

Effects of Age on Detection of Emotional Information

Frequently, people encounter situations in their environment in which it is impossible to attend to all available stimuli. It is therefore of great importance for one's attentional processes to select only the most salient information in the environment to which one should attend. Previous research has suggested that emotional information is privy to attentional selection in young adults (e.g., Anderson, 2005; Calvo & Lang, 2004; Carretie, Hinojosa, Marin-Loeches, Mecado, & Tapia, 2004; Nummenmaa, Hyona, & Calvo, 2006), an obvious service to evolutionary drives to approach rewarding situations and to avoid threat and danger (Davis & Whalen, 2001; Dolan & Vuilleumier, 2003; Lang, Bradley, & Cuthbert, 1997; LeDoux, 1995).

For example, Ohman, Flykt, and Esteves (2001) presented participants with 3×3 visual arrays with images representing four categories (snakes, spiders, flowers, mushrooms). In half the arrays, all nine images were from the same category, whereas in the remaining half of the arrays, eight images were from one category and one image was from a different category (e.g., eight flowers and one snake). Participants were asked to indicate whether the matrix included a discrepant stimulus. Results indicated that fear-relevant images were more quickly detected than fear-irrelevant items, and larger search facilitation effects were observed for participants who were fearful of the stimuli. A similar pattern of results has been observed when examining the attention-grabbing nature of negative facial expressions, with threatening faces (including those not attended to) identified more quickly than positive or neutral faces (Eastwood, Smilek, & Merikle, 2001; Hansen & Hansen, 1988). The enhanced detection of emotional information is not limited to threatening stimuli; there is evidence that any high-arousing stimulus can be