

Dan Cosley: Advising statement

In this statement I'll talk about my philosophy toward advising, which I see as encompassing much more than research activity. Research advising is important, but it's only part of the story: advising about other scholastic issues, thinking about future careers, and helping people think about life choices both in and beyond academia are all important.

To do this well, I set myself three main jobs. First, I try to understand where students are at. Second, I help them figure out what they need and want. Third, I provide tools for them to get there. This view of advising works well for students at all levels, although the balance of academic issues and the kinds of conversations differ between PhDs and other students. I will discuss each in turn.

Mentoring PhD students

On the understanding front, I try hard to gather information. I talk to students on a regular basis: where they're at, what's going well, what problems they are having, and so on. I spend the most time with my own advisees, who get an hour or more a week. For students I'm a committee member for, I try to check in once a month or more, and I often have casual conversations with other students in the department as well as students from other institutions at conferences. I also ask PhD students to complete a self-evaluation every semester and discuss it with me so we can make sure they're doing things that will help them. More generally, I am a regular reader of guides to PhD life and career advice for PhDs, blogs about student and faculty experiences in academia, and, of course, PhD Comics. Combined, this gives me both a general feel for the grad student situation and information about the individual needs of students I work with.

Helping students figure out what they need is critical in interdisciplinary spaces like information science that encompass a number of intellectual communities and ways of knowing. Thus, a major goal is to get students to think about which jobs, disciplines, conferences, and people will help them meet intellectual, career, and personal goals. I help them be aware of choices and opportunities I learn about and connect them with people who know more than me about particular topics. I help people think about the values they might strive for after having a PhD, and how their choices and opportunities will help them achieve different values. I also make them aware of the forces that shape their choices (for instance, academic research being subject to disciplinary norms, funding, interest from students and reviewers, and academic schedules) at both the macro level of careers and the micro level of specific research projects. Most generally, I encourage them to think about work-life balance, making sure that they aren't neglecting the kinds of priorities that are easy to sacrifice when there concrete tasks with deadlines and pressure. Sometimes students come with troubles I'm not equipped to deal with; here, I lend a sympathetic ear and try to help them find resources that can help with their problems.

Finally, I give them everything I can to help them get there. I give copious time, both for talking about ideas and working on them together. I give copious feedback, suggestions, and ideas on any kind of decision or work they ask for. I give relevant stories, from my own and others' experiences, as well as the limitations of those stories. If appropriate to their goals, I give them

opportunities to give lectures and help design courses, and/or to find and mentor undergraduate and masters students in research. I give them advocacy: reference letters for jobs, internships, scholarships, and other resources, connections to other people, and support in departmental and grad school matters. But mostly, I give them as much freedom as I can in shaping their choices given the constraints I mentioned earlier. I give slightly less freedom, and somewhat more time and hands-on guidance, to early-stage PhD students, who need structure while they figure out how to be academic. But on balance I work to give people as much flexibility and responsibility as they can handle.

As with classroom teaching, I have weaknesses as a PhD advisor. I am reluctant to push people into things that don't excite them, which means that sometimes students don't get experiences that I think they need. More generally, I don't like pushing students who appear to be unexcited or overworked, even though for some such students a more directive style would help. I also encourage people to sample projects broadly early in their careers, which is useful for building both experiences and resumes, but this may not be good advice for folks who are already inclined to multiple, varied interests. Finally, I give direct and thorough feedback on work and talks. This is useful for giving people a clearer picture of how other people think through research, but people sometimes find the amount and level of detail to be a little overwhelming. I've worked on strategies such as summarizing (especially with positives) to reduce the anxiety this kind of feedback can cause.

But, as with classroom teaching, advisee feedback suggests that on balance I am a very good advisor. I have already had a good amount of success at helping students further their goals and achieve recognition through advising and advocacy, as listed below.

- Liz Murnane: an MSR women's scholarship, an MSR internship, organizing committee positions in CSCW, and multiple grants to attend conferences for women in CS.
- Amit Sharma: The Yahoo Key Scientific Challenges award, an internship at Google, and multiple travel grants.
- Victoria Sosik: Internships at PARC and Google, an NSF Graduate Fellowship, a finalist as an Anita Borg scholar, organizing committee positions in CSCW, a CSCW 2014 PC mentoring slot, and multiple grants to attend conferences for women in computer science.
- Jenn Thom (advised by Geri Gay): a research scientist position at IBM.
- Hao-Chuan Wang (co-advised with Susan Fussell): an assistant professorship at National Tsing Hua University, Taiwan.
- Xuan Zhao (communication): internships at Facebook and MSR Cambridge and admission to the Michigan PhD program.

Mentoring masters and undergrad students

For the most part I treat undergrads and masters students much as I do PhD students, using the same principles of understanding them, finding their needs, and providing tools to get there. The main difference is that most undergrad and masters students are not destined to become

academics: school is one of many aspects of life that compete for their attention. Thus, the balance of topics is a little different.

I help both my academic advisees and students who I do research with think about broader university advising questions around school, internships, and careers. I help them think about how to choose courses that will help their intellectual and professional goals, and about what those goals are. I help them consider experiences such as internships and study abroad, talking about the values and tradeoffs involved there. I do the same for careers, pointing out alternatives to traditional jobs such as startups and service work (like Teach for America) that might be most appropriate for recent graduates. Particularly for students I do research with, I point out that research is a potential career and talk about the pluses and minuses of grad school, but I do not push it. For those interested in research, I help them think about what they want to learn by doing research and about what problems they are interested in. I help them learn more about projects, labs, and professors who are available to work with around Cornell who match their goals. I talk about the intellectual and practical reasons to do research, as well as the drawbacks, and the need to think about the fit of skills, topics, goals, and personalities when choosing collaborators.

As with PhDs, I then try to help them get what they need. I help them find and fit into projects with other professors or my own students, and lead projects as they gain more experience. I regularly obtain NSF money to support undergraduate research and help students in research roles to go beyond the research itself by participating in events such as BOOM (“Bits on Our Minds”, the undergrad project expo in Computing and Information Science) and academic conferences. I help them navigate administrative requirements and point them to folks who can do that better than I can. I serve as a reference, writing letters, for internships, jobs, and grad school as needed, and have helped dozens of undergraduates and masters students achieve goals in this role. And, as with PhDs, I try to give them the freedom to make their own choices.

My main weaknesses as an advisor for undergrads and masters students are similar to those for PhDs: I work best with motivated people, and I tend to err on the side of too much freedom and not enough direction. In addition, although we consider alternatives to traditional careers, I'd say that around 85% of students go on to traditional careers. With little industry experience and a primarily academic mindset, I can only give so much personal insight into how to negotiate careers (though, as with other questions I don't feel as knowledgeable about, I do try to direct students to better resources). Finally, I don't require meetings with academic advisees, and so I only work closely with those who are more proactive in seeking out my time.

Students advised

Please see my CV for a complete list of people I have advised in some research, TA, or academic capacity.