103_preregistration (#29252)

Created: 10/15/2019 10:05 AM (PT)
Public: 10/17/2019 12:42 AM (PT)

Author(s)
Caro Hautekiet (Université de Genève) - Caro.Hautekiet@unige.ch
Naomi Langerock (Université de Genève) - Naomi.Langerock@unige.ch
Evie Vergauwe (Université de Genève) - Evie.Vergauwe@unige.ch

1) Have any data been collected for this study already?
No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?
This is a conceptual replication of Experiment 1B of Johnson et al. (2013; doi: 10.1177/0956797612466414). The experiment tests the inhibition-of-return-like effect resulting from refreshing in working memory: response times for probes should be slower for refreshed items than for unrefreshed items)

3) Describe the key dependent variable(s) specifying how they will be measured.
Response time on lexical decision task (response to probe), measured by key presses.

4) How many and which conditions will participants be assigned to?
There are four within-subject conditions; refreshed probe, unrefreshed probe, novel probe, and nonword probe.

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
A Bayesian one-sided t-test to see if RT words < RT non-words will be run with JASP default settings.

Next, a Bayesian one-way repeated measures ANOVA of response times with only word probetypes as within-subjects variable (3 levels: refreshed probe, unrefreshed probe, and novel probe) will be run using JASP with default settings.

Finally, two one-sided Bayesian t-tests will be run using JASP with default settings:
1) RT novel probes > RT old probes (whether refreshed or unrefreshed),
2) RT refreshed probes > RT unrefreshed probes. The latter test concerns our main hypothesis.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.
We will calculate the proportion of correct responses to 1) the refreshing cue, and 2) the probe. Trials with an incorrect response (including errors or RT < 150ms for the probe) to either of those will be discarded. The data of participants with less than 75 % of valid trials will be discarded.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.
Starting with N = 30, Bayesian sequential hypothesis testing on the main t-test until either BF = 10 for or against the effect (increase per 5 participants), or N = 60, whichever comes first.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)
NA