

This general information contains information that is important if you are considering participating in any of the experiments conducted by the Embodied Cognitive Science Unit at OIST. Please read it carefully before participating. Our unit is interested in investigating the cognitions and behaviors that result from the interaction of the brain, body, and environment. We use a variety of methods in our research, some of which require subjects to test perception, cognition, and communication. In these experiments, we not only record subjects' behaviors, such as movement tracking, cognitive judgments, and reaction times, but also physiological measurements of electrical activity, such as muscle and heart rate. In some experiments, subjects may also be asked to use new tools or robots. All experiments and the instruments used therein are non-invasive and involve minimal risk. However, to ensure safety, several conditions must be met. These conditions are identified on the screening form prior to participation.

The human subject experiments we conduct are reviewed and approved by an independent ethics committee, the OIST Human Subjects Research Ethics Review Committee. Members of the OIST community can learn more about the permission process at the following website: <https://groups.oist.jp/rs/human-subjects-research>.

Otherwise, please contact us and we will be happy to assist you.

In the next section, we will describe in a little more detail the information you need to participate in our study.

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 clearly stated in the recruitment guidelines.

If you wish to participate in the experiment, please register in advance via the 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 registering for the experiment, you will receive an information package containing three information sheets from the researcher within 48 hours. Please be sure to read them 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

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

Example:

To make the experiment run more smoothly

- Do not drink alcohol on the day before the experiment.
- Get a good night's sleep the day before the experiment.
- On the day of the experiment, take off your jacket or sweater and put on a shirt.
- On the day of the experiment, please refrain from consuming caffeine such as coffee.
- On the day of the experiment, please stretch your arms before the experiment.
- On the day of the experiment, please refrain from wearing hard contacts and wear glasses.

On the day of the experiment, you will be led to the experimental room. Then you will be asked to sign two forms:

- Screening Form: a questionnaire to confirm that you are eligible to participate in the experiment.
- Informed Consent: a document to confirm that you have received sufficient instruction about the experiment and that you are willing to participate.
- Participation / Remuneration Confirmation Form: a document to declare that you have participated in the experiment and received the remuneration.

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.

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 one of the designated research administrators. To anonymize the data, the administrator 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.

After the completion of the study, your signed Informed Consent Form and Screening Form, will be handed to the research administrator. The research administrator 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 or the Unit's PI, providing your name and date of birth. The research administrator 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 for strictly scientific purposes, such as reproduction. The data will be uploaded without the subject code so all connection between you and the data will be severed at this point. Be aware that it will not be possible to delete individual anonymized data once it has been analyzed and uploaded in an article. Additionally, anonymized data may also be used in future studies by us or other researchers to reanalyze with different measures and under different hypotheses. You will need to agree to such sharing of data by ticking a specific clause in the Informed Consent Form.

In case participation involves recording additional personal data like audio or video, the researcher will inform you about this and you will need to give a specific consent. Video and audio recordings will be stored in a secure dedicated portion of the OIST server, accessible only to the researchers involved in the study. In all cases your privacy will be protected according to Japanese law.

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 sickness or 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://groups.oist.jp/ecs/posts>.

8. Who can I contact for more information?

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

Experiment coordinator, Tae Morrissey tae.morrissey@oist.jp

Research unit administrator, Kaori Yamashiro kaori.yamashiro@oist.jp

Complaints or other inquiries:

Principal Investigator, Tom Froese tom.froese@oist.jp