June 5, 2020

Marc Brysbaert, PhD

Department of Experimental Psychology

Ghent University

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Dear Dr. Brysbaert:

Dr. Mark Huff and I are submitting our manuscript entitled “The lrd Package: An R Package and Shiny Application for Processing Cued-Recall Data” to be considered for publication as an original research article in *Behavior Research Methods*.

Although cued-recall tests are commonly used in psychology, no open access tools currently exist that can be used to quickly process the large amounts of lexical data that these studies generate. The *lrd* (lexical response data) package for *R*, has been designed to address this issue by providing researchers with a user friendly tool for quickly and accurately scoring large amounts of lexical output, while also being able to control for minor errors in participant responses. In this paper, we provide an overview of the package, introduce an *R Shiny* application that has been made freely available and can be operated using only Excel skills, and provide a general user guide. We then show that data scored using *lrd* accurately reproduces manually coded data by using this program to replicate the results of two cued-recall studies and by testing the reliability of its output relative to human coded data.

Please note that this manuscript is a revised version of BR-Org-20-148 (Action Editor: Marco Marelli) which now includes significant revisions both to the manuscript and the package it presents. First, we have updated the *Shiny* application to include new options for computing mean recall rates (at both the participant and condition levels) and have added plotting capabilities. Second, the *R* package has been updated to include a new function for computing each participant’s proportion of correct responses. Third, we have updated the scoring functions example to include participant responses that differ from the correct response by only one or two letters. Finally, the language throughout the manuscript has been updated to clarify that this program is designed specifically for processing cued-recall data. In addition to the revised manuscript, we include brief responses to the reviewer comments with our submission.

We hope that *lrd* will both drastically reduce the amount of time spent coding lexical data and assist the reproducibility measures being adopted by the field by providing researchers with a standardized, open-source method for processing lexical output across psychological studies. This work is original and not under review elsewhere, and we report no conflicts of interest. We look forward to hearing about the suitability of our paper in *Behavior Research Methods*.

Sincerely,

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