



"PEER
REVIEWS
ALLOW US TO
HAVE NEW
EYES."

—JEONGAH
SHIN

“

Peer review is essential to upholding the integrity of scientific research. Peer review is not only a check and balance of scientific research but also an evaluation of scientific communication.


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—Yelena Pacheco



On Peer Review

FROM
WIPP 7001
GRAD STUDENTS,
SPRING 2021



Carlo Francisco Adajar Mathematics

A while back, I saw a thread on Twitter about nasty feedback. We had reviewers who seemed to delight in telling an author that their paper is worthless and that they do not belong in their field. Sadly, this is not an uncommon phenomenon: “Reviewer 2,” the cantankerous second reviewer, tasked with catching what the first reviewer may have let slip past, is one of the most infamous villains of academia. There are blogs dedicated to compiling the worst comments reviewers have left on papers. It often happens that these mean reviewers are higher up on the academic ladder. In a sense, meanness is a means of signaling expertise and seniority. It seems that to make it in academia, you have to be mean.

Don't believe this. Needlessly hostile criticism helps no one and harms the scientific community. While we must maintain scientific rigor and value clarity in communication, we don't want to lose valuable knowledge hidden in a rough paper by discouraging the author from revising their work. More importantly, even if the paper is itself of no value, we do not wish to turn away a growing, learning scientist with vicious, destructive criticisms. This is especially true with women and people of color—while peer review is usually anonymous/double blind, overzealous attacks on tone or nonstandard usage of English target them disproportionately, adding to the violence of a system that is already rigged against them. In this way, mean-spirited peer review shrinks and stagnates the entire scientific community, to its detriment

Anonymous Plant Biology

Peer reviewing is an important tool in writing and allows for peers to add recommendations or alterations due to a different perspective. Personally, having my work reviewed by peers has enabled me to see if my own writing makes sense when another person is reading it, and through this it has shown me how to write in a way that others can thoroughly understand. Qualities of good peer review include excellent communication skills, analytical skills, and positive feedback. Integrating peer feedback would increase the quality of my own writing by obtaining suggestions on how to make my writing better and more comprehensible. Ways to implement peer feedback would be asking my friends in my classes if they could read over my writing assignments, or even asking a friend who is in a different field to look over my work. Through reviewing other people's work, I have learned how to become a better writer by learning new vocabulary and structure that I could implement in my own writing.

Rosan Adhikari Entomology

Peer review is a process by which people who possess knowledge in a particular field give positive feedback on that field's research work. Reviewing and having your work reviewed is a powerful learning tool that enhances both engagement and performance. As peer reviewers, we should follow a constructive and feedforward approach and encourage people to improve their work. Sometimes good peer review provides insights into the alternative approach for the researcher. As a science student, peer review is crucial for communicating with people quality research outcomes.

Carlo—

**"NEEDLESSLY HOSTILE
CRITICISM HELPS NO
ONE AND HARMS THE
SCIENTIFIC
COMMUNITY."**

Ethan Baldwin

Plant Biology

Peer review is the backbone that supports the integrity of the scientific process, ensuring that only high-quality studies are published and providing authors feedback from minds fresh to the project. Peer review requires intentional preparation and forethought to effectively fill this role. Reviewers must ask themselves how to provide feedback that is clear and focused. Effective feedback highlights strong evidence and clear presentation of findings while suggesting changes that would strengthen the main arguments without taking a red pen to every sentence. Authors should prepare strategies to address these suggested changes to their submitted manuscript and evaluate whether or not the feedback could be applied to future work.

Sabrina A. Barbos

Entomology

Writing is the foundation of science. It is required for cataloging knowledge, collaboration, and reproducibility among other benefits. Because of their importance scientific articles must be reviewed in order to ensure they properly complete these tasks. Peer reviewing is the most effective way to evaluate articles for clarity, precision in language, and validity of the science. Reviewers are a major part of the scientific process and should be honored and proud of the part they have in the work conducted by other scientists. As writers and reviewers, remember the value of a peer review.

Ethan—

"EFFECTIVE FEEDBACK HIGHLIGHTS STRONG EVIDENCE AND CLEAR PRESENTATION OF FINDINGS WHILE SUGGESTING CHANGES THAT WOULD STRENGTHEN THE MAIN ARGUMENTS WITHOUT TAKING A RED PEN TO EVERY SENTENCE."

William Antoniades

Pharmaceutical and Biomedical Sciences

The process of peer-review is essential to maintaining the credibility of scientific research. An unbiased opinion of an experienced writer is incredibly valuable to the researcher and, eventually, to the reader. As opposed to other fields of study, published work in the sciences is often viewed as fact, and to uphold the trust in science literature, peer-review is an important quality control check. It is the reviewer's job to evaluate if a claim is backed by evidence. They need to critically evaluate the writer's scientific reasoning and determine its value.

Anonymous

Genetics

The peer review process is critical to the development of scientific facts and theories. Virtually all scientific facts became so after being published in a peer-reviewed journal. This means that at its core, science is a collaborative effort where we as scientists ask questions, generate data in an effort to answer those questions, and then participate in a group discussion of the new knowledge we generated. The peer review process is important because it ensures that not only are our questions important and contribute.

Rachel –

EVEN WHEN YOU ARE AN EXPERT IN YOUR FIELD, YOU DON'T KNOW WHAT YOU DON'T KNOW!

Rachel Dockman

Microbiology

Even when you are an expert in your field, you don't know what you don't know! Everything may seem so clear to you, like how your Physics professor thinks quantum mechanics are obvious, but peer review untangles what actually is obvious from what needs clarification; sometimes, peer review points out claims that are outright incorrect. Remember, science does not exist in a vacuum. If no one understands your discoveries (or if they are wrong), how will science progress? Peer review is nerve-racking, but ultimately allows your work to reach the widest audience possible while ensuring accuracy and accountability in research

Anonymous

Plant Biology

I think peer-review is indispensable for scientific communication. Ranging from writing tasks from weekly progress report to a journal article publication, peer review can help inspect the experimental rationale and design and refine the writing to make the product correct and clear. To me, the peer-review process is almost like the self-regulation mechanism for some quality control within certain research field. My strategy of reviewing others' writing drafts is to quickly read through the whole document focusing on the idea flow and the format before diving into the sentence/paragraph-level details to know what to expect and to feedback the author efficiently but not to overwhelm them. As a graduate student with English as a second language, I often need peer feedback on my grammar and wordings to make my work more readable, and the concept flows as well. I like to absorb feedbacks from multiple sources to identify the most severe problem and fix it one after another at a time.

Jack Harth

Neuroscience

Peer review is an essential part of the scientific process, but it can also be extremely intimidating, as your work is scrutinized by your peers. It is helpful to consider peer review as a collaboration, in which the common goal is a stronger, more refined product. Too often, the review process is approached as providing criticism to another's work. Instead, the process should provide an opportunity for teamwork and growth for both the reviewer and the reviewee. In order to foster healthy collaboration, all participants in the peer review must engage actively and respectfully.

June Haeun Kim

Biochemistry and Molecular Biology

As scientists and as storytellers, we have an obligation to communicate our work so that others can understand and benefit from our findings. This can be challenging. Peer-reviewing is an opportunity to polish your writing as thorough and comprehensible as possible. In this process, the reviewer should offer a broad summary along with 1-2 specific suggestions and focus on the goal of helping the writer communicate to a wider audience. Gaps in communications are best resolved through collaborative effort, and sharing your own writing for peer-reviewed feedback is one of the easiest ways to invite others into your scientific journey.

Roy Kucuk

Entomology

While one may feel the urge to surrender to merely comparing blueprints, a good peer reviewer and a good champion of the whole process remains cognizant of that which fires it. Critical focus should always highlight the ethos of the adventurer—what one seeks (hypotheses), and how they chart their course (methodology) and what they make of the new territory they've reached. This manner of engagement with the essentially vanguard-gazing processes we're expected to judge acts as a nice built-in treatment or inherent virtue. It not only ensures quality research but also fights off stagnation and bureaucratic lockstep.

Jack—

"IT IS HELPFUL TO CONSIDER PEER REVIEW AS A COLLABORATION, IN WHICH THE COMMON GOAL IS A STRONGER, MORE REFINED PRODUCT."

Anonymous

Infectious Diseases

Peer review is one of the most misunderstood aspects of a student's submission process. Many think of peer review as "something to just get done with," resulting in not giving their best effort when reviewing their peer's work. They will give a simple look over, maybe address a few grammatical errors, and move on. What only few realize, however, is that peer review is equally as beneficial to the reviewer. Taking the time to critique one's work not only subconsciously helps you critique your own work, but helps you realize ideas that you can integrate into your own work.

Maddy—

"WITH CLEAR, SUCCINCT FEEDBACK FROM THE REVIEWER AND AN OPEN, EAGER MINDSET FROM THE WRITER, THERE ARE NO LIMITS TO THE POTENTIAL IMPROVEMENT."

Anonymous

Epidemiology

Peer Review is meant to challenge you. By being a reviewer, you see materials and experiments that you might not be very familiar with, or results you disagree with. By having your work peer-reviewed, you benefit from knowledge and perspectives of other scientists that can highlight gaps in your work. Peer review is not meant to be a barrier, rather it should be used as a resource to develop high quality research. Science is always changing, theories developing and being debunked. This process challenges both the author and the reviewer to objectively evaluate the quality of the evidence.

Maddy Long

Genetics

The art of peer-review aids in the development of informative and cohesive writing, making it an important tool within the field of science and beyond. I believe that what makes the art of peer-review so effective is the flexibility of its application. On a large scale, the peer-review technique is applied by academic journals to assist researchers in fine-tuning their papers prior to publication. On a smaller scale, professors may utilize the peer-review process during the span of a class period, instructing students to edit and discuss each other's work. It is important to note that peer-review will only be as effective as the reviewer and the writer allow it to be. With clear, succinct feedback from the reviewer and an open, eager mindset from the writer, there are no limits to the potential improvement.

Yelena Pacheco

Plant Biology

Peer review is essential to upholding the integrity of scientific research. Peer review is not only a check and balance of scientific research but also an evaluation of scientific communication. As a peer reviewer I appreciate the opportunity I have not only to learn about new science but to also look at the scientific writing process from a different perspective. A good peer review will help the author step back and look at the 'big picture' of their science. When incorporating feedback, I try to focus on the comments related to that 'big picture.'

Anonymous—

**QUALITY PEER REVIEW IS OBJECTIVE,
CONTEXTUALIZED, AND SHOULD BE
CONSTRUCTIVE**

Jeongah Shin

Department of Textiles,
Merchandising, and Interiors

Peer reviews allow us to have new eyes. The more time an author spends on paper, the more he or she gets used to the writing and can't think critically. Students need fresh eyes to see if the main idea they want to talk about is well organized within the consistent flow. I think a good peer review assists the writer to solve the problem by evoking questions of whether the point is right or not. The important thing is to exclude emotions and give constructive feedback on the writing. In scientific writing, peer-review is a very crucial process where authors could re-visit their works from the audience's perspective, before the paper meets the actual readers

Anonymous

Division of Biosciences

Many instructors tell students "it's time for peer review" only to be met with blank stares. In the field of biological sciences, however, peer-review is an important tool that has existed for years to allow for a sort of checks and balances in the field. If a new researcher wants to build his repertoire and gain clout within the industry, wouldn't it make sense for him to consult established researchers in his field to guide his subject matter and publications? Quality peer review is objective, contextualized, and should be constructive in my opinion.

Anonymous

Epidemiology

Peer review is considered a necessary process to ensure the quality of academic scientific publications. No one is able to write a perfect scientific article/report in the first draft. Article reviewed by who are in the same field is important. Providing valuable feedback from peers can help researchers revise and improve their paper.