Supplemental Materials

Mental Representations of Middle Eastern Versus Ethnically Unspecified Women and Men Reveal How Ethnicity and Gender Constrain Each Other

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Moderation Analyses by Participant Ethnicity

To explore whether the ethnicity of the profile generators (Experiment 1) and the image generators (Experiment 2) influenced their mental representations, we repeated the analyses from both experiments while adding generator ethnicity as a moderator to the models. Because we did not power the experiments with these analyses in mind, we only examined participant ethnicity as a binary factor, comparing White versus non-White participants in Experiment 1 (where White participants were the majority) and Asian versus non-Asian participants in Experiment 2 (where Asian participants were the majority). Accordingly, the results of these analyses should be interpreted cautiously, pending replication with larger samples of participants.

Experiment 1

Trustworthiness

The analyses of trustworthiness reported in the main text revealed significant target gender and target ethnicity main effects and a significant target gender × target ethnicity interaction. Participant ethnicity did not significantly moderate any of these effects: participant ethnicity × target gender interaction, $b = 0.10$, $CI_{95\%}$ [-0.41, 0.61], $t(352.23) = 0.38$, $p = .702$, participant ethnicity × target ethnicity interaction, $b = 0.14$, $CI_{95\%}$ [-0.37, 0.65], $t(353.28) = 0.54$, $p = .591$, and participant ethnicity × target gender × target ethnicity interaction, $b = 0.83$, $CI_{95\%}$ [-0.19, 1.84], $t(352.52) = 1.60$ $p = .110$.

Dominance

The analyses of dominance reported in the main text revealed significant target gender and target ethnicity main effects and a significant target gender × target ethnicity interaction. Participant ethnicity did not significantly moderate any of these effects: participant ethnicity × target gender interaction, $b = 0.08$, $CI_{95\%}$ [-0.30, 0.46], $t(391.19) = 0.42$, $p = .673$, participant

ethnicity × target ethnicity interaction, b = -0.13, $CI_{95\%}$ [-0.52, 0.25], t(391.34) = -0.67, p = .502, and participant ethnicity × target gender × target ethnicity interaction, b = 0.04, $CI_{95\%}$ [-0.73, 0.81], t(391.19) = 0.10, p = .922.

Experiment 2

Image-Generation Phase

Trustworthiness. The analyses of trustworthiness reported in the main text revealed significant target gender and target ethnicity main effects and a significant target gender × target ethnicity interaction. Participant ethnicity had one significant moderating effect: participant ethnicity × target ethnicity interaction, b = -0.39, $CI_{95\%}$ [-0.68, -0.09], t(1286.06) = -2.58, p = .010, indicating that the ethnic difference (i.e., Middle Eastern targets more trustworthy than ethnically-unspecified targets) emerged for non-Asian participants, b = 0.30, $CI_{95\%}$ [0.16, 0.45], t(1291.14) = 4.09, p < .001, but not for Asian participants, b = -0.02, $CI_{95\%}$ [-0.17, 0.13], t(423.19) = -0.29, p = .773. There were no other moderating effects of participant ethnicity: participant ethnicity × target gender interaction, b = 0.02, $CI_{95\%}$ [-0.28, 0.31], t(1286.26) = 0.13, p = .899, and participant ethnicity × target gender × target ethnicity interaction, b = 0.12, $CI_{95\%}$ [-0.29, 0.54], t(1286.27) = 0.58, p = .564.

Dominance. The analyses of dominance reported in the main text revealed a significant target gender main effect and a significant target gender × target ethnicity interaction. Participant ethnicity did not significantly moderate any of these effects: participant ethnicity × target gender interaction, b = -0.21, $CI_{95\%}$ [-0.50, 0.09], t(1288.27) = -1.36, p = .175, participant ethnicity × target ethnicity interaction, b = -0.10, $CI_{95\%}$ [-0.40, 0.19], t(1287.48) = -0.68, p = .494, and participant ethnicity × target gender × target ethnicity interaction, b = 0.04, $CI_{95\%}$ [-0.38, 0.46], t(1287.87) = 0.17, p = .863.

Image-Assessment Phase

Trustworthiness. The analyses of trustworthiness reported in the main text revealed significant target gender and target ethnicity main effects and a significant target gender × target ethnicity interaction. Participant ethnicity did not significantly moderate any of these effects: participant ethnicity × target gender interaction, b = -0.03, $CI_{95\%}$ [-0.17, 0.10], $t(420.04) = -0.44$, $p = .661$, participant ethnicity × target ethnicity interaction, b = -0.06, $CI_{95\%}$ [-0.19, 0.08], $t(420.24) = -0.86$, $p = .390$, and participant ethnicity × target gender × target ethnicity interaction, b = 0.02, $CI_{95\%}$ [-0.26, 0.29], $t(422.35) = 0.13$ $p = .899$.

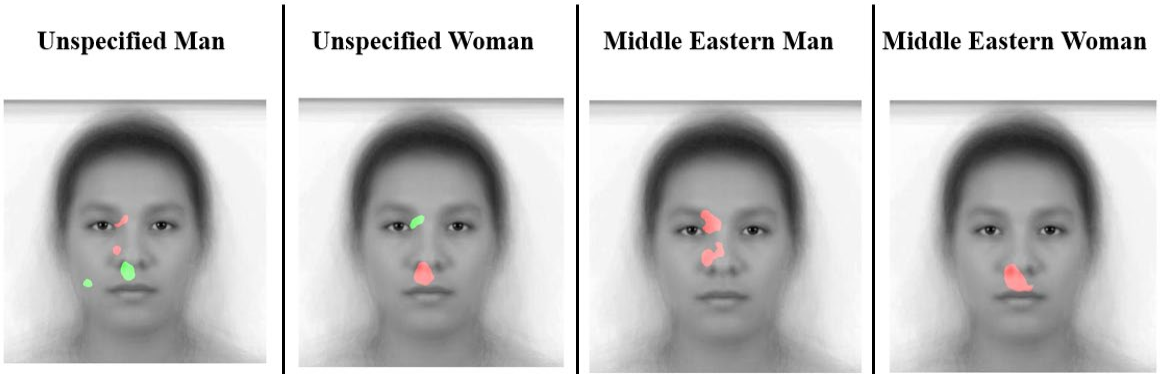
Dominance. The analyses of dominance reported in the main text revealed a significant target gender main effect and a significant target gender × target ethnicity interaction. Participant ethnicity had one significant moderating effect: participant ethnicity × target gender interaction, b = 0.18, $CI_{95\%}$ [0.04, 0.33], $t(425.28) = 2.46$, $p = .014$, indicating that the gender difference (i.e., women less dominant than men) emerged in the images generated by Asian participants, b = 0.64, $CI_{95\%}$ [0.53, 0.74], $t(427.95) = 11.92$, $p < .001$, and non-Asian participants, b = 0.46, $CI_{95\%}$ [0.35, 0.56], $t(423.19) = 8.74$, $p < .001$, but it was larger for the former. There were no other moderating effects of participant ethnicity: participant ethnicity × target ethnicity interaction, b = 0.09, $CI_{95\%}$ [-0.05, 0.24], $t(425.58) = 1.26$, $p = .210$, and participant ethnicity × target gender × target ethnicity interaction, b = -0.10, $CI_{95\%}$ [-0.40, 0.19], $t(428.67) = -0.70$, $p = .482$.

Cluster Analysis for Experiment 2

To identify facial regions that significantly predicted participants' image selections, we conducted a cluster analysis (Chauvin et al., 2005) using the Stat4CI toolbox. First, we smoothed the overlaid noise patterns for the condition-level images with a Gaussian filter, and we placed an oval-shaped mask around the noise patterns to isolate the face from non-facial regions. Next, we submitted the *Z*-transformed noise patterns to a two-tailed cluster test ($Z_{crit} \geq |2.3|$, $p < .05$) to identify pixel clusters that significantly predicted image selections in each condition (see Figure S1). Overall, face regions around the nose and eyes were most diagnostic of image selections. Green clusters indicate regions where pixel luminance positively predicted image selections; red clusters indicate regions where pixel luminance negatively predicted image selections.

Figure S1

Significant Pixel Clusters Predicting Image Selections of Each Condition-Level Classification Image (Experiment 2)



Reference

Chauvin A., Worsley K. J., Schyns P. G., Arguin M., & Gosselin F. (2005). Accurate statistical tests for smooth classification images. *Journal of Vision, 5*, 659–667.