**Supplementary Material**

**Experiment 1**

**Materials and Methods**

**Participants.** Fifteen right-handed participants without past neurological or psychiatric history participated in this experiment (12 females, mean age ± SD = 21.13 ± 4.02). All had normal or corrected-to-normal vision and provided written informed consent.

**Stimuli.** Ten continua of morphed facial expressions from fear to disgust were created using FantaMorph (Abrosoft). In each continuum, a disgusted prototype was morphed by 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80% and 90% of the physical distance to an identity-matched fearful prototype, resulting in 11 face images (i.e., fearful and disgusted prototypes, 90:10, 80:20, 70:30, 60:40, 50:50, 40:60, 70:30, 80:20 and 10:90 fear-disgust morphed faces). The prototypical expressions of fear and disgust were selected from the previously validated dataset (Young, Perrett, Calder, Sprengelmeyer, & Ekman, 2002). A total of 110 stimuli were used (10 continua of different identities × 11 stimuli per continuum). The images subtended a horizontal visual angle of 6.8° and a vertical angle of 8.6° around the centre of the screen. The viewing distance was 60 cm.

**Procedure**. Each trial began with a 600-ms fixation cross located in the centre of the screen, followed by a 400-ms presentation of a facial expression. A blank screen was presented at the offset of the stimulus, and the participants were instructed to categorize whether the face was fearful or disgusted via a key press with no time limitation. Performance feedback was not provided. The key press initiated a new trial after a 500-ms inter-trial interval. The trials were blocked by continua; i.e., the participants had to complete 10 blocks with a break between blocks. Within each block, the order of identity-matched expression morphs from the same continuum was randomized. Each stimulus was repeated 9 times, resulting in a total of 99 trials in each block (9 repetitions x 11 expressions per continuum). To acquaint the participants with the procedure, the experiment began with 1-2 blocks of practice trials, with different sets of expression continua from those used in the experiment.

**Statistical analysis**. One-tailed t-tests, unless stated otherwise, were primarily employed because the directions of assimilation and contrast effects had been determined a priori by our hypothesis. To complement the reported null effects, Bayes factors were calculated to determine how much evidence exists in favour of the null hypothesis. The computation was implemented using the “BayesFactor” package (Morey & Rouder, 2015) with its default setting for choice of alternative prior. In principle, values approaching zero indicate increasing evidence for the null. For each analysis, participants with fewer than 5 data points were excluded. The original data from all of the experiments in this study are available in a public, open access repository (https://doi.org/10.5281/zenodo.3472636).

**Experiment 2**

**Materials and Methods**

**Participants.** A different group of fifteen right-handed participants without past neurological or psychiatric history participated in the experiment (12 females, mean age ± SD = 20.93 ± 1.44). Notably, the sex ratio and the number of participants were in keeping with those in Exp. 1 so that cross-experiment comparisons could be properly performed. In addition, the effect size of the significant results in Exp. 1 was large (mean ± SD = 1.11 ± 0.57). We accordingly suggest that the sample size used in Exp. 2 can be justified.

**Stimuli and procedures.** The stimuli and procedures were the same as those in Exp. 1 with the exception that the faces were presented for only 33 ms -- a duration that was sufficiently short but still consciously visible, as marked by the above chance but reduced discrimination of facial expressions relative to a longer presentation (Szczepanowski & Pessoa, 2007).

**Results and Discussion**

**The potential confounding factors in determining the observed sequential effects.** No significant priming in the RTs was observed for the response-related assimilation. Following either the “fear” or the “disgust” responses in the preceding trials, the RTs of the current “fear” (mean ± SEM = 683.06 ± 52.19 ms) or “disgust” responses (761.47 ± 65.22 ms) did not significantly differ from those of the corresponding “reference” (“fear reference”: 718.92 ± 45.21 ms; t(14) = 1.47, p = 0.16; BF = 0.64; “disgust reference”: 774.71 ± 67.06 ms; t(14) = 0.67, p = 0.51; BF = 0.32). For the *stimulus-related* assimilation, after either the fearful or the disgusted B-faces in the preceding trials, the RTs of the current “fear” (674.30 ± 69.16 ms) or “disgust” responses (654.11 ± 53.44 ms) were also comparable to those of the corresponding “reference” (“fear reference”: 610.61 ± 27.18 ms; t(14) = 1.12, p = 0.28; BF = 0.45; “disgust reference”: 593.07 ± 24.35 ms; t(14) = 1.80, p = 0.09; BF = 0.95).

Given that the categorization performances along the expression continua (only P-, M-, and B-faces and targets were considered) were highly correlated between Exp. 1 and 2 (all participants: r ≥ 0.96, p ≤ 0.001), it is unlikely that the diminished stimulus-related contrast effects can be simply attributed to an overall change in the task performances of the selected stimuli. Alternatively, it could be argued that our manipulation affected the perceptual quality of all of the stimuli, including the current targets and thereby the diminished effects might reflect impaired categorization of the targets. Inconsistent with this alternative explanation, the target performances were actually comparable between the two experiments (two-tailed paired t-test, t(14) = 0.91, p = 0.38; BF = 0.37).

**Supplementary Figure**

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Figure S1. The categorization data of each facial expression continuum after averaging over participants. Notably, in some figures, there are no clear category boundaries mostly because of great variability across participants. Taking continuum 8 as an example, the boundary falls to the 50:50 morph for about half of the participants and to the 40:60 morph for the other half.



Figure S2. The categorization data of each participant after averaging over continua. Notably, in some figures, there are no clear category boundaries mostly because of great variability across continua.

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Figure S3. The categorization data of two different continua from two separate participants, depicting the representative cases when there are two borderline stimuli. The vertical dashed lines denote the selected targets.