

Supplementary Materials for:

Priming of Movie Content is Modulated by Event Boundaries

Because images from the same event may contain similar low-level visual features than images from different events, we investigated whether a measure of this similarity is related to the size of the observed priming effects. To measure the objective perceptual dissimilarity between prime-target image pairs, we computed the mean distance in RGB color space between pixels in the prime and target images. For each prime-target image pair, we 1) for each image, extracted the RGB values, pixel-by-pixel, 2) computed the 3-dimensional Euclidean distance between corresponding pixels between the prime and target image, 3) averaged Euclidean distances across pixels to arrive at an average perceptual dissimilarity score (a measure of perceptual change between the prime and target image). The larger the score, the more perceptually dissimilar the images. This score was included as a control variable in the response time analyses reported in the manuscript. The analyses using this control variable are presented in what follows.

Experiment 1

For Experiment 1, the dissimilarity score was unrelated to response times, $coef = -1.11$, $SE = 0.61$, $F(1, 33.04) = 3.30$, $p = .078$. Additionally, response times were still significantly faster for the within condition than the across condition, $coef = -0.16$, $SE = 0.03$, $F(1, 33.32) = 22.25$, $p < .001$.

Experiment 2

For Experiment 2, the dissimilarity score was unrelated to response times, $coef = 0.18$, $SE = 0.37$, $F(1, 169.84) = 0.22$, $p = .639$. Response times were significantly faster for the within than across condition, $coef = -0.07$, $SE = 0.04$, $F(1, 32.59) = 9.04$, $p = .005$. Response times were

significantly faster for the primed than random condition, $coef = -0.09$, $SE = 0.03$, $F(1, 776.85) = 24.76$, $p < .001$. The location type by image type interaction was marginally significant, $coef = -0.07$, $SE = 0.04$, $F(1, 1664.28) = 2.90$, $p = .089$.

As reported in the manuscript, we also conducted an analysis that was parallel with the supplementary analysis of Experiment 1 reported above. We examined response times to target images between the within and across conditions, controlling for perceptual dissimilarity. In this analysis, the dissimilarity score was marginally related to response times, $coef = -1.43$, $SE = 0.71$, $F(1, 33.72) = 4.00$, $p = .054$. But, similar to Experiment 1, response times were still significantly faster for the within condition than the across condition, $coef = -0.18$, $SE = 0.05$, $F(1, 34.49) = 13.29$, $p < .001$.

Experiment 3

The results of the response time analyses are presented in Table S1. As can be seen in the table, perceptual dissimilarity was unrelated to response times. Additionally, all effects reported as significant in the manuscript remained significant in these supplementary analyses, with the direction of effects unchanged.

Raw Response Times by Experiment

Figures S1, S2, and S3 present the raw response times for each experiment, by condition, rather than the log transformed responses times presented in the main manuscript.

Table S1.

Results from the Linear Mixed Effects Model Predicting Response Time (log RT) in Experiment 3, controlling for perceptual dissimilarity between prime and target images.

Predictor	Coefficient	SE	<i>df</i>	<i>F</i>	<i>p</i>
Location Type	-0.08	0.04	(1, 39.2)	13.71	<.001
Viewing Condition	-0.34	0.03	(1, 3535.2)	464.80	<.001***
Prime Condition	-0.12	0.03	(1, 1500.6)	60.58	<.001***
Perceptual Dissimilarity Score	0.15	0.29	(1, 482.4)	0.25	.620
Location Type x Viewing Condition	0.02	0.04	(1, 3516.8)	3.03	.050
Location Type x Prime Condition	-0.12	0.04	(1, 2879.7)	8.13	.004**
Viewing Condition x Prime Condition	0.04	0.04	(1, 3514.1)	6.41	.001**
Location Type x Viewing Condition x Prime Condition	0.06	0.05	(1, 3512.6)	1.23	.267

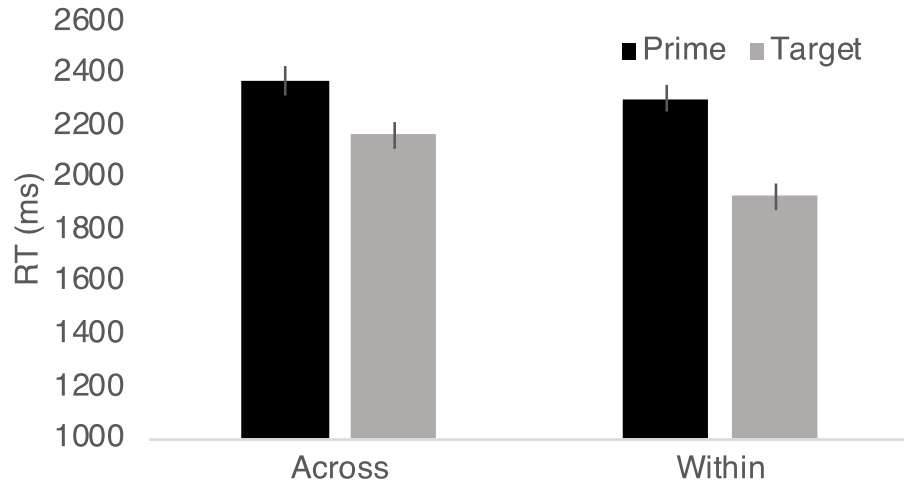


Figure S1. Experiment 1: Average raw RTs (ms) by condition. Error bars represent +/- 1 SE.

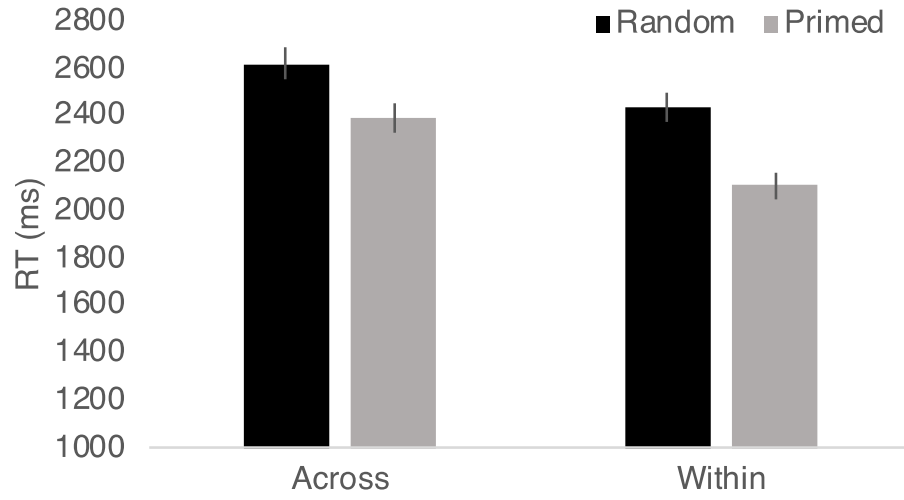


Figure S2. Experiment 2: Average raw RTs (ms) by condition. Error bars represent +/- 1 SE.

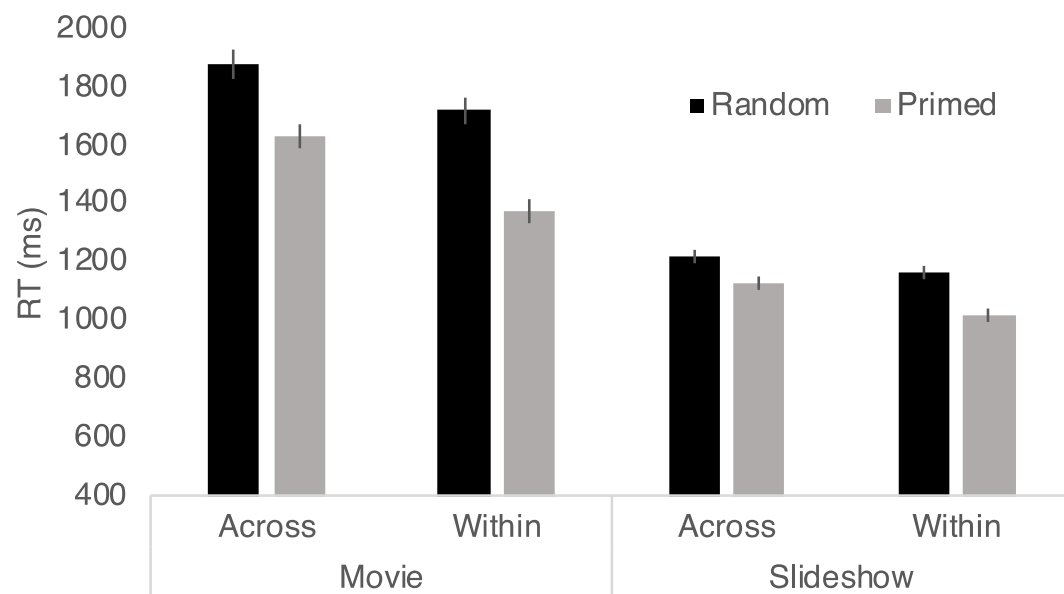


Figure S3. Experiment 3: Average raw RTs (ms) by condition. Error bars represent +/- 1 SE.