

## Debrief: Predictable task switching with cue-only trials and varying preparation

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. In this study we are trying to see if just preparing to perform can produce the same effect as performing does.

We asked you to perform low/high and odd/even judgement tasks on digit stimuli according to the 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). On most trials the cue was followed by the presentation of a target stimuli (i.e., a digit); these were “completed trials”. On a small number of trials no target appeared and instead the next cue was shown; these were “cue-only” trials.

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.) The second factor is “previous trial completion”. This means whether you performed the task cued on the previous trial (completed trial) or only prepared the cued task (cue-only trial). We will look to see if there is an interaction between the run position and previous trial completion factors: if so, we will be able to conclude that preparation and performance do not have the same effects on how well we perform subsequently.

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 and a maximum of 4 years after the conclusion of the study.

### Contact details

Experimenter: [NAME & EMAIL ADDRESS]

Supervisor: [NAME & EMAIL ADDRESS]

### 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.