What Emotion Does the Disgust Face Express?
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Background

- The nose scrunch ("disgust face") is presumed to be a universal signal of disgust (Ekman et al., 2002).
- However, the nose scrunch is commonly associated with anger contexts.
- People label the nose scrunch on an angry posture as angry (Aviezer et al., 2008).
- People match the nose scrunch with both disgust- and anger-related situations (Rozin et al., 1994).
- Thus, the nose scrunch does not exclusively convey what it's predicted to convey: disgust.

The Study

This study examines the influence of methodological context: Does the labeling of the nose scrunch vary depending on which faces are seen before it?

We hypothesized that the labeling of the disgust face would change predictably based on which faces are seen before it. 120 children (5-14 years; 54 males) each saw four or five faces, one at a time, and rated each face before seeing the next. One half saw faces posed by multiple different actors (Ekman & Friesen, 1976), and the other half saw faces posed by a single actress.

The order of the faces was same for all children: happiness smile, surprise startle, fear gasp, Anchor Face, nose scrunch — where "Anchor Face" was replaced by an anger scowl, no face, or the sick face.

Children were asked to choose from a list (angry, disgusted, embarrassed, happy, sad, scared, surprised) the label that best described the face.

Discussion

- Presentation order influences how the nose scrunch is perceived.
- In contrast to being strongly linked to disgust, the emotion associated with the nose scrunch shifts based on which faces are viewed before it is seen.
- The effect of presentation order generalized across different stimuli.
- Can expressions other than the canonical disgust face better convey disgust? For example, the sick face may be a better alternative (Pochedly et al., in prep).

The Disgust Face is Labeled Disgust when preceded by an Anger Face

Figure 1. When the anger scowl had been seen, the children were most likely to select disgusted for the nose scrunch, $\chi^2(df=1)=4.00$, p<.05.

The Disgust Face is Labeled Angry when not preceded by Anger or Sick Faces

Figure 2. When the anger scowl had been omitted, the children were most likely to select angry, $\chi^2(df=1)=23.68$, p<.001.

The Disgust Face is Labeled Angry when preceded by a Sick Face

Figure 3. When the anger scowl had been omitted and a sick face had been seen, this last effect was exaggerated with even more children selecting angry, $\chi^2(df=1)=10.00$, p<.01. Overall, choice of emotion for the nose scrunch depended on the Anchor Face condition, $\chi^2(df=2) = 28.15$, p<.001.

References

Pochedly, J. T., Pieloch, K., Widen S. C., & Russell, J. A. (in prep). Will the real disgust face please stand up? The 'sick' face conveys disgust better than the 'disgust' face.