July 19, 2018

Dear JoVE Editors:

We are submitting a revised manuscript entitled "Eye-tracking to distinguish comprehension-based and oculomotor-based regressive eye movements during reading" by Jocelyn R. Folk and Michael A. Eskenazi. In the revision, we have addressed all of the editor's and the reviewers' comments. Please consider the revised manuscript for publication in your journal. Our responses to the editor's and the reviewers' comments follow. The explanation of our responses are in italics.

Sincerely,

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Editor Comments:

1. Please take this opportunity to thoroughly proofread the manuscript to ensure that there are no spelling or grammar issues. The JoVE editor will not copy-edit your manuscript and any errors in the submitted revision may be present in the published version.
We have carefully proofread and edited the manuscript.

2. Please submit the figures as a vector image file to ensure high resolution throughout production: (.svg, .eps, .ai). If submitting as a .tif or .psd, please ensure that the image is 1920 pixels x 1080 pixels or 300dpi.
The files have been converted to .ai, and a PDF of that file is also included.

3. Please do NOT have references in the Abstract.
The references were removed from the Abstract.

4. For in-text formatting, corresponding reference numbers should appear as numbered superscripts after the appropriate statement(s): Rayner et al. (2003), Henderson and Luke (2012), etc.
The in-text reference formatting errors were corrected.

5. The Protocol should be made up almost entirely of discrete steps without large paragraphs of text between sections. Please simplify the Protocol so that individual steps contain only 2-3 actions per step and a maximum of 4 sentences per step.
6. The Protocol should contain only action items that direct the reader to do something. Please move the discussion about the protocol to the Discussion.
7. Please add more details to your protocol steps. Please ensure you answer the "how" question, i.e., how is the step performed? Alternatively, add references to published material specifying

how to perform the protocol action.
The protocol has been revised to address the concerns raised in 5-7.

8. Can a supplemental list of words used for the target words be provided?
We added ten example items from each experiment (2.2.6 and 2.3.2).

9. 2.2.4: How are the stimuli created? How are the stimuli presented?
This information has been added to this section.

10. 2.2.5: How is the norm done? How is the cloze task performed?
This information has been added to this section.

11. Can the comprehension questions be provided?
Added to step 3.

12. How long is the eye-tracking session? How many stimuli are presented? For how long? How many participants are there?
Added to step 4.1.

13. As currently written, it is not clear how to replicate your protocol. An example of each would greatly aid in its reproducibility. We understand that the publication standards for our journal are unusual so there may be a bit of back and forth between the review team and the authors.
Information has been added to the final paragraph about replication.

14. Please do not abbreviate journal titles.
These were corrected.

Reviewer #1
Requested to add more sample stimuli: ***Done (2.2.6 and 2.3.2).***

Reviewer #3
Requested to add how to analyze the data: ***Added linear mixed effects model information (5.4).***

Reviewer #2:
<u>**Major Concerns:**</u>
To help other researchers to replicate the protocol described in this manuscript, more detailed description of the material constructed is necessary, such as showing the mean and the standard deviation of the word length, word frequency, as well as showing the results of the cloze task.
The results of the cloze task have been added as well as the average and standard deviation of the frequency of the target word (2.2.5 and 2.2.6).

The objective criteria to define ambiguous homophones with a dominant meaning should also be explained more explicitly.

Added citation for the South Florida Homograph Norms (citation 15).

At very least, the authors should list the materials they used to obtain the representative results, as well as the number of the participants attended the experiments.
This has been added to 2.2.6, 2.3.1 & 2.3.2 for materials, and 4.1 for participants.

What is the statistical procedure used to analyze the data?
Added to step 5.4.

<u>**Minor Concerns:**</u>
In using the eyelink system, the calibration process is normally followed by a validation process.
Added to step 4.4.

In eyelink 1000 plus, the viewing is not binocular but monocular.
Whether the left eye or the right eye is measured depends on the position of the illuminator and is not randomly chosen.
Added the eye movements were measured from the right eye, deleted the binocular monocular part in 4.2.

The drift correct process described in 4.5 and 4.6 should be explained more clearly.
The font size of the text and the size of the screen should be described explicitly.
Added to 4.3.

How the interest areas are defined, automatically or manually? If manually, what is the criteria to define the boundary of the interest areas?
This information has been added to 5.2.