**Participant Information Sheet**

Researcher(s): Ashley Zhou, Daniel Mitchell

Principal Investigator: John Duncan

You are being invited to take part in a research study. Before you decide whether or not to participate it is important that you understand why the research is being done, what it will involve and how the information collected from you is stored and used. 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.

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

The aim of this study is to better understand how our brains support our ability to pay attention to important information as we organize our thought and behaviour.

**Who is organising and sponsoring this research?**

Cambridge University is the sponsor for this study based in the United Kingdom. We will be using information from you and/or your medical records in order to undertake this study and will act as the data controller for this.  Cambridge University will keep identifiable information about you until it is no longer needed for our research.

Your rights to access, change or move your information are limited, as we need to manage your information in specific ways in order for the research to be reliable and accurate. If you withdraw from the study, we will keep the information about you that we have already obtained. To safeguard your rights, we will use the minimum personally-identifiable information possible.

You can find out more about how we use your information at:

<https://www.medschl.cam.ac.uk/research/privacy-notice-how-we-use-your-research-data/>

**Ethical review of study?**

This study has been reviewed by an independent group of people, the Cambridge Psychology Research Ethics Committee, who have a duty to protect research volunteers’ safety, rights, wellbeing and dignity.

**Why have I been invited to take part?**

You have been asked to participate because you have previously joined either the Volunteer Panel at the Cognition & Brain Sciences Unit or the Cambridge Cognitive Neuroscience Research Panel.

**Do I have to take part?**

It is up to you whether or not to take part. Before deciding you should read this information sheet and ask about anything that is not clear. If you decide to take part we will ask you to sign a form indicating that you have agreed (consent form). However, even after you have signed that form you can withdraw from the study without having to give us a reason.

You should be aware, however, that we aim to anonymise our results (separate and remove your personally identifying information) as soon as possible after data collection to protect your privacy. If you decide to withdraw some time after your participation it may therefore not be possible to identify and remove your specific results.

**What will I be asked to do in the study?**

Taking part requires you to visit the Cognition & Brain Sciences Unit for a session of up to 1.5 hours. During the sessions, you will be asked to do computerised tasks, and after these tasks have been practised, you will then be asked to perform them within an MRI scanner. We measure reaction time, accuracy or other aspects of task performance. Stimuli include letters, words and sentences presented at a comfortable level. Tasks are designed to test aspects of attention, perception, problem solving, mental speed etc. All of the tasks will be explained in detail before you start and you will have the opportunity to practice them and ask any questions you may have.

**Will video or audio recordings be made?**

The study does not involve video or audio recording.

**Will I be paid for taking part or have my expenses paid?**

To thank you for your contribution to this study we give you £10 for each hour of your time, and reimburse your travel expenses up to a limit that you can discuss with the researcher.

**What is an MRI scan?**

MRI stands for “magnetic resonance imaging.” MRI uses a strong magnetic field to give us a 3D picture of your brain and allows us to see changes in the activity of different parts of your brain as you do tasks. MRI is a non‐invasive technique (all the scanning equipment is outside of the body) that is used routinely in modern medicine. It has no known side effects. It does not involve injections or x-rays. Because of the strong magnetic field a qualified MRI operator will ask you to remove all metal belongings (which we will store safely) and check that you have no metal within your body. You remain clothed throughout and metal that is part of your clothes (jeans rivets etc.) is normally unproblematic. If the operator does not think it is safe we will not continue. They will also ask you questions to ensure that you will be comfortable in the scanner. If you are very uncomfortable in small, confined spaces you may not wish to participate. If it is safe and you are happy to proceed, during the session you will lie comfortably on a hospital‐style bed with your head inside the MRI scanner whilst the scans are taken. It is a bit noisy and you will be asked to wear ear‐plugs. You will be provided with a hand‐held alarm that you can squeeze if you become uncomfortable or distressed at any time. This will alert the operator who will remove you from the scanner immediately. To collect good information it is important that you keep your head as still as possible when in the scanner. Scans typically last 60 to 75 minutes.

**What if the MRI scan suggests something unusual about my brain?**

We do not run diagnostic scans, but if something abnormal is detected (that was not already on your records), you will be appropriately counselled and referred to an appropriate specialist in consultation with your GP, if that is what you would like. There can be benefits of detecting problems in terms of starting treatment earlier than would otherwise be the case but, very occasionally, findings may have implications for future employment and insurance.

**What are the possible risks/side effects of taking part?**

There are no obvious risks from the computer and paper-and-pencil tasks that you will be asked to complete. If you become tired or uncomfortable during any of the tasks please let us know and we can take a break or end the session. Remember you can withdraw from the study at any time without needing to give us a reason.

With the appropriate safety checks in place, MRI is a safe, non-invasive imaging techniques, with no known side effects.

**What happens to my personally identifiable information?**

For this study we obtain two types of information. *Personally identifiable information* includes your name, address and date of birth – information from which you could be identified and that we use to contact you, calculate your age and so on. Anonymised research data includes information like the buttons you pushed on a computer task, information from a brain scan and your answers on a questionnaire; in other words, once it is no longer connected to your Personally Identifiable Information, information from which it would not be possible, or would be very difficult, to identify you personally.

We separate your Personally Identifiable Information from your Anonymised Research Data and treat these two types of information very differently.

The University of Cambridge Data Protection Officer is the Data Controller for any Personally Identifiable Information that you have given us. Contact details: The Old Schools, Trinity Lane, Cambridge CB2 1TN data.protection@admin.cam.ac.uk.

Electronic Personally Identifiable Information is either entered directly into a secure area of our computer system or transferred there as soon as possible after collection. Personally Identifiable Information on paper records is kept in a locked filing cabinet within a secured building. Personally identifiable information is treated with strict confidentiality and in line with Data Protection Act 1998, which regulates the collection, storage, processing and disclosure of such information. This information is held very securely, seen only within the research team, and kept only for as long as is necessary for the conduct, recording, reporting and verification of our research.

If you have questions about how long and for what reasons your Personally Identifiable Information is held, please ask the researcher.

**What happens to my anonymised research data?**

Your *anonymised* research data, typically combined with similar information from other volunteers, will be used for scientific research. The results are presented in scientific papers and talks, in teaching and in explaining our science to health professionals, school groups and the public in general. We take great care to ensure that individuals cannot be identified from our research outputs.

Undertaking scientific studies is expensive and relies on the generous contribution of time from volunteers. To make the most of your *anonymised* research data we plan to look after it for the long term and may use it to answer research questions beyond those for which it was originally collected. This may include combining *anonymised* research data from this study with *anonymised* data from other studies in the CBU in which you have been involved (e.g. brain scanning studies) and with the *anonymised* answers that you gave when you joined the Panel. In addition to our own analyses, we agree with the principle that research data, often collected with public money, are a public good, produced in the public interest, which should be made openly available with as few restrictions as possible in a timely and responsible manner. Many of the bodies that fund our research insist that we follow this principle. In line with this we may also share *anonymised* research data with other researchers in the UK and around the world and may make anonymised research data available as “Open Data”. Open data can be downloaded free of charge by anyone interested in the research or who wishes to repeat or conduct new analyses. This allows others to check our results and helps avoid research duplication. If research data is made Open we have no control over how that information is used.

We are very aware that, sometimes, anonymised research data could be used to identify an individual (for example, questionnaire responses about life events could identify a particular person to someone who knows him or her or who had read a newspaper story of similar events). In such cases we take great care to reduce the chances of this individual being identified by omitting critical details or not sharing even anonymised data with anyone outside of the original research team.

**Are there any circumstances in which you would divulge my Personally Identifiable Information to anyone outside of the research team?**

We have a duty of care to volunteers and the general public. If you give us information that indicates a real risk of harm to yourself or another person we have a responsibility to share that information with relevant services. You should only consent to taking part if you understand this possibility.

**Can I get access to my results from the study?**

It is important that, as researchers, we minimise potential harm to volunteers in our studies. We often use new techniques and interpreting research data can be complicated and has the potential to cause undue concern. For this reason we do not divulge individual results. If you have concerns about your performance please discuss these with the researcher.

**Are there compensation arrangements if something goes wrong?**

The study has insurance to deal with any claim in the very unlikely event of anything going wrong that causes harm.

**What should I do if I have a complaint about the study?**

We are keen that volunteers feel informed and well treated when they take part in our research. If you have a complaint about this study please contact the Principle Investigator listed at the end of this information sheet in the first instance. If you are not happy with the response, please contact the Director of the Cognition and Brain Sciences Unit (director@mrc-cbu.cam.ac.uk). Further steps can be taken through the University of Cambridge if necessary.

Thank you for considering taking part in this study. Our research depends entirely on the goodwill of potential volunteers such as you. If you require any further information, we will be pleased to help you in any way we can.

If you require more information, please contact:

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