**PARTICIPANT INFORMATION SHEET**

**Title of the experiment:** STREAM-spatial EEG

Dear participant,

Thank you for volunteering to take part in the EEG experiment “STREAM-spatial”.

* **What is the purpose of the study?**

Your participation will help us to better understand how human memory functions in healthy participants. In particular, we aim to study the temporal dynamics of memory reconstruction processes, decomposing memory’s architecture into different features.

This experiment is part of a larger study conducted within the School of Psychology, University of Birmingham, and funded by the European Research Council (ERC) under Starting Grant ERC-2016-STG-715714 (STREAM). We hope that our new findings will ultimately lead to publications in scientific journals.

* **What are the kinds of tasks you are expected to perform?**

During the experiment I will ask you to perform one practice session and two regular sessions of a memory task while sitting in front of a computer screen and using a keyboard to respond. This experiment will take ~100 min, plus the time it takes to set up the EEG recordings (~45min). You will have a number of breaks to rest during the experiment if you feel tired. Depending on your choice, you will receive either 1 RPS credit points per hour, or £8 per hour in cash.

This experiment consists of a memory task, testing your ability to associate objects to locations. Each session of this experiment is divided into three parts: a familiarization part in which you will get to know the material used in the remainder of the task, a learning part in which you will learn new object-location pairings; and a retrieval part in which we test your memory for these pairings. During the learning part, you will see a series of locations on the screen followed by an object in the centre of the screen (e.g. a dog).You will be asked to memorize this particular object-location association. All object-location pairs are shown several times. At a later point in time, during the retrieval part, you will be asked you to recall the associations.

All pictures will be emotionally neutral and will not cause any distress. During each part of the experiment, we will record the responses you give, in order to evaluate your task performance.

* **What is Electroencephalography (EEG)?**

Electroencephalography is a non-invasive electrophysiological technique to record the electrical activity of the brain. To record this electrical signal, you will be fitted with an electrode cap on your scalp.

* **Is there any risk associated with EEG?**

Because the EEG signals are very small, we will try to create maximum contact between your skin and each electrode by using an abrasive gel and a syringe fitted with a blunt tip. This procedure may feel strange, but it should not be painful. EEG does not carry any known risks for you, except for slight skin irritations from the abrasive gel. As a precaution regarding the unlikely risk of disease transmission, the cap and electrodes are disinfected after each use and the tools used to exfoliate the skin are thrown away after use.

* **What happens with my data?**

Data will be stored in an anonymous format on local computers, using an ID different from your RPS ID. All information collected during the experiment will be treated confidentially. Only authorised personnel involved in the project will be allowed to access this information. The information will be retained by the University of Birmingham and will only be used for the purpose of research, and statistical and audit purposes. By supplying this information you are consenting to the University storing your information for the purposes stated above. The information will be processed by the University of Birmingham in accordance with the provisions of the Data Protection Act 2018. No identifiable personal data will be published.

* **Do I have to take part?**

You are free to withdraw from the study at any point, if you so wish, with no penalty. In case you decide to withdraw your data will simply be discarded and not further analysed. You can decide to withdraw your data until the end of this experimental session, at the time of debriefing.

* **Whom can I contact?**

If you have further questions about this study, please contact the experimenter, Marije ter Wal via m.j.terwal@bham.ac.uk, or the principal investigator of this research project, Dr Maria Wimber, either via phone 0121 4144659, or email m.wimber@bham.ac.uk.

Please, feel free to ask any additional question to the experimenter.