Gmail

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Variables for R script

1 message

Feng, Nicole <NFENG@bwh.harvard.edu> Fri, Dec 22, 2017 at 3:02 PM
To: Erich Tusch <erich.tusch@gmail.com>
Cc: "Daffner, Kirk R.,M.D." <kdaffner@bwh.harvard.edu>

Dear Erich,

I hope this message finds you well. Thank you again for lending us your expertise.

Kirk and I have spent some time compiling a list of variables that we hope your script can help us compute. Our experiment has a lot of detail, so I'll first give a brief explanation of the experimental design and then a description of how the list of variables to be computed are organized.

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Like the contrast experiment in the grant proposal, subjects are asked to respond to target (T) and nontarget (NT) faces. One variable we manipulate is working memory load, or the number of pairs of faces subjects are asked to remember. For this, we have four loads: 1 face pair, 2 face pairs, 3 face pairs, and 4 face pairs. Each level of face pair load is organized into one section (thus, 4 sections total) that has three blocks; each of these blocks are identical except for the random order in which probes are displayed. In each block, there are 84 probes of which half are T, half are NT. Each of 42 Ts and NTs are evenly split among three levels of contrast: 100, 69, and 22 percent. The possible coded responses to T/NTs are: too early, correct, incorrect, too late, or no response.

We wanted to counterbalance the order in which subjects completed each face pair section, so we decided to split one experimental run into four parts to avoid redundant coding in E-Prime. Thus, for every subject, we have four separate E-Prime output files, one for each face pair.

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As for the different variables, they are listed in the document titled, "Script Variables." The first sheet contains a list of variables broken down into the most basic units, as a visual aid. The second sheet contains the list of variables to be computed. You will see that this sheet is split into two sections.

In the first section, column D, you'll see a list of fractions (e.g., # correct responses to target faces/total # of target faces) that we hope the script can calculate (do you have a sense of whether fractions or percentages would be easier for the script?). In column E, we list corresponding mean RT and in column F we list median RT that we hope the script can help generate. Below are a couple examples to help explain the shorthand:

> T 100 correct = # of target faces at 100% contrast to which subjects responded correctly
>
> NT 100 69 22 incorrect (FA) = # of nontargets at 100%, 69%, 22% contrast to which subjects responded incorrectly

The first section is an example of a single block within a face pair. So, we are interested in all of those listed variables for 1 Face Pair Block 1, 1 Face Pair Block 2, 1 Face Pair Block 3, 2 Face Pairs Block 1…4 Face Pairs Block 3. Rather than listing these variables 12 times, this was the shorthand I created.

In the second section, you'll see that the fractions, mean RT, and median RT follow a similar organization. These represent calculations collapsed across blocks, within each face pair load. So these set of variables would have 4 iterations, one for each face pair load.

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To this message, I have also attached defined item codes, E-Prime event codes, and the binlist in case you need them for reference. This is a lot of information, so please let me know if I can help clarify anything. We also realize that we are asking for a ton of variables to be computed, but having these pieces will help give us a more comprehensive understanding of subject behavior. However, if you think a further pruned version would be better, we can consider ways to reduce our number of variable we have.

Thank you very much for your efforts in helping us to put this together. I realize I am sending this to you as we are about to start another holiday season. I wanted to get it to you prior to my departure this evening to CA. I will be away until January 2nd but if you have questions in the meantime, please feel free to send them over. We are very appreciative of your efforts and expertise.

Take care and have a happy holiday!

Nicole

5 attachments

Item Codes.xlsx
12K

E Prime Event Codes.docx
12K

contrast_binlist.txt
42K

Behavioral Outputs.zip
78K

Script Variables.xlsx
24K