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Can Sensory Simulations Be Used to Regulate Emotion?

In nearly every situation, there are certain emotions that society dictates are inappropriate to express. Instead of reacting to every emotion, individuals often try to change how they feel to better fit the situation. The popular ditty, "I Whistle a Happy Tune" from Rogers and Hammerstein's "The King and I" tells a classic example of this type of emotion regulation in which the act of whistling serves to alter a feeling of fear into that of fearlessness. Emotion regulation often involves changing mental representations of the emotion such as changing the content of the thought (Gross, 1998). Recent developments in embodied cognition suggest a new and potentially valuable lens into emotion regulation. Embodied cognition theory posits that mental representations often include sensory and motor simulations in the mind. Studies have demonstrated that, due to this link between mental representations and their sensory elements, sensory simulation can influence cognition (Barsalou, 2008). However, despite the importance of mental representations in emotion regulation, there is limited research that looks at embodied cognition in the context of emotional representations. The present research studies emotion regulation as a function of visual sensory alterations in mental representations. Participants were asked to recall strongly negative and positive emotional memories for which they had images or scenes they saw in their mind's eye. They then imagined seeing the images or scenes moving far away, remaining as is, and moving close. Participants rated the intensity of their emotion (whether positive or negative) in response to each image or scene after each distance transformation. To help limit the influence of participants' expectations regarding what might happen, they were told prior to trials that some people find that moving the images far away intensifies their emotion, while moving the images close weakens it, some the opposite, and some experience no changes in their emotions as a result. Results demonstrated that, whether positive or negative, emotions were rated as more intense when an image was seen in the mind's eye moving closer and less intense when moving farther away. These data suggest that the kinds of sensory simulations proposed in embodied cognition may provide new opportunities for emotion regulation.