Modulation of mood on eye movement pattern and performance in face recognition

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Abstract

Research has suggested negative mood facilitates local attention while positive mood facilitates global attention. In face recognition, looking at the eyes has been associated with engagement of local attention as well as better recognition performance. Accordingly, negative mood changes may lead to more eyes-focused eye movements and consequently enhance recognition performance. We tested this hypothesis using mood induction. Through Eye Movement analysis with Hidden Markov Models (EMHMM), we discovered eyes-focused and nose-focused strategies. Although negative mood changes predicted increased eye movement pattern similarity to the eyes-focused strategy, it did not predict changes in recognition performance. Furthermore, most participants did not switch between eyes-focused and nose-focused strategies despite changes in mood. We conclude that mood changes lead to eye movement pattern changes that are not sufficient to modulate recognition performance as individuals may have preferred eye movement strategies impervious to transitory mood changes.