

CONSENT TO PARTICIPATE IN RESEARCH [ERN 09-719]
School of Psychology, University of Birmingham
Brain activity when remembering facts about other people and objects.

What is the purpose of this study?

The purpose of the study is to examine the patterns of brain activity while you recall information we have told you about people and objects.

What does this study involve?

Your participation in this study may last up to 90 minutes. It will involve performing simple computer-based tasks in which you reason about other people's thoughts and are asked to recall information about the scenarios. At the same time we will record your brain activity using fMRI.

Will you be paid to participate in this study?

In exchange for your participation, you will earn £25.

Other important items you should know:

- **Benefits from participation:** You will not benefit directly from participating in this study, but your participation may provide you with the indirect benefit of learning more about experimental psychology and how we form impressions of others.
- **Risks associated with participation:** For the tasks in this study, you will encounter no greater risks of discomfort than those incurred in routine daily activities. You will be taken through a separate safety checklist and consent procedure for the neuroimaging procedure involved in this study.
- **Withdrawal from the study:** You may choose to stop your participation in this study at any time. Your decision to stop your participation will have no effect on your academic standing. Should you decide to withdraw from the study, your compensation will be prorated to reflect the portion of the study that you have completed.
- **Data collection:** The data collected in this study will include basic demographic information about you (e.g., sex, ethnicity, age) and response times and error rates to the tasks, together with recordings from your brain. The data collected in this study will be used only for the purpose described in this form, and in an anonymised form may be shared with other scientists. Data gathered from this study will be maintained as long as required by regulations, which is up to 10 years following the publication of empirical articles or communications describing the results of the study.
- **Confidentiality:** Every effort will be taken to protect the names of the participants in this study. Your identity will not be recorded as part of your research data, and will not be revealed in any publication that may result from this study; your consent form will not be stored with your data, to ensure that your identity cannot be linked in any way to your data. If you consent for your videotape to be used in future studies, your identity will not be given to participants in those studies. All information you provide will be kept confidential, except as governed by law.

Who should you call with questions about this study?

Questions or concerns about this study may be directed to the staff member in charge of this research project: Professor Ian Apperly (email i.a.apperly@bham.ac.uk; telephone 0121 414 4339).

CONSENT

I have read the above information about "**Brain activity when remembering facts about other people and objects**" and have been given an opportunity to ask questions.

- ☐ I agree to participate in the tasks involved in this study. (Your agreement to take part in brain imaging will be sought separately).

Participant Name

Participant Signature and Date

Researcher Name

Researcher Signature and Date

PARTICIPANT INFORMATION SHEET

Title of project: Brain activity when remembering facts about other people and objects.

Part 1

Introduction to the research and invitation to take part:

You are being invited to take part in a research study. It is important that you understand why the research is being done and what it will involve before you decide whether or not to take part. Please read the following information carefully, and please discuss this with others if you wish. Feel free to ask us if there is anything that is not clear or if you would like more information.

What is the purpose of the study?

The study will be examining the relations between brain structure and brain function using magnetic resonance imaging. A separate form will provide more detail on the tasks involved in the study.

What kinds of stimuli will be presented?

The stimuli will be visual images (pictures, words), sounds, tactile input or smells. Any stimuli that might potentially be distressing will be shown to you beforehand to enable you to judge if you feel distress. You will be able to withdraw from the study at any time (below).

Do I have to take part?

No. It is up to you whether or not to take part. If you do, you will be given this information sheet to keep and be asked to sign a consent form. You are still free to withdraw at any time and without giving a reason. Withdrawing from the study will not affect you in any way (e.g., your future medical treatment).

What will happen to me if I take part?

You will undergo an MRI scan and you may also be asked to carry out a task while in the scanner. As you carry out the task we will measure changes related to brain activity which will inform us about how brain areas operate while a task is being undertaken. The scanning session will last about 45 min, during which time you will be asked to lie still.

What is magnetic resonance imaging?

Magnetic resonance imaging involves changes the gradient of a magnetic field to produce shifts in the alignment of atoms in the body of the person being scanned. The changes in alignment can be used to measure the structure and function of the tissues. When the brain is scanned we can derive information about both brain structure and function. The procedure is non-invasive and carries no known harm outside of safety issues for operating in a high magnetic field (e.g., if you have a cardiac pacemaker). For this reason you will be asked to go through a safety questionnaire with a scan operator prior to being allowed to proceed into the scanning environment.

What are the possible benefits of taking part?

By learning more about how the brain works, by using MRI, we will be able to develop better ways of diagnosing changes in brain function, and we will learn about how to improve brain function to optimise performance.

What happens at the end of the research study?

The results will be written up in a scientific publication or presented in other academic formats. In addition results may be reported in a newsletter to be distributed to participants or to hospitals involved with the study. All data will be reported anonymously.

Will my data be shared?

In the ethics consent form we also ask if you are willing to share the data we collect from you with other researchers. There are two levels of data sharing: 1) sharing only within the University of Birmingham or 2) sharing more generally as an open access resource outside of the University. In the former case, your anonymised data may be copied to an internal University of Birmingham data server and made available for other University of Birmingham members of staff to use in their research. In the latter case, your data may be made publicly available on the internet as an open access resource. Many scientific journals now require the studies they publish to upload anonymised data repositories as part of the publication process so that other researchers can examine and re-analyze the data. Such sharing of data is considered best practice and is consistent with current government and international policies on scientific data. Note that any shared data will never contain any personal details about you (name, address etc). Please note that you can choose to allow sharing of your data (or not) at either level. If you are happy to share your data you will also need to fill in a short health and demographic questionnaire.

Will I be recognisable from my data?

In case of MRI data, you should be aware that there exists software that can reconstruct the outline shape of the face, similar to the picture shown on the right. Furthermore, similar to fingerprints, brain shape and anatomy are unique to each individual, thus in the future technology may become available enabling one to recognize an individual from their brain structure.

**Will my data be used for non-research purpose?**

Your data may be also used for example for educational, teaching or media purposes.

What if there is a problem?

It is possible that lying in the scanner might cause some back or neck pain, and it is possible to feel a burning sensation. If you experience any discomfort you can press the emergency buzzer and you will be brought out of the scanner immediately. Any complaint about the way the study has been conducted or any possible harm you may have suffered will be addressed. The detailed information on this is given in Part 2.

Will my taking part in the study be kept confidential?

Yes. All the information about your participation in this study will be kept confidential. The details are included in Part 2.

This completes Part 1 of the Information Sheet.

If the information in Part 1 has interested you and you are considering participation, please continue to read the additional information in Part 2 before making any decision.

Part 2

What will happen if I do not want to carry on with the research study?

You are free to withdraw from the study at any time, including following data collection, without giving a reason. If the data collected until the time of withdrawal could be used, you will specifically be asked to give your consent to having the data included in any analysis.

What if there is a problem?

The University of Birmingham has an insurance policy in place which provides cover for claims arising from negligent harm.

If you have any problems with the conduct of the study then you can contact various people:

- (i) phone the Research Governance Committee of the University of Birmingham, who have considered this project, on 0121 414 7618, who will arrange for your concerns to be investigated.
- (ii) Anyone named above (under contact details) as contact personnel for BUIC.

Unexpected findings on your scan

As you are aware, the images obtained of your brain are for specific research purposes only and are generally not suitable for diagnostic opinions. They do not form any part of your official medical records. However, although the pictures are not diagnostic scans, in the unlikely event that any unusual findings are noted incidentally by the scan operator, further advice will be sought and you will be contacted at a later date to discuss any follow-up.

Will my taking part in this study be kept confidential?

Our procedures for handling, processing, storing and destroying your data are all compliant with the Data Protection Act 1998. All information that is collected about you during the course of the research will be kept strictly confidential.

Who is organising and funding the research?

The research is organised by the University of Birmingham.

Who has reviewed the study?

This study was given a favourable ethical opinion by the Research Ethics Committee, University of Birmingham.

You will be offered a copy of this information sheet and the signed ethics consent form to keep.

Thank you for considering taking part and taking the time to read this information.

ETHICS CONSENT FORM

Mapping Brain Function with Magnetic Resonance Imaging

BUIC Project Code:	
Ethics Code:	

Have you read the Participant Information Sheet?	YES	NO
Have you received enough information about this study?	YES	NO
Have you had an opportunity to ask questions and discuss this study?	YES	NO
Have you received satisfactory answers to your questions?	YES	NO
Who have you spoken to?		
Do you understand that you are free to leave the study: <ul style="list-style-type: none"> at any time? without having to give a reason for leaving? without affecting your medical care? 	YES	NO
Do you agree to your data being shared within the University of Birmingham?	YES	NO
Do you agree to your data being shared outside the University of Birmingham?	YES	NO

By signing this consent form you agree to participate in this research project. You also agree that the named investigators for this project and their collaborators may use the data collected for their present and future research.

Name (capital letters):

Signed: Date:

Debriefing: Brain activity when remembering facts about other people and objects. [ERN 09-719]

Previous research demonstrates that several brain areas are consistently recruited when we reason about what other people are thinking- notably bilateral Temporo-Parietal Junction, and medial Prefrontal Cortex. However, it is unclear and theoretically contentious whether these brain areas actually represent information about what other people are thinking, or whether they control the representation and activation of information elsewhere in the brain (for example in ventral visual cortex).

One of the tasks you completed is a widely used test of reasoning about other people's thoughts and feelings, and we are using it to identify just those parts of your TPJ and mPFC that are activated when you do this. The other task used carefully controlled presentation of combinations of objects featuring either as what was really in a box, or what someone thought was in a box, or both. From this task we are able to train a computer program to recognise the patterns of brain activity that occur when you think about particular objects. We can then test whether that program can also detect the representation of that same information when you imagine someone else thinking about that particular object, and we can test whether this information is present in TPJ, mPFC, or elsewhere in the brain.

Please return this debriefing sheet to the experimenter. If you have any questions about the experiment (e.g., our goal, our hypotheses, the measures, or the condition to which you were assigned), the experimenter would be happy to answer them now.