



How to revise and resubmit a journal paper

Donald Wunsch

So, you've submitted your paper to your ideal target journal, waited the requisite period, and one day, your inbox contains an e-mail from the publication's editor-in-chief. It's not the hoped-for acceptance, but a "Revise and Resubmit." (One of my favorite journals has switched to the more-discouraging, "Reject and Resubmit," but this is actually the same thing.)

Revise and resubmit is perhaps the most important review decision an author can receive, for these reviews determine the author's most crucial decisions. Outright rejection requires the author to start over, perhaps with advice from a trusted mentor. Accepted papers are usually straightforward, but resubmissions depend on how well the author responds. What should the author do next? Fortunately, a few simple steps can make a tremendous difference to a hopeful author.

Before reading the rest of the editor's message, take a deep breath and realize that this is normal. The majority of published papers receive this message during the first pass.

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And brace yourself; the reviews you are about to read will likely contain some harsh criticisms. At least they may seem that way to you. It's hard to learn that your masterpiece was not lavished with praise, and anonymity does not lend itself to gentle wording.

So, you're reading this article to get some advice about how to respond in such a situation. Later, I will provide more advice about digesting the editor's letter, but first it's time for a flashback. The ideal time to begin preparing your response to a "Revise and Resubmit" verdict is right after submitting the manuscript.

This may seem counterintuitive if not downright shocking. Shouldn't

one submit only after a paper is optimally polished and in tip-top condition? The majority of editors would probably exhort you to think exactly this way. And indeed, you should never send out a paper that you wouldn't be proud to see in print as is. For one thing, there's a (very) small probability that it will be accepted as is. Also, it is unfair to ask reviewers to volunteer their time for a work you haven't even optimized yourself.

However, publishing, like any other open-ended task, will expand to consume all the time and resources you are willing to give it. At some point, you have to put a wrap on the paper and submit it. But, nobody knows the paper better than you. What are the chinks in the armor that you fear reviewers will point out? If you're like most researchers, you are your own harshest critic. Therefore, as you move on to your next project, an excellent back-burner endeavor is to continue with a few tweaks, experiments, and polishes to your already-submitted paper. In the unlikely event that it gets accepted as is, those tweaks can become the start of a follow-up paper. In all likelihood, however, at least one reviewer will come up with comments

that relate to this extra work you performed, and you will be ready.

The reviews are in

Ready or not, you're now reading the reviews. You might agree with part of what you see, some comments may seem downright insulting, and others may appear idiotic. Resist the urge to inquire from what murky backwater the editor pulled "Reviewer #2." Remember, you are far from objective about these comments. You should assume that the comments and questions somehow are more reasonable than they appear to you. Therefore, instead of arguing, reach for these three strategies.

Start with suggested corrections

Ignore the "insults" and go straight to the corrections the reviewer suggested. Whatever negative adjective gets applied to your work is irrelevant. What is essential is that changes to the paper are necessary to alleviate or remove the reviewer's concern. This is why it is mandatory to restate the reviewer's concerns in your own words. Choose words that accurately reflect the issues raised by the reviewer but that also remove any pejorative connotations. For example, if the reviewer says, "The paper's results are nonsense, derivative, and unsupported by the data," you would respond, "Reviewer #2 required further substantiation of results and the novelty of the approach. We are responding with additional data sets and better analysis and discussion of the previously submitted data sets." It is essential to switch to more neutral language while showing that you clearly understand the context of the reviewer's concern.

Capitulation

The best way to turn around a reviewer's opinion is to do whatever the reviewer has asked. You can turn a foe to an ally pretty quickly through this process. The reviewer gets to take some pride in making recommendations that were taken seriously, understood, and followed.

The editor gets some comfort in the idea that the review process worked. And you get published! Capitulation can take several forms:

1) Just delete the part the reviewer doesn't like. Don't overlook this option. I once had a student come to me despondent because one reviewer hated the best part of his paper. I told him he had hit the jackpot. There were enough

results for two papers. We deleted the part that the reviewer hated. The part he liked was still enough, and the reviewer was happy. None of the other reviewers objected. The deleted part was later accepted to an equally good, perhaps even better, journal, almost as is. Most of the time, deletion isn't as dramatic, amounting to just a sentence or two. But if it doesn't seriously hurt your point, consider just removing the offending statement.

2) Add more reasoning or data to address the reviewer's concern. This can be the most work, but it is very worthwhile if the additional material will conclusively settle the issue at hand.

3) Explain the material better. This is particularly important for those "idiotic" reviews. No matter how dunderheaded you think a reviewer comment is, the journal will go to thousands of readers. At least a few of them will be even more dunderheaded than your reviewer. So, take the blame for all misunderstandings, even the most egregious. You may be more at fault than you think, and you are far more likely to get the paper accepted if you adopt this attitude, even if you feel the opposite. Something along the lines of, "We were unclear about the point in Section III to which the reviewer objected. We have clarified that we actually meant X,

not Y, by improving the explanation in Section III, as well as in the introduction."

4) Add appropriate citation(s). This is particularly useful if the contested issue has already been settled in another publication. It is even more helpful if those citations come from the same journal. Of course, you would have done your best to come up with

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these in the first place, but the reviewers' comments and the intervening time provides opportunities to focus your search and find more material.

5) Weaken or adjust your claims. If you said something that a reviewer contends with, it might be possible to assuage the problem by qualifying the statement. This could take the form of narrowing a claim, such as claiming "the lowest false alarm rate among the considered approaches on these data sets" instead of "it outperforms all other algorithms." Or it might be necessary to concede a point. Perhaps your algorithm beats all but one other approach but is faster than the remaining approach, for example. You don't want to weaken a claim more than necessary, but you might need to scale back some claim if the reviewer's criticism is justified. And, a paper with more modest claims is still a paper. Understatement is often an expectation of the genre when it comes to research publications. Time will prove the value of your contribution.

6) Correct outright errors. This happens most often with spelling and grammar. You should have a professional editor check all important papers before submission, even if you think you write really well. The service is not terribly expensive, and editors will

invariably find things you overlooked. But no matter how carefully you and others have checked your submission, reviewers will find something, perhaps in the language, a technical issue, or a problem with a figure. Many reviewers never have and never will let an article get by without

more fully covered in some other publication you cite or move the explanation to an appendix.) The point is that in this letter, you make your case that you've done what they wanted, and that the paper is now ready for publication.

Another issue in the response letter is that you can use it to

that the paper is now much better and suitable for publication. Remember to reword each criticism in neutral but accurate language in your synopsis.

Timeliness is essential. Competitors might publish ahead of you if you don't move quickly. Also, most journals will expect that any response must come within a reasonable time. It is also easier for editors, associate editors, and reviewers to recall the main themes if you respond quickly. A timely response definitely improves your chances.

One last remark: Show this article to your advisor, mentor, or senior collaborator to see with which points he or she agrees. Your mentor is your most important ally in this process, so be sure to leverage his or her experience. You will probably want several iterations with your mentor in each stage of the publication process.

The majority of "Revise and Resubmit" recommendations can be turned into acceptances by following these steps. Good luck in getting published!

About the author

Donald Wunsch (dwunsch@mst.edu) is the Mary K. Finley Missouri Distinguished Professor at Missouri University of Science and Technology. He earned his B.S. degree in applied mathematics from the University of New Mexico, his M.S. degree in applied mathematics from the University of Washington, his M.B.A. degree from Washington University in St. Louis, Missouri, and his Ph.D. degree in electrical engineering from the University of Washington. His previous employers include Texas Tech University, Boeing, Rockwell International, and International Laser Systems. He is an IEEE Fellow.



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marking some correction. This is what the review process is for, so just do it.

Reap the benefits of progress

Benefit from any progress you have made in the meantime. If you followed the advice in this article and kept some work moving along in the area of your paper, there's a good chance that some of it is at least a bit relevant to the reviewers' remarks. Now is the time to work it in there. If you make changes that weren't flagged by any reviewer, you can still remark on them in your response letter.

Speaking of the response letter, it is a critical component of getting accepted. It should present an organized summary of how you have addressed every issue raised by every reviewer and where those changes can be found in the paper. You should make a change to the paper to address each reviewer criticism, and this is the place to point it out. This will also help you deal with any conflicting reviews. For example, if one reviewer wants an additional explanation of an issue and the other one wants to cut the discussion of the same issue, you should explain how you resolve these points. (You could, for example, explain that the issue is

leverage the opinion(s) of the favorable review(s). You will have at least one reviewer more favorably inclined than the others—otherwise you would have received an outright acceptance or rejection. You can include a statement that you agree with the points made by this reviewer. Unlike the initial review, in the next cycle, they are likely to be able to see the other reviewer remarks. Your goal is not to pit them against each other but to show that you have strengthened the paper considerably. The response is seldom a rebuttal but is instead your opportunity to show that you've learned from this process and reflected those lessons in the paper. The response also can put you in the driver's seat, allowing you to weave the reviews into a narrative of your own design. You can't paint a different picture of the reviews, but you can put them into a frame of your choosing.

The letter should be polite and take what may be your only opportunity to thank the anonymous, volunteer reviewers for helping you significantly improve the quality of the paper. It should conclude that you've done everything asked and that you believe that the editor and reviewers will share your opinion