PROJECT 1

DoS: Prof. Cesare Maffei

Title: Emotional and behavioral dysregulation in Borderline Personality Disorder: what does support the selection of adaptive and maladaptive strategies in everyday life?


Project description (Number of characters, including spaces: 2.000 - 3.000):

Borderline Personality Disorder (BPD) is characterized by pervasive alterations in emotional and behavioral regulation. Dysfunctional behaviors and maladaptive regulation strategies are selected for their immediate effect in reducing intense emotional activation, as manifestations of BPD alteration in decision making. However, their selection has several secondary negative consequences. To increase knowledge on BPD emotional and behavioral dysregulation dynamics, the aim of this project is to: 1) investigate subjective and physiological manifestations of BPD emotional functioning as they occur in the real life, 2) study the impact of adaptive and maladaptive regulation strategies on emotional regulation from a subjective and biological perspective.

This work could be supported by the use of Ecological Momentary Assessment (EMA) which is well suited to study subjective emotional experiences, physiological responses to events and behavioral choices during spontaneous daily activities.

The project will be developed in the three years of the PhD program. During the first year, the student will define the experiments and will acquire all the necessary skills to setup and administer the tasks and to analyze data. Two main topics will be considered in case-control experiments: 1. Daily physiological monitoring, 2. Emotion regulation strategies efficacy.

In the first topic, participants’ physiological activity and emotional functioning will be measured during daily life through a wearable device (www.empatica.com) connected to a mobile application allowing to obtain real-time physiological and self-reported data. The second area will focus on evaluating emotion regulation strategies efficacy (e.g., Temperature, Intense exercise, paced breath; adaptive and maladaptive regulation strategies) in reducing emotional and physiological activation after emotion induction tasks.

The second year will be dedicated to data collection and analysis. Daily monitoring analytical plan could include multilevel modeling and mixed model approach to evaluate within-subject associations of physiological arousal and affective dysregulation, and group differences in these associations. Analyses on emotion regulation strategies task will include between group and pre-post comparisons considering subjective and physiological data. Correlational analysis will be conducted among experimental results and BPD dysfunctional processes assessed by self-reported questionnaires.

During the third year the student will work on the finalization of the experiments and on the final dissertation.
The results of this project could be useful to elucidate what guides BPD behavior in triggering contexts, clarifying the impact of regulation strategies on emotional difficulties and providing empirical evidence which could be helpful in the development of evidence-based treatments.

This project will benefit from a collaboration with Prof. Verschure and the Institute of Bioengineering of Catalonia.

**Skills to be acquired by the student:**

- deep knowledge of emotion and decision-making theories and literature

- deep knowledge on Borderline Personality Disorder

- data collection and processing of neurophysiological and self-reported data on BPD and HCs participants

- competencies in statistics and in the use of statistical software

- competencies in programming

**References (max. 3)**

