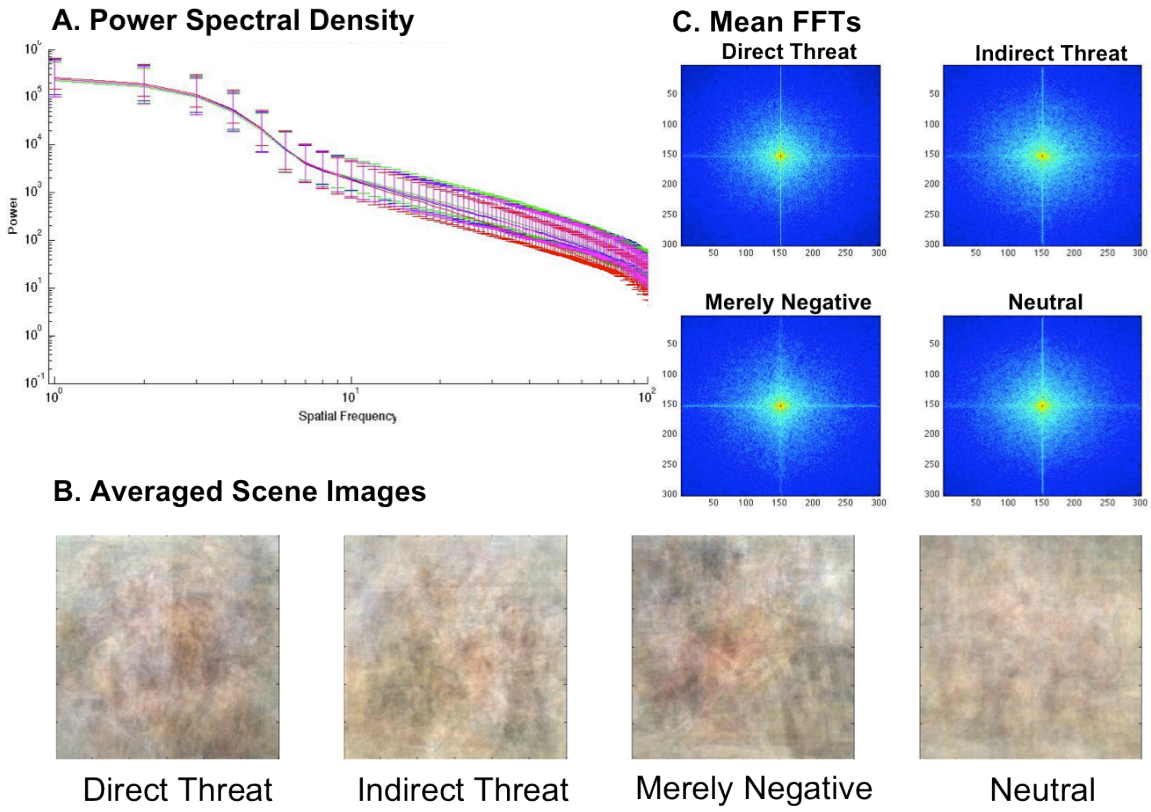
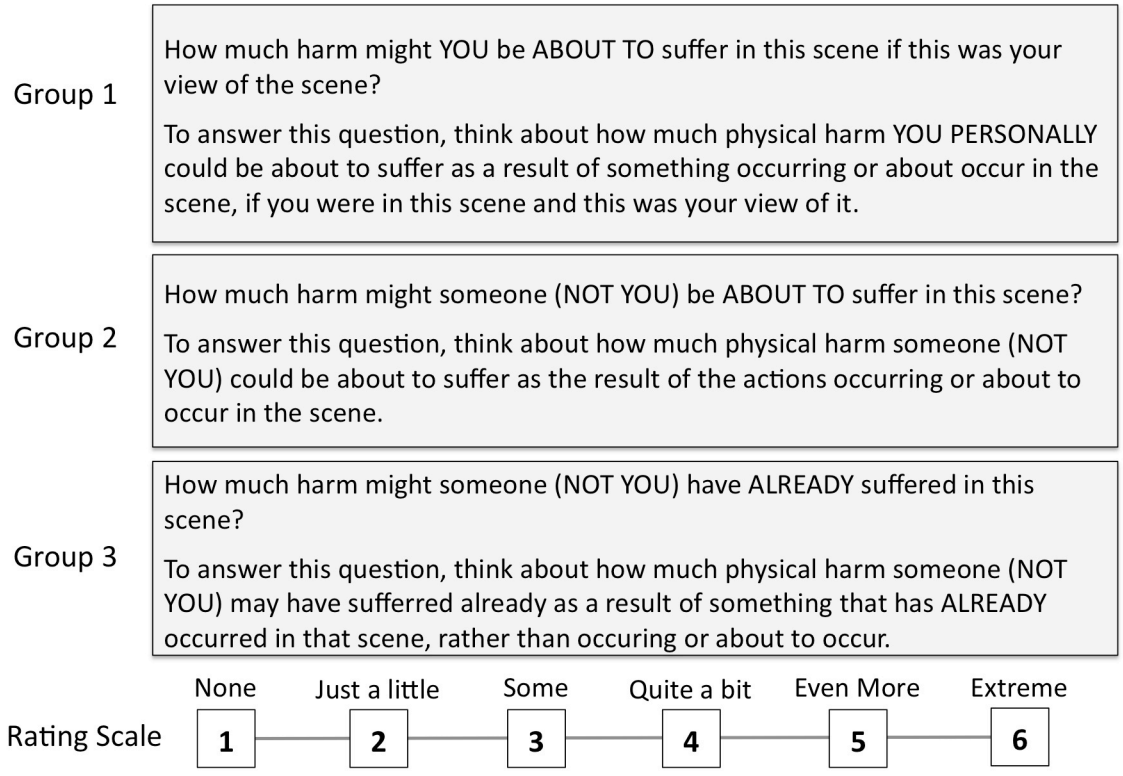
Supplemental Materials



Supplemental Figure 1. Analysis of the images employed in this study. **A.** Average power spectral density for the Direct Threat (red), Indirect Threat (magenta), Merely Negative (blue), and Neutral (green) images. **B.** Averaged images from the four stimulus conditions. **C.** Averaged Fast Fourier Transform images for the four stimulus conditions.

Supplemental Figure 2. The instructions and rating scale provided to the three question groups in Experiment 1.



Supplemental Figure 3. The instructions and rating scales in Experiment 2. **A.** Valence rating instructions and scale. **B.** Arousal rating instructions and scale.

A

How negative do you feel this scene is?

To answer this question, think about how you personally would feel if you were in this scene and this was your view of it.

Not at all	Slightly	Somewhat	Quite	Very	Extremely
1	2	3	4	5	6

B

How calm or agitated does this scene make you feel?

To answer this question, think about how you personally would feel if you were in this scene and this was your view of it.

Very slowed and still	Slowed and still	**Slightly** slowed and still	**Slightly** engaged and energized	Engaged and energized	**Very** engaged and energized
1	2	3	4	5	6

Behavioral Experiment 2: rating valence and arousal of the stimuli

Participants

We tested 33 participants, who were students at Northeastern University in Boston, MA, and were compensated for their participation with a $15 gift card. The mean age of the participants was 20.4 years (S.D. 4.4 years, range 18-37); 17 were female. The participants were of varied ethnic background (17 White, 11 Asian, 3 Black, and 2 Hispanic) and had an average of 13.7 years of education (S.D. 1.7 years, range 12-17). Twenty-three spoke English as a native language; the remaining participants were fluent in English and had 5-16 years of English-speaking experience. All had normal color perception and normal or corrected-to-normal vision. The experiment was approved by the Institutional Review Board of Northeastern University (protocol #11-03-35).

Stimuli and Procedure

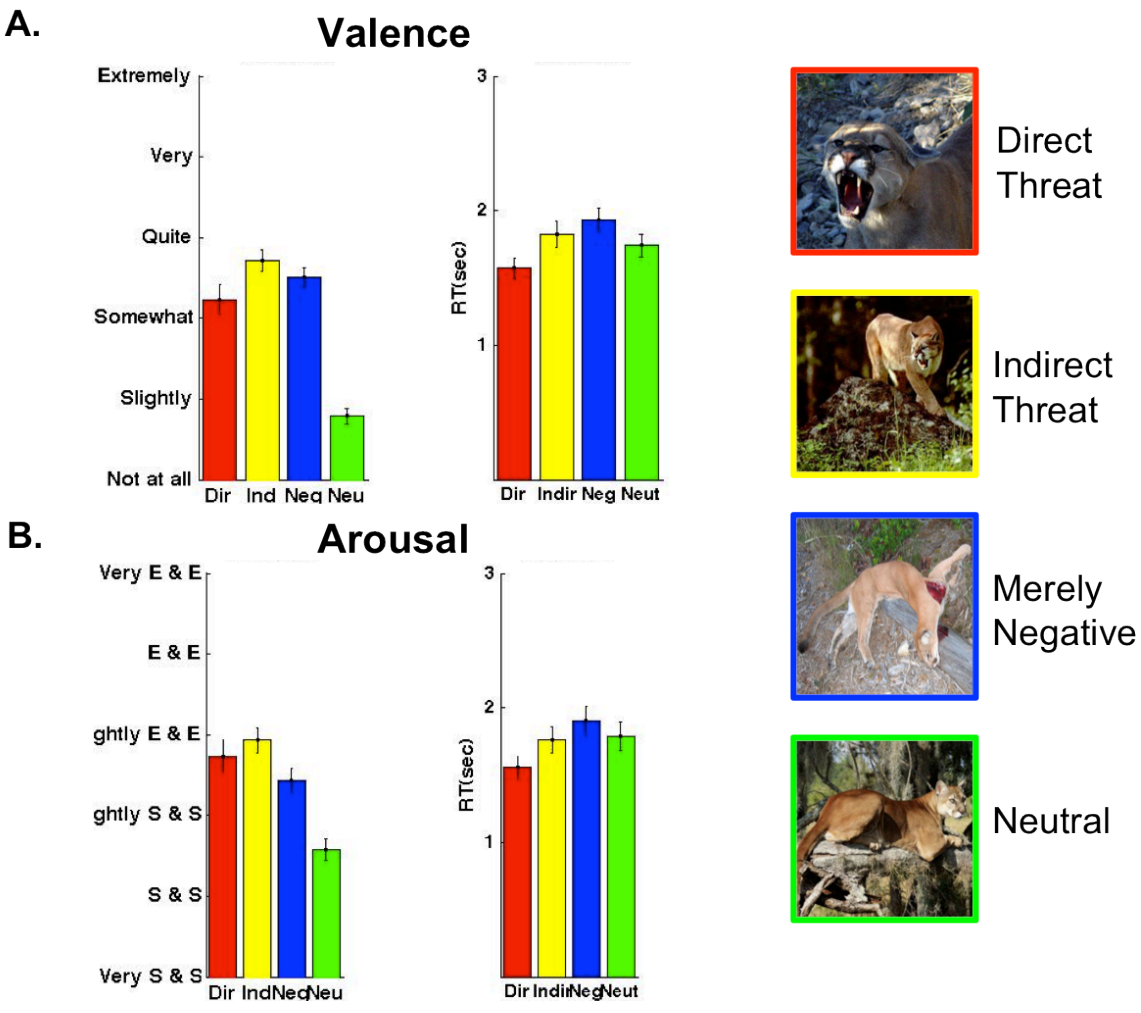
The stimuli and procedures were identical to those in Experiment 1, with the exception of the instructions provided to the participants. Instead of assessing the impending or past threat potential of situations shown in the stimulus images, the participants were asked to rate the valence and arousal of the stimuli on a 6-point scale. The rating scales are shown in Supp. Fig. 3.

Results

Participants judged all evocative images as more unpleasant and highly arousing when compared to neutral images (Supp. Fig. 4). Critically, however, Direct

Threat images were perceived as *less* negative than Indirect Threat (t_{32}=-6.3, p<0.0005) image and not significantly different in arousal, and marginally less negative (p=0.06) and marginally higher in arousal (p=0.08) than the Merely Negative images (p=0.06). Participants were also fastest to evaluate both the valence and arousal of the Direct Threat images (p<0.00001), and slowest for the Merely Negative images (p<0.00001). These findings suggest that valence and arousal are *not* the main driving factors in perceiving situations as (directly or indirectly) threatening, or merely negative without extant threats. Rather, as we hypothesized, situational context depicted in these images determines whether they are perceived as directly or indirectly threatening, or as merely negative without containing current threats.

Supplemental Figure 4. Experiment 2 results. **A**. Valence rating results (left panel) and response times (right panel). **B**. Arousal rating results (left panel) and response times (right panel). Color-framed example images on the right provide the color key for the four conditions in **A** and **B**.



Supplemental Figure 5. Stimuli employed in the fMRI study. Red frames indicate Direct Threat Stimuli, yellow frames Indirect Threat stimuli, blue frames Merely Negative stimuli, and green frames indicate Non-threat, neutral control stimuli.