Rachel E. Scherr February 14, 2014

Most reviews are negative. Don't you find this to be true? I think this is partly because a lot of work that gets put out into the world is not as good as it needs to be yet (so it deserves a negative review), and partly because the anonymity and thanklessness of the review process brings out people's mean and crabby side. I get a lot of negative reviews, I think for both reasons, and probably other reasons too. I have gotten a lot more thick-skinned over the years. But the bad ones still sting. For example, one reviewer said to me, "My primary dissatisfaction with this 'study' is that the methodology is highly flawed." Yes, the word "study" was in scare quotes. Ouch.

I have written harsh reviews myself. I'm much more careful these days, but I still have to watch out. Papers that I think are bad can be stimulating, because they help me articulate my own values. That's exciting for me, and I sometimes get sucked into expressing my values rather than getting into the world of the paper, which I think is my real responsibility as a reviewer. In addition to just getting excited (about my own thoughts), I think I used to feel angry at a bad paper (or its author), because their assertion that their work was good when I thought it was lousy felt like an assault on my values. And I think I felt righteous, because I saw myself as protecting the field from being polluted by junk. In general, this mindset suggests an image of the field as fragile and under attack, and myself as its protector. This is not where I'd like to be. I'd rather think of the field as a collection of people who are each doing work that has good potential, and myself as part of a process that helps their work reach its potential.

I do not think that I should be lowering my standards for the sake of being nice. I still give a lot of negative reviews, in the sense that I send a paper back with the strong message that it is has a ways to go to be ready for publication. My goal is not to give more positive reviews, but to give negative reviews that have no sting. I think I can be honest and forthright and have high intellectual standards without inflicting pain. I also think that when I do this, my reviews are more effective, in the sense that they are more likely to help the authors improve their work. When I had a paper rejected from the Journal of the Learning Sciences, the reviews were so deeply engaged with my claims and my data, it was frankly an honor, even though they eviscerated me. And I learned a ton from what they said.

My model for a good negative review is the kind of conversation you might have with a friend in which the friend is expressing something to you, and you see through to their unexpressed meaning well enough to say, "I don't think what you said is really it. I think what is really going on for you is X." And maybe they knew X already and maybe they didn't; and maybe you are not right about their X. But whatever the case may be, there is a good chance of it being a pleasant conversation, because it feels good to be seen even though there is vulnerability when you are seen maybe a little more clearly than you had seen yourself. No one wants to be saying something that isn't what they wanted to say, so if you help them figure what they really mean, everyone can feel a sense of satisfaction and accomplishment. This is what I hope my negative reviews can be like.

Below are some steps that I think help me achieve this. My strategy is very much influenced by the fact that I do not have all day to write a review; I try to keep my active time down to an hour or so for a short paper and a couple hours for a full paper. It helps if I take breaks to let my thoughts turn over in my mind. The higher-quality the paper, the more time I spend on it, which I think is as it should be. Often at that point I'm reading and thinking for my own edification as well as for the sake of the review process (especially when the editors have done a good job of sending me papers that are related to my own work).

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#### Strategies for evaluating a paper

First, I identify the main research questions the paper is asking and/or the claim that the paper is making.

This should take me only a few minutes of good-faith effort; ideally, they are in the title, the abstract, the introduction, and the conclusion. If I have any trouble at all finding these, I stop here. It's not possible for me to critique someone's argument or the quality of their data or whatever if I can't tell what the person is trying to show.

That said, there are usually plenty of clues in the paper about what the questions and claims are, or ought to be, even if the author hasn't spelled them out for me. My next step is to spend some time musing on the title, abstract, etc. and scanning the paper to see what they seem to be trying to say. I use my spidey sense, especially with authors I know. I make a couple of genuine guesses or suggestions as to what I think their thesis might be or how they might express it more clearly, and I go on to composing my written review (see below). For most early drafts, and quite a few submitted papers, this is as far as it's appropriate to go.

Once I've identified the research questions and claims, I evaluate their strength.

In my opinion, a good research question is one that (1) is answerable, and (2) could have more than one reasonable answer. A good claim, similarly, is one that someone could disagree with; otherwise there's not much point in publishing a paper about it. A question like "What features of [instructional method] cause student learning?" is better than "How do students engage in group work?" A claim like "Gestures can convey scientific ideas that students have not yet articulated" is better than "This theory allows an in-depth analysis of learners' activities."

Next I skim through the paper and see how everything that's in it pertains to the argument that's being made.

This is the first time I do anything that could be called "reading the paper." This is on purpose, because now I know what I am looking for while I am reading, which saves me a lot of time. However, I am still not reading sentence by sentence — I'm breezing through. Hopefully, the author will have made this easy for me by dividing the paper into well-named sections that outline what's being presented.

At this point, if the paper has made it this far, I have spent about half an hour reviewing. Honestly, less than half of the papers I read make it to this level.

Only now do I actually read for substance.

As in: Does the data or argument that's presented address the main point of the paper convincingly? Has the author thought of reasonable counter-arguments and responded to them? Is the whole thing placed in a context that highlights its importance and impact?

Finally, if the paper meets those criteria, I might actually get down to the writing level.

Does each paragraph address an identifiable point? Do the sentences make sense? Is it a good read? I used to start reading a paper for this stuff right away, and got bogged down in writing cleanup before I had really understood what the paper was even about. This is

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not how to best serve the authors or journal editors. My opinion is that copyediting is not a reviewer's job at all: it takes too much time and is not why I was asked to do the review. Instead of copyediting, I try to observe general features of the writing, positive and negative. For example, "You tend to write really long sentences," or "I got swept up in the inspiring statements from students that illustrate your themes."

### Strategies for writing a review

When writing a review, I first decide how long the review is going to be.

For a PERC paper, one page is plenty. For a full paper, two pages is often enough. While there is no length limit on reviews, I think there is a risk that writing a lot dilutes my main message to the authors (and also just makes the review more work to read).

I always write my reviews in the form of a letter to the first author.

I start it with "Dear Ben," or whoever, and end it with "Sincerely, Rachel." I try to take this format very seriously, in the sense that I imagine myself addressing the person directly, and write something that I could feel good about reading aloud to him or her in person. I literally read it aloud to someone at home so that I can hear what it sounds like. (I am always tempted to skip actually reading it aloud with my voice, but it's vastly more informative to read aloud than to read silently.) When submitting the actual review, you may decide to remove your own name if you feel vulnerable to the judgment of more powerful people in your field, i.e., if you are a graduate student. Either way, I think reviews are more effective when you write them as if you were communicating with the author face to face.

I start my letter with a brief summary of what I understand the paper to be saying, so that the authors can learn whether they have made their point effectively.

This corresponds to the first step of the private part of the review process (identifying the claim). I then state briefly (in one or two sentences) whether I think the piece is ready for publication and why or why not, so that they (and the editors) don't have to search for that elsewhere.

In the rest of my letter, I specify some things that the authors have done well, and some things that I think need improvement.

I start with evaluating the research questions and claims, then go on to the subsequent steps. I try to keep it down to just a few items in each case, because I think that's about as much feedback as a human being can process. Where I am criticizing, I try to offer only constructive criticism: rather than describing what the paper lacks or fails to do, I try to describe what it needs and should do (and, ideally, why it needs that). For example, instead of saying "Procedures are not explained," I might say, "In order to feel clear that you are measuring what you claim to be measuring, I need to know more about your experimental procedures." I think this is what constructive criticism should mean, rather than the idea that you can say whatever nasty thing you want as long as you think it will make the paper better. After writing the review I go over it to check that I am being consistently constructive, because in spite of my best intentions, I still have a tendency to slip into making righteous declarations.

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I usually end by thanking the authors for the opportunity to learn more about their work.

If I didn't learn anything substantive about their work, I might end by telling them that I would like to learn more. I try to only say things that are true.

### **Continuing to improve**

Most of the time in a journal review process I can't know how my review "landed" with the author. For this feedback I have to rely on colleagues who give me things to review openly. Practicing with people you know is very helpful. I am grateful for the opportunities people give me to continue to grow in this area.

For further advice on giving feedback on writing, I highly recommend "Writing with Power" and other books by Peter Elbow.