SUPPORTING INFORMATION

Supplemental Table 1.
Mean Ratings, Luminance, and Red Value as a Function of Stimulus Set

Stimulus Set	Rating Type					
	Good[a]	Bad[a]	Threatening[a]	Arousal[b]	Luminance[c]	Red Value[c]
Positive	6.11	1.07	1.10	2.33	130	135
Neutral	4.21	1.14	1.15	1.61	125	130
Negative	1.42	5.12	3.18	5.68	128	135
Threat	2.08	4.28	5.71	5.18	125	132

[a]Rating varied between-subjects on 7-point scales ("1 = Not at All" to "7 = Extremely").
[b]Rating varied within-subjects on 7-point scales ("1 = Relaxed, calm, sluggish, dull, sleepy, or unaroused" to "7 = Agitated, stimulated, frenzied, wide-awake, or aroused"); Kveraga et al., 2015.
[c]Obtained in Adobe Photoshop

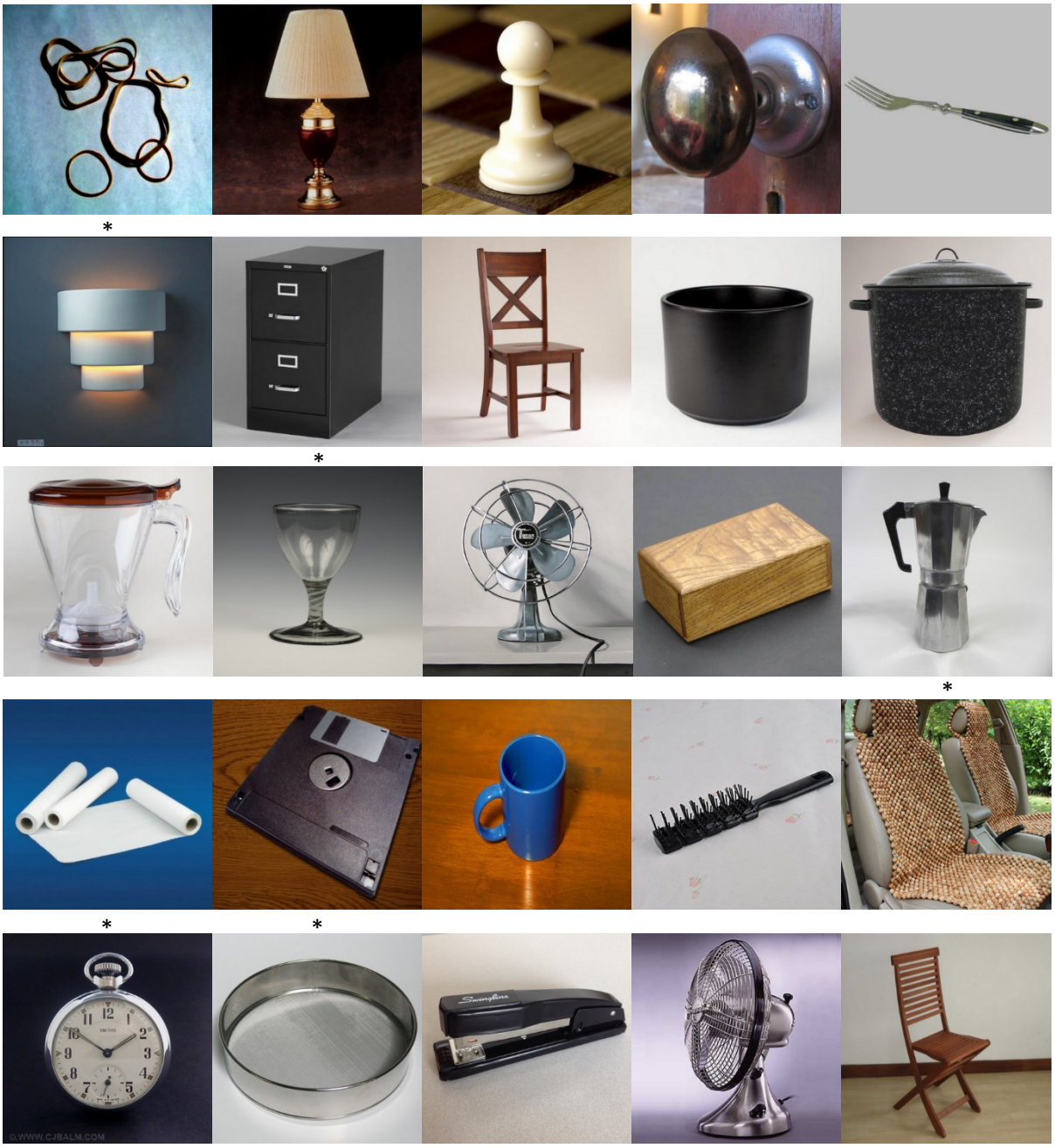
Stimuli for Studies 1, 2, and 3 (from March et al., 2017)

Note: Stimuli topped with an "*" were not presented in Study 1.

Threat Stimuli

Negative Stimuli

Neutral Stimuli



Positive Stimuli

Pilot Studies

Despite the monetary incentive to actively attend and accurately describe the stimuli, participants were remarkably unable to do so. In particular, they were unable to accurately describe an average of 94.26% (i.e., 2594 of 2752 stimulus presentations) and 99.32% (i.e., 4966 of 5000 stimulus presentations) of the stimuli in Pilots 1 and 2, respectively, with the modal response being "I don't know." These data suggest that the stimulus presentations effectively minimize conscious perception. The interested reader may wonder whether participants had an enhanced ability to correctly describe the threatening stimuli given the stronger effects elicited by those stimuli in the main studies. Of the 5.74% of stimuli correctly described in Pilot Study 1 (i.e., 158 of 2752 stimulus presentations), 26 were threatening, 7 were negative, 40 were positive, and 85 were neutral. Likewise, of the 0.68% of stimuli correctly described in Pilot Study 2 (i.e., 34 of 5000 stimulus presentations), 4 were threatening, 3 were negative, 6 were positive, and 21 were neutral. So, participants were not better able to correctly describe the threatening stimuli. Furthermore, the pattern of correct description across the stimulus categories in the pilot studies does not track the pattern of skin conductance, startle-eyeblink, or inferred valence across those stimulus categories in the main studies. The remarkably low rate of correct stimulus description indicates that the stimulus presentations effectively minimized conscious perception. Noteworthy for future research is the exceptionally low rate of stimulus description in the second pilot (i.e., 0.68% vs. 5.74%) which sandwich masked the stimuli compared to the first pilot that only backward masked the stimuli.

The Two A Priori Comparisons Testing Threat Superiority

In each study, we submitted the four responses to a multivariate repeated measures analysis and tested threat superiority with two a priori comparisons that are orthogonal to each other: (1) the mean response to threat versus the mean of the responses to the negative, neutral, and positive stimuli, and (2) whether there was systematic variability among responses to the latter three stimuli. The first comparison uses coefficient weights of 3, -1, -1, -1 for threat, negative, neutral, and positive, respectively. The second comparison, which is a simultaneous test of two orthogonal contrasts that are each orthogonal to the first comparison, uses coefficient weights of 0, 2, -1, -1 and 0, 0, 1, -1 for threat, negative, neutral, and positive, respectively. Orthogonality of the comparisons is demonstrating by confirming that each pair satisfies the mathematical requirement that the product of corresponding coefficients sums to zero (Maxwell, Delaney, & Kelley, 2018, p. 201):

```
(3*0) + (-1*2) + (-1*-1)+ (-1*-1) = 0
(3*0) + (-1*0) + (-1*1) + (-1*-1) = 0
(0*0) +  (2*0) + (-1*1) + (-1*-1) = 0
```

The study design with four stimulus categories allows 3 degrees of freedom (DF) to explain variation. The first comparison is a 1 DF test and the second is a 2 DF test. We performed the comparisons for Studies 1 and 2 using manova statements of SAS Proc GLM as follows:

```
proc glm;
model threat negative neutral positive = /nouni;
repeated stimulus 4 / nou;
manova h=intercept m=(3 -1 -1 -1);
manova h=intercept m=(0 2 -1 -1,  0 0 1 -1);
run;
```

Similarly, we performed the comparisons and whether either was moderated by the presence vs. absence of the probe in Study 3 using manova statements of SAS Proc GLM as follows:

```
proc glm;
class probe;
```

```
model threat negative neutral positive = probe / nouni;
repeated stimulus 4 / nou;
manova h=intercept m=(3 -1 -1 -1);
manova h=intercept m=(0 2 -1 -1,  0 0 1 -1);
manova h=probe m=(3 -1 -1 -1);
manova h=probe m=(0 2 -1 -1,  0 0 1 -1);
run;
```

Facets of Nonthreatening-Negative Stimuli

The negative stimuli consisted of disgusting (e.g., feces, cockroaches) and sad objects (e.g., dead/injured animals). To ensure no systematic variance in reactions underlying negative stimuli, we conducted sub-analyses comparing responses to the disgusting vs. sad stimuli in Studies 2 and 3 (we could not do this for Study 1 because the lost data file, noted in the Method section, contained individual stimulus information). The disgust vs. sad stimuli did not yield differences in startle-eyeblink of Study 2, $F(1, 99) = 0.38$, $p = .5391$, nor inferred valance ratings of Study 3, $F(1, 80) = 0.05$, $p = .8178$. Hence, there are no differences between the disgusting and sad facets of the negative stimuli, at least when presented outside of conscious perception.

Supplemental References

Maxwell, S. E., Delaney, H. D., & Kelley, K. (2018). *Designing experiments and analyzing data: A model comparison perspective (3rd edition)*. Routledge.