

Debrief: Predictable task-switching

Thank you for taking part in this experiment. This debriefing sheet will provide further information about the rationale of this study and how we plan to analyse the data.

When people must switch between two or more tasks within a block of trials, their performance varies according to whether they are performing the same task as they did on the previous trial, or whether they are switching to a different task. Previous studies have shown that in predictable trial sequences repeating a task for a second time does not further improve your performance any more than repeating the task for the first time does. This study is a pilot study for an EEG study we plan to run in the future. Therefore, in this study we are trying to replicate the lack of effect of repetition, while also looking for an effect of preparation.

We asked you to perform low/high judgement and odd/even judgement tasks according to cue shown on screen, and the position of the current trial within a predictable sequence of trials. On some trials you had a long time to prepare (1000ms) and on others you had a short time to prepare (300ms).

We will measure the pattern of your performance in terms of speed and accuracy of response (those are our dependent variables). We will categorise trials according to two within-subjects factors. The first factor is “run position” – i.e., whether the trial was the first, second or third in a run of trials from the same task. (Since tasks switched predictably every three trials, every trial can be categorised into one of these run positions.) We will compare run position 2 and run position 3 to see if they produce the same level of performance. The second factor is “preparation length”. This means whether you had a long time to prepare for the upcoming task, or a short time to prepare for the upcoming task. We will look to see if there is an effect of preparation on performance.

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 encrypted USB sticks, 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 in a locked filing cabinet for a minimum of 3 years after the conclusion of the study.

Contact details

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Further reading

Rogers, R. D., & Monsell, S. (1995). Costs of a predictable switch between simple cognitive tasks. *Journal of Experimental Psychology: General*, 124, 207-231.

Wylie, G. R., Javitt, D. C., & Foxe, J. J. (2003). Cognitive control processes during an anticipated switch of task. *European Journal of Neuroscience*, 17(3), 667-672.