

# Melbourne School of Psychological Sciences Debriefing Statement



PROJECT TITLE: Word learning and optimality

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**Thank you for participating in our study!**

We are interested in the cultural evolution of language and what causes languages to become optimal or not. You played two rounds of a language learning game with a word learning bot. In round 1, we showed you one of the plants 3 times more often than the other plant. Then in round 2, we flipped it so the other plant was shown 3 times more often. The optimal strategy would be to always use the short word with the most common plant and the long word with the rare plant. But in the real world, the frequencies of objects change! So how do languages keep up with this and stay optimal?

For example, we say the word “info” (for “information”) more than people did in the 1970’s because information technology has become more common. Likewise, you might have started saying “iso” recently (instead of “isolation”) because, well, isolation became way more frequent after corona virus hit. This linguistic phenomenon is known as “Zipf’s Law of Abbreviation”.

In our study, we focused on how the shared communication history of two people affects their ability to re-optimize their language use. Half of all the participants in our experiment played the same bot for both rounds, giving them a long communication history. And the other half of participants played a new bot in the second round, so they had to start from scratch after the frequencies changed. We want to know if having a new partner makes it easier for people to adapt their language use to the changing frequencies. And your data will help us figure this out! If you want to find out what the results of this experiment are, please check our webpages in about a year. And until then, here are two awesome papers on this same topic:

[Zipf’s Law of Abbreviation and the Principle of Least Effort](#)  
[Zipf’s Word Frequency Law in Natural Language](#)

If you have any concerns arising from your participation in this study, please contact the Responsible Researcher. Contact details are provided above.

As always, we are very grateful to the thoughtful data you provide, as it tells us a great deal about how humans think and reason.

This research has been cleared by the Human Research Ethics Committee (HREC 2057397). If you have any concerns about this project please contact the Executive Officer, Human Research Ethics, The University of Melbourne (Tel: 8344 2073; Fax: 9347 6739).