Toward an automatic and valence non-specific mechanism of relevance detection.

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Abstract

In two studies involving 48 participants each (24 men and 24 women), we tested the hypothesis of a general, automatic mechanism of emotional attention relying on the relevance of a stimulus, irrespective of its valence. Participants performed 60 trials of an emotional "border task" in which they were presented with emotional pictures with an upper and a lower border (both stripped). Positive, negative and neutral pictures (20 of each) were used. Participants had to indicate as quickly as possible, by pressing a response button, whether the upper and lower borders were identical or not, irrespective of the content of the pictures. After the "border task", participants were presented again with the same pictures in order to rate them in terms of valence, arousal and relevance. Negative pictures were selected so as to be relevant for all participants, whereas positive pictures were selected so as to be relevant for male participants only in Experiment 1and for female participants only in Experiment 2. In Experiment 1, positive pictures represented plunging necklines and in Experiment 2, positive pictures represented babies. Ratings revealed that men judged positive and negative pictures more relevant than neutral pictures in Experiment 1, as did women in Experiment 2. The most important result was that relevance was predictive of the results in the "border task", since response times were longer for relevant (positive and negative) pictures than for neutral pictures. The present studies suggest the existence of an automatic mechanism of emotional attention driven by relevance and independent of valence.

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