The following hastily scrawled letter was found one morning slipped under the door at the JREF Blog Department of Education addressed to "Any Skeptical Professor." If you are an educator and would like to contribute to the Swift Blog's series about skepticism and education, please contact Bob Blaskiewicz .

Dear Skeptical Professor,

I am a college student, and recently my biology instructor has said some strange things. The other day, he was talking about "all the toxins in our food and our environment." He also said, "With all the pesticides in our food, it's no wonder cancer is now the number one killer in America, even more than heart disease." He also talked about the professor who was reported to be looking for young woman to surrogate a Neanderthal baby. He apparently didn't know the professor had been misquoted.

I'm at a loss. I don't want to embarrass him in front of the class, but I also hate that he's passing on misinformation. I also have to consider that if I make trouble, there goes my GPA!

Any advice would be greatly appreciated!

Desperate in Detroit

Dear Desperate,

You are right in that confronting your professor in class would be a poor choice. Your professor should have office hours, you can go see him during that time instead. That way there is no pressure on him or you from having other students present during your discussion.

You should pick a topic with which that is easy to demonstrate a misunderstanding without making your professor feel defensive. It is important for you to start on a positive note. State that you found what he said very interesting, and decided to learn more about it (this is a complement). During your investigations, you found out something interesting you thought he would like to know.

My suggestion is to find original sources for the Neanderthal news item. Tell your professor you thought it was so interesting that you decided to read about it in more detail. Show him where the research differed from the media reports. This can become a discussion of poor science reporting and media bias towards sensationalism. Express your surprise at how badly the story was mangled.

Hopefully by starting out this way, your professor will be more receptive when you bring other topics up. Remember – meet him outside of class, start with a positive statement, demonstrate that you are “on his side”, and show him the original sources or peer-reviewed research papers.

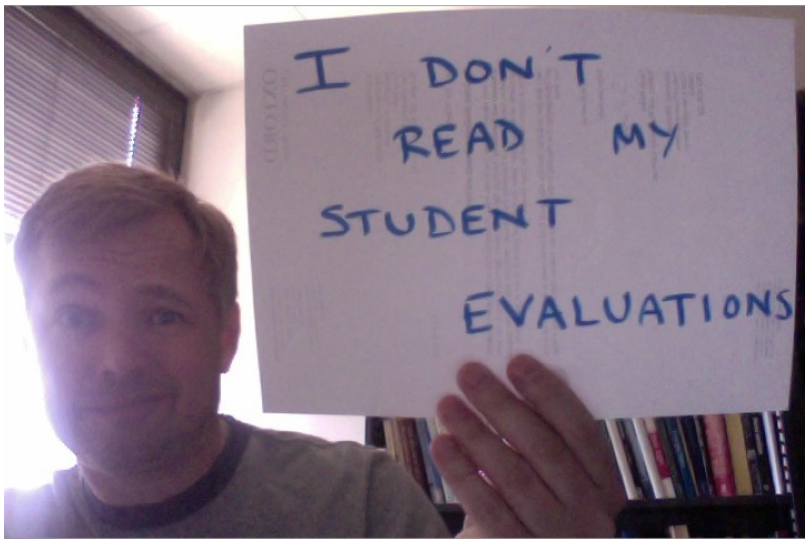
Good luck!

Karen Koy

Dear Desperate,

You have found yourself in a very tricky position, indeed! While the urge to publicly shame your professor may be quite strong, it's probably in your best interest to quell these urges (at least, in

the moment). After-all, he's likely to shame himself in due time!



The photo to the left is from http://philosophershaming.tumblr.com/ For better or for worse, most classroom situations are a one-way street. The professor disseminates knowledge, and the student acts as the receptacle. By voicing your disagreement with what's being professed, you run the risk of making the instructor feel that his credibility is being challenged. He is unlikely to take kindly to this turn of events, and his unease could easily be reflected in your subsequent grade for the course. However, you need not sit idly by while witnessing atrocities of misinformation. In fact, you may even be able to turn the interaction into a net-positive for both parties! Here's how:

While it's not advisable to publicly challenge your professor, teachers do appreciate students who seek extra information and who contribute positive content to classes. So, when your professor makes one of these claims, it's natural in the moment to ask whether he can guide you toward any research supporting his claim. (Spoiler alert: He probably won't be able to.) Be sure that you don't phrase your question in a combative way. If the question is posed from a place of genuine interest, the professor may be able to turn the situation into a "teachable moment" for both himself and the students, rethinking his choice of words.

When it comes to a simple misunderstanding of current events (as in your Neanderthal example) I see no problem with you interjecting that, "I heard that the professor was misquoted..." As a teacher, this is the type of correction that I would be very open to during class.

However, if your goal is to persuade your professor, you're unlikely to have any success through interaction in the classroom. The power structure and emotional context are insurmountable barriers to persuasion. Your best bet at persuading someone like this is via email (assuming, again, that you approach it in a non-combative way). Guadagno and Cialdini (2007; Computers in Human Behavior) showed that attitudinal changes in men are more likely in response to arguments made via email than face-to-face (when there are social barriers to persuasion, as there are in your case). Simply contacting the professor to report that he motivated you to pursue further research and that "there seems to be a controversy here" can be a cathartic exercise for you while also showing the professor that you're an engaged student. Of course, be sure to include a link to relevant research supporting your position. If the email also leads to a change in the professor's attitude, then that's an added bonus!

Sincerely,

Timid in Tempe (Tony Barnhart)
www.anthonybarnhart.com

Dear Desperate,

First off, I sympathize with your situation. Though it's many years ago now, I certainly had my fair share of professors inflicting bizarre beliefs upon their captive audience, and more recently have witnessed or heard students' accounts of colleagues' equally incorrect instruction. One would hope that open dialogue in class would yield a common acceptance of whatever the evidence actually points to, but if you sense that your instructor would not be amenable to such a discussion or would penalize you for dissenting, I wouldn't insist that you sacrifice self-preservation for principle.

Different institutions have different mechanisms and procedures for dealing officially with this sort of thing, so you should probably speak with a counselor, Academic Affairs officer, or ombudsperson, even if you don't intend to file a formal complaint -- just to get a clear sense of what options are available to a student in your situation. Hypothetically.

Of course, you can also talk with other members of the class about the instructor's fallacies and falsehoods, to kill the wrong before it takes root and, perhaps, to come up with ideas for dealing with the situation. But I'm sure your concern is for more than the immediate future.

Having said that, there are some steps you can take to prevent further miseducation from happening. You can start by assembling a collection of documents from reputable sources that provide clear evidence that counters your instructor's claims. Be sure to include website addresses or other publishing information, highlight the salient passages, and preface the entire packet with a typewritten note in which you express your concerns and respectfully request that the instructor educate himself a bit more. This can be done anonymously, and you can leave the packet in your instructor's mailbox or under his office door. Personally, I would also urge the instructor to acknowledge and correct his earlier inaccuracies for the class, and would observe that students' respect for their instructor would only increase were he to model the humility and self-examination required for effective critical thinking.

If the problem continues unabated, you can consider Phase 2. Here you have a choice, which will depend partly on your comfort level and partly on the specifics of your institution. You can bring your concerns directly to the department chairperson, or dean, or whomever you've discovered is the appropriate recipient for such complaints, or you can write your instructor another note informing him that you are about to do this and giving him another chance. Either way, the eventual action would involve submitting a meticulously researched version of the earlier packet to the institutional representative, along with a letter clearly outlining what you consider the problems with and consequences of the instructor's teaching, with as much specific information as you can gather documenting the offending content of that teaching: exact quotes from the instructor, to the best of your ability to recall them; any relevant handouts or other material; and corroboration from other students, should any be willing to cooperate.

Obviously, anonymity is not an option at this stage if you wish to ensure that the institution will investigate your concerns -- and, again, the effect of tenure and similar considerations on an institution's ability or willingness to interfere with an instructor's teaching will vary. At the very least, though, you can (anonymously) inform the chairperson of what's going on so that he or she can decide whether and how to steer the instructor, and the department, in the right direction.

I wish you the very best of luck, and I hope you'll let us know how everything turns out.

Marc David Barnhill

Marc David Barnhill, Karen Koy, and Tony Barhnart are mild-mannered skeptical teachers by day, caped crusading advice columnists by night. Together, they form a sort of Voltron of academic wisdom. The Lion Voltron. Not the stupid car Voltron.