

## Supplemental Materials

### Appendix A

Appendix A includes the description of the robust statistics of Experiments 1 to 5. For each experiment, we report the robust statistics, using the Yuen-Welch method (Wilcox, 2012; Wilcox & Tian, 2011). The raw data and script files can be found on OSF <https://osf.io/agvz3/>.

### Experiment

*Experiment 1: Red, green, blue, and valence*

*Red-green vs positive-negative*

Using the Yuen-Welch method for comparing 20% trimmed means showed the mean difference in reaction times between conditions ( $M = 85.07$ , 95% CI [47.18, 122.96]) was statistically different from zero,  $t(25) = 4.62$ ,  $p < .001$ ,  $\xi = .79$ . This can be considered a large effect.

*Red-blue vs positive-negative*

Using the Yuen-Welch method for comparing 20% trimmed means showed the mean difference in reaction times between conditions ( $M = 49.85$ , 95% CI [11.09, 88.61]) was statistically different from zero,  $t(25) = 2.65$ ,  $p = .01$ ,  $\xi = .42$ . This can be considered a medium effect.

*Experiment 2: Red-blue versus positive-negative*

Using the Yuen-Welch method for comparing 20% trimmed means showed the mean difference in reaction times between conditions ( $M = -6.26$ , 95% CI [-71.27, 58.76]) was statistically different from zero,  $t(17) = -.2$ ,  $p = .84$ ,  $\xi = -.05$ . This can be considered a tiny effect.

*Experiment 3: Red-blue, vs positive-negative*

Using the Yuen-Welch method for comparing 20% trimmed means showed the mean difference in reaction times between conditions ( $M = 21.36$ , 95% CI [20.29, 22.43]) was statistically different from zero,  $t(24) = 1.27$ ,  $p = 0.218$ ,  $\xi = 0.16$ . This can be considered a small effect.

*Experiment 4: Red-blue versus aggressive-calm*

Using the Yuen-Welch method for comparing 20% trimmed means showed the mean difference in reaction times between conditions ( $M = -77.35$ , 95% CI [-122.03, -32.67]) was statistically different from zero,  $t(20) = -3.61$ ,  $p < .001$ ,  $\xi = -.67$ . This can be considered a large effect.

*Experiment 5: Red-blue versus enthusiastic-relaxed*

Using the Yuen-Welch method for comparing 20% trimmed means showed the mean difference in reaction times between conditions ( $M = -83.21$ , 95% CI [-143.94, -22.48]) was statistically different from zero,  $t(23) = -2.83$ ,  $p = .01$ ,  $\xi = -.57$ . This can be considered a large effect.

## Supplemental Materials

## Appendix B

Appendix B includes Table B1 with percentages erroneous responses for each critical block for Experiments 1, 2, 3, 4, and 5.

*Table B1. Percentages erroneous responses for each critical block for Experiments 1, 2, 3, 4, and 5.*

		% errors		% errors
Experiment 1 - red vs green, positive vs negative	Red + negative, green + positive	5.2%	Red + positive, green + negative	6.5%
Experiment 1 - red vs blue, positive vs negative	Red + negative, blue + positive	4.8%	Red + positive, blue + negative	5.7%
Experiment 2 - red vs blue, positive vs negative	Red + negative, blue + positive	6.0%	Red + positive, blue + negative	6.5%
Experiment 3 - red vs blue, positive vs negative	Red + negative, blue + positive	7.0%	Red + positive, blue + negative	7.8%
Experiment 4 - red vs blue, aggression vs calm	Blue + calm, red + aggressive	6.0%	Blue + aggressive, red + calm	6.0%
Experiment 5 - red vs blue, enthusiasm vs relaxed	Blue + relaxed, red + enthusiastic	5.1%	Blue + enthusiastic, red + relaxed	6.3%

**Figure titles**

*Figure 1.* An illustration of the process to predict context-dependent cross-modal associations with dimension-specific polarity attributions.

*Figure 2.* Mean reaction times in milliseconds for the critical blocks of Experiments 1, 2, and 3. Error bars represent standard errors of the mean.

*Figure 3.* Mean reaction times in milliseconds for the critical blocks of the IATs of Experiments 4 (left) and 5 (right). Error bars represent standard errors of the mean.