

**Line by line comments for MS PeerJ\_73410v1 “Relationships among cost, citation, and access in journal publishing by an ecology and evolutionary biology department at a U.S. university”**

Line 45: Would be good if you could include a new reference as that one is slightly old.

Line 56: Since it concerns the whole of the scientific community, I would reword to “for researchers.” or “for the whole of the research community, including ecologists and evolutionary biologists”. I prefer the former.

Line 65-66: on the role of scholars to the publishing ecosystem, you could mention here the value of scholars’ reviewing that has been estimated to be worth billions of dollars

- Aczel, B., Szaszi, B. and Holcombe, A.O., 2021. A billion-dollar donation: estimating the cost of researchers’ time spent on peer review. *Research Integrity and Peer Review*, 6(1), pp.1-8.

Lines 76-80: I think this could be removed as it pre-empts the results section.

Lines 122-125: It would be good to link these three categories with established open access options such as green, gold etc., that are familiar to most readers. If I am not mistaken that would be: ‘fully friendly’ = Gold, Diamond and Platinum; ‘intermediate’ = Green, and, ‘unfriendly’ = traditional subscription publishing model.

Lines 126-128. If they were subscription-based would they not be paid by the library as well? How are they different from the ones you got the information from the library? Adding that information would help readers.

Line 133: Why not 2015-2018?

Line 137: Better to reword to: “We standardized journal names, to ensure that...”

Lines 143-147: Please provide more detail about the types of analyses conducted and only for those that were included in the final manuscript. If it’s just bivariate plots and regressions, then reword to indicate that only these two analyses have been used to identify patterns in this study using R. On the latter, please also indicate the version of R used, and cite any statistical packages if applicable.

Line 157: Maybe reword from “(see above)” to “(see Materials & Methods)”

Line 159: Is that Proceedings of the Royal Society B: Biological Sciences? Must be, based on line 168 and Figure 1.

Line 166: ‘Over a recent 4-year period’. Best to specify the period (2015-2018).

Line 166-167: ‘100+ reviews to single journals’. Best to replace with ‘more than 100 reviews in two journals’.

Lines 173-174. I would remove that sentence from the Results section, as it is more appropriate for the Discussion.

Lines 177-179. Again, I would remove those lines as they way they are phrased are more for the Discussion. Or it could be included in the Methods section under the data analysis, and then mention the type of stats used to answer that question.

Line 181.  $R^2=0.211$  is more relatively weak than relatively strong. If not comfortable with that, perhaps consider removing ‘relatively strong’.

Line 182. Consider rewording to: ‘statistical outliers for both impact factor and price’.

Line 195. Instead of weak I would focus on how the relationship was non-significant, and thus reword lines 193-195 to: “Benefits to researchers in terms of citation rate, however, showed no relationship to annual subscription ( $R^2 = 0.038$ ,  $P > 0.05$ ; Figure 3).”

Line 199-200. Consider rephrasing to: “The most popular open access journal was *PLOS One*, with a total of 31 publications by EEB faculty over the 2015-2018”. Also it works better as the second sentence of the paragraph, right after the different price options are given.

Lines 217-220. I would remove this sentence as it is more about the methodology. Also the novelty of the article is mention at the beginning of the discussion.

Line 227: Anonymous, 2016. Is there no author for this article (could not find it when I searched for it) or could it be cited in a different way? Not sure, if it is wrong, but I have never seen Anonymous being used before. Alternatively, you can remove that citation and choose others, e.g.

- Harvey, L.A., 2017. Impact Factor: a crude yardstick which does not measure influence or impact on clinical practice. *Spinal Cord*, 55(9), pp.799-799.
- Diamandis, E.P., 2017. The Journal Impact Factor is under attack—use the CAPCI factor instead. *BMC medicine*, 15(1), pp.1-3.

Line 229: I would add here though how you found a positive relationship between APCs and impact factor. Why do you think there was a difference between the two? Could it be that when you have to pay for an article through an APC you pay more attention to impact factor, than when you do for a subscription-based journal that is paid through the University?

Lines 234-236: This is the first time that PNAS is being used in the discussion of high profile journals as outliers to general trends. Would it be better to just focus on Nature and Science as you do throughout all of the Results / analyses?

Line 239. It's not clear how the citation of Neylon & Wu 2009 relates to your finding.

Lines 253-256. Interesting to consider the work by Chua et al. 2017, who found a positive relationship between IF and citation rate for subscription-based journals, but a non-significant relationship between IF and citation rate for open access journals.

Chua, S.K., Qureshi, A.M., Krishnan, V., Pai, D.R., Kamal, L.B., Gunasegaran, S., Afzal, M.Z., Ambawatta, L., Gan, J.Y., Kew, P.Y. and Winn, T., 2017. The impact factor of an open access journal does not contribute to an article's citations. *F1000Research*, 6.

Lines 257-275: These two paragraphs are a bit too wordy. I would remove the two quotations from Garfield and DORA, as they do not add something novel to the discussion that is not covered by the rest of the text.

Lines 287-302. You could also discuss briefly your finding on editorships in relatively low-impact journals. Can you speculate why (perhaps the same motivations as for reviewing articles in said journals?)?

Lines 287-302. You could embed here the monetary value of academics serving as reviewers

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Discussion Point: It would have been interesting to touch upon why PLOS One is an outlier in terms of having a high APC but disproportionately many papers published. Could you speculate why that is?

### **Additional reading**

The authors might find the following technical briefing on open access patterns in deep-sea biology published earlier this year, interesting. Available at: <https://www.dosi-project.org/open-access-publishing/> (link to pdf: <https://www.dosi-project.org/wp-content/uploads/open-access-deep-community-briefing-1.pdf>)

## **Figures**

Figure 3A. I would remove the circle and try to align the journal names somehow. It's a bit crowded but it should be possible. Right now, the first impression I get from looking this plot, is that something important is going on with these journals. Alternatively you could use journal abbreviations.