Reflections on teaching oppression
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Regardless of one’s opinions on the current status, and the future of, race and diversity issues in our society, I think most can agree that we need to get better at discussing these things. Given some of the events of the last year, an improved dialogue on diversity and inclusion on our own campus is particularly important. It’s also important to note that, as any quick glance at the 24-hour news stations will show, it isn’t necessarily more conversation that is needed, but better, more sustained, more constructive conversation that is needed. If our classrooms aren’t a place for sustained, constructive dialogue on important issues of our day where growth is sorely needed, then I don’t exactly know what service it is that we provide (especially in a publicly-funded institution). So, I want to spend a short amount of time trying to convince you that you can and should think of your classroom as a place for welcoming discussion on racism, sexism, homophobia, classism, Islamophobia, and any of the other ugly manifestations of oppression your discipline may be well-suited to combat. Given my lack of general training on these matters and space constraints, I’ll stick to some short examples of what I’ve done and why I think such things are worth doing.

In the casual conversations I’ve had with friends and colleagues about making the classroom a forum for diversity issues, two commonalities have emerged. One—faculty are worried about time. They feel that there isn’t enough time to get the “purely intellectual” work done that they need to and to be a place for politically and practically relevant discussions like the ones I’m encouraging. Two—faculty are worried about a lack of expertise. They would like to be able to help improve the multi-cultural dialogue occurring on campus, but they aren’t experts in that—they’re experts in Ancient Greek Philosophy or International Political Economy or Lie Algebras or Cognitive Psychology or the Contrabass. These are worries that I understand, but I think they both stem from a fundamental misconception. They both tacitly assume that facilitating class discussion on race and related issues needs to be something different from the rest of what happens in the course. I have spent the last several years of my research focused on convincing people that this needn’t be the case, though. One simply can stay as intellectual and as close to their expertise as desired and still lead meaningful discussions on oppression.

The easiest way to do this—learn the history of your own discipline. I’m sure it will be a shock to nobody that none of our disciplines have grown up and developed in a vacuum. They are all parts of a larger societal context and are just as susceptible to nasty power structures as any institution. This has led to centuries and centuries of systematic exclusion, discouragement, and, more often than it might seem, verbal and physical abuse of scholars who are not—to be blunt—rich, straight, old, white men. One of the courses I teach here is Excursions in Mathematics. The three most mentioned parts of my class from course evaluations are all pieces of the history of mathematics that deal with these issues of diversity—Hypatia, African-American mathematicians, and Alan Turing. Thus, faculty even have self-interested reasons to care about these issues as students have consistently responded very positively to my efforts to include stories of figures with diverse social identities within the history of the discipline.
Hypatia was a 4th-5th century CE mathematician and philosopher who was head of the Neo-Platonist school at Alexandria in Egypt—the intellectual seat of the Greco-Roman world for hundreds of years at that point. She was also, unfortunately, brutally murdered due to jealousy over her political influence and intellectual abilities. Importantly, discussing her life not only gave us a chance to point out the fact that women in academia can face serious adversity (while drawing attention to the improvement in the extent of that adversity), it also greatly facilitated the academic aims of the course. Hypatia and her father were responsible for the edition of Euclid’s Elements (arguably the single most important work in the history of mathematics) which has survived to this day. Hypatia is also a wonderfully concrete portrayal of the shift from the Ancient to the Medieval world, as she was an Egyptian with Greek and Roman beliefs murdered by a group of Christians just five years after the sack of Rome. Many of us have reasons to discuss these groups and these events—so, why not discuss Hypatia in relation to them and use it as an opportunity to discuss sexism in and through intellectual life? And if you’re discussing the Medieval world, don’t perpetuate the Eurocentric myth of a "dark age". Use it as an opportunity to study the absolutely astonishing contributions of the Islamic Golden Age or the Mayan Classic Period!

As for African-American mathematicians, there are three particular figures I want to point out—Thomas Fuller, Kelly Miller, and Clarence Stephens. Thomas Fuller was a slave who, despite having no educational opportunities, possessed Rainman-like abilities. Fuller was an unbelievably interesting case to discuss not only for drawing attention to what we may have lost out on by forcing a man with such an intellect into horrifying and degrading life conditions, but also as a chance to discuss the extent to which some mathematical abilities may be products of nature and some of nurture. Kelly Miller, on the other hand, was able to secure much more in the way of educational opportunities—being the first African-American to pursue a Ph.D. in mathematics. Unfortunately, he was unable to finish this degree because of an increase in tuition—a fact which lends itself wonderfully to discussions of intersectionality of systems of oppression. Despite this fact, Miller went on to eventually become a professor of both mathematics and sociology—while also being a committed activist with respect to the education and study of black people. Since I am so interested in the combination of intellectual and political activities, Miller is a very nice case study here. 1 Finally, discussing the introduction of African-Americans to higher education in the US gave us a perfect opportunity to discuss Clarence Stephens, one of the first ten black Ph.D.’s in mathematics in the country. Stephens was also an unbelievably successful chair of the math department here at SUNY Potsdam. This was fun to discuss because students get excited about feeling connected to the content of a course—a further reason to investigate diversity with a diverse student body!

I’d imagine that Alan Turing is a person and name that people are much more familiar with. He was the subject of a recent blockbuster—The Imitation Game. Turing received this attention because he was able to use his training as a logician to give us the modern computer, crack the German enigma code, and save perhaps millions of lives during World War II. He also happened to be a homosexual, for which he was prosecuted.

1 Miller is also an interesting case study given that, despite his many admirable efforts, he also held and defended misogynistic views. Thus, he would provide an opportunity to discuss the insufficiently understood phenomenon of victims of oppression occasionally holding oppressive views of their own.
convicted, and sentenced in a way which led to his suicide at the age of just 41. Again, in discussing Turing, we got a chance to discuss challenges that LGBT folks face in the academy, but also the practical utility of abstract and seemingly-detached intellectual work. In this case too, there was a clear chance to point out the great harm to the academy caused by prejudice against oppressed groups. Even if you don't care about the personal harm to members of these groups (which you obviously should!), there's still serious reason to care about prejudice in academia and society at large. If Turing was able to accomplish all he did by the age of 41, imagine what he would have accomplished if he had lived through the other 2/3 of his academic career he would have had with a death of old age.

Better yet, imagine what we might keep the world from losing if we could use our classrooms as a place to include, encourage, and investigate diverse lives, opinions, and perspectives. Again, I think this is something that we can and should be doing in as many classes as possible. And while I think the histories of our disciplines provide one great jumping off point, we can include more rigorous teaching of our disciplines through discussions of oppression and its effects on knowledge in other ways as well. I also teach in the philosophy department, focusing mostly on logic. Put simply, logic studies the processes by which we combine old beliefs (i.e. premises) to come to new beliefs (i.e. conclusions). As it turns out, there are at least three different kinds of processes we use to do this—deduction, induction, and abduction. Here, I want to provide one final example of the kind of teaching I'm encouraging—this time from my PHIL-100 Intro Logic course.

In induction, we argue from premises about a sample which we have experience with to a target with which we have only limited experience. In doing so, we rely upon an assumption that the sample tells us something interesting about the target. Given this assumption, clear problems can arise. The most obvious one is the fallacy of 
*hasty generalization*—where we reason from a sample which is insufficient to tell us something interesting about the target. In hasty generalizations, the sample can be insufficient either for being too small in relation to the size of the target or for being unrepresentative of the whole target. All too often, these fallacies are discussed via silly, far from life examples—examples along the lines of “1 and 3 are prime. Therefore, all odd numbers are prime.” or “My philosophy teacher is a leftist. Thus, all philosophy teachers are leftists.” This is terribly unfortunate, as it seems to me to be a missed opportunity for drawing connections between logic and important ethical imperatives.

Hasty generalizations are not just a logician’s construct to make a point about inductive reasoning. Hasty generalizations happen all over the place in our daily lives and in scary, abhorrent ways. For instance, if one watches Fox News long enough, they will eventually see somebody enthymematically invoking something like the following:

*P1: 19 Muslims perpetrated the September 11th, 2001 terror attacks.*

**Conclusion: Muslims are terrorists.**

Clearly this is fallacious, as it is a terribly hasty generalization. There are something along the lines of 1.6 billion Muslims alive today, so a sample of 19 is horribly

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2 What is cruelly ironic about this state of affairs is that it was Islamic scientists and philosophers who did more than any other culture to advance our understanding of the induction and scientific method which hasty generalization bastardizes. It was ibn al-Haytham who put forth the scientific method six centuries before Bacon. Such an overlook wouldn’t be so problematic if it weren’t part of a hugely Eurocentric
insufficient for drawing conclusions about Muslims generally. And while it involves most of the same logical considerations as the examples above, this example much more clearly connects logic and ethics. As I said, this is a morally abhorrent argument. So, using it as an example illustrates that attending to logic requires us to discourage hasty generalizations and bigotry at the same time. That is, since hasty generalizations are one of the bases for stereotypes, stereotypes are the bigot’s favorite tool, and practicing good inductive logic involves discouraging hasty generalizations, it follows that practicing good inductive logic is to discourage bigotry. Furthermore, that encouraging logic involves discouraging bigotry and prejudice should be unsurprising when we think of the definition of ‘prejudice’ as “unreasonable feelings, opinions, or attitudes, especially of a hostile nature, regarding an ethnic, racial, social, or religious group” (Dictionary.com).

I hope for a future where logicians see discouraging of such prejudicial irrationalities as part and parcel of their charge and calling. I also hope for a future where many of my colleagues here at SUNY Potsdam see similar endeavors as part and parcel of their charge and calling. As I hope to have made clear in this short piece, simply by researching and teaching cases like these and bringing the relevant realities of social oppression into the course, we are able to open up the issues for discussion while still teaching very much within our expertise. And if you feel you need a little bit of a kick-start, please join us October 1st and 2nd for workshops related to these matters. For more information, see http://www.potsdam.edu/faculty/research/change/index.cfm.

telling of the history of philosophy or if ibn al-Haytham were an enigma in the Islamic Golden Age. Nothing could be further from the truth, though. This time period was flush with extremely-skilled experimentalists like ibn-Firmas in physics, Al-Zarqali, ibn-Ridwan and al-Battani in astronomy, Al-Razi and ibn al-Haytham in optics, Jabir ibn-Hayyan, in chemistry, and Al-Razi and ibn-Sina in medicine.