

Thinking About Numbers

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University of Sussex ethics review (C-REC) clearance number: ER/HS464/1

You are being invited to take part in a research study. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully.

If you would like a copy of this information sheet, please take a moment to save this text onto your computer. A pdf copy can also be downloaded from the project's website, at <http://users.sussex.ac.uk/~gg44/rep2rep/profiling/>.

WHAT IS THE PURPOSE OF THE STUDY?

This study is part of a project called "How to (re)represent it?" The aim of the project is develop software that will select appropriate display notations or diagrams ("representations") that are suited to peoples' particular abilities and knowledge, in order to improve how they understand and solve problems. The aim of this specific study is to investigate the suitability of different ways of testing of how people think about numbers and representations. We will use the results of this study to design the specific tests that the software give to its users so that it can make selection of representations that is tailored to each person individually.

This questionnaire will be accepting answers until we receive approximately 100 participants – or, if we cannot reach that number, until the 10th of August 2019

DO I HAVE TO TAKE PART?

Taking part in this research is entirely voluntary; it is up to you to decide whether or not to take part. If you are a student, deciding to take part or not take part in this study will have no impact on your marks, assessments, or future studies.

If you decide to take part you are still free to withdraw at any time and without giving a reason whilst taking the questionnaire. You can do this by exiting the questionnaire webpage before finishing the questionnaire; your data will be deleted for being incomplete. If you wish to withdraw after completing the questionnaire, but before 10th August 2019, please contact Holly Sutherland (rep2rep@sussex.ac.uk) and quote the unique identifier phrase you will be asked to generate below. After this date, it will be impossible to withdraw your data from the study, as the data will be fully anonymised for analysis publishing.

WHAT WILL HAPPEN TO ME IF I TAKE PART?

If you take this questionnaire, you will be asked two sets of questions. For all questions, your answers will be recorded. For the second and third set of questions, data such as the time you spend on the question, or the number of clicks you make, may also be recorded.

The first set asks for general demographic information (your sex/gender, your age, the languages you speak, your job as it pertains to maths, and your maths education history). The second set involves answering questions involving sequences of numbers; some of these questions will ask you to find missing numbers in a sequence or predict trends in data, and others will ask you to represent sequences of numbers in different ways.

The questionnaire should take between half an hour and an hour to complete. You will be entitled to an £8 Amazon voucher as compensation for your time. Instructions on how to claim this compensation will be provided at the end of the questionnaire.

WILL MY INFORMATION IN THIS STUDY BE KEPT CONFIDENTIAL?¹

All personal data will be kept strictly confidential. We will **not** ask you for your name or contact details, so they will not be linked to your questionnaire responses. Instead, you will be asked to create a unique identifier phrase on the next page. This will instead be used to identify you for the purposes of receiving compensation, or for removing your data should you wish to opt-out after completing the questionnaire.

The full data will be kept on password-protected desktop computers, and will only be accessed by members of the research team. This data will be held (securely and confidentially, as detailed above). At the end of the project only general categories of any personal data will only be held (e.g., broad age bands, general degree subject [science/humanities], English as native speaker or second language, cognitive disability or none). Selected data from the study may be placed in public repositories available to other researchers as part of the research publication process, but this will only include the general categories of any personal data.

WHAT WILL HAPPEN TO THE RESULTS OF THE RESEARCH STUDY?

These results will be used to in the larger project described above. The results will also be published, through papers in journals and/or papers presented at conferences. The journals and/or conference proceedings will be available online after publishing.

WHO IS ORGANISING AND FUNDING THE RESEARCH?

This research is being conducted by members of staff in the Engineering and Informatics school at the University of Sussex. This project is funded by a grant the Engineering and Physical Sciences Research Council.

WHO HAS APPROVED THIS STUDY?

This research has been approved by the Sciences & Technology Cross-Schools Research Ethics Committee (C-REC). The ethical review application number of the study is ER/HS464/1.

CONTACT FOR FURTHER INFORMATION

If you have questions, want further information, or wish to withdraw from the study after having completed the questionnaire, you can contact a member of the team at rep2rep@sussex.ac.uk.

If you have any concerns about the way in which this study has been conducted, you should contact the Chair of the Sciences & Technology C-REC, Dr. Karen Long, at crecscitec@sussex.ac.uk.

INSURANCE

The University of Sussex has insurance in place to cover its legal liabilities in respect of this study.

2nd April 2019