



Ask Professor Nescio

Editor's Note: Graduate students, early career faculty, and other mathematicians may have professional questions that they are reluctant to pose to colleagues, junior or senior. The *Notices* advice column, "Ask Professor Nescio", is a place to address such queries. Nomen Nescio is the pseudonym of a distinguished mathematician with wide experience in mathematics teaching, research, and service. Letters to Professor Nescio are redacted to eliminate any details which might identify the questioner. They are also edited, in some cases, to recast questions to be of more general interest and so that all questions are first person. Some letters may be edited composites of several submitted questions. Query letters should be sent to notices@math.ou.edu with the phrase "A question for Professor Nescio" in the subject line.

—Andy Magid

Dear Professor Nescio,

I'm wrapping up my Ph.D. thesis and will graduate the end of this semester. My advisor just told me that he thinks we should submit my thesis results as a joint paper. Some of my fellow grad students tell me that this is a good idea because my advisor is so famous, but others say it's a bad idea because it will look like the thesis work is his, not mine. Of course I don't want to make my advisor mad at me at this stage. What should I tell him?

—*Troubled*

Dear Troubled,

Understand that the answer to this question is tricky. A correct answer, if it exists, would depend on a lot of additional information not contained in your query. Even with additional information, I can almost guarantee the solution is not unique and you have to try for a solution that optimizes some set of criteria.

The fact that your advisor is "famous" says that he/she really doesn't need to pad his/her publication list; therefore the motive for putting his/her name on the paper lies elsewhere. (Unless, that is, the advisor is an insecure egomaniac. It's not impossible for a famous person to have an uncontrollable desire to plaster their name everywhere but the walls of a public toilet. If that's the case, grin and bear it. Contesting this is likely to lead to a confrontation.)

If, on the other hand, all is normal, there is a spectrum of responses, and I would ask you some additional questions if we were talking over a glass of wine (or beverage of your choice). The first question is the obvious one: Did your advisor prove any of your theorems? I am going to assume the answer to this one is "No," since the opposite indicates a clear answer. Maybe the next question I would ask you is, "Do you like your advisor?" If that strikes you as an odd question in these circumstances, let me say that I have met mathematicians having the

entire spectrum of feelings about their advisor. If you really like him/her, then I would suggest the two of you sit down and have a friendly conversation where you express your concerns. So let's assume your feelings are somewhere between indifference and dislike and you don't feel comfortable approaching this directly.

Understand that advising a Ph.D. student is hard work. In many cases, even when the thesis is published only by the student, there is a lot of the advisor's energy and creativity in the work. This is hard to measure but is certainly a reason why some advisors want their name on the student's work. Some have even told me that each doctoral student is one less paper in their bibliography. Thus the request is neither unique nor entirely unreasonable. I think the assumption of most mathematicians is that the advisor has helped the student with the dissertation. In some cases that may be an unfair assumption. Having both names on the paper reinforces the perception. Nevertheless understand a fundamental fact. When you talk about the thesis at a conference or in a colloquium, one of two things is going to happen. Either you will dispel that notion and affirm your dominance or equality as a contributor, or you will convince the audience that your advisor's input was even more significant than originally thought. In other words, having a joint paper with your advisor is unlikely to affect the mathematics community's pre-conceived view of the work, and only you can convince them you were the driver.

Incidentally, some of your friends are correct. Given that your advisor is famous, there could be a benefit to shared authorship: people are more likely to look at the paper seriously. Yes, the content will ultimately determine whether the research is judged meritorious, but name recognition draws quick attention.

I have had several doctoral students and have contributed to their theses in different ways—occasionally with a good idea, sometimes just as a

cheerleader, and sometimes as the person who plants a kick in an appropriate place at the appropriate time. Some students probably thought I contributed less than I think I did, some thought the opposite. I generally avoided trying to be a co-author and sometimes I had to insist to the student that they should publish solo. So if your advisor were asking me, I'd advise letting you publish under your name alone.

In summary, this is one of those questions that have many possible correct answers. I hope that even if I haven't answered your question, I have provided a bit of perspective so you can come to your own conclusion.

—*Respectfully,*
Professor N. N.

Dear Professor Nescio,

I'm up for tenure along with three other assistant professors. The tenure committee has asked me, and not the others, to meet with them to talk about my research. All our dossiers are pretty similar. Should I be worried about this "special" treatment?

—*Flummoxed*

Dear Flummoxed,

Professor Nescio is shocked! Shocked that in this day and age a tenure committee does not understand that all candidates must be approached and treated the same. Whether you should be worried or not is unclear, but I cannot imagine a reason for such a singular meeting.

I would hope that after the time you have spent at your university you have made a good friend in the tenured ranks—a mentor, a confidant, a senior researcher in your area who values your work. (If you haven't, this may be a cause for greater concern than your singular treatment.) Approach this person or the department chair and mention this turn of events. If you can do this casually during an encounter in the hallway, all the better since this will seem to say the request is not a major event in your life. (Sometimes a trace of naiveté is useful.) It's likely they will be surprised and can, perhaps, get to the bottom of this matter. In the meantime, agree to the meeting.

Frankly, if you were denied tenure and the others were not, you might have grounds for a lawsuit. I am not a lawyer, but it is my understanding that most of the lawsuits that concern tenure or promotion are based on procedural issues, not the final decision.

—*Respectfully,*
Professor N. N.

Dear Professor Nescio,

I am working on my thesis and have written two papers, which I posted on the arXiv and submitted

for publication. I received an email from a mathematician who said that he and a co-author were working on some of the same problems treated in my papers. Although their work is not available as a preprint, he said they had lectured on this subject and suggested that I acknowledge their work in my papers. They have now sent me a preprint. Do I need to acknowledge their work in my papers?

—*Confused*

Dear Confused,

This is an innocuous request. Strictly speaking, there is no necessity to acknowledge their work, but what will you lose if you do? Since you now have their preprint, a footnote along the following lines might be good: "Upon seeing my paper on the arXiv, Professor X kindly informed me of his work with Professor Y [here cite the preprint] that is related to the present work." This does three things. First it informs the interested reader of additional information on the subject, thus furthering the advance of mathematics. Second it extends a professional courtesy to Professors X and Y, who, given that they are working in your area, may be of assistance in the future. Finally it firmly proclaims that you did not have access to their ideas when you were doing your research. Then you should inform Professor X about what you are doing and urge him/her to post his preprint on the arXiv. It may well be that at some point in the future you too will ask for such a professional courtesy.

So, gentle supplicant, understand, as you begin your voyage across that wide sea of discovery that we call a career, that even though this voyage is fraught with peril, every swell in that sea is not a portent of an approaching storm.

—*Respectfully,*
Professor N. N.

Dear Professor Nescio,

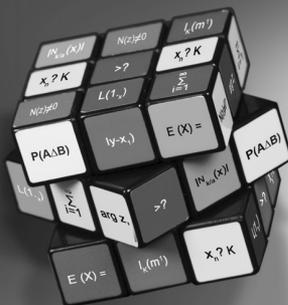
The referee report for a recent paper of mine suggested that I add citations to several papers by a certain author, which are only peripherally related to my paper. I suspect that the author is the referee and that he is simply trying to promote his own work. And yet, in order for the paper to be accepted, I am supposed to revise it in accordance with the referee's comments. How can I handle this situation?

—*Baffled*

Dear Baffled,

Your suspicion sounds realistic and Professor Nescio understands your reluctance to comply. He understands pride, having enough of this trait that some humble folks of a religious bent might accuse him of possessing this one of the seven deadly sins. No one likes to be asked for such a revision that

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seems to be pandering to an anonymous force. Nevertheless let us ask, "How accurate is your use of the word 'peripherally'?" This will be difficult, but try to objectively assess the relation of the references to your work. Then ask, "Does including the reference damage my work?" With the added detachment that time brings, you might be able to address these issues correctly, and the answers to the questions should indicate your response.

Your situation reminds me of a pair of referee reports I received at an early stage of my career. In one of these cases my paper solved a problem raised in another mathematician's work. I included a different proof of one of his results, and I said in the paper that my proof was easier. The referee, who I strongly suspect was the original author, said he didn't see that my proof was easier. Professor Nescio was proud of his proof. Nevertheless, he removed the offending word, kept the proof in his paper, and said, "The following is an alternate proof." This satisfied the referee, though to this day I think my proof was easier.

In the other case I was more forceful because the referee was off base. After having held onto my paper for about 18 months, he returned a report only after I had prompted the editor to prod this negligent mathematician. In the report he said that the proof of my main theorem could be shortened by using a result that appeared in a standard reference. In fact the referenced result was connected to mine only by the fact that they both belonged to the same area of mathematics; there was no connection between the hypotheses and conclusions of the two. Even at this tender age Professor Nescio was quite disturbed by such a lack of professionalism. After making some other, minor changes called for by the referee, I sent the manuscript back to the editor with the following statement in my cover letter. "I fail to see the relevance of the referee's comment number 6." I was notified in about three weeks that the paper was accepted.

I have included these two tales from my past to indicate that there is a wide spectrum of possible responses to a referee's report and to illustrate that such a report need not be slavishly heeded. You are a professional mathematician, and your opinion is valid. Your opinion of your own paper is not objective, but it has merit.

Returning to your situation, it sounds like it is closer to the first of my two experiences. Nevertheless, if you truly find including the references to be offensive, tell the editor that this is the case, state your reasons, and ask for his/her advice and/or intervention. Remember that an editor is not supposed to be a mere paper processor but to exercise judgment.

*—Respectfully,
Professor N. N.*