It's All in the Eyes:
Genuine Smiles Are Preferred Even When Concealed By a Face Mask

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Background

Duchenne smiles (genuine smiles) reflect internal happiness. They are expressed using the mouth, as well as activation of muscles around the eyes.

Social smiles are used for a variety of reasons (e.g., politeness). They are expressed using only the mouth.

Duchenne smile   **Social smile**

A range of emotions, including happiness, can be detected even when people are wearing face masks (Carbon et al. 2020).

Contrary to intuition, people are more accurate at identifying Duchenne and Social smiles when others are wearing face masks (Majka et al., 2021).

I am smiling.

Research Question

People can distinguish between different kinds of smiles when others are wearing face masks, but do their perceptions shape their interpersonal judgments?

Hypothesis

People will be judged more favorably with a Duchenne smile than a Social smile, and this difference will be amplified if they are wearing a face mask (vs. no mask).

Method

Participants
- 167 Amazon MTurk workers from U.S. (67.7% male)
- They were diverse in age (range: 21-77, M = 37.59), but primarily white (76%).

Design

Independent Variables
- Smile Type: Duchenne vs. Smile (within-subjects)
- Target Face Covering: No Mask vs. Mask (between-subjects)

- Dependent Variable:
  - Desire to work with Target on a 1(*not at all*) to 7(*very much*) scale

General Procedure
1. Participants watched videos displaying Duchenne (n = 10) & Social smiles (n = 10)
2. Target people in the videos either wore no face masks or masks.
3. Participants had to rate their desire to work with target

Videos courtesy of BBC (ND). Also used in Bernstein et al., 2008

Duchenne smile w/ no mask

Duchenne smile w/ mask

View a sample of our stimuli!

Results

Additional findings:

Within the *no mask* condition, the more liberal participants' political views…

- The more positive their views towards face masks, r(78) = -.31, p = .005.

- The less difficult they thought it was to read emotions through face masks, r(78) = -.31, p = .005.

Y-axis: Desire to Work With as Potential Partner (1–7)
X-axis: Face Covering — No Mask, Face Mask
Legend: Duchenne Smiles, Social Smiles

Only a main effect of smile type emerged, F(1, 165) = 39.46, p < .001, $\eta p2$ = .19.

Key Takeaways

✓ As predicted, participants wanted to work with targets displaying Duchenne smiles more than those displaying Social smiles.
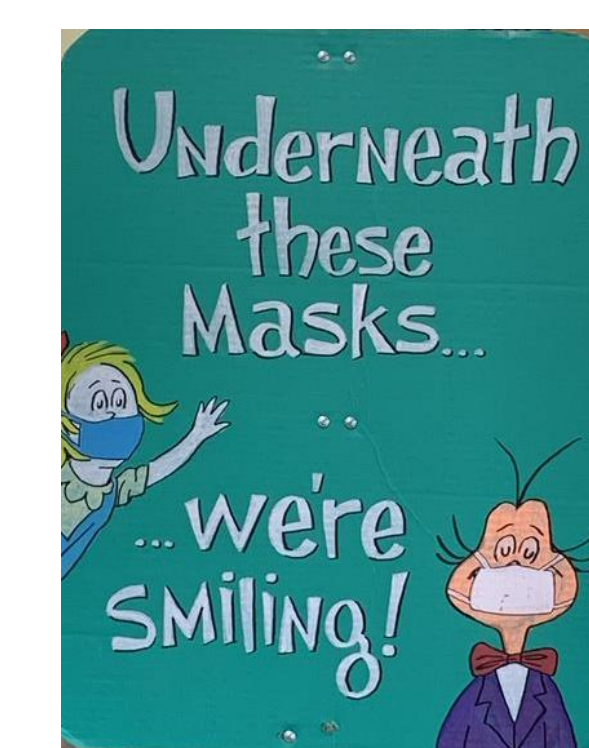
✗ Contrary to predictions, the pattern of findings was consisted across the no mask and mask conditions.

These findings add to research demonstrating that smile perception does not seem to be impaired by face masks (Majka et al., 2021).
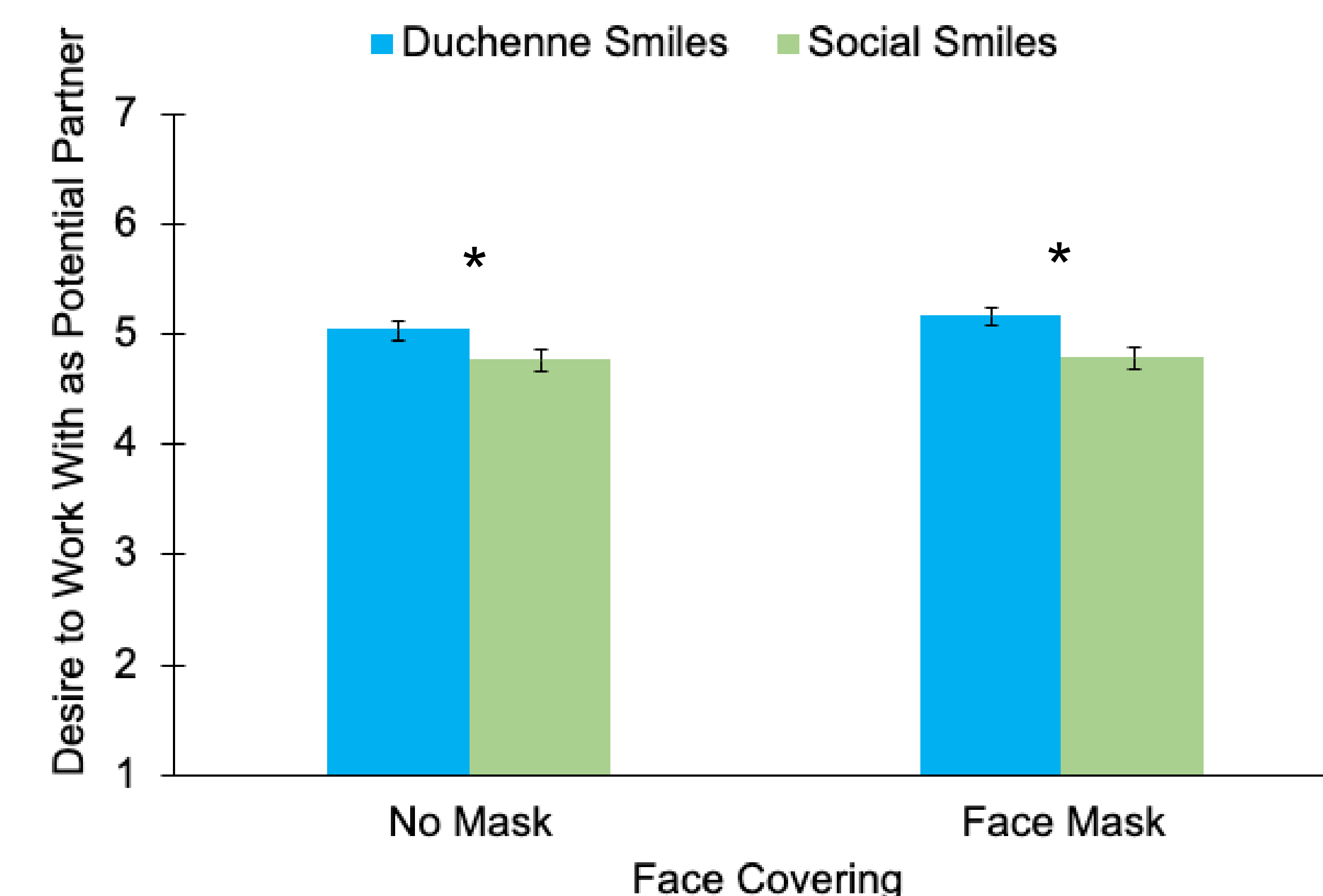
Discussion

Future research might investigate:

- Potential demographic differences
- Whether these results generalize to more realistic contexts
- Whether attractiveness impacts these findings

Underneath these Masks… were SMILING!

References & Thanks

Bernstein, M.J., Young, S.G., Brown, C.M., Sacco, D.F., & Claypool, H.M. (2008). Adaptive responses to social exclusion. *Psychological Science, 19*(10), 981–983.

Carbon, C.C. (2020). Wearing face masks strongly confuses counterparts in reading emotions. *Frontiers in Psychology, 11*, 1-8.

Majka, E.A., Gill, J., Kwasniewski, A., Santacruz, C., Wallace, K., & Zanevych, Y. (2021, April). *Face masks improve detection of real and fake smiles*. Poster presented at the Annual Meeting of the Midwestern Psychological Association, Chicago, IL.