

January 11, 2020

Dear Professor Gibbs and the anonymous reviewers,

We apologize for our delayed response and thank the editors of *Communication Research* and the anonymous reviewers again for their thoughtful comments on our revised submission. We are thrilled that the work was conditionally accepted and have responded to all of the remaining concerns.

The reason for our slow reply was an issue that none of the reviewers raised. While revisiting our data and analysis code in the context of considering R3's point about reverts, we discovered a bug caused by a change to an underlying software library that took us quite a while to understand and resolve fully.

The problem affected our measurement of reverted edits and fixing the error has altered our estimates for model M2 in ways we describe in depth below. Because the software error affected both before and after the intervention, it did not introduce bias and the change in the proportion of edits reverted as well as the substantive takeaways and implications are largely unaffected.

We apologize for not catching the problem sooner, but are grateful to the reviewers and the editor for focusing our attention on our measure of reverts because doing so ultimately led us to catch and fix the problem.

The rest of the letter provides a summary of the specific issues and revisions we have made. Under each issue, we indicate which reviewer(s) raised concerns and describe how and where we have addressed the concerns in the manuscript. We have also attached a "tracked changes" version of our manuscript created with the `latexdiff` package.

As before, we are deeply grateful for the time and effort you have all invested in this manuscript. We have done our best to address the issues you each raised in your reviews and look forward to your responses.

Sincerely,

The Authors

Summary of Changes

1. CONVERT FOOTNOTES TO ENDNOTES (APA COMPLIANT)

As requested by the editor, we have converted all footnotes to endnotes in order to comply with APA style requirements.

2. CONSISTENCY OF MEASUREMENTS

R3 elaborated a distinction related to the measurement of our dependent variables before/after the intervention requiring account. Indeed, we did not appreciate aspects of this point from the previous round of reviews and agree that it underscores an important element of our analysis. We have added a short paragraph to the limitations subsection to try and capture R3's point as well as the ways in which we have attempted to address it.

3. TYPOS AND MINOR CLARIFICATIONS

We have fixed the typo identified by R2.

We also revised several points in our manuscript where it was not sufficiently clear that our approach draws from and builds on RDD while differing from classic RDDs as well.

We also added a note to clarify that Wikia (the source of data) partially rebranded as "Fandom" in 2016 after our data was collected.

We plan to have the manuscript professionally proofread prior to publication to help catch any additional issues of this sort.

4. ADDRESS RELATED ISSUE IN DATA RE: REVERTS

As mentioned above, we discovered a software error that took us quite a while to understand and resolve. The error affected the code we used to measure reverted edits and caused reverted edits to be undercounted systematically. In that the undercounting occurred consistently throughout the dataset, the measure of reverts in our most recent draft had perfect precision (no false positives) but imperfect recall (some false negatives). Thankfully, the undercounting did not introduce bias into our estimates.

Fixing the software error and incorporating updated data with the larger counts of reverts throughout has had the following impacts:

- The raw counts of reverted edits occurring before/after the design change are larger. Because the bug was unbiased in relation to the intervention, our interpretation which focuses on the relative change in reverted edits is almost completely unchanged.
- Because our measure of the total number of reverts is larger, the ratio of high/low quality edits as a result of the transition to the account requirement is smaller.
- The new measure for reverted edits led to a series of estimation problems for several of our robustness checks for M2 which rely on R's notoriously unreliable `glm.nb()` function. This was, in fact, the cause of nearly all of the delay. Fixing these issues required a slightly different approach to estimation for 4 models in our online supplement. These changes are all described in the supplement.

Fixing the bug resulted in fewer counts of zero for our measure *reverted*. This led to several important improvements in our analysis:

- In our previous submission, sensitivity analysis reported in our supplement suggested that our results in M2 were attenuated and no-longer statistically significant when we removed the 5% and 10% of wikis with the most reverts. These results from these robustness checks are now consistently statistically significant and the estimates increase in magnitude in the more restricted samples.
- We were able to replace the logistic regression models we had reluctantly used in our wiki-level analysis with the same negative binomial models used throughout the analysis.
- Although the part of the appendix presenting logistic regression versions of our models of reverted edits is arguably no longer necessary, we have retained it. The results from the analysis are substantially stronger evidence in favor of the estimated effect for H2.

Although this change also impacted our measure of non-reverted edits used in M3a, reverts make up such a small portion of edits that there are no substantively meaningful changes to any of our estimates for M3a. Models M1 and M3b were entirely unaffected.

To fully resolve this issue, we have had to generate new results and figures throughout much of the paper and all of the sections of the supplement. We have also made minor tweaks to some of the text presenting the results to reflect the magnitudes of estimates now reported. Although the changes have modestly impacted the magnitude of some of our estimates, all magnitudes remain substantively consistent with respect to the theories that motivate the study. We also believe that none of these changes alter the substantive takeaways or our interpretation of our results.

Once again, we apologize that this took us so long to sort out. We thank the reviewers and the editors for their attentive reading of our work and for helping us to discover this problem in the first place!