to the out-group face. We predict a larger cueing effect (i.e., faster RTs in the valid cue condition than in the invalid and neutral cue conditions) when in-group faces are shown as compared to out-group ones. This will extend Liu et al.'s (2016) findings to ingroup memebrs. We will additionally explore whether ingroup faces are harder to ignore, leading to slower responses in the ingroup condition when the cue is invalid.
Regarding the SOA conditions, this will be the first study to test in-group-related attentional biases in a cueing task and to explore the timing of such effects.

4) How many and which conditions will participants be assigned to?
3 within-subject conditions: Cue validity (Invalid| Valid| Neutral), Face status (In-group| Out-group), SOA (250|350)

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
Linear mixed-effects models will be run to analyze the data, using sum-to-zero coding. RTs (correct trials) will be modelled by Cue validity, Face status, and SOA, as well as their interaction. The random structure will include a random intercept by participants, and any of the following slopes: Cue validity,Face status, SOA and their interaction, that would be shown to contribute to the model according to the rePCA function from the RePsychLing R package .

6) Any secondary analyses?
If accuracy rates are not at ceiling, we may look at error rates modulated by the same predictors, analyzed via a glmer model (family=binomial).

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.
We will recruit 40/50 participants. Potential participants will be female university students studying at the same university of the in-group member. Participants who have relations to the out-group member community will be excluded.

8) Anything else you would like to pre-register? (e.g., data exclusions, variables collected for exploratory purposes, unusual analyses planned?)
The experimental session will start with an initial phase in which participants will be exposed to the faces to learn their group membership. They will be told that they will see two students from two different universities (i.e., their own, and another one) and listen to the them reporting about their university life habits (six utterances per speaker). After the exposure, they will be tested in a "Who said what" memory task in which they will be presented with one face at the time along with four written sentences (2 related to their own university, and other 2 to the out-group university). Participants will have to indicate which sentence was the one produced by the displayed speaker. This task will test if participants have correctly inferred to which university each speaker belongs. If participants will show particular difficulty in learning the faces' group membership (i.e., they will make cross-category errors), they will be excluded from analysis in the main experiment.

After the cueing task, a perceptual matching task (as in Moradi et al., 2015) will be administered to collect a measure of in-group bias. Exploratory analyses

will be run to examine whether greater bias in the perceptual matching task predicts greater facilitation or inhibition in the ingroup condition in the main task.