Cerebral laterality as assessed by functional transcranial Doppler ultrasound in left-and right-handers: A comparison between handwriting and writing using a smartphone.

We thank the recommender for his thorough examination of our manuscript and his attention to detail. We have now made the requested changes and additions, and we hope that now the manuscript is in a state that can be accepted for review before December 1st, after which no new submissions can be accepted for review in PCI-RR until the end of the year.

Recommender's suggestion 1: Direct link to the manuscript

Thanks for updating the link. However, this now points to the overall project rather than the latest version of the manuscript. This is better than before but I'm willing to bet it will still be confusing for many reviewers. Please use the direct link to the manuscript. For the present version this would be:
https://osf.io/57w2s/?view_only=ecc03e1a965b4d70bd1f7883fc14f709
However, for a further revision it will be yet another address of course.

Author's response

We thank the reviewer for his suggestion. We have now updated our OSF files so the link directly links to the latest version of the manuscript. This version does not have the tracked changes active – we have uploaded the "tracked changes" file in the response letter to the recommender using the PCI-RR appropriate method.

Recommender's suggestion 2: Design Table

Thanks for the modifications. Condensing the text there certainly helped with clarity (and it will be even clearer once tracked changes have all been accepted). However, there now seems to be an error in your interpretation of Hypothesis 2 - unless I'm getting very confused. Hypothesis 2 compares LI_typing_corrected between left- and right-handers, using an indep. sample t-test. In the Interpretation column, you interpret a null effect (no difference between left- and right-handers) as evidence that the lateralisation is unrelated to the medium - but isn't the exact opposite the case? If there is no difference between left- and right-handers for typing even though you'd expect to find this for handwriting, that would indicate that lateralisation does depend on the medium?
Moreover, in this context I wonder if you shouldn't be testing the interaction contrast here - that is, whether the Right-Lefthander_handwriting is greater than Right-Lefthander_typing. However, this is probably something to debate with your reviewers from this field.
I must concede that I find the whole concept generally quite confusing (e.g. talking about the absence of evidence for a reduction in the left/right laterality between left and right handers...). I suspect Doppler ultrasound and handedness experts will be familiar with this but I wouldn't necessarily count on that - however, I'll also let reviewers be the judge of that.

Author's response

We thank the reviewer for spotting this error. It was indeed an error of omission on our part to not update the interpretation of Hypothesis 2 in our previous manuscript. We have now updated the interpretation of Hypothesis 2 to reflect the changes that were made in Hypothesis 2 during the reviewing process (page 23). We would also like to add that the "Bayesian" approach is a relatively

new way of statistically analyzing the data, but it is a superior approach for data such as ours, and specifically for showing an absence of difference between two groups.

Recommender's suggestion 3: General changes required

You should have also received a generic list of required changes to the manuscript. As far as I can tell some of these have not yet been incorporated:

1) *Data must be available to readers after recommendation, either in the text or through an open data repository such as Zenodo (free), Dryad (pay) or some other institutional repository. Data must be reusable, thus metadata or accompanying text must carefully describe the data;*

Please add a data availability statement.

2) *Details on quantitative analyses (e.g., data treatment and statistical scripts in R, bioinformatic pipeline scripts, etc.) and details concerning simulations (scripts, code) must be available to readers in the text, as appendices, or through an open data repository, such as Zenodo, Dryad or some other institutional repository. The scripts or code must be carefully described so that they can be reused;*

Include this also in your availability statement.

3) *Details on experimental procedures must be available to readers in the text or as appendices;*

As for as I can tell this is all fine, so there shouldn't be anything to add - reviewers may of course have further questions about the methods though.

4) *Authors must have no financial conflict of interest relating to the article. The article must contain a "Conflict of interest disclosure" paragraph before the reference section containing this sentence: "The authors of this article declare that they have no financial conflict of interest with the content of this article.";*

Please include the COI disclosure before the reference section.

5) This disclosure has to be completed by a sentence indicating that some of the authors are PCI recommenders: "X is a recommender at PCI Registered Reports."

Please include if this applies to you (since you submitted your manuscript anonymously I cannot ascertain if it does).

Author's response

We thank the recommender for being diligent over the requirements of the PCI-RR and for helping us prepare our manuscript according to those standards. Our point-to-point response to the recommender's "General changes required" is as follows:

1) We have added a section named "Data Availability Statement" in our manuscript (page 20, last sentence) where we state that all data and supplementary materials will be publicly available at osf.io once the study has been completed (this manuscript being a Registered Report Stage 1, no data have been collected to date).

2) We also included a statement about the availability of the details of our quantitative analyses (i.e., our analysis code and accompanying text) in our “Data Availability Statement” section (page 21, first paragraph).
3) We thank the recommender for his comment on the availability of the details on experimental procedures in the manuscript. We hope that the reviewers will find too that we have sufficiently described the details of our planned experiment.
4) We have added a section “Conflict of Interest” (page 21, line 6) where we have stated that no authors have a conflict of interest.
5) None of the authors is a recommender at PCI-RR. The statement we added that “no author has a conflict of interest” is meant to include that too.