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## **Decision Making – Spatial memory and navigation**

You have been invited to participate in an experiment in the Perceptual Decision Laboratory from the Department of Experimental Psychology of the University of Oxford. Your involvement in this project is completely voluntary.

### **What does the study involve?**

In this study, you will be asked to make decisions about planning for navigation. The task will be performed in two different sessions, one in the Experimental Psychology Department and the other one in the FMRIB Center (John Radcliffe Hospital). The first session will be done on a computer with a keyboard for you to make responses. The whole session should last no more than one hour. The second session will be done within an fMRI scanner. This device will allow us to record a signal that has been associated with the level of oxygenated blood in your brain (thus correlating for each area of the brain with how much “energy” is spent, and how much your brain is activated). We plan to use this technique to disentangle the function in different areas in the brain while you perform the task.

### **The task**

In this experiment, you will have to navigate through a subway network to find your way to a destination station. On your way, there will be several lines for you to take. Your task is both to reach the goal on time and learn as much as possible from the map. During the scanning session, you won't see the map. You will be required to navigate from memory!

You will only need to learn one map for the whole of the experiment. During the training session, you will first see the map and you will plan your way to the goal station. Then you will have to perform your plan, but you won't see the map anymore! Your position will be represented only by the name of the station – same as the goal of the journey. This means that you will have to remember the name of most of the stations as well!

At multiple times during in the experiment, we will also evaluate your learning on the map by asking about directions (e.g., which way to go from station A to station B).

Please remember that you are free to withdraw from the experiment at any time with no explanation. Should you wish to contact anyone after you have taken part, please contact [jdobalaguer@gmail.com](mailto:jdobalaguer@gmail.com)