

Participant Information Sheet – EEG Study: Paid Participants

Project Title: The Neural Basis of Object Categorization in the Infant Brain

Project Summary:

Recognizing and categorizing objects in everyday life seems trivial, even when we view them from non-standard angles or when the object is partially obscured. Nevertheless, the ability to quickly and accurately recognize and categorize the same object under a variety of different visual conditions is something that must be acquired through the course of development. Infants' ability to recognize objects across changes in viewpoint and visibility develops gradually throughout their first year of life, as infants gain more sensory experience and interact with objects. Studying infants' neural representations of object category is an evolving domain within developmental cognitive neuroscience that has gained substantial attention in recent years, shedding light on the early perceptual and cognitive processes underlying infant visual recognition. As this field matures, an important question to be addressed concerns how soon infants achieve *invariant* object representations (i.e., object representations that are tolerant to changes in viewpoint), which are often taken to be a 'hallmark' of adult object vision. To provide a proof of concept and provide highly relevant adult data to contrast the results obtained from infants, we recruit adult participants to benchmark our experiments.

You are invited to participate in a research study being conducted by Mahdijeh Khanbagi, PhD candidate – under the supervision of Dr Genevieve Quek, from the MARCS Institute for Brain, Behaviour and Development, Western Sydney University. The research involves behavioural and non-invasive neuroimaging (electroencephalography [EEG]) experiments that investigate the neural activity associated with object recognition and perception. This study is a face-to-face EEG experiment.

How is the study being paid for?

This study is funded by HDR Candidature funding from Mahdijeh Khanbagi

What will I be asked to do?

You will be asked to complete a basic demographics questionnaire. During the experiment, your brain responses (EEG signals) will be recorded using 64 EEG electrodes. You will wear an electrode cap underneath the electrodes and have conductive gel applied to your scalp to help conduct the signal from your scalp to the electrodes. You will then be asked to view visual stimuli on a computer screen. The visual stimuli may be presented in different ways and in different durations, and features of the stimuli may also change. You will be asked to respond to these stimuli in different ways. Responses may include pressing buttons or keys (either on a keyboard, mouse or button box), typing responses on a keyboard, or pressing a particular key when recalling visual material.

How much of my time will I need to give?

The study will take up to 1 hour to complete, depending on the experiment. This includes 30-45 minutes of testing and additional time to set up the EEG sensors before and after the experiment.

What benefits will I, and/or the broader community, receive for participating?

You will have the opportunity to learn more about object recognition and how the brain creates representations from visual information. As reimbursement, you will receive an electronic gift card, at a rate of \$30 per hour.

Will the study involve any risk or discomfort for me? If so, what will be done to rectify it?

This study complies with Western Sydney University's COVID Safe procedures regarding face-to-face experiments. If applicable, participants and researchers must meet university requirements (e.g., vaccinations) to complete the study. The EEG equipment and testing location will be sanitised before and after each experiment, and social distancing will be practised whenever possible. Researchers will adapt to any changes to safety procedures, including the wearing of face masks while indoors.

There are no known risks associated with EEG. It is a non-invasive technique and all researchers involved in the study are familiar with the safety protocols for EEG.

The study should not cause you any serious discomfort. You may feel slight discomfort and strain from keeping your head still and watching the visual stimuli for short periods of time, but you will be allotted a break time between experimental blocks to rest your eyes. You may also experience slight discomfort from the conductive gel in your hair, but this can be cleaned out in the testing location with the provided shampoo, conditioner and towels.

However, please note that this experiment is not suitable for people with a history of photo-sensitive epilepsy due to the way the visual stimuli are presented.

If you ever experience discomfort, please let the researcher know and the experiment can be discontinued at any time.

How do you intend to publish or disseminate the results?

It is anticipated that the results of this research project will be published and/or presented in a variety of forums. In any publication and/or presentation, information will be provided in such a way that the participant cannot be identified, except with your permission. The information we collect from you in this study will be made completely anonymous in all platforms we share this data to.

Will the data and information that I have provided be disposed of?

No. Your data will be used as per Western Sydney University's Open Access Policy. This means

that data collected from this study can be made available online and world-wide in perpetuity.

Can I withdraw from the study?

Participation is entirely voluntary, and you are not obliged to be involved. If you do participate you can withdraw at any time without giving reason by letting the Principal Investigator or Principal Supervisor know.

If you do choose to withdraw, any information that you have supplied will be withdrawn from the database whenever possible. However, if your data is already in an Open Access repository, it may not be possible to fully withdraw your data. Please be assured that all data shared to these platforms will be de-identified.

Can I tell other people about the study? *[If you don't want the participant to suggest to other people that they should take part in the project remove this paragraph.]*

Yes, you can tell other people about the study by providing them with the Principal Investigator's and/or Principal Supervisor's contact details. They can contact the Principal Investigator and/or Principal Supervisor to discuss their participation in the research project and obtain a copy of the information sheet.

What if I require further information?

Please contact Principal Investigator Mahdiyeh Khanbagi and/or Principal Supervisor Dr Genevieve Quek should you wish to discuss the research further before deciding whether or not to participate.

Principal Investigator
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Principal Supervisor
Dr Genevieve Quek
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Privacy Notice

Western Sydney University staff and students conduct research that may require the collection of personal and/or health information from research participants.

The University's Privacy Policy and Privacy Management Plan set out how the University collects, holds, uses and discloses personal or health information. Further details about the use and disclosure of this information can be found on the [Privacy at Western Sydney webpage](#).

What if I have a complaint?

If you have any complaints or reservations about the ethical conduct of this research, you may email the Ethics Committee through Research Services: humanethics@westernsydney.edu.au.

Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.

If you agree to participate in this study, you may be asked to sign the Participant Consent Form. The information sheet is for you to keep, and the consent form is retained by the researcher/s.

This study has been approved by the Western Sydney University Human Research Ethics Committee. The Approval number is *H15639*.

Explanation of Consent

What will happen to my information if I agree to it being used in other projects?

Thank you for considering being a participant in a university research project. The researchers are asking that you agree to supply your information (data) for use in this project and to also agree to allow the data to potentially be used in future research projects.

This request is in line with current University and government policy that encourages the re-use of data once it has been collected. Collecting information for research can be an inconvenience or burden for participants and has significant costs associated with it. Sharing your data with other researchers gives potential for others to reflect on the data and its findings, to re-use it with new insight, and increase understanding in this research area.

You have been asked to agree to Unspecified consent.

Unspecified consent

When you agree to unspecified consent it means that you agree that your data, as part of a larger dataset (the information collected for this project) can be re-used in any future research.

To enable this re-use, your data will be held at the University in its data repository and managed under a Data Management Plan. The stored data available for re-use will not have information in it that makes you identifiable.

The researchers who are managing the data under this Plan will decide what types of future projects are suitable for this data to be used in. The projects may mean that the dataset is given to other researchers outside of the current research team. The researchers could also be from anywhere in the world and may, or may not, have affiliations with a university. The data will be held for a significant period of time – until it is felt that it is no longer needed for research. After this time the data will be securely destroyed.

The re-use of the data will only be allowed after an ethics committee has agreed that the new use of the data meets the requirements of ethics review.

You are welcome to discuss these issues further with the researchers before deciding if you agree. You can also find more information about the re-use of data in research in the [National Statement on Ethical Conduct in Human Research](#) – see Sections 2.2.14 - 2.2.18.