Project Suggestion for

MSc in Cognitive Neuroscience, Cognitive and Decision Sciences, Research Methods in Psychology and Social Cognition, UCL

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Topic: **Collective decision making**

Collective decision making describe the process in which a group of individuals interact and reach a decision, a process which take place in everyday life, as well as in crucial decision points in the lives of individuals and groups. We study this subjects by examining dyads (pairs of subjects) while making joint decisions regarding perceptual tasks. An emerging notion is the importance of metacognition, i.e. our ability to asses our own performance and communicate them, to this process. Key questions are how dynamic are metacognition abilities, and how they affect dyads performance. Moreover, can these properties be linked to neuronal structure or pattern of neuronal activity, which may indicate the neural basis of human cooperation?

We are looking for a highly motivated student to take part in a project involving behavioural measurements of dyad decision making.

Required Skills: Basic Statistics (SPSS, Excel), programming in Matlab (or other programming language) is not a must but having some background (or eagerness to learn) it is going to be very useful. Background in computer science and cognitive psychology/neuroscience is preferable.

Required commitment: The project will require ~50 hours of data collection which will consist of ~30 sessions. In addition the task includes preparing the experiment (consent forms, experimental instructions, and running sheets), recruiting the participant pairs, running the experiments, backing up the data and participating in the analysis of the data.

Educational value: The experiment offers an opportunity to engage in design, programming and implementation of a behavioural experiment in social neuroscience, as well as introduction to data analysis tools and methods. The student will become familiar with basic analysis of structural brain imaging data. Help for learning and using Matlab will be provided.