

Turning the microscope on power dynamics in the lab

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ABSTRACT Sexual harassment is pervasive in academic science, as it is in so much of our society. My own department was confronted with this fact two years ago when high-profile accusations came out against a recent colleague of ours. Formal conversations in our department about sexual harassment quickly broadened to larger themes of power dynamics in the lab, and how the lab structure and our silence around power dynamics can enable abuses. Unexamined (and therefore uncheckable) power dynamics can allow sexual harassment, exploitation, bullying, and other ethical breaches to fester. These problems fall disproportionately on minority or marginalized persons, feeding into existing problems with diversity in science. Several students in our department organized and pushed for reforms on multiple scales. We offer our experience as an example of one way to aim for a healthier work environment for all researchers.

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INTRODUCTION

On February 2, 2016, experiments skidded to a halt throughout my department as colleagues read and forwarded a *New York Times* article reporting sexual misconduct allegations against my PhD advisor.

To clarify, I had two PhD advisors, and one of them (the one in the article) had left our university a year after I joined his lab. At this point, he was at his third R1 university in three years. Our lab members—now scattered across all three schools—still met several times a week via video chat, continuing to support one another from a distance.

So I sat with stunned postdocs in my (other) lab and listened to them wonder aloud how something like this could happen, and whether it happened at very many other universities.

I realized I had already been thinking about this topic for a while and could imagine a lot of ways that this could happen at any university. So had several other graduate students in the department. By the end of the week, those graduate students had found one another and begun meeting formally, interested in taking advantage of the department's sudden and rare focus on this issue. Over

the following two years we discussed ideas for projects small and large, completing some and laying the groundwork for others.

Of all the problems around sexual harassment and abuse of power that we saw and tried to address, none are unique to our school. They are all reflections of the structure in which we train our scientists, and are relevant to all research universities.

We published a zine this past spring with a more detailed account of our story, ideas, what we did, and recommendations for how to do similar projects in your own institutions: <https://academicstakingaction.wordpress.com/zine>.

THE VALUE OF FOCUSING ON THE PROBLEM

Change is difficult. It requires energy and motivation, which are hard to summon if you do not feel personally invested. Before asking our colleagues and the administration to start making changes, we wanted them to deeply consider the problem for themselves—to immerse themselves under its full weight, and make sure they saw their own experiences included. If the whole department could collaboratively define the problem, then each new idea or proposal to follow would be a welcome solution rather than an outside threat to the status quo.

We, in the scientific community, have little practice talking openly about the aspects of our culture that perpetuate deep and chronic harm. Most often we prefer to avoid the discomfort by keeping our heads down and just “focusing on our science.” If we made a bit of time to collectively train our gaze on the problem, we could develop our common language for it, and begin to use that language.

So this was the first thing we did.

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WHAT WE NOTICED

We invited our whole department to come together and consider the problem, however they saw it. Postdocs, staff, students, and faculty all gathered to hear one another's impressions, questions, and feelings. We invited an experienced outside facilitator to guide the discussion, so it wouldn't feel geared toward any particular perspective within the department. He came up with the following three questions and brought us back to them repeatedly throughout the conversation: Is there a problem? If so, what is it? What have you noticed about it?

Here is some of what members of our department had to say:

- Some noticed a communication problem, in which information about misconduct was passed around between students but never beyond. They wondered why that was so.
- Some noticed that the fallout of any conflict between a principal investigator (PI) and his or her trainee generally landed on the trainee, who might have to switch labs and start over, or stay and face less favorable treatment.
- Some described how retaliation from an advisor is often impossible to prove but can be harmful enough to erode an early career. Title IX, designed for undergraduates, can't help with this problem.
- Some noticed that many different types of problems, ranging in severity, often get lumped together but ought to be treated separately.
- One PI described feeling unequipped to help a student who came to him in crisis, and other PIs lamented the lack of training to deal with such situations.
- Some compared the structure of a department to a feudal society. Each lab is a relatively isolated community with a single PI at the top controlling the flow of resources down to others who are inextricably dependent. The person at the top receives little or no feedback on how he or she wields that control, making it difficult to compare notes across labs or to establish and uphold a standard of behavior.
- We observed that the same power dynamics that enable sexual misconduct in the lab also play a role in intellectual property disagreements (i.e., a PI giving one trainee's idea to someone else in the lab without asking), labor exploitation (i.e., a student being asked to work unreasonable hours, or on inappropriate tasks), and other abuses of power.
- We noticed that the definition of a "good mentor" can be completely different for every unique mentor–trainee pair.

Many mentioned the power constraints inherent to the way labs are structured.

Scientific training happens in a hierarchy. If you have ever joined a lab and stayed in it long enough to see another junior member join, you have at least some firsthand experience at both the top and the bottom of some part of this hierarchy. We don't always define ourselves by the hierarchy, but when complications arise (personal, professional, or both), the hierarchy can quickly become all that matters.

Power differentials are already present under the surface of all of our interactions, be they due to race, gender, sexual orientation, income, physical ability, age, or otherwise. These power differentials become amplified when they meet the lab hierarchy. They can make it harder to get into the room to begin with, easier to become a target for abuse (intentional or not), and treacherous to try

to protect oneself and hold on to what little one has, if conflict arises.

But the lab is also a casual environment. People spend nights and weekends there, share beers after hours, and sometimes bunk together in the field or at research stations. It can be easy to momentarily forget about the hierarchy or these power differentials, especially if you are their beneficiary. But forgetting them or dismissing their influence can open up room for grave misunderstandings.

GATHERING INFORMATION, STRENGTHENING COMMUNITY, SETTING STANDARDS, ENCOURAGING COMMUNICATION, AND CREATING A SAFETY NET

Based on the department-wide conversation, it was clear that the problem was not contained to just sexual relationships between PIs and students but was part of larger issues of abuse of power. Equipped with all we had heard, members of our group started planning the next projects.

Some of us, in collaboration with a panel of faculty members, focused on gathering more quantifiable information. This group made a survey to track data about trainees' experiences across our department.

Some of us focused on trying to break down the silo walls that separate each lab and keep trainees isolated. We adapted a program that some faculty had already begun, wherein participants' names are scrambled randomly each month into groups of three or four. These groups meet for lunch and get to know one another personally, outside the formality of a committee meeting or the frenzy of a departmental mixer. We modified the program and expanded it to include faculty, students, postdocs and staff.

Some of us focused on finding and improving the mentorship training resources already available across campus. We found that many of the people offering these trainings were hungry for feedback on how the trainings could be more useful. One person whose program was already very successful in her department was eager for the invitation to expand her program to other departments.

Some of us focused on defining common standards of professionalism for our department. We held a department-wide workshop where groups discussed hypothetical scenarios about power differentials and inappropriate behavior. After a discussion, participants individually wrote down values they find important for department members to uphold. We synthesized these values into a concise statement that we will be able to look to as a compass in the future.

Some of us focused on the communication gap within the lab. We promoted the practice of yearly one-on-one check-ins between PIs and their trainees, which one professor in our department was already doing with great success. These check-ins would allow a moment for both the PI and the trainee to set goals for themselves, evaluate their own performances, and provide feedback for one another before issues had a chance to snowball.

Some of us focused on the communication gap between trainees and the administration, lobbying to include leadership evaluations as part of faculty reviews. If teaching, publication record, and funding all warrant formal evaluation, it seems like a glaring (and insulting) omission that team management does not. By repairing this omission we would create a safety net to catch severe or long-term problems—the kind that could not be solved by simply improving communication within a lab. The effort to enact this change is ongoing.

WHY CHANGE ANYTHING?

We have all been trained in this current system, with varying degrees of ease and success. Most of us simply mentor as we have been mentored and consider a position at the top of the hierarchy to be the reward for making it through the previous steps. But just because this is the structure we have does not mean it's the best one, or the most productive.

It is not enough to say that we want more women or more ethnic minorities in science and then disregard their experiences. This approach only adds a burden on some of our scientists' shoulders by expecting them to suppress their views of the world. It does not invite new perspectives; it demands a forgery of the perspective we already have.

Having a conversation about power dynamics—taking a moment to notice them and committing ourselves to compensating for their harms—is a critical first step. This extra bit of consideration will not take up your whole day, and it will not make anyone a less rigorous scientist. If we truly value inclusivity in science, if we are interested in the full and spectacular range of scientific minds, we must pay specific attention to one another. We must train ourselves to make sure everyone is seen, valued, and kept safe in our halls.

The words above reflect the ideas and efforts of not just myself but a whole group of students. Special thanks for Kriti Sharma for her editorial help. If you would like more details about these projects, please see the zine we published collectively (<https://academicstakingaction.wordpress.com/zine>).

TECHNIQUES TO PRE-EMPTIVELY ADDRESS AND DEFUSE ABUSE OF POWER IN YOUR DEPARTMENT

- Practice noticing the many power dynamics at play in your daily interactions due to seniority, race, gender, class, ability, age, sexual orientation, or other factors. Consider how each of those dynamics may be putting pressure on one person that is invisible to the other.
- Talk about power. Allow it to be an openly acknowledged aspect of our work culture.
- When witnessing a behavior and wondering whether it is acceptable, try imagining that same behavior from different positions in the hierarchy. Would you accept this treatment from a junior? Would you talk to a superior that way? There should be one standard for common decency.
- For trainees: Make sure you have at least some advisors or thesis committee members who are not just good for your research program but with whom you feel it is safe to be open.
- For trainees: Being co-advised or having close collaborators outside your lab may help redistribute the intense dependence on one PI's good graces.
- For PIs: Set a time to check in regularly with your lab members on their own progress, your guidance, and their experience in the lab.
- For administrators: Establish a program that allows colleagues from across the department to meet casually in small groups and get to know one another. This will foster collaborations, will make the department more collegial, and will help build community around more vulnerable department members.
- For administrators: Evaluate leadership during regular faculty reviews. Ask the PI's lab members, advisees, and other faculty who serve together on thesis committees for feedback on the PI's mentoring.