M Gmail

Milena Rabovsky <milena.rabovsky@gmail.com>

Decision on Nature Human Behaviour manuscript NATHUMBEHAV-16100696B

stavroula.kousta@nature.com <stavroula.kousta@nature.com>   20. Juni 2018 um 18:28
Antwort an: stavroula.kousta@nature.com
An: milena.rabovsky@gmail.com

20th June 2018

*Please ensure you delete the link to your author homepage in this e-mail if you wish to forward it to your co-authors.

Dear Dr Rabovsky,

Thank you once again for submitting your revised manuscript, entitled "I like coffee with cream and dog? Change in an implicit probabilistic representation captures meaning processing in the brain," and for your patience during the re-review process.

Your manuscript has now been evaluated by Reviewers 3 and 4 from the previous round of review, and in the light of their advice I am delighted to say that we can in principle offer to publish it. First, however, we would like you to revise your paper to ensure that it complies with our Guide to Authors at http://www.nature.com/nathumbehav/info/gta. We have included below a list of specific points for your attention. Please make sure to attend to all points, in order to ensure that your manuscript can be accepted for publication promptly.

We hope to hear from you within 10 days; please let us know if the revision process is likely to take longer.

***General formatting:
1. The title should provide a clear and compelling summary of the main findings in fewer than 90 characters including spaces and without punctuation. Please revise your title by dropping the first part (i.e., "I like coffee with cream and dog?")

2. The title page of your manuscript should include the title; full author first and last names (initials can be used for middle names); full affiliation information (including postal addresses); corresponding author information (indicate the corresponding author with an asterisk and supply their email address).

3. It is Nature Human Behaviour policy not to include priority claims in manuscripts. Priority is established by virtue of publication. Please remove the word 'new' when describing the learning algorithm you have developed, as well as any other instances of priority claims.

4. Your manuscript is currently significantly above the length limit for Articles. Please make sure that the revised manuscript (may text and methods) does not exceed 10,000 words. This should include the content of footnotes (see point below).

5. Footnotes/endnotes are not permitted. Please eliminate them, and either incorporate (some of their) content in the main text or place the information as Supplementary Notes in the Supplementary Information file. (See below)

***Statistics and Reproducibility:

6. Inferential statistics should be reported in full wherever they occur (main text, Figure captions, Tables) as follows:

statistic(degrees of freedom) = value, p = value, effect size statistic = value, % Confidence Intervals = values

7. P values reported should be exact. Do not report 'ns' – give the exact value. The smallest P value that should be reported is P <0.001, except in studies of genetic associations.

8. Indicate whether the data met the assumptions of the statistical tests used, including whether normality and equal variances were formally tested. If not, please show data distribution (individual data points) and include the following statement: "Data distribution was assumed to be normal but this was not formally tested."

9. As you are already aware, Nature Research is taking an active approach to improving our transparency standards and increasing the reproducibility of all of our published results. Please provide an updated version of the Reporting Summary with your final files. This reporting summary will be published along with your paper.
The Reporting Summary can be found here: https://www.nature.com/authors/policies/ReportingSummary.pdf

10. In addition, we will need our Editorial Policy Checklist (https://www.nature.com/authors/policies/Policy.pdf) filled out and uploaded with your final files; it will not be published but is useful for policy compliance.

***Figures and Tables:
11. You must follow the guidelines detailed in the following document to prepare your figures for final submission: https://www.nature.com/documents/NRJs-guide-to-preparing-final-artwork.pdf.

Please pay particular attention to:
sizing
format
how to combine panels to create a single figure file

12. You have exceeded the limit of 8 display items (the combination of Figures and Tables) for the main manuscript. Please combine Figures 3-5 into a single figure with three different panels.

13. For all graphs, the x and y axes much cross at 0. For all graphs that report Model N400 results, the scale and range of the y axis should be identical: x and y axes should cross at 0, minimum value = 0, maximum value = 5, major unit = 1. Simply put, the y axis should be identical in all the panels that report Model N400 results across all figures (main text and supplementary), so that readers can easily compare results across the 16 effects you examine.

14. Remove all figures from the main manuscript file. For main text figures, upload them as individual files, one figure per file (i.e., do not upload individual figure panels separately). Figure captions and tables should remain in the main manuscript file. For supplementary figures and tables, please remove them all from the manuscript file and create a separate Supplementary Information file.

15. All figures and tables, including supplementary figures and tables, must be cited in the text in numerical order.

16. Figure legends should be concise and no longer than 350 words. Begin with a brief title and then describe what is presented in the figure and detail all relevant statistical information. See guidelines above for the reporting of statistical tests. The number of participants/observations in each figure (panel) should be specified. Figure legends should all be included at the very end of the manuscript.

***Supplementary Information:
17. The Supplementary Information file should only make use of the following sections: Supplementary Figures, Supplementary Tables, Supplementary Notes, Supplementary Discussion, Supplementary Methods, Supplementary References. No other type of section should be used, e.g. plain numbered sections or "Supplementary Section 1".

18. Please list supplementary items as "Supplementary Figure 1", "Supplementary Figure 2", etc. (not "Figure S1").

19. Please ensure that Supplementary Information is submitted as a single document without a cover page. Please avoid inserting header or footer information, and leave 2.5 cm at the top and bottom of the document for standard journal headers and footers to be inserted during in-house processing. Please also check very carefully that any submitted Supplementary Information appears as you would like to see it published (you will not see proofs of the Supplementary Information; it will be published as sent).

***Statements and disclosures:

20. Please include a separate "Data availability" statement at the end of your Methods section. This statement should inform our readers about the availability of the outputs of your modelling and should include references to data included as supplementary items, accession codes to public repositories, URLs to data repository entries, dataset DOIs, and any other statement about data availability. We strongly encourage submission of all raw data as supplementary information or deposition in a suitable repository. At a minimum, you should include the following statement: "The data that support the conclusions of this study are available from the corresponding author upon request", mentioning any restrictions on availability. For more guidance on how to write this statement please see: http://www.nature.com/authors/policies/data/data-availability-statements-data-citations.pdf.

21. Please update your "Code availability" statement so that it includes information on where your code has been deposited. Note that this statement should be separate from your Data Availability statement.

22. Please ensure that you acknowledge all funding sources that supported the work reported in your manuscript and provide grant or contribution numbers in an Acknowledgments section after the references. Indicate what role the funder(s) had in the conceptualization, design, data collection, analysis, decision to publish, or preparation of the manuscript. If any of this information could be perceived as a competing interest, ensure that it is also included in your competing interests statement. If the funder(s) had no role, please include the following statement: "The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript." If no specific funding supported the work, include the following statement: "The authors received no specific funding for this work." Keep other acknowledgements brief and do not include thanks to anonymous referees or editors, or effusive comments.

23. Please include a "Competing interests" statement after the Acknowledgments. Note that we ask authors to declare both financial and non-financial competing interests. For more details, see https://www.nature.com/authors/policies/competing.html. If you have no financial or non-financial competing interests, please state so: "The authors declare no competing interests."

***Legal guidelines:
24. Please sign and upload with your final submission the Licence to Publish form.

Or please sign either the Licence to Publish form for UK government employees, Licence to Publish form for US government employees or Licence to Publish form for Canadian government employees if the corresponding author is either a UK, US or Canadian Government employee.

For more information on our licence policy, please consult http://npg.nature.com/authors.

25. Should your manuscript contain any items (figures, tables, images, videos or text boxes) that are the same as (or are adaptations of) items that have previously been published elsewhere and/or are owned by a third party, please note that it is your responsibility to obtain the right to use such items and to give proper attribution to the copyright holder. This includes pictures taken by professional photographers and images downloaded from the internet. If you do not hold the copyright for any such item (in whole or part) that is included in your paper, please complete and return this Third Party Rights Table, and attach any grant of rights that you have collected.

***Other:
26. A brief (maximum 250 characters, including spaces) summary of the main findings of the paper to be used on our website and in our E-Alerts. The summary should be written in the third person in language suitable for a broad audience. The summary may be edited by the editors prior to publication. Please provide

this summary in your cover letter.

27. As mentioned in our previous letters, all corresponding authors on a manuscript should have an ORCID – please visit your account in our manuscript system to link your ORCID to your profile, or to create one if necessary. (Per legal policy, this must be done in the manuscript system by the owner of the ORCID.) For more information please see our previous letters or visit www.springernature.com/orcid.

28. Candidates for the cover image (300 dpi resolution at 8.5 by 11 inches).

To submit your revised manuscript, you will need to provide the following:
• Cover letter
• Point-by-point response to the reviewers (if applicable)
• Manuscript text (not including the figures) in .docx or .tex format
• Individual figure files (one figure per file)
• Supplementary information file in .pdf format (if applicable)
• Reporting summary
• Editorial policy checklist
• License to publish
• Third-party rights table (if applicable)
• Suggestions for cover illustrations (if desired)

Please use the following link for uploading these materials:

If you have any further questions, please feel free to contact me.

With best regards,

Stavroula Kousta

Stavroula Kousta, PhD
Chief Editor
Nature Human Behaviour

Reviewer #3:
Remarks to the Author:
I believe that the authors have done a very good job of addressing my prior comments (e.g. that the model doesn't produce an N400 to syntactic anomalies, and various other points) as well as of addressing the points raised by the other reviewers. I have read the response to the reviewers and the paper (again). I found the response to the reviewers (both informal and formal, and through the changes added to the paper) to be very effective. At this point, I believe the field is best served by publishing this work and allowing researchers who share these interests with the authors to form their own opinion of whether they are convinced or not. The coverage of the model (the range of N400 phenomena it successfully captures) is impressive and while not everyone will be convinced, this is not a reason not to publish. Moreover, while there will always be more studies that could be modeled, I see no reason to delay and keep adding more and more data. Here's why (and this to me is a
critical point): I have no doubt that there WILL be data that this model cannot explain. But in that case, the authors have convinced me that it will be worth considering WHY the model (specifically, why THIS model) cannot explain those data - and through such consideration, we may infer additional principles which are currently lacking in our accounts of the N400 (or sentence processing more generally). So to my mind, this is a win-win situation.

Reviewer #4:
Remarks to the Author:

I must say that I was really impressed with the authors' response. They took meaningful steps to address all of my major concerns about accurately characterizing the contribution and being transparent about limitations, and added a new simulation that strengthens the parallels between the model results and classic N400 patterns. With these changes, I think this paper will make a valuable contribution to advancing current debates in the field, whether or not one buys the model as it stands.