When Suppressing Your Emotions Is Good: Emotion Regulation Affects Attentional Selection in Working Memory

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Abstract

The ability to control attention has been suggested to be a major determinant for individual differences in working memory (Kane, Bleckley, Conway, & Engle, 2001; Vogel, McCollough, & Machizawa, 2005). However, experiments investigating differences in the interaction of attention and WM used exclusively neutral (non-emotional) stimulus material. Here, we investigated the influence of emotional content on attentional selection within WM. Furthermore, we examined to what extend emotion related personality traits contribute to the efficacy of attentional selection in working memory. Using an emotional modification of a retro-cueing paradigm (Griffin & Nobre, 2003), 34 participants were presented with six words, that could have been negative or neutral, and were asked to remember them for a following recognition test. After 2 seconds, a cue was presented. In half of the trials, the cue retrospectively indicated the subjects to selectively attend to only one word out of the six; in the rest of the trials, the cue instructed participants to keep maintaining all the six words in memory. On the group level, there was no evidence that attentional selection is attenuated for negative stimulus material. However, we found a significant correlation with selection efficacy for negative stimuli and the ability to suppress emotions as assessed with the Emotion Regulation Questionnaire (Gross & John, 2003). In contrast, trait anxiety was not correlated with task performance. There were no correlations with any subscale of the questionnaires when stimuli were neutral. This study demonstrates the influence of individual emotion regulation abilities on WM performance for emotional material.

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