Dear Editor,

We wish to submit our manuscript entitled, "Males are not the more variable sex when it comes to personality" by Lauren Harrison, Daniel Noble and Michael Jennions for consideration as a *Nature Communications* research article. Our meta-analysis uses a massive dataset of over 2,000 effect sizes, covering 226 different species, from five broad taxonomic groups, and collected from over 200 studies, to take a new approach to testing the human-focused ‘greater male variability’ hypothesis in animal personality behaviour.

Studies looking at sex differences in variability between men and women often draw parallels with the animal kingdom to explain these patterns. Yet there is little evidence that many animal traits do show greater male variability, especially for behaviours that are shared by both sexes. We compared the personality behaviours of males and females, of which behaviours are often measured the same way in many different species, to test the applicability of the ‘greater male variability’ hypothesis to animal behaviour. We find little evidence for widespread, consistent male-female differences in personality in animals, either for mean values or levels of variation, and no evidence supporting the greater male variability hypothesis. The findings of our meta-analysis suggest that accepting evolutionary explanations for patterns of greater variability in men than women are premature.

Given that sex differences in variability for men and women is a topic that frequently attracts attention in psychology, and that these studies also consider animal behaviour as the basis for such sex differences in humans, we believe that the unexpected findings of our meta-analysis will appeal to the general or specialist audience interested in human or animal behaviour, and would be an excellent fit for *Nature Communications*. Additionally, our meta-analysis examines a unique aspect of the sex differences argument previously explored by O’Dea *et al* in “Gender differences in individual variation in academic grades fail to fit expected patterns for STEM”, also published by *Nature Communications* in 2018, which had an extremely high citation rate.

Each of the authors have contributed significantly to the present submission, and each of the authors confirms that this manuscript is not under publication consideration by any other journal. Our meta-analysis has been pre-registered with the Open Science Foundation (OSF), as is good practice for systematic and meta-analytic studies [link?]. Additionally, all of the authors have approved the contents of this manuscript and have agreed to *Nature Communication’s* submission policies.

We suggest Dr Stuart Ritchie or [some personality person, maybe a woman would be cool??] as appropriate reviewers, given their extensive background on variability in human cognitive behaviours.

We look forward to your publication decision, and please do not hesitate to contact us should you have any questions.

Sincerely,

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