Happier Faces Shift Attention Rightward: The Cognitive Consequences of Magnitude Processing

Kevin J. Holmes
Emory University

Stella F. Lourenco
Emory University

Abstract: Magnitude is a property shared by countless dimensions of experience, from the clearly defined (e.g., number) to the more abstract (e.g., happiness). In the case of number, Fischer et al. (2003) found that the processing of numerical value caused involuntary shifts in spatial attention, suggesting automatic activation of a spatially oriented mental number line. In addition to replicating Fischer et al.'s findings for number, the current experiment showed that the processing of human faces produces similar attentional consequences. Participants were primed with faces whose expressions ranged from neutral to extremely happy prior to detecting peripheral stimuli. Whereas less happy faces speeded subsequent detection in the left visual field, more happy faces speeded detection in the right visual field. These findings suggest that spatial organization extends beyond the dimension of number and, importantly, that magnitude information inherent in everyday stimuli such as numbers and faces may influence what we perceive.