Recommender's and Reviewer's comments = black
Authors' comments = blue

Invitation to revise

Thank you for submitting your revised Stage 1 plan. Both external reviewers are happy with the changes made. However, before we proceed to issue In Principle Acceptance, there are a few minor loose ends that may be worth tidying up. One is the typo that you have mentioned to me in an email, which you should amend as you suggest ("In our Stimulation Parameters and Positioning section of the manuscript, we say we will localize hMT+ at 3 cm dorsal of the inion and 4 cm leftward. It should read 5 cm"). The others, I list below.

Dear Dr. McIntosh,

Thank you for your comments, we have addressed each below, and updated the manuscript accordingly.

Thank you for your consideration.

Best,

Grace Edwards, Mica Carroll, and Chris Baker

1) Minor typo. On reflection, I think it is best to remove reference to 'placebo' from question 2 in the design table: "Question 2: Does the facilitation of contralateral motion coherence induced by hf- tRNS targeted at left hMT+ exceed that of the placebo effect of the application of the electrodes to the same area with no stimulation". Placebo would refer to a specific mechanism of change that you are not testing, so just refer instead to "the effect of".

We have updated question 2 accordingly:

"Does the facilitation of contralateral motion coherence induced by hf-tRNS targeted at left hMT+ exceed that of the application of the electrodes to the same area with no stimulation?"

2) Minor typo. In several places throughout the manuscript, e.g. in statement of effect sizes, you use four decimal places, which seems like spurious precision. In general, 2 decimal places should be used unless you have a specific reason to require more.

We have updated the manuscript so only 2 decimal places are used throughout the manuscript.

3) Minor tweak. You are drawing your effect size estimate from the study of Ghin et al (2018). Using a central estimate of effect size from a standard published (not Registered Report) study runs the risk of overestimating the effect size. You might acknowledge this fact, before

you state (as you already do) that the effect size estimate is still conservative in the context of your design, because it is from a between-subject design where yours is within subject.

We have added the following to the *Participants* section of the *Methods* (page 8):

"We acknowledge that using a central estimate of effect size from a standard published (not registered report) study may risk an overestimation of effect size."

4) Minor clarifications. I still do not fully follow your description of how you determined the effect size from Ghin et al (2018). Was it based on the values reported in their paper, or on a re-analysis of their paper (because I can't easily find your quoted values in the paper itself). Also, the statements you make are of the general form:

"We used a true mean of 10.51% related to the difference in contralateral and ipsilateral motion coherence threshold for hMT+ targeted hf-tRNS, null hypothesis mean of 2.59% related to the difference in contralateral and ipsilateral motion coherence threshold for hMT+ targeted sham tRNS, and standard deviation of 14.8% from Experiment 1 of Ghin et al (2018; Cohen's d: 0.5351)."

Our effect sizes are extracted from figures 2a and 4a in the Ghin et al., (2018) paper. We used a plot digitizer to estimate these values, and now report this in the Study Design Template and Appendix B.

It's not really accurate to call these "true mean" and "null hypothesis mean"; they are just the estimated mean differences for the treatment and relevant control conditions. When you state the standard deviation, you do not make it clear what this is the standard deviation of. Is it the pooled standard deviation of those two differences, which you are using to calculate the effect size of the between-subjects difference between conditions?

We have updated the manuscript to remove the mention of "true" and "null hypothesis" means. We have also clarified the standard deviation used in Appendix B, which is the standard deviation of the control condition.

Finally, is it inaccurate to imply that the effect size for hypothesis 1 (the ipsi-contra difference) is a between-subjects comparison in their design?

Yes, in Ghin et al. (2018) the ipsilateral versus contralateral difference following stimulation targeted at left hMT+ is a within-subjects comparison. For the power analysis of our replication of this contrast, we use a between-subjects standard deviation extracted from the ipsilateral motion coherence performance in Figure 2a. We have now updated the *Participants* section of the method to avoid the implication that the initial comparison from Ghin et al. was between-subjects.