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**Information sheet for participants**

Dear Participant,

Thank you for your willingness to participate in this scientific study. We expect this study to yield important scientific findings that will contribute to future discoveries that will help children and adults. In this text, we answer questions you are likely to have, including about who is involved and about data protection.

**Members of the scientific team:** The members of my team are student or research assistants at the Leibniz Centre for General Linguistics. This research is carried out by the Leibniz Centre for General Linguistics (ZAS). The ZAS is a non-university research institute of the State of Berlin under the auspices of the Geisteswis- senschaftlichen Zentren Berlin e.V. The LeibnizDream project was selected for funding by the European Research Council (ERC).

**Data protection:** Participation in the study is voluntary. The legal basis for the processing of your data is Article 6(1)(a) DSGVO. We do not collect names or other identifying information in the study itself, but only the anonymous data mentioned below. Personal data from your consent will be kept strictly separate from all research data. The research data will be pseudonymised, analysed and, after a period of time, made publicly available free of charge in a fully anonymised form for non-commercial purposes. Such public availability and secondary use of research data corresponds to the goal of open science. The pseudonymised data will be deleted after ten years at the latest.

As a data subject, you have the right to information, to correction, to deletion, to restricted processing and to transfer of your data in accordance with the GDPR. Please note that once the study is completed, we will no longer be able to associate the anonymous data to you. Your rights regarding non-anonymised data remain unaffected. We will delete your contact details immediately after the end of the study, unless you have expressly consented to further storage.

We recommend that you take note of the legal information below and keep it for future enqueries and/or complaints.

**Contact and legal information:** The legal basis for processing participant's data is Article 6 (1) of GDPR. The contact details of the main responsible person are Prof. Uli Sauerland, Schützenstraße 18, 10117 Berlin, phone: +49-30-20192570, email: sauerland@leibniz-zas.de. If you have any doubts about the lawfulness of the processing of your personal data, you can lodge a

complaint with the following offices:

1. Data protection officer of the Leibniz Center for General Linguistics: Jens Neumann, pico engineering GmbH, Oldenburger Allee 25a, 30659 Hannover, Germany, +49 511 165911-51, jens.neumann@pico-engineering.de

2. Member State Supervisory Authority: Berlin Commissioner for Data Protection and Freedom of Information Official Data Protection Officer, Friedrichstr. 219, 10969 Berlin +49 30 13889-406, behDSB@datenschutz-berlin.de

**Type of data collected:** In the study, the following data will be collected: demographic data, written protocols of the project staff during the testing, the data types marked with a cross in the paragraphs below, and the combination of that data. Video data will not be collected.

☒ *Keyboard or screen input*: Participants in this study will be asked to complete tasks using the keyboard, mouse pointer or touch screen. The input (e.g. selection of an image, choice of button or text entered) and time of input will be recorded. The following procedure ensures the security and anonymity of the data entered:

- The data is stored on the device during the experiment.
- After the experiment is completed, the data is sent to a secure server in Germany.
- All data will be pseudonymised, i.e. all data will only be linked by a random combination of letters and numbers.
- All recordings by which participants inadvertently or knowingly disclose personal data will be deleted (Note: this does not apply to the demographic information collected before the start of the study. These will be encrypted and stored separately until the end of the study).

☒ *Eye tracking*: Participants in this study are asked to allow the measurement of eye movements via a camera (e.g. webcam, smartphone camera or tablet camera). A programme uses the camera image to determine head position and eye movements. No picture or video recordings are made in the process! The following procedure ensures secure and anonymous eye movement measurements:

- Before starting and during the experiment, the accuracy of the measurement is checked.
- A program calculates the eye positions as X-Y coordinates on the screen. We use the software https://farm.pcibex.net.
- Only X-Y coordinates are created and send to a secure server in Germany after the experiment.
- The file with the coordinates is pseudonymized, i.e. it is not given a name, but a random combination of letters and numbers.

☐ *Audio recordings*: Participants in this study are asked to speak aloud (e.g. in response to a question or when repeating sentences or words). An MP3 sound recording is made via the microphone of the device (e.g. laptop, tablet, mobile phone or headphones with microphone). The following procedure ensures safe and anonymous sound recording:

- Sound is only recorded during the response phases. Participants will always be informed about the beginning and end of the audio recording.
- Participants will be instructed not to disclose their names, addresses or any other information, that could be used to identify them, during the audio recording.
- After the end of the response phase (online) or after the end of the experiment (offline), the resulting MP3 files are sent to a secure server in Germany. The data is then

anonymised in three steps:

1. The audio recordings are "pseudonymized", i.e. the files are only linked by a random combination of letters and numbers.
2. By randomly changing the frequency of the audio recordings, it becomes impossible to identify the participants by their voice in the audio recording.
3. All parts of the recording in which the participants accidentally or knowingly reveal personal data are deleted or replaced by a beep. Likewise, recordings or parts of recordings in which third persons are accidentally heard are deleted.

**Use of this research:** The goal of this research is a better understanding of how thoughts become language. Furthermore, our personal benefit from this research is solely the scientific recognition we receive from the findings. We do not plan any commercial exploitation of the findings. The student members of our team will be paid for their work and will also gain important experience as part of their academic training.

I very much hope that I have answered all your questions and that I have been able to convince you to participate in our study. Now and after the study is completed, you will have another opportunity to ask questions to the team member who is in contact with you. If you need any further information afterwards, my staff and I will be happy to help you by e-mail or telephone.

With best regards,
Chao Sun