The Many Smiles Collaboration
A Multi-Lab Adversarial Test of the Facial Feedback Hypothesis
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SUMMARY
▪ The facial feedback hypothesis suggests that our facial expressions influence our emotional experience.
▪ A large replication effort consistently failed to replicate a seminal demonstration of this hypothesis (Wagenmakers et al., 2016), but meta-analysis suggests the effect is real (Coles et al., 2019).
▪ Consequently, a large adversarial team of researchers—some advocates of the facial feedback hypothesis, some critics, and some without strong belief—collaborated to specify the best ways to test this hypothesis.
▪ Pilot testing (n = 206) suggested that smiling could both magnify ongoing feelings of happiness and initiate feelings of happiness in otherwise neutral scenarios.
▪ Next, 22 labs from 20 countries will perform more extensive tests to examine whether there is a replicable facial feedback effect. (Registered Report at NHB)

COLLABORATIVE MODEL

22 labs from 20 countries execute the study
Labs debated methodological details for 2 months
Methods adjusted based on feedback from hypothesis-critic, hypothesis-advocate, and neutral consultant
Registered Report submitted. Methods expanded based on reviewer feedback
Two pre-registered pilot studies conducted on proposed methodology

OUTSTANDING DISAGREEMENTS IDENTIFIED
1. Does posing happy vs. neutral expressions cause people to feel happier?
2. Are facial feedback effects eliminated when controlling for awareness of the experimental hypothesis?
3. Can facial poses initiate emotional feelings in neutral scenarios or can they only modulate ongoing emotional feelings?
4. Do happy facial poses only influence feelings of happiness if they resemble a natural expression?

METHODOLOGY

PILOT
▪ n = 206
▪ 2 (pose) x 2 (task) x 2 (stimuli present) mixed design
▪ Linear mixed-effects modeling and Wilcoxon tests

MAIN STUDY
▪ Projected n > 1584
▪ 2 (pose) x 3 (task) x 2 (stimuli present) mixed design
▪ Linear mixed effects modeling, Wilcoxon tests, and Bayesian linear mixed-effects modeling

PILOT RESULTS (n = 206)
1. Participants reported more happiness after posing happy vs. neutral expressions
   - pose
     - happy
     - neutral
   - F(1, 202) = 43.65, p < .001
2. Effect robust when analyses limited to participants who were completely unaware of the hypothesis
   - pose
     - happy
     - neutral
   - F(1, 139) = 19.75, p < .001
3. Facial poses both initiated happiness in neutral scenarios and modulated ongoing happiness.
   - stimuli
     - absent
     - present
   - F(1, 98) = 15.56, p < .001
   - F(1, 104) = 29.40, p < .001
4. Effects detected in task that led to less (directed action) and more (mimicry) natural expressions
   - task
     - mimicry
     - directed action
   - F(1, 101) = 21.86, p < .001
   - F(1, 103) = 22.54, p < .001