Exploring differences in conscious and preconscious processing of the emotional content of words

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Abstract

Previous work investigating the processing consequences of emotional associations of words has led to conflicting results, with studies suggesting either a processing disadvantage for negative words (Vinson et al., 2011; Estes & Adelman, 2008), an advantage for negative words (Nasrallah et al., 2009) or an overall processing advantage for valenced words (regardless of polarity, Kousta et al., 2009). Previous studies, however, differ along important dimensions, which may be responsible for the reported different results, even for those studies that stringently controlled for other lexical and sublexical differences across stimuli. Two important methodological differences are (a) whether the task directs attention to emotion; (b) whether the task taps into conscious vs. preconscious processing of stimuli. Here, we use a within-subject design to contrast two tasks: lexical decision (i.e., deciding whether a string of letters is a real word in English) for words presented in full view and a location decision (i.e., deciding whether a word is presented above or below a fixation point) for words presented under a continuous flash suppression task (CFS, a variant of binocular rivalry). Hence, both tasks are emotion-irrelevant, but crucially lexical decision taps into conscious processing whereas the CFS paradigm taps into preconscious processing. For highly controlled items and the same subjects, we found that valenced words (regardless of polarity) were processed faster in lexical decision but crucially, under CFS, negative words took longer to emerge from suppression than either positive or neutral words. We interpret these differences as revealing characteristics of subcortical and cortical emotional pathways.

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