



## The Pale Shades of Emotion: A Signal Detection Theory Analysis of the Emotional Stroop Task

PDF (Size: 292KB) PP. 537-541 DOI: 10.4236/psych.2012.37079

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### ABSTRACT

In the emotional Stroop effect (ESE), people are slower to name the ink color of negative, emotion-laden words than that of neutral words. Two accounts have been suggested for the ESE, relating it to either deficient attention to color or to temporary disruption of action in the face of threat. Is the ESE driven by a threat-produced change in perception, or is it a strategic bias in responding? In a pioneer import of Signal Detection Theory to this realm, threat was found to diminish the psychological distance ( $d'$ ) between the ink colors, but it did not impact response bias ( $\beta$ ). The results indicate that the ESE derives from a deep perceptual change engendered by the negative stimuli and not from changes in the criterion for responding. These results constrain future theorizing in the domain of emotion-produced changes in behavior, and provide some support for the threat account of attention under emotion.

### KEYWORDS

Emotional Stroop Effect; Attention; Threat; Signal Detection Theory; Emotion

### Cite this paper

Ben-David, B., Chajut, E. & Algom, D. (2012). The Pale Shades of Emotion: A Signal Detection Theory Analysis of the Emotional Stroop Task. *Psychology*, 3, 537-541. doi: 10.4236/psych.2012.37079.

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