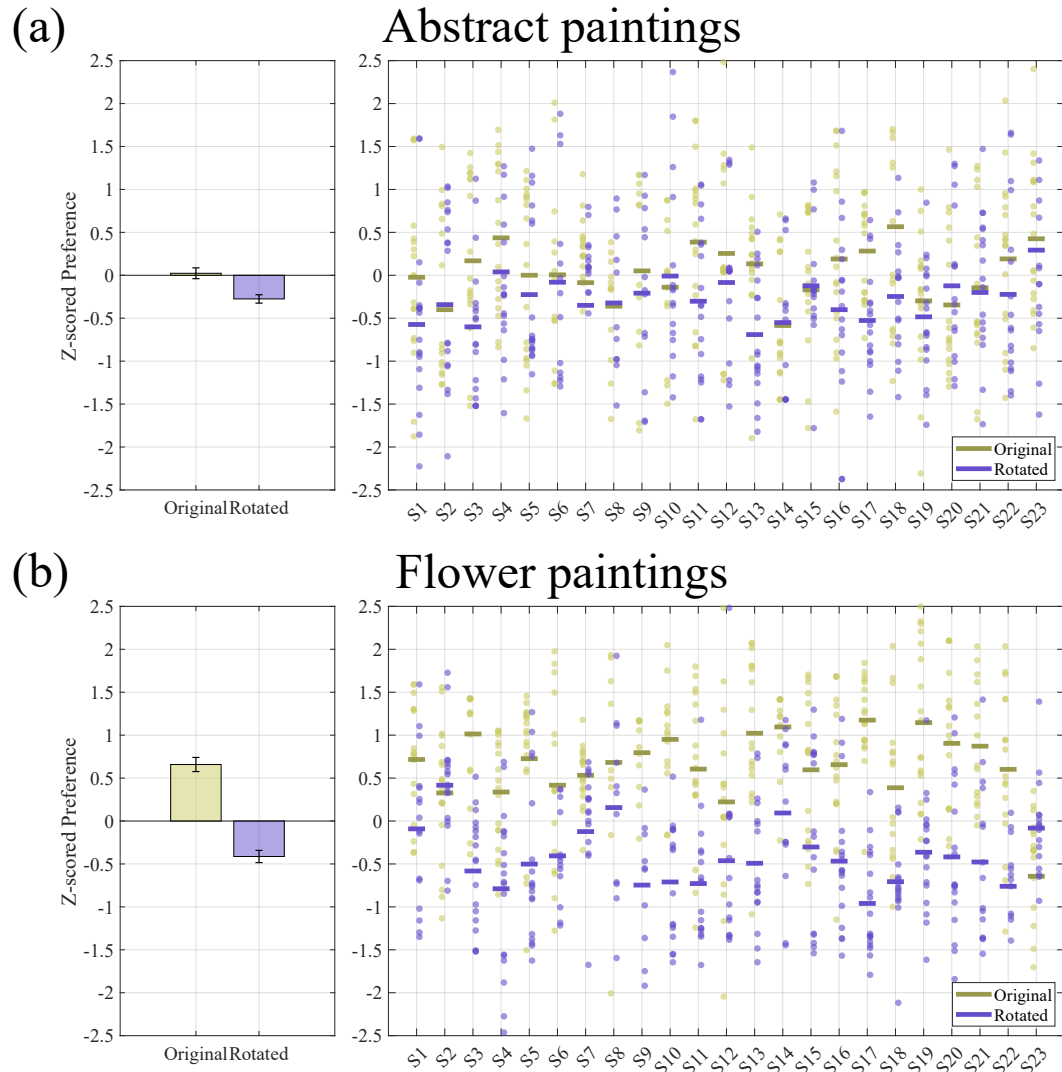


## Supplemental Materials

### Pupil dilation is driven by perceptions of naturalness of color composition in paintings

**Figure S1**

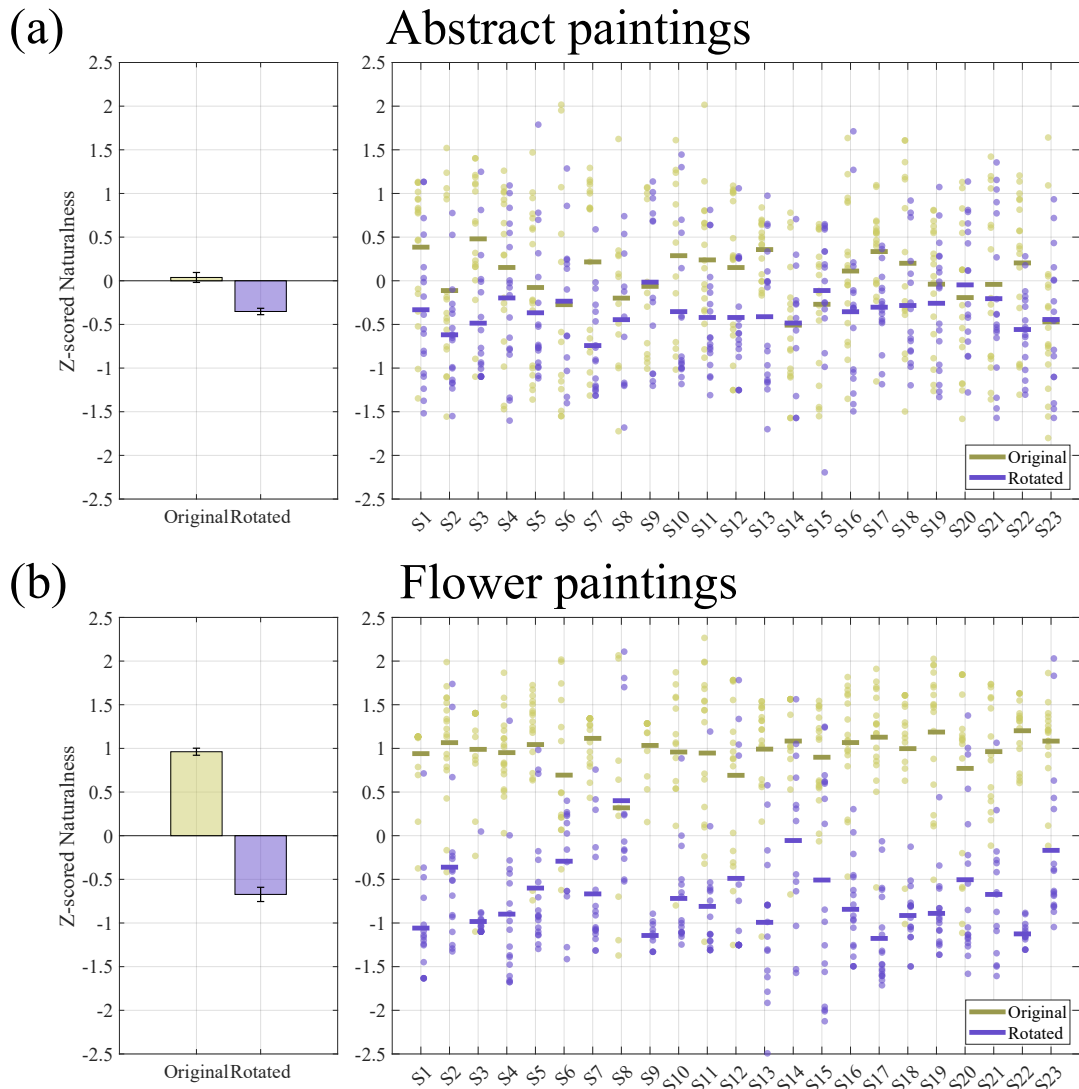
*Preference rating data for all participants*



*Note.* Each dot in the figures corresponds to the preference rating for each painting (yellow dots correspond to original paintings and blue dots to the hue-rotated versions) as provided by each participant (S1 to S23). (a) For Abstract paintings, although six participants (S2, S8, S10, S14, S15, and S20) rated the hue-rotated versions as preferred compared to the originals, the difference was negligible (especially for S2, S8, S14, and S15). (b) For Flower paintings, most of the participants (except for S2 and S23) rated the originals as preferred compared to the hue-rotated versions.

**Figure S2**

*Naturalness rating data for all participants*



*Note.* Each dot in the figures corresponds to the naturalness rating for each painting (yellow dots correspond to original paintings and blue dots to the hue-rotated versions) as provided by each participant (S1 to S23). (a) For Abstract paintings, although six participants (S6, S9, S14, S15, S20, and S23) rated the hue-rotated versions as more natural than the originals, the difference was negligible (especially for S6, S9, S14, and S23). (b) For Flower paintings, most of the participants (except for S8) rated the originals as more natural than the hue-rotated versions.