OIST ECSU

Experiment Information

Self-movement cognition experiment

2505071351

Experiment	Self-movement cognition experiment
Lead Researcher	Kazuma Takada
Experimenters	Kazuma Takada
Experimental equipment	Display, Pen Tablet, Keyboard

Dear Participant,
Thank you for agreeing to participate in this study! Before you begin, it is important that you learn about the procedures involved. Please read the following carefully.

1. Our goals

The goal of this study is to investigate how a person's movement affects his or her self-cognition. To avoid behavioural bias, the specific research questions and hypotheses cannot be explained prior to the experiment. They will be explained after the experiment is completed.

2. Instructions and Procedures

You participate in an experiment in which you manipulate the dots that are displayed on the screen. The dots displayed on the screen are moved via a controller. The movement of the controller, which you move with your hand, is reflected in the dots on the screen. You will be asked to move two dots (a square and a circle) on the display for 5 seconds and find the one that most closely matches the movement of your hand (the movement of the controller). You are free to move the controller in any way you like for the 5 seconds, but you will be instructed not to force the controller beyond its operational range. After 5 seconds, the two dots will stop moving. You will then be asked to select the dot that you feel most closely matches your movement using the keyboard. You will be asked to complete this experiment multiple times, both actively moving and passively being moved. For more detailed information on the experiment procedure and flow, please refer to the ***Participant Instruction***. There will be a maximum of 10- minute breaks between each experimental block. During the self-motion perception experiment, a cloth will be draped from your neck to the desk to prevent you from seeing your hands. You can also find details of the equipment used in this experiment in the ***Participant Instruction***.

The experiment includes a break, a trial run of the self-motion experiment, and a questionnaire after the experiment. In the questionnaire, you will be asked to write about your feelings during the experiment and how you searched for and identified the dots that matched your movements. This questionnaire will be administered after all the trial runs have been completed.

All the information you provide will be anonymized and used only for data analysis. When the experiment starts, you will be given more detailed instructions in a separate instruction sheet, and you will also have a practice run to get used to the experiment.

3. Time involvement

The experiment will take approximately 90 minutes. As compensation, you will receive a 2,000 yen Amazon gift card. If for any reason you are unable to complete the experiment, you will receive compensation based on your level of participation.

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4. Risks and benefits

The equipment used in this experiment does not pose any risks to participants in general. However, in the case where the controller moves the participant's arm, there is a very small possibility that the controller may move in an unintended way due to an unexpected error. The voltage of the controller and the temperature of the motor are constantly monitored, and if the program determines that the controller is being affected, the controller will stop immediately. Also, if the participant feels danger during passive movement (when the controller is moving the participant's hand), or if the experimenter judges that there is danger, the experimenter can press the emergency stop button to immediately stop the controller. This emergency stop button is directly connected to the motor power supply, and when it is pressed, the power supply is stopped and the controller stops moving.

In addition, there is a possibility of physical fatigue due to sitting in the same posture for a long time or moving your arms. The risk of physical fatigue is minimized by stretching before and after the experiment, as well as taking breaks during the experiment. If there is an unexpected reaction to the experimental device, the experiment will be stopped.

5. Further explanations

Please contact us at the following address as needed.

If you would like more information about this study: Kazuma Takada, k.takada@oist.jp.

To schedule or opt-out of the experiment: Tae Morrissey, tae.morrissey@oist.jp

If you have concerns about the study: Tom, Principal Investigator: Tom Froese, tom.froese@oist.jp