Perception of Facial Expression of Emotion

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More than 25% of people worldwide suffer from mental illness (WHO, 2013). Emotion is a subjective conscious experience essential to social interaction in humans, who express emotions primarily through facial expressions. Facial expressions provide insight into an individual's internal emotional state. Changes in person's emotional state alter his/her ability to perceive facial emotions for example people with mood disorders (schizophrenia, autism) experience altered facial emotion perception. Here, binocular rivalry was used as an objective method of (1) ranking the perceived salience of different facial emotions and (2) measuring changes in the perceiver's internal emotional state. Observers were presented with a facial emotion expression (anger, disgust, fear, happy, sad or surprised) to one eye, and a neutral expression to the other eye, and observers indicated which image was dominant at the time. The rivalry approach reliably ranked the relative salience of six universal facial emotions (ANOVA $F(5,257) = 66.13$, $p<0.01$). This method is sensitive to changes in the perceiver's internal emotional state when rivalry is modulated by music. The rivalry method can lead to better differential diagnosis of similar psychological disorders: for example, one might use the distinct patterns of facial emotion perception to distinguish if a child suffers from social anxiety or bipolar disorder. Furthermore, the ability to use binocular rivalry to monitor the internal emotional state in individuals (for example in case of labile patients suffering from post-traumatic stress disorder, schizophrenia, etc.) can help clinicians optimize patients' environment to improve everyday function, and consequently improve quality of life.

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