

Plain Language Statement

School of Computing and Information Systems

Project: *Unicode Analogies*

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Introduction

Thank you for your interest in participating in this research project. Please take the time to read this information carefully. You may ask questions about anything you don't understand or want to know more about. Your participation is voluntary. If you don't wish to take part, you don't have to. If you begin participating you can also stop at any time, however, you will be paid only upon full completion of the task — answering all fifteen (15) abstract problems.

What is this research about?

Artificial Intelligence (AI) is a technology that has the potential to transform any field to which it is applied. We do not have a firm grasp on its capabilities, or why it performs the way it does in many tasks, posing pragmatic and ethical issues. In this research, we aim to clarify this understanding by analysing the behaviour of both humans and computer vision systems in solving our abstract reasoning tasks. Constructing these tasks have historically required extensive manual effort, however, we can accomplish this by rearranging existing abstract images (characters in Unicode) that have first been described by humans.

What will I be asked to do?

Upon accepting the task, you will be directed to a page containing a set of instructions, some presolved example problems, and then fifteen unsolved problems. These problems feature incomplete sequences of Unicode characters (i.e. letters and symbols from the world's writing systems). In each instance, you will need to do your best to complete the sequence, selecting the character from four possible answers to fill in the blank. See Fig. 1 for an example. Upon full completion of the task, you will be directed back to Prolific.co, and be compensated the advertised £8.50GBP (\$14.44AUD for the expected 40 minutes, which is slightly higher than the Australian minimum wage for 2022).

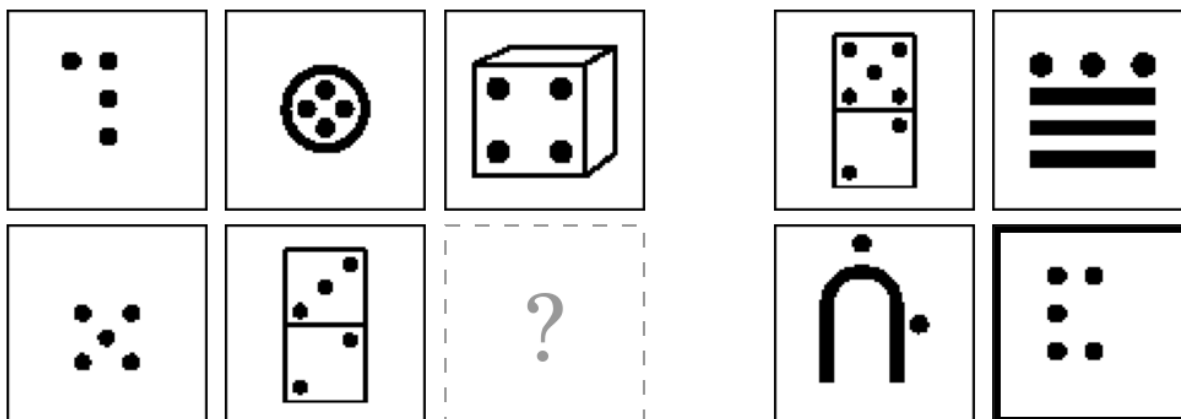


Figure 1. A sample problem. Participants are asked to look at the two context rows (left) and complete the sequence with an answer (right). This rule specifies a constant number of dots; 4 per image on the top row, and 5 per image on the bottom row.

What are the possible benefits?

By participating in this experiment, you will help us better understand the limitations of computer vision systems and help the community of researchers behind this technology make it safer and smarter. After you have completed your tasks, your anonymised data will be processed and used to establish a baseline of human performance on a new academic dataset. The likely users of the data from this project are computer vision researchers building machine learning models, as well as cognitive scientists.

What are the possible risks?

The project does not attract any serious risks to participants; the only images displayed are black and white characters from a number of different writing systems, which have been manually selected and free from questionable content.

Do I have to take part?

No. Participation is completely voluntary. You may take breaks at any time or withdraw your consent to participate and discontinue participation at any time, at which point, all data provided by you would be destroyed and not included in the study. Withdrawing from the study would have no negative effect on your relationships with the platform, Prolific.co, or the University of Melbourne.

Will I hear about the results of this project?

We aim to publish the study in the proceedings for a peer-reviewed conference. There is a link provided in the task to the Github repository for this project, and updates of all project outcomes will happen there.

What will happen to information about me?

No identifying information will be collected as part of the study. Prolific.co user IDs are initially recorded to ensure that, in the case any participant repeats this task, data from only the most recent copy is used. Upon ascertaining this, the user IDs will be removed, thereby anonymising all data collected. **Personal data in the form of user IDs are therefore held only for as long as the task is advertised on Prolific (no longer than one fortnight).** The results will be published on the corresponding Github.com repository, alongside the academic dataset used to populate survey questions. Results and dataset are anonymised, held by the researchers for five years, and served on Github indefinitely.

Who is funding this project?

This project is funded by The University of Melbourne.

Where can I get further information?

If you would like more information about the project, please contact the researchers.

Who can I contact if I have any concerns about the project?

This research project has been approved by the Human Research Ethics Committee of The University of Melbourne. If you have any concerns or complaints about the conduct of this research project, which you do not wish to discuss with the research team, you should contact the manager of Human Research Ethics:

Research Ethics and Integrity

University of Melbourne, VIC 3010

Tel: +61 3 8344 2073, Email: humanethics-complaints@unimelb.edu.au

All complaints will be treated confidentially. In any correspondence please provide the names of the research team members and this project.