Synopsis of Original Research Paper

Psychological research for the effects of dynamic information of a face on the recognition of facial expression by spatial frequency analysis.

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This experiment was performed on the effects of motion information on the recognition of facial expressions by the use of band-pass filtered images. Two spatial frequency band levels (low and high), two facial expressions (happy and sad), two modes of presentation (dynamic and static), and three morphing rates (10, 30 and 50%) were used, and eight subjects took part in the experiment. A 2AFC task was employed to judge the facial expression. With respect to happy faces of 10 to 30% morphing rates presented at the low spatial frequency band level, the percentage of correct responses was higher in the dynamic mode of presentation than in the static mode. With respect to sad faces, too, the performance was higher in the dynamic mode than in the case of static faces of 10 to 30% morphing rates presented at the high spatial frequency band level. These results suggest that motion information plays an important role in the recognition of facial expressions. And face motion has defferent influence on the recognition of two facial expressions.

Key words: recognition of facial expression, motion information, band-pass filtered facial image