Synopsis of Original Research Paper

Measurement of Cosmetic Effect and Visualization of Impression Space by Rhythm of Smile Expression

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This paper presents a framework of tempos and rhythms to clarify the relevance between psychological states and facial expressions, particularly addressing repetitive operations of intentional facial expressions after giving a stress stimulus. By acquiring image datasets of facial expressions under the states of pleasant–unpleasant stimulus for 20 subjects, we extracted expressive tempos for respective subjects. Consequently, averages of extraction rates show that the pleasant state was 81.1%. The unpleasant state was 77.8%. Regarding effects of pleasant–unpleasant stimulus on the expressive tempos, particularly addressing the variation of the number of frames constituting one tempo, the variation in unpleasant stimulus became greater than that in the pleasant stimulus. The results show that the analysis using expressive tempos and rhythms is valid as an indicator for estimating the psychological state.