A helping hand? Effects of interpersonal touch on emotion processing

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There exist many studies examining the effects of emotion processing in clinical and subclinical samples. While many would assume from personal experience that interpersonal touch can play a role in emotional processing and regulation, e.g. for support or consolation, only a limited amount of studies focused on the connection between interpersonal touch and emotion processing.The underlying mechanisms and the clinical relevance of the effects of interpersonal touch on emotion processing remain unclear. To gain better knowledge in this area of research, we conducted an experiment exposing one group (n= 21) to interpersonal touch of an unknown person and the other group (n = 20) to the mere presence of an unknown person while watching emotional pictures. After each picture participants rated their experienced valence and arousal caused by the picture. Additionally, we gathered data of galvanic skin response (GSR) and facial electromyography (EMG). Unexpectedly, findings suggest that touch leads to higher levels of corrugator muscle (EMG) activity for negative, neutral and positive pictures. Moderation analysis revealed that this effect is stronger for participants with higher social anxiety. According to these findings, it seems that interpersonal touch is not always an entirely positive and soothing experience, but it may have a stressing effect on some people. When confronted with emotional situations, interpersonal touch of an unknown person may enhance the negativity of the experience and hence worsen the emotion regulation of people. This may be an important practical implication for physical contact in health care systems, for example.

Encoding and recognition of person identity during threat: A multinomial modeling approach

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A threatening context facilitates perceptual processing, which in turn is suggested to support memory encoding and recollection of context information. For instance, better memory has been found for affective words which were encoded during threat compared to safety conditions. Based on this, we examined face identity learning as a function of verbally instructed threat or safety. In two studies, participants (N=64 and 76) completed two sessions, in which 96 face pictures (divided in four subsets A, B, C, and D) were presented. During the encoding session, faces from Set A, B and C were presented with different background colors each once for 1s or 6s (Study 1 or 2). To trigger aversive anticipations, Set A was shown with a specific color (e.g. blue) which was instructed to signal threat of receiving shocks. In contrast, Set B and Set C (e.g. yellow/green) were presented without further instructions, however, implying safety to the participants. During the second recognition session, all pictures (old Sets A, B, C and the new Set D) were presented intermixed and a source memory (blue/yellow/green background or new) task was performed. Individual parameter estimates of item (face identity) and source memory (threat or safety context) as well as guessing parameters were obtained via hierarchical multinomial processing tree modeling. Preliminary results show that the mere verbally instructed threat compared to safety context was rated as more unpleasant, arousing and threatening. Recognition performance for items as well as for sources, however, did not vary as a function of aversive anticipations. Hierarchical multinomial model based parameter estimates did not reveal

differences between the conditions for item memory, source memory as well as for item and source guessing parameters. Taken together, language was highly effective in establishing a context of threat-of-shock and safety, however, recognition performance was comparable during both context conditions.

Keywords: Affektive Wissenschaft, Gesunde Probanden

The Role of Emotion Regulation in Future-Oriented Thinking: A Double Dissociation

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Biased future-oriented thinking has been implicated in mental health for several decades. Ventromedial prefrontal cortex (vmPFC) volume, a key area in emotion regulation, has recently been related to future-oriented thinking in social contexts. Behaviourally, the link between future-oriented thinking in social contexts and emotion regulation has not been tested explicitly, however. Here, we therefore tested future-oriented thinking in social contexts in relation to typically adaptive versus maladaptive emotion regulation strategies, i.e, cognitive reappraisal and expressive suppression. In a sample of 511 healthy individuals, we indexed future-oriented thinking in social contexts using a novel German adaptation of the levels of dispositional expectancies for social threat and reward scale (LODESTARS), an instrument measuring anticipated social threat and reward. Cognitive reappraisal and expressive suppression were assessed at the trait level via the Emotion Regulation Questionnaire (ERQ). The German LODESTARS exhibited satisfactory psychometric properties. Crucially, whilst cognitive reappraisal was positively associated with anticipated social reward, it was negatively associated with anticipated social threat. Conversely, expressive suppression was negatively associated with anticipated social reward and positively associated with anticipated social threat. These findings highlight the role of cognitive reappraisal in promoting positive future-related expectations along with reducing anticipated social threat. Expressive suppression, by contrast, may elevate negative future-related expectations and diminish positive expectations. Our results thus provide a novel insight into the potential social effects of habitually adopting typically adaptive versus maladaptive emotion regulation strategies. They may also have particular implications for emotional disorders, which are characterised by deficits in future-related thinking.

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Validität von Automatic Facial Coding bei emotionalen Gesichtsausdrücken

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Automatic Facial Coding (AFC) ist eine relative junge Forschungsmethode zur objektiven Messung emotionaler Gesichtsausdrücke. Bestehende Forschung konnte zeigen, dass AFC Bewegung verschiedener Merkmale des Gesichts (Action Units) und emotionale Gesichtsausdrücke standardisierter Bilderinventare vom trainierten Schauspielern akkurat klassifiziert. Allerdings scheint eine Klassifizierung häufigeren Fehlmessungen zu unterliegen, wenn untrainierte Studienteilnehmer solche Gesichtsausdrücke darstellen. In der vorliegenden Studie wurden daher 70 untrainierte Studienteilnehmer gebeten aktiv die Gesichtsausdrücke von Freude, Ärger, Traurigkeit, Ekel, Angst und Überraschung darzustellen, während die Gesichtsausdrücke mittels Videokamera aufgezeichnet wurden. Videoaufnahmen der intensivsten Gesichtsausdrücke wurden mit einer etablierten AFC Software analysiert (FaceReader, Noldus Information Technology) und sowohl Action-Unit-Parameter