

# National favoritism in face perception - a categorization study

## Introduction

**National favoritism**, i.e., preferential treatment of own-nationality individuals, is a form of **ingroup favoritism** (Turner et al., 1979) and has been documented in various contexts, specifically among the Central and Eastern European participants (Danel et al., 2012; Pope & Pope, 2015; Krumer et al., 2022).

In the **economic games** people cooperate more readily with own-nationality partners and are more generous to them (Kumar et al., 2021). Polish participants judge Polish-looking faces as **more attractive** (Danel et al., 2012). Also in real-life international sport competitions, referees and judges tend to **favor own-nationality contestants** (Pope & Pope, 2015; Krumer et al., 2022).

## Materials and methods

**Participants.** 36 (22 female, 14 male) participants, all White, declared Polish nationality and citizenship.  
**Face images.** 300 multinational face images (150 female, 150 male, all White) from several databases, e.g. the Chicago Face Database (Ma, et al., 2015), Radboud Faces Database (Langner et al., 2010), the Warsaw Set of Emotional Facial Expression Pictures (Olszanowski, et al., 2015). The nationality of each of the presented individuals was not provided by the database creators.

**Procedure.** The task was to ascribe a **subjective "Polishness" rating** to each of the faces. No definition of "Polishness" was provided, following Bjornsdottir et al. (2019).

**Eye-tracking.** Gazepoint GP3 HD Eye Tracker (Vancouver, Canada) at 150 Hz. ROIs for eyes, mouth and nose were selected manually. Fixations proportions were **normalized for the ROI area**.

**Ethical concerns.** To avoid fostering a stereotype of a "Polish-looking" person, the participants were debriefed and were given an opportunity to discuss the research goals.

## Results

In 16% of the trials the faces received ratings 1 or 2 ("low Polishness"), in 57% ratings 3-5 ("medium Polishness"), and in 27% 6 or 7 ("high Polishness").

**Women** were rated as **looking more "Polish"** than men.

The proportion of the first **fixations towards the eyes increased as a function of "Polishness" rating**, as indicated by the linear trend ( $F(1, 32) = 4.31, p = .046, \eta^2 = .120$ ). The same, but stronger, effect was observed for the following fixations (2nd-5th);  $F(1,32) = 12.05, p = .002, \eta^2 = .273$ .

These effects **did not interact with the sex of the faces** in the images.

For the initial fixation, we also observed the main effect of sex: the participants tended to make **more eye contact with female faces** and directed less fixations towards their mouths.

## Discussion

Participants made **more eye contact with faces they judged as nationality-ingroups**. This effect was **specific for the eyes**. Hence, we confirmed the effect of ingroup appearance on face perception a within-race procedure. Interestingly, this tendency occurred **relatively early**, as the first fixation started on average 269 ms (SD = .155) after the image onset.

**Women** were more frequently rated as **appearing like ingroups** than men. We speculate this might stem from more inclusive treatment of women or women having less pronounced facial features indicating their nationality. Participants also made **more eye contact with female faces**. However, this pattern of results does not explain the tendency to make more eye contact with perceived nationality ingroups, since **no interaction between sex and rating was observed for gaze fixations**.

Importantly, these results were calculated for **individual ratings** (i.e., subjective impressions), not averaged ones. There was little interindividual agreement which faces "look Polish".

Increased eye contact with nationality ingroup members can have profound consequences, since **eye contact** is one of the **basic forms of social interactions**, facilitating emotion recognition, social bonding, and social regulation (for review: Kleinke, 1986).

The **causal relationship** between the eye contact and nationality rating cannot be established in this study. We explored this issue more in **Study 2** presented in the **poster "National favoritism in face perception - a free viewing study"**.

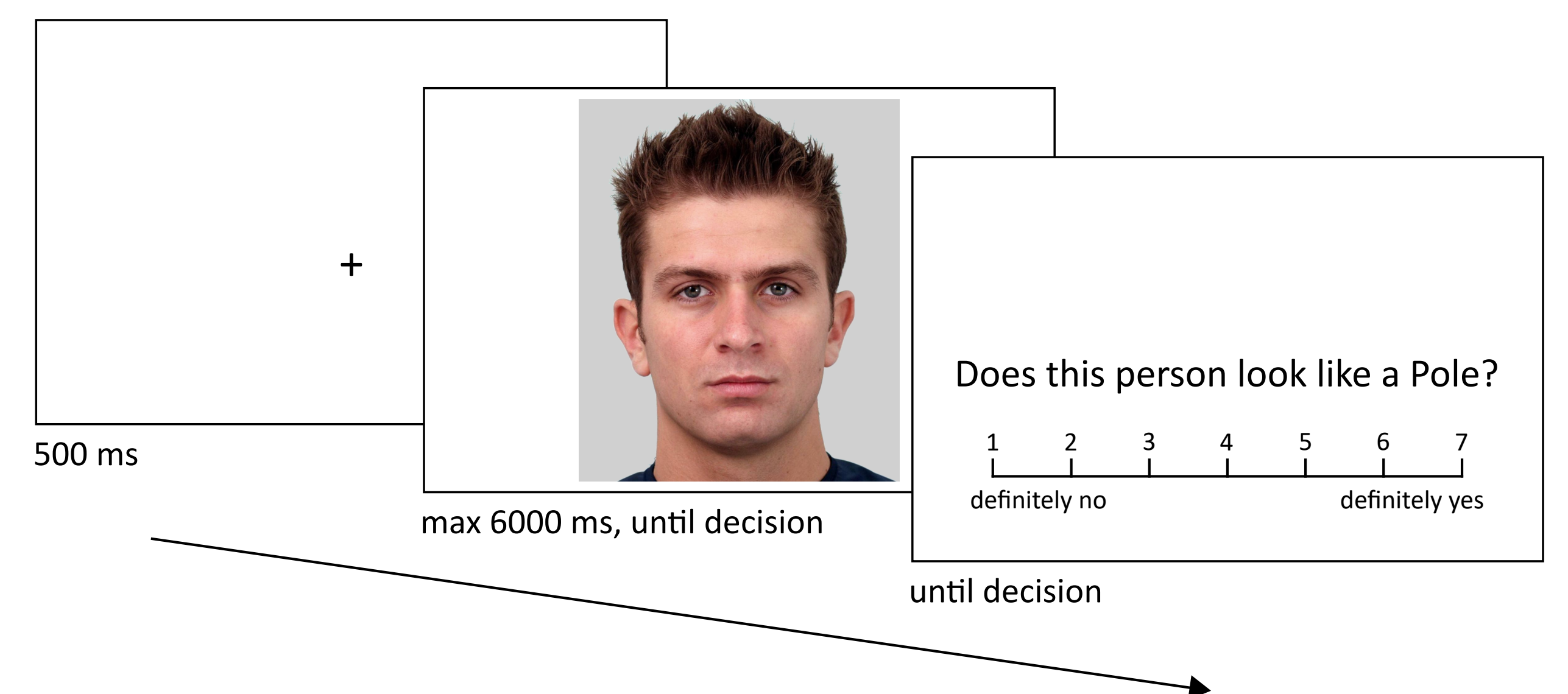
## Literature

Bjornsdottir, R. T., Yeretsian, S., West, G. L., & Rule, N. O. (2019). When words become borders: Ingroup favoritism in perceptions and mental representations of Anglo-Canadian and Franco-Canadian faces. *Group Processes and Intergroup Relations*, 22(7), 1021–1038.  
Danel, D. P., Fedurek, P., Coetzee, V., Stephen, I. D., Nowak, N., Stirrat, M., Perrett, D. I., & Saxton, T. K. (2012). A Cross-Cultural Comparison of Population-Specific Face Shape Preferences (Homo sapiens). *Ethology*, 118(12), 1173–1181.  
Goldinger, S. D., He, Y., & Papesch, M. H. (2009). Deficits in cross-race face learning: Insights from eye movements and pupillometry. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 35, 1105–1122.  
Kawakami, K., Williams, A., Sidhu, D., Choma, B. L., Rodriguez-Bailón, R., Cañadas, E., ... Hugenberg, K. (2014). An eye for the I: Preferential attention to the eyes of ingroup members. *Journal of Personality and Social Psychology*, 107(1), 1–20.  
Kleinke, C. L. (1986). Gaze and eye contact: A research review. *Psychological Bulletin*, 100, 78–100.  
Krumer, A., Otto, F., & Pawłowski, T. (2022). Nationalistic bias among international experts: evidence from professional ski jumping\*. *Scandinavian Journal of Economics*, 124(1), 278–300.

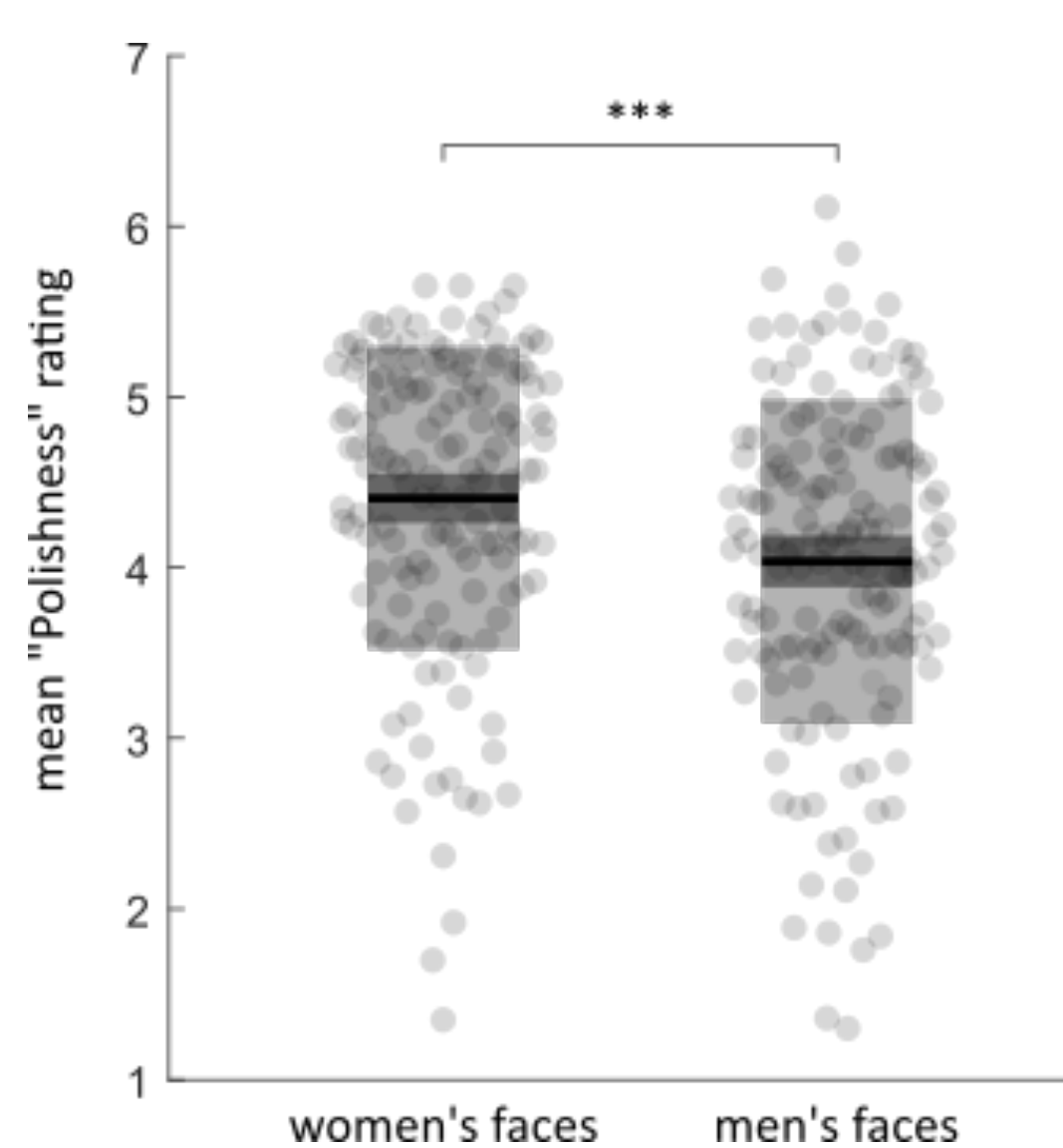
Does **national favoritism** manifest itself also in **face perception**?

Differences in attention deployment to ingroup vs outgroup faces with **more attention to the eyes of ingroup members** (Goldinger, 2009; Kawakami et al., 2014; Wu et al., 2012) have been shown in the **cross-race studies**, for White vs Black and White vs Asian faces. However, these results were often interpreted as an effect of racial differences in diagnostic face features or even in the light of racial relations in the US context. It has not been clearly established whether similar differences occur also in a within-race context.

## Study procedure

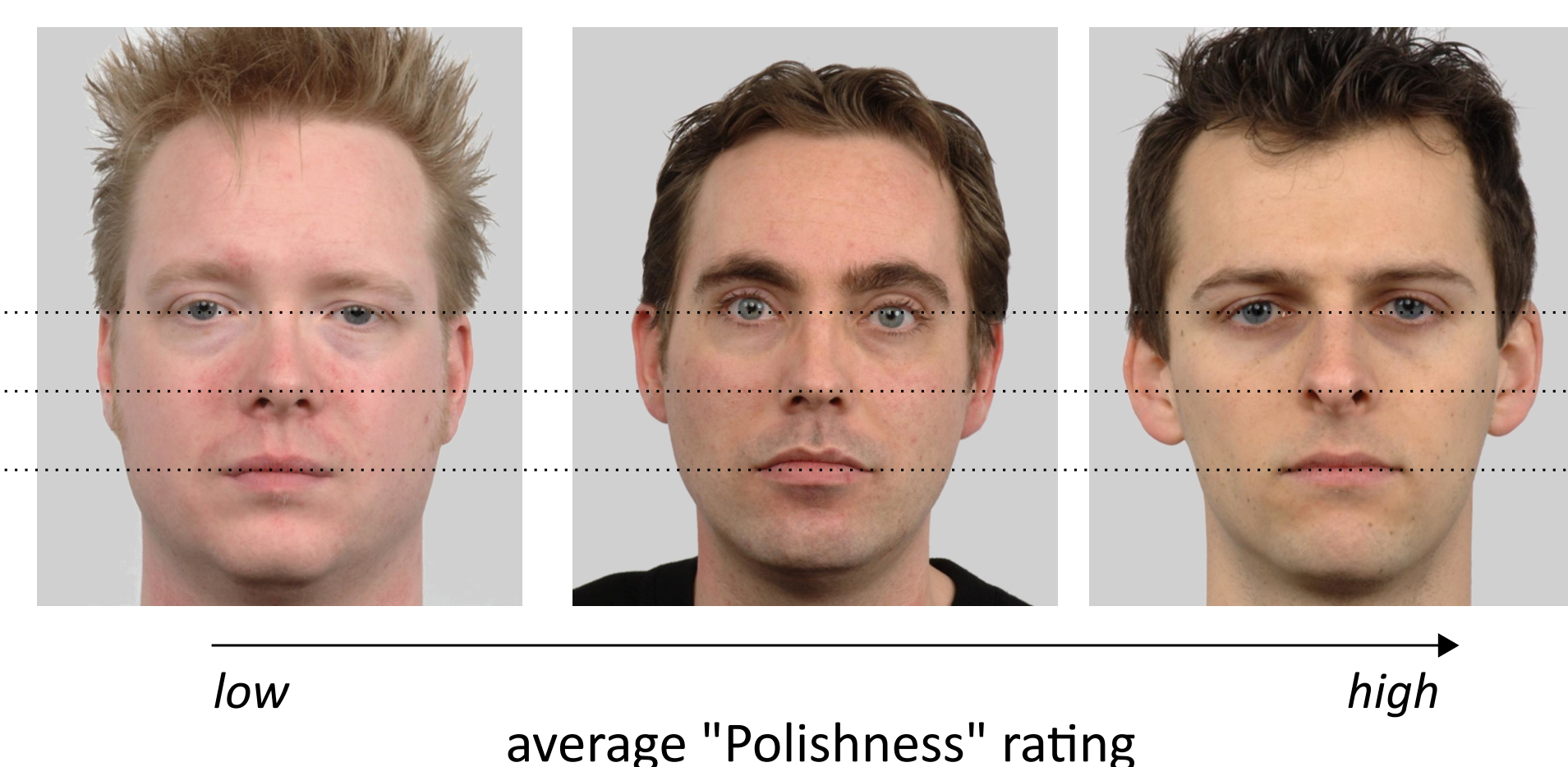


## Sex of the face and the average "Polishness" rating



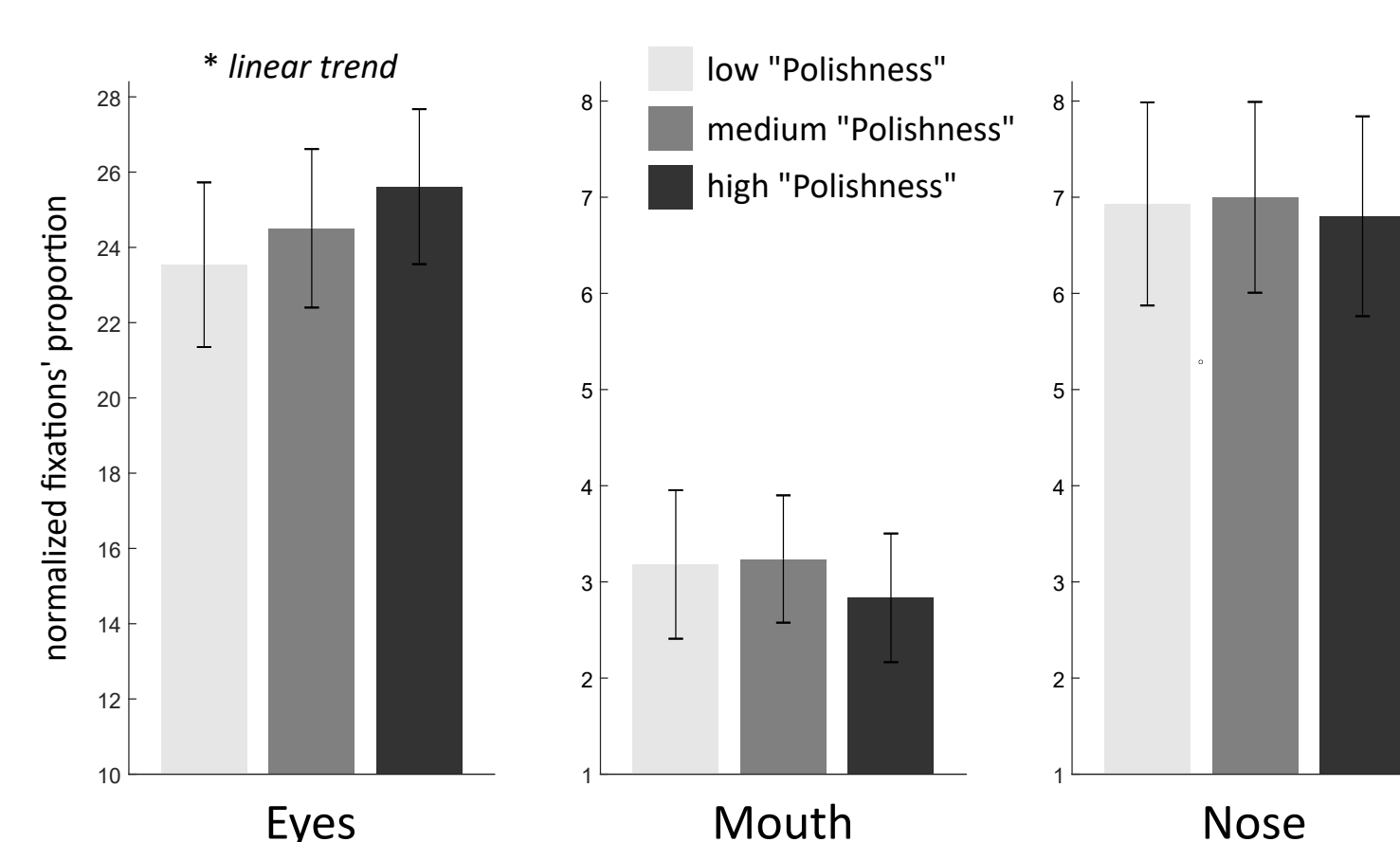
eyes at a constant level  
fixation cross position  
mouth at a constant level

## Exemplary stimuli

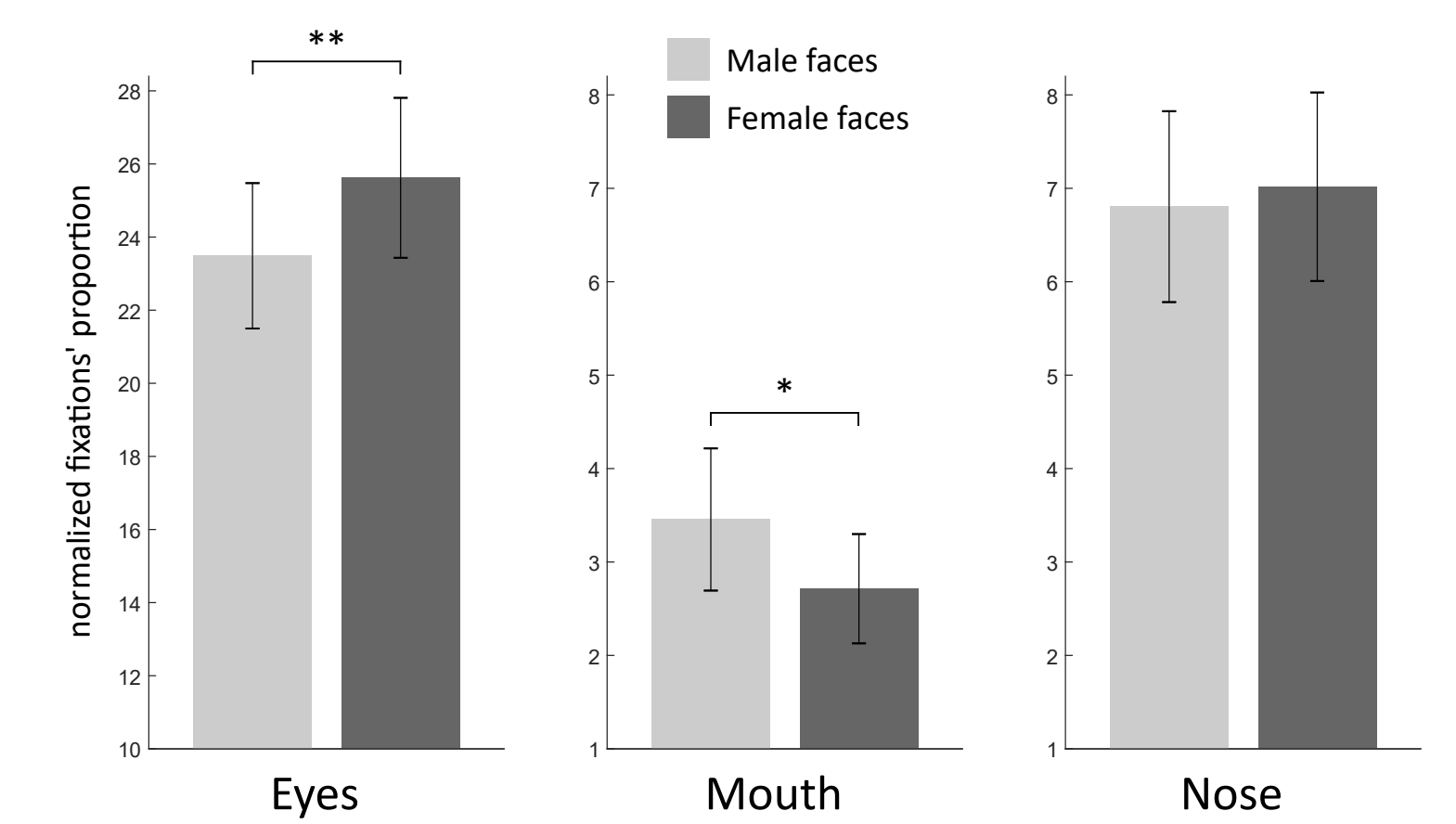


## 1st fixations

The effect of "Polishness" rating: more eye contact with ingroups

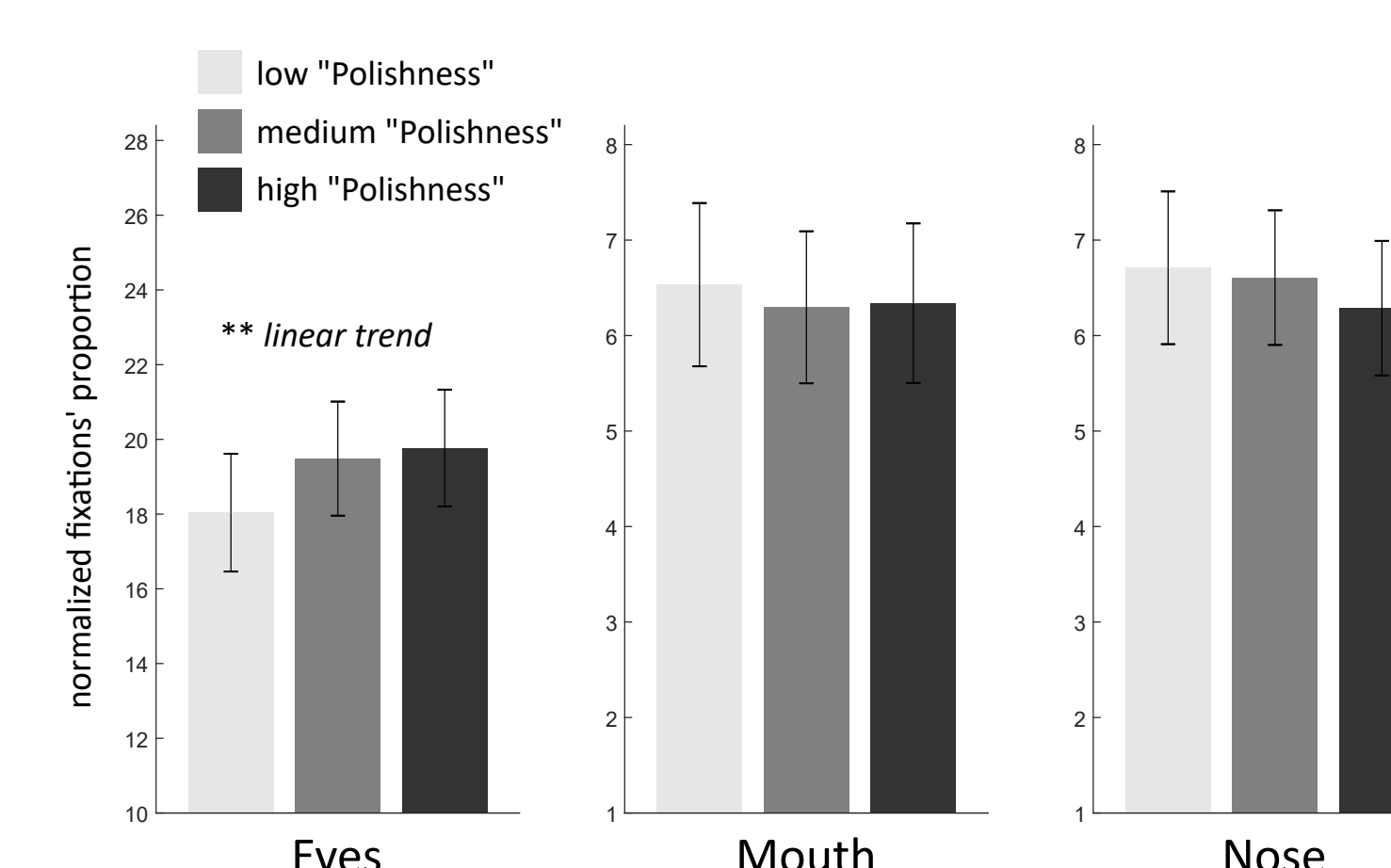


The effect of sex of the faces: more eye contact with women

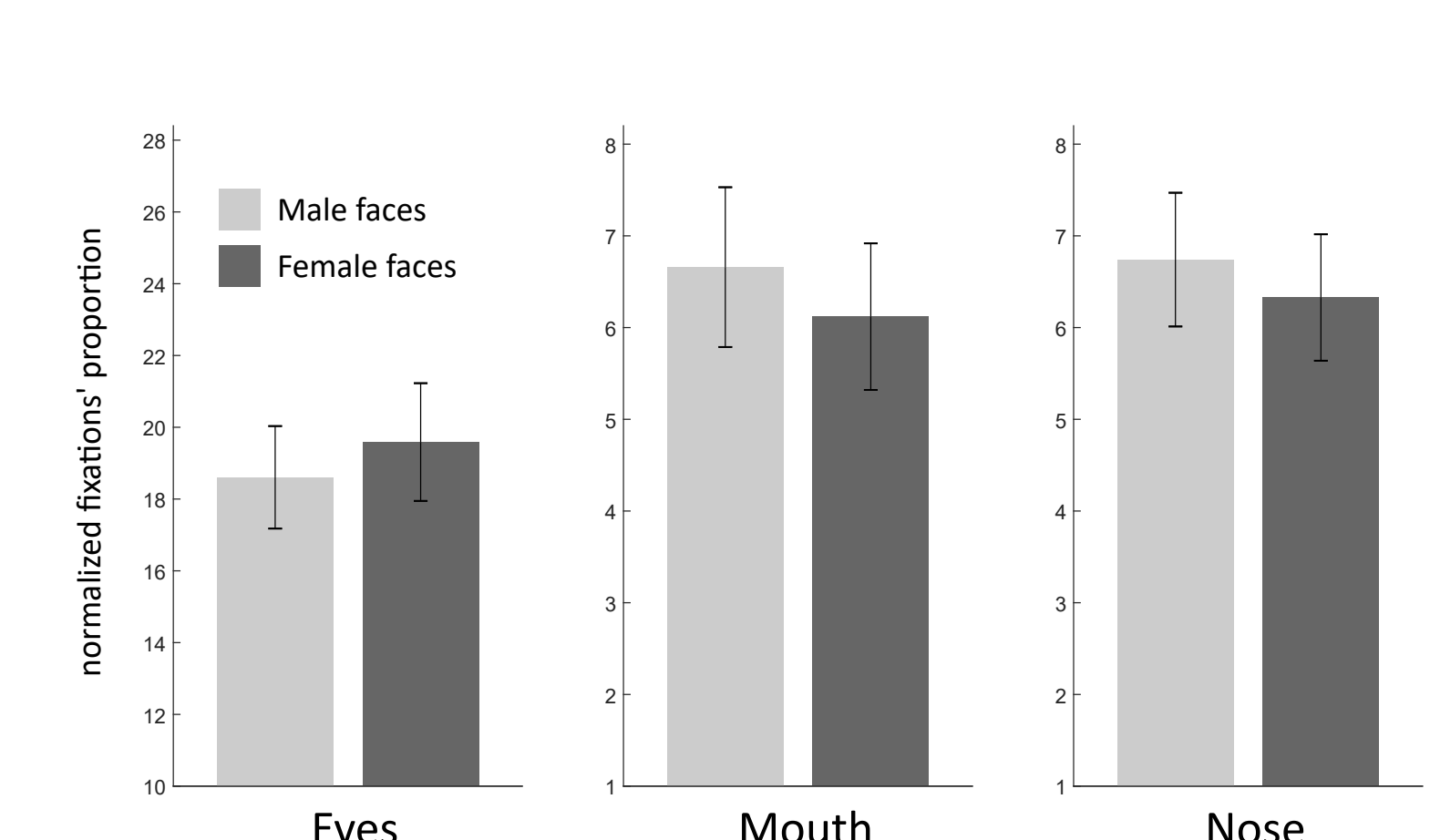


## 2nd-5th fixations

The effect of "Polishness" rating: more eye contact with ingroups



No effect of sex of the faces



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