**Project title: "Neural and Computational Processes Underlying Changes in Self-Esteem"**

Supervisor: Dr. Geert-Jan Will (Research group: Prof. Ray Dolan)

Background:

Low self-esteem is a core characteristic of many psychiatric disorders, such as anxiety disorders, eating disorders, and depression. Yet, the neural and computational processes mediating changes in self-esteem are largely unknown. Using computational modeling, my colleagues and I have recently shown that moment-to-moment fluctuations in self-esteem can be explained by the combined influence of: 1) recent expectations about what other people think about us and 2) social prediction errors arising from those expectations when we receive feedback from them (i.e. the difference between actual and expected social feedback). Using functional magnetic resonance imaging, we showed that social prediction errors correlate with activity in the ventral striatum and momentary changes in self-esteem co-vary with activity in ventromedial prefrontal cortex.

Next steps (this is where you get involved!):

I am looking for MSc students who would like to help me further expand this line of research. I am planning three new projects (1 functional Magnetic Resonance Imaging [fMRI] study, 1 large-scale behavioral study, and 1 drug administration study), which will provide unique insights into the dynamics underlying changes in self-esteem. Research questions will include:

1. Can we predict who will develop depressive symptoms in a sample of young people at risk for depression using neuroimaging and our self-esteem task?
2. How do social comparisons affect changes in self-esteem?
3. What is the role of dopamine in social feedback processing and changes in self-esteem?

I am looking for students who have:

* Enthusiasm for social, cognitive and/or clinical neuroscience.
* Great organizational, interpersonal, and communication skills.
* Experience with software used for statistical analysis and experimental design (e.g., SPSS, R, MATLAB).
* Prior experience running human subjects (having worked with vulnerable populations like patients or children is preferred).

Your responsibilities will include:

* Participant recruitment, screening, and testing.
* Analysis of behavioral and/or fMRI data.
* Assistance in further development of the research.

Contact details:

If you are interested, please send an email with your CV to: **Dr. Geert-Jan Will (g.j.will@ucl.ac.uk)**.