Trait Anxiety Affects the Appraisal of novel Stimuli: Evidence from an EMG Recording Over the Zygomatic Region

DAN GLAUSER, Elise, AUE SEIL, Tatjana, SCHEERER, Klaus R.

TRAIT ANXIETY AFFECTS THE APPRAISAL OF NOVEL STIMULI: EVIDENCE FROM AN EMG RECORDING OVER THE ZYGOMATIC REGION

Elise S. Dan Glauser, Tatjana Aue, & Klaus R. Scherer
University of Geneva

Descriptors: anxiety, appraisal, EMG

According to appraisal theorists, emotions arise after an appraisal of the environment triggering variations in peripheral parameters and muscular contractions. Past research has mainly investigated these reactions as function of the situation parameters. The general hypothesis of the present work is that personality has also an impact on the appraisal process and therefore on the bodily activity. Trait anxiety reflects the constant expectation of threatening situations (e.g., unknown situations). In this study, images (either known or unknown) were presented to two groups (low vs. high anxiety). A double task paradigm permitted to indirectly show the amount of resources invested in the appraisal. Moreover, EMG was recorded for the Corrugator, Zygomatic and Frontalis regions during the second following image onset. Results show that, for the low anxiety group, appraisal resource allocation is transient whereas it persists for the high anxiety group. EMG data show an interaction effect for the Zygomatic region indicating activation of this muscle only in low anxiety group when viewing new pictures. This could be interpreted as a positive reaction to novelty for non-anxious participants that is not present for anxious participants, probably because for these latter, new stimuli provoke threat. Globally, these results confirm differences in appraisal process and muscular reactions for individuals with different levels of anxiety in response to new stimuli, showing that personality is an essential factor in the unfolding of appraisal process leading to emotional reactions.