

## **Response Letter**

### **General comments**

I would like to express our sincere gratitude on behalf of all the authors for the valuable suggestions provided by the editor and both reviewers. In this letter, I aim to highlight the main modifications made in response to the previous version of the manuscript.

Firstly, we revised our approach to analyzing the data by controlling for each region's uneven number of citations and presented the results in terms of countries instead of regions. In this new version, we employed a rarefaction method to calculate the average number of citations for each region across different countries. Recognizing the significant disparity in the number of citations received by each region, we decided to randomly sample 1000 papers from each region and record the countries that cited these papers. This process was repeated 100 times to generate a distribution of values, allowing us to assess the variability of our estimates. With this modified approach, we believe the results are now more controlled and less influenced by differences in the number of works produced by each country within regions. Despite this change, our results remained consistent.

Another important modification relates to the presentation of the results. Instead of showing the number of times each region cited another region, we decided to present the number of times each country cited each region. We believe that this alteration provides more informative insights and facilitates a deeper interpretation of the citation dynamics between regions and countries. These two modifications were implemented in response to the editor's suggestion, with the aim of providing a more standardized interpretation of the data that enhances result comprehension and allows for interpretations about country characteristics.

Furthermore, we included an important addition to the manuscript: the analysis of geographical markers based on zoogeographical regions. Following the original zoogeographical regions proposed by Wallace (1876), we examined their presence in the titles of the top 1000 single-author papers from each region. Interestingly, we found that only the Neotropical and Afrotropical regions were mentioned in the titles of all the papers analyzed. We have included a sentence highlighting this finding in the main text while maintaining the original geographical marker results. The analysis of zoogeographical markers, along with all the necessary code to reproduce the analysis, has been included in the supplementary material. However, we also

discuss the results in the main text to reinforce the patterns revealed by the political and geographical markers.

The only point we couldn't include was to increase the authorship. Regrettably, despite our diligent attempts to engage with researchers from various countries in the Global South, we did not receive their timely responses for inclusion in this review. We wholeheartedly acknowledge the presence of bias within this manuscript, encompassing both the dearth of representation of Global South researchers and the gender bias. We recognize that mere statements alone are insufficient without concrete actions. Nonetheless, in our pursuit of transparency, we have appended a positionality statement at the conclusion of the manuscript, acknowledging the limitations and biases stemming from the underrepresentation. Furthermore, we have explicitly stated that the viewpoints expressed herein are based on the perspectives of this confined group of authors. Nevertheless, we firmly believe that the evidence presented in this study pertaining to academic recognition may strike a chord with other Global South researchers.

In the next section, we provide a detailed response for each point raised by the reviewers. We have indicated when additional discussion was added to the main text or if we decided to keep the original content, providing the reasons for our decisions.

Once again, I sincerely appreciate the invaluable feedback from the editor and reviewers, which significantly contributed to the improvement of this manuscript.

Gabriel Nakamura

### **Reviewer 1 – main comments**

1 - My experience is that the premises leading to biases discussed in this piece, and traditionally discussed among peers, are non-existent. Most of the difficulties I have found in my career are personal or are rooted in difficult local-university realities. My biggest difficulties are finding research money in my country and the biggest opponents to my research are within my university department. I also would like to make a hint about academia in extremely undeveloped countries (I would call them... the Deep South). In some countries, I do fieldwork, or in some parts of my country, universities are really basic. Most lack a decent number of

professors, and research money is just not there. Therefore, I consider we have homework to do, before starting blaming the global north for our global south misfortunes.

**Response:** Thank you for addressing the significant issues regarding personal experiences in the work environment of the Global South. As researchers from the Global South, all of us affiliated with Brazilian institutions (except for one author based in a Global North institution), we are intimately familiar with the concerns raised by the Reviewer. However, we acknowledge that most of the challenges encountered in their career are rooted in a personal perspective. While we recognize the importance of discussing the difficulties faced by local universities, we have chosen, in this piece, to rely on the broader evidence found in existing literature and the data utilized in our study. Nevertheless, we agree that certain points raised by the reviewer should be acknowledged, and thus, we have included some aspects pertaining to local challenges faced by Global South institutions on a more specific level (lines 243-245).

The Reviewer states that the premises leading to the biases discussed in this piece are non-existent. In response, we would like to refer to an extensive compilation of references by Cannon (last updated in 2019) concerning the influences of colonialism on various dimensions, including academic practices and inclusion. Due to limitations regarding references of this piece, we were only able to select a few that we believe provide a general context for the effects of colonial practices resulting in biases in academic recognition and inclusion. Therefore, considering the substantial evidence present in the literature, it is difficult to deny that neocolonial practices do not leave an impact on academic recognition in a global analysis, as we have highlighted here.

Recent literature demonstrates that biased patterns in academic recognition persist even after controlling for quality, topic similarity, and language. This leads to the conclusion that even if all the immediate issues raised by the reviewer were addressed at a local level, we would still be faced with the ultimate causes of biased patterns. Several pivotal works, which are also cited in the main text and provide extensive evidence to support the premise of academic colonialism, include Gomez et al. (2022), Raja et al. (2021), Amano et al., Fox et al. (2023), and Torres and Alburez-Gutierrez (2022). Thus, from a personal standpoint, we fully agree with and relate to the points raised by the reviewer, and we acknowledge the need to incorporate them into our discussion. However, as previously argued, based on the wealth of evidence derived from rigorous data and analysis, it is challenging to deny the premise of colonial practices and their

effects on various aspects of academic practice, including the one addressed in this study, namely academic recognition. Denying this premise would mean disregarding concrete evidence. Given that our objective in this text is to provide practical perspectives grounded in evidence from the literature, we have chosen to maintain our focus on the general patterns of bias, with the ultimate causes traced back to the history and practices of colonization.

2 - As an editor, it is extremely difficult to find suitable reviewers from the global south (line 100). Most colleagues don't really speak English. Most don't have a working level control of the available literature. Most are simply don't trained in critical reading. Why don't we start there? The literature on this topic is still very general, and incapable of picking up probable underlying reasons for the lack of representation of global south researchers in global north panels.

**Response:** Thank you for bringing up this important issue. We acknowledge that the reviewer's perspective may have been overlooked in our discussion, and we appreciate the opportunity to address it. However, we still maintain our focus on the general patterns outlined in the existing literature we cited in the manuscript and in our previous response.

We agree that addressing individual flaws, as highlighted by the reviewer, would improve the representation of Global South authors. However, we prefer to refer to the commentary by Amano et al. (2021) in *Nature*, which emphasizes the need for the entire scientific community to tackle language barriers, rather than placing the burden solely on non-native English-speaking scientists. As Amano et al. state, overcoming language barriers is an urgent task for the entire scientific community if we are to address the existing inequality in academia. Considering that English is the lingua franca of science, and that the participation of non-native English speakers is crucial in addressing contextual environmental issues, overcoming the language barrier becomes a structural problem within the research agenda. As Amano et al. (2021) suggest, language barriers are an issue worth tackling for the sake of both native and non-native speakers of English.

We do not deny the challenges faced by non-native English speakers from the Global South. In fact, some authors of this piece also serve as editors for important journals in *Ecology* and *Evolution* and are familiar with the issues raised by the reviewer. However, this does not negate the need for global efforts to overcome the language barrier while recognizing the importance of individual-level efforts. Rather than taking the reductionist perspective of

individuals, we believe it is a better approach to attack the issue from the holistic view of structural problems. As emphasized earlier, our focus in this piece is on the structural problems that require an integrated approach involving not only individuals but the entire scientific community.

Recent experiences supported by formal data point in the opposite direction to the concern raised by the reviewer. In an editorial issue published in the *Journal of Applied Ecology*, Pettorelli et al. (2021) reflect on practical actions taken by the journal to support the science conducted by Global South researchers. One of the measures they implemented was the inclusion of more reviewers from the Global South, resulting in a 64% increase in representation. To the best of our knowledge, this increased representation has not compromised the quality of papers published in the journal, showing that improving diversity of by including more reviewer from Global South do not compromise the quality of science.

3 - One of my best experiences in the global north was to see people and industry consuming to a bigger degree (my) science. In my home country, this rarely happens. It is no surprise to me that nobody wants to fund my science in my country. I challenge that a solution is to reduce the costs of open access (Line 115) for scientists in the global south. Of course, someone should stop this nonsense system of extremely high fees for publications; the system is rigged!, but this affects global north scientists as well (even when this is to a lesser degree).

**Response:** Thank you for sharing your perspective and personal experience. We contend that empirical evidence, supported by extensive data (citation 19 in the main text), demonstrates that open access fees discourage researchers in the Global South. While we acknowledge that removing high publication costs is not the sole solution (we provide more suggestions that are not grounded solely on removing the fees barriers), it is a step towards reducing bias by ensuring that authors from lower-income countries, predominantly based in the Global South (as explained in reference 19), are not excluded.

4 - Finally, I do recognize (it is a fact!) that global south science is not cited, but the discussion is much more complex than simply global north scientists not familiar with global south papers. We can write books on this topic.

**Response:** Thank you for your response. It seems that the Reviewer agrees with the main point we raised in our piece regarding the biased academic recognition of researchers from the Global South. This topic is extensively examined in several studies cited in our manuscript.

Additionally, I have included an extensive list of references at the end of this response letter (although it is not exhaustive) to further support the existence of citation bias from various perspectives. We appreciate the Reviewer's concern in highlighting the complexities and mechanisms underlying this pattern. While we have considered the lack of familiarity as one possible reason for the bias, we also acknowledge the existence of other factors that may contribute to this bias.

5 - I do think that there is a gap between North and South academia. Some recent papers suggest that the gap, in fact, is growing with time. But I challenge your view of the issue. I strongly suggest you revise the narrative of other minority groups (LGTB, black, women) and learn from their activism, both in academic and non-academic contexts. For example, I do challenge your abilities to recognize privilege (Line 88) as no woman was included as a co-author. I do challenge your interest in writing for the global South, as the reference to Saul will be mostly understood by global North researchers. Part of the problem is that neither the global North nor the global South, are homogeneous places.

**Response:** Thank you for the comment. We acknowledge the lack of representation from the side of the authors that sign this piece. We provided, at the end of the text a positionality statement acknowledging about our personal biases, privileged position and highlighting that, as any opinion piece, this one is biased by our personal views, even by approaching the problem with evidence from literature. The points raised by the Reviewer are of great importance to be addressed, but here, as highlighted in the manuscript, we decided to keep the focus on the problem of academic recognition.

## **Reviewer 2 – main comments**

1 - Include authors from other regions of the Global South in the manuscript who may identify other or additional areas of improvement with respect to inclusion, recognition, and support. If you do not plan to include authors from other regions of the Global South, I think that is okay,

but I would indicate/acknowledge in the text of the manuscript the bias of researchers based exclusively in the Americas.

**Response:** Thank you for your attention to this significant matter. Regrettably, despite our diligent attempts to engage with researchers from various countries in the Global South, we regrettably did not receive their timely responses for inclusion in this review. We wholeheartedly acknowledge the presence of bias within this manuscript, encompassing both the dearth of representation of Global South researchers and the gender bias. We recognize that mere statements alone are insufficient without concrete actions. Nonetheless, in our pursuit of transparency, we have appended a positionality statement at the conclusion of the manuscript, acknowledging the limitations and biases stemming from the underrepresentation. Furthermore, we have explicitly stated that the viewpoints expressed herein are based on the perspectives of this confined group of authors. Nevertheless, we firmly believe that the evidence presented in this study pertaining to academic recognition may strike a chord with other Global South researchers.

2 - Since you are working with papers from the field of ecology and evolution I would also look at titles that include zoogeographic region names as a geographical marker as well. I would expect a similar trend, but it might be useful as many papers in ecology and evolution may use a zoogeographic region in the title and not a country name. I think this would bolster support for the claims you make and would also provide an opportunity for discussion about the inherently colonial nature of the names and boundaries of these regions.

**Response:** Thank you for the suggestion. We undertook a comparable analysis by tallying the mentions of zoogeographical (*sensu* Wallace, 1876) regions in the titles of the same articles used for the country-based geographical counting. Our analysis yielded noteworthy findings, indicating that only the Neotropical and Afrotropical zoogeographical regions were referenced in the titles of papers, with 51 and 2 mentions, respectively. We have opted to include these findings in the main text. Furthermore, to facilitate a more comprehensive comprehension of the data and analysis, we have provided all the codes and data as a permanent DOI link in the end of the text. This approach ensures that readers have access to a broader perspective on the information at hand.

3 - I would deposit your data and code somewhere that has a DOI. You can do this easily from a GitHub repository to somewhere like Zenodo at this

link: <https://docs.github.com/en/repositories/archiving-a-github-repository/referencing-and-citing-content>.

Response: Thank you for the suggestion. This reviewed version is accompanied by the whole dataset used to perform the analysis stored in Zenodo repository and with a DOI.

All the other suggestions provided by Reviewer 2 were added to the text. Except with regarding a question regarding biases in reviewers from Global North and Global South. We didn't find any reference approaching this interesting issue. Finally, we'd like to thank the constructive critiques from Reviewer 2 that helped to improve this manuscript.

## References

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