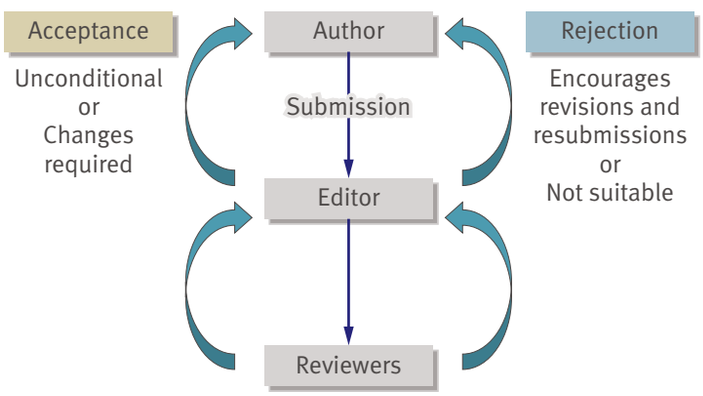
Peer review: it's not personal

Peer review is central to scientific publication but can sometimes be disheartening. **Sundip D Udani** and colleagues explain how it works



The peer review process

The romance of research captured our imagination, and we took up the challenge. We identified a topic, and we found collaborators and support, funding, and time for the research. Finally, we analysed the results and crafted a research paper into shape. The process was long, with rewrites, rewording, and reconsideration, which took much time and effort. Even the abstract was difficult. Hopefully this article gives a measured view of the next part of the process—peer review (see figure).

A common scenario

This time it wasn't just a piece of coursework. The work had been submitted to a real journal for publishing and the metaphorical envelope sealed with a final click. Was that an ectopic heartbeat? By the time the pulse had settled the work had been delivered along the digital superhighway to the journal's server. The final version was waiting to be downloaded by the editor.

You were again lost to the demands of your time by patients, the on-call rota, lectures, and the realities of day to day life. Just as the paper has been relegated to the second division of worries in the "out of sight and out of mind" league an innocuous email arrived.

Box 1: Types of reviewers' comments

Addition of information—Reviewers may comment on missing information that would make the study design and analysis clearer. They may also help editors by highlighting areas that might be too detailed—for example, if the authors have over interpreted their data or have strayed well beyond their results in the discussion section.

General comments—This may include comments on the originality of the research and where it fits into current scientific debate. Does it add an important message? Reviewers' may also comment on the soundness of your research design and method of analysis.

Comments on graphs and figures—These might involve improving your caption to enhance understanding or about changing the physical attributes such as the size or positioning.

Comments on grammar—Certain sections of your text may contain grammatical errors—for example, a run on sentence or inappropriate punctuation. Rewording the sentence and correcting punctuation can usually easily amend these.

Comment on references—Reviewers often give helpful remarks on the references you cite. They may point out that the authors have misinterpreted what a reference actually says or shows. They may also highlight important and relevant references you may have missed out. This is part of the reviewer's job of advising the editor of where this piece of research sits in the context of what is already known.

Without a thought and with a light fingered click you stare, aghast, at the response from the editor. It takes sometime to understand what has happened. Something seems to have gone wrong. There seem to be endless pages of criticism. You're sure you can feel a headache starting, and it feels a little hot. You read the email again still unsure of whether the journal wants to publish the article. Finally, with a sinking feeling, a memory of all the work and almost in a blind panic you forward it to one of the other authors. Hopefully they'll know what to do.

This scenario is common, and often the first response to the peer review process is panic. But remember that it's not personal. The reviews may be highly considered and well crafted, but they can also be just a small paragraph with a few scathing words that somehow cut to the core. Had we really missed a vital point? Had the reader missed the point? Did these corrections really need doing? Why has this all gone so horribly wrong?

Despite that initial panic when you see your first example of peer review, it's vital that you take a measured and controlled view of the process. Remember, sending the paper in is just the first part of the process. Take a minute to empathise with the editorial team. They may have a stack of papers submitted that month. There may be a limit to the number of papers they can publish. It's not unusual for a journal editor to have many times the submissions available for the space. They have to remember their readers and make sure the work is of interest and above all they want the best quality work published in their journal. Just imagine the efforts made by the reviewer and the work required to produce a good review and mostly it is carried out voluntarily.

So the first thing to do is to read the response from the editor carefully. Have they rejected the paper, or have they asked you to resubmit and tackle the questions from the reviewers? If they rejected the article, what was the reason? Did you submit to the right journal?

If there are comments from the reviewers then the next thing to do is carefully read what they said. Are the comments valid? Most likely. The reviewers are acting in good faith, sometimes they wish to share their knowledge and skills (box 1).

Useful websites

- *BMJ* resources for authors (http://resources.bmj.com/authors)
- *BMJ* peer review topic collection (http://bmj.com/cgi/collection/peer_review)
- Gitanjali B. Peer review: process, perspectives and the path ahead. *J Postgrad Med* 2001;47:210-3. www.jpgmonline.com/article.asp?issn=0022-3859;year=2001;volume=47;issue=3;spage=210;epage=4;aulast=Gitanjali
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Far from flawed

Remember that peer review is not perfect. Surprisingly few studies have looked at the usefulness of peer review. However, it has been used for more than 200 years, and many people consider it the hallmark of good science. Editors need peer review because it helps them select the best papers for their journal. Because editors are not experts in everything they need the help of others. The best editors use reviewers not to make decisions for them but to identify flaws in a hypothesis or even basic research design. Editors may then prompt the author for changes or further work.

Slowly work through each comment and amend the text to take account of the reviewers' points. It is often unnecessary to go back and redo the research unless you have fundamentally gone wrong—this can happen, however. Remember that even with the best education and the most confident team, something can always be missed. This is why peer review is so important. Fundamentally, the process is about a community of researchers and an agreed result that stands up to scrutiny. Importantly, the reviewer's comments can be used to hone the report into the final work that will be published once the process is complete and an email of acceptance received. Have a little confidence.

Reviewers are trying to be helpful, and their remarks are usually constructive. But sometimes they may miss the point. If you disagree with a point that a reviewer has made then you can politely argue your case to the editor in a letter. Hopefully, from this dialogue with the editor an agreement can be reached.

The peer review process is often not discussed, and without prior knowledge it can be upsetting. It can all seem personal. However, stay focused and make the most of the editors' and the reviewers' comments and skills. After all the effort and if the work is good you will see your work in print. Not only will you feel a sense of success but you will understand exactly how much effort goes into peer review to ensure the quality of work and the journal's content is of the highest level.

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