

# General Information

## Embodied Cognitive Science Unit

2511191622

This General Information sheet contains important information if you consider participating in one of the studies run by the OIST Embodied Cognitive Science Unit. Please read it carefully before agreeing to participate. Our Unit is interested in investigating adaptive behavior as it emerges from an interplay between the brain, body and environment. We employ a diversity of methods, some of which require volunteers to participate in various experiments that test e.g., perception, communication, social interaction. In these experiments we typically record participant's behavior, such as movement trajectories, perceptual judgements, reaction times, but also take physiological measurements like muscle activation, heart rate or electrical brain activity. Some of our experiments also require participants to use novel tools or interact with a robot. Despite this diversity of methods, all of them are non-invasive and have minimal risk. However, to further ensure your safety, participation in our studies requires that several conditions are met. These conditions will be checked prior to your participation by means of a Screening Form.

Each study that we carry out has been reviewed and approved by an independent ethics committee: the OIST Human Subjects Research Review Committee.

Here we answer some questions you might have about participating in one of our studies.

### 1 What determines who is selected for participation?

Most of the research conducted in our unit focuses on the general nature of human behavior and cognition. If the purpose of the research is to investigate cognition in special populations, such as those with dementia, mental illness, or developmental disabilities, this is explicitly stated in the recruitment guidelines.

Those who wish to participate in the experiment must register in advance via our online form. In the online form, you will be asked to answer questions to verify that you meet the requirements for participation in the experiment.

### 2 What will I be asked to do?

After you register for an experiment you will receive an information package, within 48 hours, from the researcher that contains 3 information sheets. You will be required to read before the experiment:

- General Information: the present document
- Equipment Information: a document that describes the devices used in the experiment
- Experiment Information: a document that provides more information about the study you signed up for

If extra preparation is required before the experiment, you will be notified a day before the experiment.

Example:

To make the EEG-measurement run more smoothly,

- Please wash your hair with shampoo and dry it.
- Please do not use hair conditioner, foam, gel, or hairspray.

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- Please do not braid your hair (we would have to undo the braids otherwise).
- Please wear clothes that you do not mind getting dirty if some electrode gel gets on them.
- If you use face cream or make up, areas that the electrodes contact with will be cleaned with alcohol based abrasive gel.
- Day before the experiment, please do not drink alcohol.
- On the day of the experiment, please do not take caffeine such as coffee.

On the day of the experiment, you will be picked up from the instructed location and led to the experimental room. Then you will be asked to sign two forms:

- Informed Consent Form: that confirms that you have been sufficiently informed about the study and are willing and able to participate
- Screening Form: that confirms you are qualified to participate in the study
- Depending on the experiment, you may be asked to sign additional forms

You will be given a chance to ask any further questions you might have about participation.

### **3 Do I have to participate?**

You are not obligated to participate in the experiment even if you have a professional or personal relationship with the Unit's principal investigator (Tom Froese) and other researchers involved in this experiment. Your decision to participate should be entirely voluntary and you will not face any negative consequences if you do not sign up for the study.

It is important that you understand that even after you agree to participate and sign the consent form, you have the right to withdraw from the experiment without giving a reason. You will not face any negative consequences or disadvantages as a result of your withdrawal. You will still receive the agreed compensation for your time involvement.

If you wish to withdraw from the study before it begins, please email the Lead Researcher, whose contact will be given in the recruitment material. If you wish to withdraw from an ongoing experiment, a verbal request to the researcher present in the room is sufficient. After your participation in the experiment is concluded, there is still a possibility to delete your collected data until it has been used in a published resource (conference paper, journal article, etc.). At this point your anonymized data will be uploaded to a data sharing platform for the purpose of ensuring scientific transparency and replicability. Consult Section 5 of this document for more details on our data management policies.

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#### **4 What will I gain from participating in a study?**

Participation in our studies contributes to advancing our knowledge about adaptive behavior and cognition but has no direct or indirect benefits to your physical or mental health. All data collected in the experiment from different participants will be analyzed as a group. We will not use the data to make any individual assessment of your behavior or mental capacities. You will receive gift cards as compensation. The amount of the compensation varies depending on the experiment.

#### **5 What will happen to my data?**

Personal data can only be accessed by the designated research administrator/ technician. To anonymize the data, the administrator/ technician will generate a unique and random subject code. The experimental data will be collected, processed, and stored under the subject code. The link between your personal data and the code is recorded in a separate reference table by the research administrator/ technician.

After the completion of the study, your signed Informed Consent Form and Screening Form, will be handed to the research administrator/ technician. The research administrator/ technician will deposit this data in a secure location for a period of 5 years. This is necessary to enable you to withdraw the data at a later time (but within the storage period) should you so desire. You can request withdrawal by sending an email request to the research administrator/ technician or the Unit's PI, providing your name and date of birth. The research administrator/ technician will then retrieve your subject code from the reference table and will do the following:

1. execute a data deletion script that removes all your collected data from our storage
2. destroy your signed paper-based forms
3. remove your entry from the reference table

In any case, after the storage period is over, sensitive data and associated reference entry will be destroyed.

In the spirit of open science, your anonymized experimental data may be shared with other researchers solely for scientific purposes, such as replication. The shared data will not contain any information that can be linked back to you. Please note that individual anonymized data cannot be deleted once they have been analyzed and included in a publication.

Furthermore, anonymized data may be used in future studies by us or by other researchers for reanalysis under different measures or hypotheses. You will be asked to consent to such data sharing by ticking a specific clause in the Informed Consent Form.

If the study involves recording additional personal information, such as audio or video, the researcher will inform you and obtain your explicit additional consent. Video and audio recordings will be stored on a secure, dedicated section of the OIST server, accessible only to researchers involved in the study. In all cases, your privacy will be protected in accordance with Japanese law.

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### **6 What happens in case of any accidents, adverse effects or incidental findings?**

We take utmost care in preventing any accidents from happening. However, should anything unexpected happen during the experiment, we will follow a standard emergency protocol in resolving the situation. In addition, in case of any unexpected injury during the experiment, part of the costs for treatment will be covered by OIST.

Some of the measurements such as recording electrical activity from the scalp (EEG) or muscles (EMG) require attaching electrodes to your skin. This is generally painless and safe but might result in mild skin irritation in some people. This typically resolves on its own.

Our experiments are not designed for clinical diagnosis and researchers have no clinical training. Participation in any of the experiments can therefore not be considered as a clinical or screening test.

### **7 How can I see the results of the study?**

You will not be provided with individual results of your participation in the study.

The links to publications stemming from work in our research Unit are posted on the Unit's website: <https://www.oist.jp/research/research-units/ecsu/publications>.

### **8 Who can I contact for more information?**

Details about the experiment, cancellations, scheduling, and withdrawals:

Unit Technician, Tae Morrissey [tae.morrissey@oist.jp](mailto:tae.morrissey@oist.jp)

Research unit administrator, Kaori Yamashiro [kaori.yamashiro@oist.jp](mailto:kaori.yamashiro@oist.jp)

Complaints or other inquiries:

Principal Investigator, Tom Froese [tom.froese@oist.jp](mailto:tom.froese@oist.jp)