**PARTICIPANT INFORMATION SHEET - Neural Mechanisms of Emotional Learning**

**UCL Ethics Committee approval ID Number: 12707/001**

You are being invited to take part in a research study. Before you decided it is important for you to understand why the research us being done and what participation will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

**What is this study about?**

The aim of this study is to understand how people learn about good and bad outcomes. We are especially interested in how the parts of the brain involved in memory help this process. This is a process that we think might go wrong in mental health problems such as depression and anxiety, and so we are also interested in investigating whether brain activity during learning is related to symptoms of these conditions.

**Why have I been chosen?**

You can only take part in this study if you:

* Are aged 18-65
* Have no history of cardiac problems
* Are not pregnant
* [MEG exclusion criteria given in section C1]

**Do I have to take part?**

No. It is up to you to decide whether or not to take part. If you do decide to take part, then you will be given this information sheet to keep and be asked to sign a consent form. You can withdraw at any time without giving a reason and without it affecting any benefits that you are entitled to. If you decide to withdraw, then you will be asked what you wish to happen to the data you have already provided.

**What will happen to me if I take part?**

Before being invited to the centre a researcher will check that you are suitable for the study. You may also be asked to complete a brief online questionnaire. If you are suitable and are interested in taking part, we will invite you to an assessment, we may also invite you to a second assessment. Remember at any point you are free to withdraw from the study, without penalty and without having to give a reason.

The first assessment will last up to [time] hours and will involve having a brain scan called a magnetoencephalography (MEG), which is described below. During the brain scan you will be playing computer games that involve learning what to do to get a good outcome or bad outcome. Good outcomes are converted into money, which you get to keep, and bad outcomes are electric shocks or losing money. Even if you lose money you will still receive £5 an hour. The aim of the games is to collect as much money as you can while avoiding the electric shocks. The shocks are designed to unpleasant but not to cause pain, and you will decide the level that you are comfortable with before beginning the games. You will first play the games outside the scanner. You will also be asked to complete some questionnaires about personality traits and characteristics related to mental health problems like anxiety at end of assessment.

You will receive at least £5 an hour to thank you for the inconvenience of taking part, and you can receive more depending on how much money you collect during the games.

What happens during the brain scan? The scanner looks a bit like a hairdresser’s dryer. It is in a magnetically-shielded room to stop interference from external magnetic fields. Because the device measures small magnetic fields, you will be asked not to wear metallic items (zips, metal buttons, etc.) on the day of your scan. Once you have removed any metal you are wearing or carrying you will be asked to sit or lie down inside the scanner while your brain activity is recorded. You will be able to talk with the researcher whilst you are in the scanner. [We may measure your eye-movements and/or muscle movements during the scan. We may take additional measurements of your brain activity using electroencephalography (EEG). In these instances, we will place electrodes on your skin on your hand, face or scalp. They are painless but the gel used to clean the skin and place them on may cause a slight reddening or irritation of the skin. If it is uncomfortable we will remove the electrodes immediately.]

Full instructions will be given and there will be plenty of opportunity to ask questions at the time. If you are in the scanner and decide you want to stop we can stop immediately and you can leave the scanner. Some people find the enclosed space of the shielded room (the size of a very large elevator) uncomfortable. You will have access to a panic button at all times and can press this to stop the scan and you will immediately be removed from the scanner. On average this will take approximately 1 ½ hours, and will never take more than 2 hours.

If you are invited to a second session, this will happen up to two weeks later, and will last no more than one hour. In this session you will complete more computer-based games, but without a brain scan.

**What are the possible disadvantages and/or risks of taking part?**

As part of this study you will receive some mild electric shocks. These are not designed to cause significant pain, but they can be unpleasant. We will ensure that the shocks are at a level that you find tolerable, and if you find the shocks too strong at any point you will be able to stop the experiment and you will not receive any further shocks.

The MEG scanner has no side effects and you will not feel anything, as it is just passively measuring your brain activity.

**What are the possible benefits of taking part?**

Whilst there are no immediate benefits for those people participating in the study, it is hoped that data collected from this study will help us understand how people learn about pleasant and unpleasant events.

**What if something goes wrong?**

If you wish to complain, or have any concerns about any aspect of the way you have been approached or treated by members of staff you may have experienced due to your participation in the research, UCL complaints mechanisms are available to you. In the first instance, please talk to the researcher or the chief investigator (Professor Ray Dolan, [r.dolan@ucl.ac.uk](mailto:r.dolan@ucl.ac.uk)) about your complaint. If you feel that the complaint has not been resolved satisfactorily, please contact the chair of the UCL Research Ethics Committee ([ethics@ucl.ac.uk](mailto:ethics@ucl.ac.uk)).

**Will my taking part in this project be kept confidential?**

Any non-anonymous information, such as your name, email address etc. will be kept confidential and not shared outside the research team. Anonymised data (without any information that could link it back to you) may be shared openly on the internet to allow data from this study to be used by other researchers.

**Limits to confidentiality**

Your confidentiality will not be breached under any circumstances.

**What will happen to the results of the research project?**

The data from this study will be anonymised and retained indefinitely and might be used for other, future research projects in addition to the study you are currently participating in. We will publish the data in journals and presentations and we will give access to the data to the general public via the Internet and a fully open database. There is no way that anyone will be able to identify you from this publicly shared data.

If you change your mind and withdraw your consent to participate in this study you can contact us via [relevant platform]. If you wish, we will delete your data. **However, once data and research results have been shared with other investigators or the general public, it is not possible for this to be destroyed, withdrawn or recalled.**

**Data Protection Privacy Notice**

**Notice:** The data controller for this project will be University College London (UCL). The UCL Data Protection Office provides oversight of UCL activities involving the processing of personal data, and can be contacted at [data-protection@ucl.ac.uk](mailto:data-protection@ucl.ac.uk). UCL’s Data Protection Officer is Lee Shailer and he can also be contacted at [data-protection@ucl.ac.uk](mailto:data-protection@ucl.ac.uk)***.***

Your personal data will be processed for the purposes outlined in this notice. The legal basis that would be used to process your personal data will be the provision of your consent. You can provide your consent for the use of your personal data in this project by completing the consent form that has been provided to you.

***Your personal data will be processed so long as it is required for the research project***. The purpose of this is to allow us to contact you and for you to withdraw your data.

If you are concerned about how your personal data is being processed, please contact UCL in the first instance at [data-protection@ucl.ac.uk](mailto:data-protection@ucl.ac.uk). If you remain unsatisfied, you may wish to contact the Information Commissioner’s Office (ICO). Contact details, and details of data subject rights, are available on the ICO website at: <https://ico.org.uk/for-organisations/data-protection-reform/overview-of-the-gdpr/individuals-rights/>

**Who is organising and funding the research?**

This study is being carried out by University College London (UCL) and is funded by the Wellcome Trust.

**Contact for further information**

For more information, please contact [names and contact details of researchers]

**Thank you for reading this information sheet and for considering taking part in this research study.**