Debrief: Preparation and Inhibition 2019

Many thanks for participating in our experiment.

This debriefing sheet will provide further information about the rationale of this study and how we plan to analyse the data.

When people switch between tasks with different rules, performance usually worsens such that responses are slower and errors more common. Research shows that if you have just completed a task (A) and then change to a different task (B), it is harder to then switch back and complete task A again than to complete a completely different task (C) i.e. ABA task sequence is harder than CBA task sequence. This is thought to be caused by the first A task being inhibited (via a mechanism known as "backward inhibition") so that the B task can be completed easily without any competition from the preceding task. When task A is required again the inhibition needs to be overcome, therefore producing the cost.

This study was interested in looking to see what stage of task processing is responsible for producing backward inhibition. One possibility is that it is the preparation stage (where you prepare to do a particular task but do not yet have anything to respond to).

In this study you were asked to perform either a shape, line orientation or colour judgement. In most of the cases, you were shown a cue (e.g. "@@@@@"), followed by a target (e.g. a red circle with vertical lines through it). These were "completed" trials. However, in some trials, a cue (e.g. "@@@@@") told you to prepare to perform the line task but no target (e.g. a red circle with vertical lines through it) was shown, so you could not actually perform that task. These were the "cue-only" trials. We will be looking to see if after those cue-only trials backward inhibition has been produced. If it has then this will be evidence that preparation stage (the selecting of a task in our working memory) is enough to produce backward inhibition.

This experiment used a within-subjects design, since all participants performed in all conditions. We will test whether preparation is enough to trigger backward inhibition by comparing ABA trial sequences to CBA trial sequences when task B is a cue-only trial. If preparation is enough to trigger backward inhibition then we would expect ABA trial sequences to have worse performance than CBA trial sequences.

Your data will be held anonymously so that it is impossible to trace this information back to you individually. These data will be held securely on the University network, on DVDs in a locked office, or on an encrypted data storage drive, and may be retained indefinitely. To ensure access to the data for the wider research community, the anonymous dataset may be archived online, for instance on the Open Science Framework (https://osf.io/), or sent to other researchers for inspection. Your completed consent form will be stored electronically on a password-protected server, and separately from any data collected, for a minimum of three years after the conclusion of the study.

Contact details:

Research Fellow: Name Here* Email: Email Here*
Supervisor: Name Here* Email: Email Here*

Further Reading:

Koch, I., Gade, M., Schuch, M., & Philipp, A. M. (2010). The role of inhibition in task switching: A review. *Psychonomic Bulletin & Review*, *17*(1), 1-14.

Schuch, S., & Koch, I. (2003). The role of response selection for inhibition of task sets in task shifting. *Journal of Experimental Psychology: Human Perception and Performance, 29(1*), 92-105

N.B. Please contact Name Here* using the above email address if you would like to receive an electronic copy of your completed consent form.