Peer Reviewing a Journal Article

Note that these are *very general* guidelines. You may include additional subfield-specific or journal-specific critiques in your review.

Step 1
As you read the paper, consider the following five domains of critique

Domain 1: Ethics
- Plagiarism
- Fraud
- Other ethical concerns

Domain 2: Framing
- Is the contribution of the paper well-placed in the literature?
- Is there literature that the author(s) missed?
- Do the authors accurately state (and not over- or understate) what the paper adds to our scientific knowledge about a topic?

Domain 3: Content
- **Title**: Does it accurately represent the contents of the paper?
- **Abstract**: Is it an accurate and fair summary of the article? Are statistical conclusions represented accurately? Are speculations erroneously presented as conclusions?
- **Introduction**: Is the problem clearly stated? Does it present a narrative that is easy to follow and supported by previous research? Does it lead you logically to the hypotheses? Are the hypotheses clearly and fairly stated? Is the general method clearly stated?
- **Method**: Is the sample size justified? Can you clearly understand how the data were collected? Does the design make sense given the questions the paper is asking? Could you replicate the method given the write-up? Did the authors deal with attrition adequately? Were sufficient measures taken to control sources of bias and confounds? Are there any possible confounds not accounted for?
- **Results**: Are these logically laid out? Do they follow from the methods? Are statistics appropriate? Are any errors made? Are all comparisons reported? Are outliers adequately justified? Are planned versus exploratory analyses clearly delineated?
- **Figures:** Are the figures adequately explained? Do they help the reader understand the paper? Are figures misleading in any way (e.g. axes with different scales to exaggerate effects, etc.)?
- **Conclusions/Discussion**: Do their results support their interpretation and their broader claims? Are the findings adequately explained with respect to previous work? Do the authors account for any differences between their work and previous work? Is the theoretical contribution of the paper adequately described? Are there confounds that prevent the authors from being able to draw the conclusions they do? Are limitations acknowledged?
- **References**: Do they cite the appropriate papers? Are citations used appropriately?

Domain 4: Scientific Best Practices
- Any evidence of HARKing, p-hacking, or other questionable research practices?
- Are planned/exploratory analyses clearly marked?
- Do any of the results appear to rely on arbitrary analytic decisions?
- Are decisions regarding data collection or analyses adequately justified and compelling?
- Have the authors preregistered their study, made data available (or have a plan to do so), and otherwise been transparent in their decision-making?
- Do the authors adequately address the external validity of their study? Do the authors acknowledge limitations on generalizability (e.g. beyond the population studied, the method used, etc.)?

Domain 5: Language
- Typos, major spelling errors
    - No need to correct, just bring these to the attention of the editor
- **DO NOT** worry about things like grammar

Step 2
Write the review

A manuscript review is in the form of a letter to the editor about the paper in question. Use third-person language about the paper (e.g. The authors did X, I would suggest the authors include Y).

I would suggest writing your review so that it is easy for the authors to respond to in-line. Try to use bullets rather than massive blocks of text, when possible.

Your goal should be to critique with an eye to improving the work. Remember the people on the other end of this review! Think about what kind of a review YOU would want to receive.

Here are the basic things to include:

1. Brief summary of the paper (2-3 sentences)
2. Positive comments (what did they do right?)
3. Major issues
    a. These include issues that require a major revision, pertaining to Ethics, Originality, or Content, and Scientific Best Practices.
    b. Whether and how you think these issues could be addressed (e.g. by the addition of a study or more statistics, additional literature review, etc.)
4. Minor issues
    a. These include issues that require a minor revision (e.g. minor statistical or reference issues (e.g. failure to report effect size, failure to cite one paper).
    b. Typos, etc.

Depending on the rules of the journal, you may also be asked to provide a recommendation. These are not typically seen by authors. Recommendations may be:

- Accept as-is (unusual)
- Minor revisions needed (no need for additional review)
- Major revisions needed
- Reject (no amount of revising will make it suitable for publication)

Things to keep in mind as you review

- **Be aware of your own biases**: Most reviews are anonymous, but due to the nature of our fields, few truly are anonymous. Try to give as close to an objective review as possible.
- **Start positive and be constructive.** Don't just tear a paper apart. Remember there are people on the other end of this review, and remember you might be on the other end of a review soon, too!
- **No series of studies can be perfect**. Be careful to notice where more discussion is needed rather than necessarily additional data. Weigh merits of the paper and its ability to spawn additional research.
- If you have a concern about the paper that you do not wish to bring up in the review, you can bring it up with the editor directly through a direct letter or confidential comments on most manuscript review web sites.