aiming at investigating – from both a physiological (thanks to EEG recordings) and classical psychological (thanks to a qualitative and quantitative *ad hoc* self-report battery: FQ, FSS, 5D-ASC) points of view – psychophysiological correlates of the two experimental conditions and at exploring potential common features. We then induced and compared the two altered states of consciousness, namely a hypnotic state induced via a double indirect induction procedure, and a state of flow induced via a PC videogame (flOw). To increase the chances of actually making participants experience those states in the laboratory setting, we focused on a sample that already proved to be able to enter both the states we were interested in. We then opted for a group of clinical psychologists who were specializing as ericksonian psychotherapists (n = 7). There have been two data collection phases. In the first phase, we collected subjective data regarding previous experiences of hypnosis and flow proposed by the subjects, to be used as a reference. In the second phase, in the laboratory, each subject underwent both experimental conditions, and we collected both physiological and self-report subjective data regarding those experiences. Physiological data showed significant variations in the power of delta, alpha and gamma frequency bands, but only in the condition of hypnosis. The state of flow was associated to a qualitative modulation of theta power over prefrontal areas. Subjective data demonstrated that participants qualitatively recognized to be in a flow state during the relative induction condition, with the exception of only one of them. Self-report quantitative data showed that the experimental condition of hypnosis presented similar features with respect to the reference state of flow. To sum up, our main hypothesis was partially verified: while physiological data during the flow condition were less consistent, hypnosis was overall associated to the slowing of cortical rhythms, and first evidences suggested that hypnosis and flow states may be similar at least for subjective experience.

tDCS effects on implicit association tests in Eating Disorder patients

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Transcranial Direct Current Stimulation (tDCS) has been increasingly used in experimental and clinical studies on food-related pathological behaviours and attitudes. However, neural mechanisms underlying eating disorders are still partially unknown and controversial results have been reported concerning tDCS effects on eating behaviours. This study aims at assessing whether tDCS applied to two cortical regions involved in food and body representation, namely the medial Prefrontal Cortex (mPFC) and Extrastriate Body Area (EBA), affects implicit attitudes towards food and body images in female healthy con-

trols and female patients with Eating Disorder (ED). Implicit association tests (IATs) on tasty and high calories food versus tasteless and low calories food (food-IAT), overweight versus underweight body images (body-IAT), flowers versus insects (control-IAT), were administered to 10 patients with anorexia or bulimia nervosa and thirty-four healthy volunteers. In three separate sessions anodal tDCS was applied on mPFC, right EBA or in sham mode immediately before the IATs. Results showed that control participants evaluated tasty food as more positive both in explicit ratings and in food-IAT. Reaction times of the food-IAT generally increased when tDCS was applied over mPFC. Moreover, ED patients performed the three IATs overall slower than controls and their reaction times increased in mPFC- and EBA-tDCS conditions both in body-IAT and control-IAT. These results demonstrate that tDCS differently affected cognitive tasks in healthy and clinical populations. Indeed, only in the ED participants tDCS increased reaction times in the three IATs. However, this effect could be related to a general interference with the cognitive mechanism involved in stimuli categorization, since it was unspecific for the cortical site of stimulation and IAT material. This study confirms a tDCS effect in modulating cognitive tasks in ED patients, but it also shows that research is still needed to clarify the role of different target areas, which could be selected for clinical trials.

Motion or e-motion? Representation of observed Emotional Bodily Expressions in the anterior Intraparietal Cortex and superior Temporal Sulcus: a TMS state-dependent study

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The human being is an extremely social animal. Detecting prey or predators, identifying pleasant or dangerous situations, learning new skills and inferring social norms are just some examples that clearly illustrate the fundamental importance of comprehending our conspecifics' movements. In the visual domain, the encoding of whole body gestures has traditionally been studied with the so called Point-Light Display (PLD) paradigm. In the human brain, a widespread network of areas is activated by the sight of body movements, but their role in comprehending the emotional content of bodily expression is still unclear. The goal of the present experiment was to investigate the existence of a neural system involved in the processing of Emotional Bodily Expressions (EBE). In aninitial behavioural study, 26 participants were adapted with PLDs depicting fearful, happy or neutral actions and were subsequently asked to recognize happy of fearful PLDs. Adaptation is a phenomenon in which changes in neural tuning and excitability, induced by prolonged exposure to sensory stimulation, can bias the perception of subsequently presented stimuli. We found an adaptation after effect for the emotional – but not neutral – stimuli, with faster RTs for incongruent conditions. This adaptation effect demonstrates the existence of a neural mechanism specific for EBE perception. We then examined the cortical locus of this mechanism with the use of TMS-adaptation paradigm (n = 17). We targeted two areas of the action representation system: the anterior Intraparietal Sulcus