

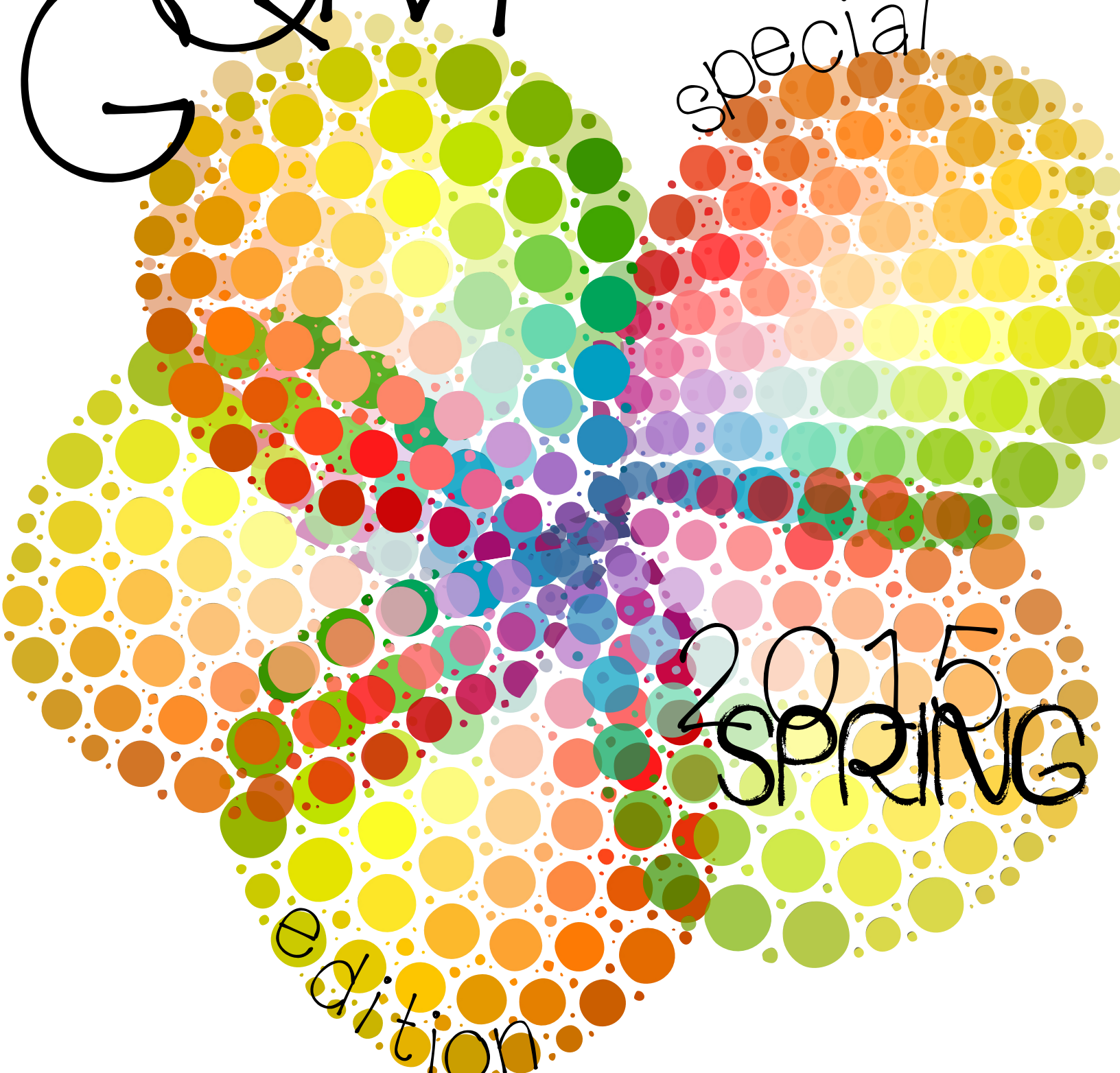
REFLECTIONS
OF PRISMATIC
WOMEN

QOM

special

2015
SPRING

edition



...About the GQM special Edition...

The GQM team is proud to share with you this special edition of GWIS Quarterly Magazine!

Unlike other installments of GQM, this issue was designed as a medium for honest conversation between GWIS members and leadership. We wanted to hear from graduate women about their motivations, hardships, and triumphs, and to provide a mechanism for peer-inspiration.

We provided several writing prompts- which appear as the headers of each page- to provoke thoughtful self-reflection. We are proud of the numerous and in-depth responses we've received.

Thank you for participating in our first ever special edition project. With your help we hope to make this an annual event.

We invite everyone to continue the conversation on our blog, on the [Readers-to-Readers](#) page.

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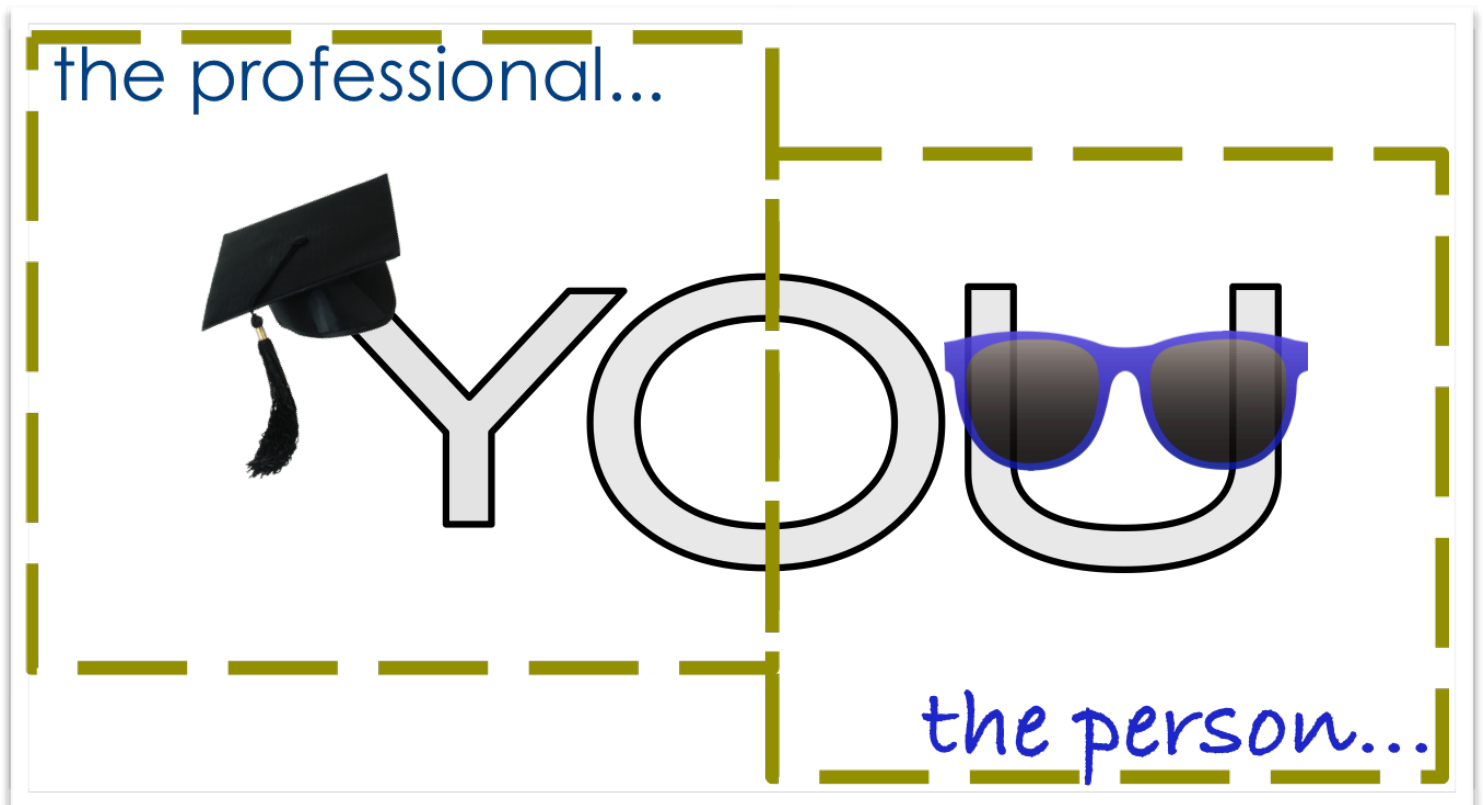
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a letter from the editors

yo, y take the u out of you?

This letter is going to be different from the ones before it.

usually, we spend hours of our time writing and editing each issue before we sit down to write our letter. We edit, and read aloud, and edit again, trying to get it perfect. This time, though, you did the work for us. You put in the time and effort. But more importantly - you put in the trust. You trusted us enough to share some incredible, heartbreaking, awe-inspiring, real stories with us, and first and foremost we want to tell you just how grateful we are for your courage and honesty. We learned so much from your stories and experiences - and we hope that by publishing some of them, others will too.



The main lesson we took away from this issue was that the separation of "personal" and "professional" is an illusion. Professionals are, at every level, people, with lives, obligations, feelings, relationships, health issues, and dreams for the future. The professional you cannot survive without the personal you - you as a person need to eat, sleep, relax and maintain the other aspects of your life in order to function well as a professional. The sooner academia as a whole understands and embraces this basic fact, the better off we all will be. The continuous effort it

takes to attempt to separate these two parts of yourself is strenuous, unnecessary, and detrimental to your overall well being - and therefore to your productivity. It is creative capital that is tied up in a useless and impossible venture - the repression of an entire part of your self identity. Normally, this kind of split personality warrants a trip to the psychiatrist! But, not for us! We celebrate this, and call it "professionalism". In fact, the term professionalism in our culture is practically synonymous with the utter suppression of all

personal feelings and mannerisms. But unless you're a borderline dissociative undercover operative, there is not a "personal" and a "professional" you, there's just you.

...unless you're a borderline dissociative undercover operative, there is not a "personal" and a "professional" you, there's just you...

More than just allowing yourself to be a person, remember that you are entitled to take care of yourself, and anyone who says otherwise is perpetuating an unhealthy, unsustainable, exploitative, and abusive system. Don't simply accept that "this is just the way grad school is"! On some level, of course we need to make sacrifices for our work. But purposefully setting aside your health and relationships because you think that's what's expected of you or that you don't have enough time to invest in yourself and your family is counterproductive and insane. The idea that if you're healthy, well rested, and well rounded then you're not working hard enough is a toxic and pervasive attitude, and it is the mark of a self-destructive institution. At the end of the day, science can't survive if there are no scientists because we all stressed ourselves into oblivion and burned out at 30. We had a friend who once commented that "academia isn't actually a factory for churning out scientists - it's a factory for creating mental health issues." Maybe that's the academia we entered into, but we at GQM fervently believe it isn't the academia we should leave to the next generation.

...We need to be honest with ourselves about our limits, and then have the self respect to maintain them...

The key to solving any problem is acknowledging there is one. Let's all see this for what it is, and make conscious decisions about our health, relationships, and productivity that strike a balance we can live with. Be honest and upfront about your refusal to sacrifice your well being for the sake of perceived productivity, and dare anyone to tell you that's not ok. When this conversation comes up, that's the perfect time to address it, with the full

knowledge that you are not alone in this fight. It's time to put ourselves higher on our list of priorities and responsibilities. We need to be honest with ourselves about our limits, and then have the self respect to maintain them. And recognize that your friends and peers also have limits. As you read through the stories in this issue, keep in mind that many people's lives are more complicated than they let on, and resist the urge to label or diminish their contributions or dedication based on your incomplete information. We should be building each other up, not breaking each other down.

...Here at GQM we're waging war on this self destructive atmosphere...

Remember that the main purpose of graduate school is your education, and regardless of the generally apocalyptic vibe in academia right now, this is not a competition. This is only the beginning of your career - so many of us are coming out of graduate school exhausted and spent. What's the point of that? We're supposed to be building a future, not depleting the supplies of energy, self respect, and confidence that will sustain that future. This should be an empowering experience, not a degrading one. Here at GQM we're waging war on this self destructive atmosphere, and we are right here when you need support. In fact, we invite you to [click here](#), and tell us what you need! If you think we're kidding about any of this, [visit our blog](#) for a list of studies we've collected on mental health issues in competitive graduate programs. The data is out there, and it's terrifying. Just because no one talks about it doesn't mean it's not real - so consider yourself informed. On the other hand, we've seen firsthand what supportive graduate programs and advisors can do to mitigate the maleffects of the current academic climate. Working together we can raise the quality of this experience for everyone involved.

Hang in there!
the GQM Editors
Dina Navon
Joelle A. Labastide

... a defining moment for my self confidence that still affects me today...

There is a senior faculty member in my program who seemed to always underestimate me and my abilities, mostly based on his very short interactions with me. I gave a really excellent talk that I put a lot of hard work into, and afterwards he was very congratulatory and complimentary. Suddenly, for a moment, his interactions and perception of me had changed. But this subsided and the interactions went back to the previous norm. This experience made me realize two things: 1) people who are going to negatively judge me based on stereotypes or first impressions are not worth wasting anxious energy and 2) I am a competent and critical scientist, and while it's nice to be recognized by others, it's more important to believe in my own abilities first and foremost. I still struggle with imposter syndrome and I have a reactionary worry about how first impressions will turn people off, but going back to this moment helps me realize that the people I want supporting me won't write me off. *-NotYourAverageJane*

I will never forget the time I volunteered to give a talk at a conference. I have a fear of public speaking, but it's something I'm actively working on by putting myself out there and giving talks. Part of my ritual to reduce my anxiety is to go to the room I will speak in before anyone is there, speak to an empty room, and go through the technical logistics to make sure the projector works, my file uploads correctly, etc. I went through this ritual, and noticed that the room was only able to hold 50 people. I was somewhat comfortable with this size, and went through the rest of my day at the conference ready to speak to 50 people maximum.

A half hour before the talk was scheduled, the room and order of presenters was changed. My heart sunk straight into my belly because now I was the first person going to speak in the main conference room that had 200+ people in it, and I didn't have time to

do my pre-talk ritual. When I was called up to the podium I convinced myself that I have something to say, that this audience wants to hear it, and I know what I'm talking about! Once my presentation loaded after some finagling, I just started speaking like I was having a conversation with a colleague about my research into comparative proteomics. After I explained my results and was summing up my 20 minute talk, I noticed that everyone I looked at in the room was absolutely awestruck about what I had just said, and I had the attention of everyone. When I finished my acknowledgements, everyone shot up out of their seats and gave me a standing ovation. I was about ready to cry because the last time I witnessed a standing ovation was during a middle school orchestra concert where it was nearly obligatory.

After all the other talks there was a poster session, and there was a steady stream of people with praise, questions, and business cards at my poster the whole time. They were absolutely amazed that I was a just a junior undergraduate presenting complicated research in such a fluid manner, and all professors that came to my poster strongly encouraged me to go into graduate school because they all thought that I was a 2nd or 3rd year PhD candidate presenting preliminary work behind my thesis. I was unsure if I wanted to go straight into grad school or work after graduating, but this experience was what gave me the emotional resolve to take the plunge straight into my PhD. In hindsight, this was by far the best experience of my undergrad career because it taught me that I'm adaptable, can rise to the occasion, and that the imposter complex I feel as a women in science is just a mental illusion. I'm also pretty much over my public speaking anxiety, and can give a talk now without shaking, stuttering, or umming my way to a bored audience. *-Wild Thing*

I wouldn't call this a "defining moment" but certainly a defining phrase that encourages me to put my best foot forward. My parents, both musicians, and particularly my mother, would remind me that each day is an audition. You never know who is listening or watching. So every time you set foot out the door you're representing the best you can possibly be, and then you're ready for any opportunity that might present itself! It used to drive me crazy when she said that...now they're words to live by!

-CastingCall

When I was a wee freshman in high-school I decided that I wanted to try to take Honors English. I thought that I was a decent enough writer and I wasn't feeling challenged at all in the normal English class.

The first graded paper I got back was a 50% or so. A blow to the confidence, but nothing I couldn't recover from. However, when my teacher passed back our second essays, she handed out everyone's except for mine and, in front of the whole class, told me she wanted to meet with me later to discuss my paper.

In that meeting she proceeded to tell me that I was clearly a math and science person, asked me why I had even bothered to sign up for Honors English, and told me that I was trying to sound smarter than I was in my papers and it was obvious and failing. She offered to assist me with my writing skills but told me I should be prepared to fail all essays until around Spring Break. That would be an entire semester of failing assignments, there would be no way for me to pass the class. I immediately dropped the course and switched back to regular English where they were two weeks behind and again, I was not challenged at all, but I received As on all my papers.

My sophomore year I started working for the school newspaper and though turning in articles was panic-inducing, by senior year I was the editor-in-chief. My senior year I was also a bit more mischievous and found myself in Saturday school where we were

required to write essays that were graded and if not completed in a satisfactory manner, we would have to return the following week and try again. That old Honors English teacher was now in charge of reading those essays and when we met to go over mine she kindly said, "I've read over this and obviously you're a very talented writer." My response, "Oh that's nice, that's not what you told me a few years ago." Her jaw dropped, I quietly walked out, and we never spoke again.

However, despite working for a newspaper throughout college and writing papers constantly, I have never gotten over my fear of people reading my work. I start papers weeks in advance so I can read and reread them millions of times. Even drafting emails takes me hours. I can't write something and then immediately show it to someone else and even for this magazine, I was too nervous to put my own name. I believe that I will never be able to write anything, no matter how short, without thinking of that teacher telling me I would fail for an entire year. It's sad, but that moment has affected my self-confidence for the rest of my life.

-StillAnonymous

I was doing a presentation on a current project. A fellow grad student asked a relatively simple question and I couldn't answer it. My advisor had to answer it and it made me feel completely unqualified. I stopped working on the project a few months after that.

-Drew A. Blank

In high school, our guidance counselor was talking to my class about college prep. He told us that the students who have to work hard in high school are better prepared for college, and people who had an easy time in high school aren't successful when they get to college. I had a pretty easy time in high school, so now, every time I'm struggling, I feel if I fail it's to be expected, because I didn't work as hard as I should have in high school.

-Highjinx

... a defining moment for my self confidence that still affects me today...

Invited Interview

Nilanjana 'Biju' Dasgupta

Director, Faculty Equity & Inclusion

Professor, Psychological & Brain Sciences

College of Natural Sciences



Professor Nilanjana 'Biju' Dasgupta's conducts important research on gender equality as a member of umass's Department of Psychological and Brain Sciences. The considerable efforts she has put forth toward educating the rest of the scientific community through university-wide lectures and conversations, have made her largely influential to GWIS leadership. Some of the most important components of her work are tangible strategies for increasing involvement and retention of women in STEM fields through more

mindful education practices, including the identification of the key stages of academic development and environmental conditions where attrition rates are highest. As both a successful female member of the STEM community and a solution-minded proponent of social change, we are excited that she's accepted our invitation for this interview.

GWIS: There's a lot of research being performed right now by you and others in UMass's psychology department about gender inequality, yet there are still major gender imbalances, even within our own college. Do you feel that the findings from those studies are being translated efficiently into education practices throughout the university?

Prof Dasgupta: There is often a major chasm between basic research that we, academics, do at a research university and it's translation into applications, programs, and policies in the real world. This is a common problem in many types of science including behavioral sciences, biological sciences, and physical sciences. Some of us do the basic research (like myself); others create the applications, programs and policies in the real world. But the translation of discoveries from researchers to practitioners is slow and imperfect. That's what you're seeing here. Sometimes this can be frustrating, but I've learned

to live with small slow changes as long as I can see some positive impact.

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I see my job as doing the basic research to identify and test solutions to gender inequality in STEM. Then I try to spread the word around. Some people hear about the data, pick up the message, and put it into action in their teaching and advising. I've heard stories from faculty colleagues and graduate instructors about the ways in which they have implemented some of my research in their classrooms. That's enormously gratifying; that's what keeps me going. I think if more teachers and advisors keep doing that we'll see gender imbalances in STEM fields decrease over time. I recognize this sort of social change is slow and piecemeal.

GWIS: How can we help convert those findings into better practices quickly and effectively throughout STEM endeavors at UMass?

Prof Dasgupta: In order to be more efficient in translating behavioral science research on gender equity to practice we need to have all members of the university who teach and advise students in STEM pay attention to this type of work. We need all STEM departments (GPDs, UPDs, faculty, undergraduate studies committees, graduate studies committees) to think deeply about how research findings identifying solutions to gender (in)equity in STEM can be put into action in their own departments. These may be in the form of classroom practices, advising/mentoring practices, and other professional development programs. Essentially, we need our data to trickle up to STEM departments so that they can use that to increase the recruitment and retention of women in STEM majors, Masters, and PhD programs. Some of these programs are also

what's needed to increase the recruitment and retention of students of color in STEM.

GWIS: As young academics who are about to become leaders and educators, what are the main hindrances to creating gender balanced classrooms, and how do we avoid them?

Prof Dasgupta: Presenting science in an overly abstract way often turns off students and leads to small numbers of women (and some men) in STEM classes. Students need to see science as relevant to the world they live in. Using real world applications to introduce scientific concepts is a way of attracting diverse students into science classrooms. Try project-based teaching; if possible have students pick their own projects that allow them to learn scientific concepts. This is a good strategy to bring more students in STEM majors and also a way to keep them in the major over the long haul.

Competitive classrooms foster gender inequity. Women are less likely to want to linger in classes where students are trying to out-do each other overtly or subtly. Foster collaboration and teamwork in your classes.

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Nobody does well in environments where they feel too different. Being the only woman in a class ("solo") or one of a few ("token") feels alienating. Students who feel that way are at risk of dropping out of the class or major especially when the subject matter gets difficult. The solution? When you teach, create teams of students who work together in which 50%-75% of the students are women. For example, if you create teams of 4 students for a class activity,

put 3 women in the same group instead of 1 woman in each group.

Create a mentoring system where students in your class have access to advanced students who have taken and done well in the same class. Students are much more likely to reach out to other students than faculty. This mentoring system may be especially helpful for women and other students in STEM classes who feel out of place. If they have already met the advanced student mentor a few times, they may be more willing to reach out to the mentor when they need help. In some cases having a female mentor may be helpful for female students.

All the above-mentioned interventions are particularly important to implement when students are beginners -- in their first two years of college (undergraduates) or first two years of graduate school (for grad students). That's when attrition is most likely because new students feel more unsure and isolated.

GWIS: You have a much broader and more comprehensive view of academia than we do as students - what guidance do you have for GWIS members and leadership about having a bigger impact on this problem?

Prof Dasgupta: Be the new generation of scientists who use social science research to inform your teaching. Try some of the strategies I mentioned (above) in your own classrooms when you teach.

Be patient. Social change is slow and uneven.

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Find the scientific research you love and immerse yourself in it. Keep your eyes on your own career goals in science and stick with it even when you feel

momentarily unsure. Your presence in the field is a big solution to gender equity in STEM fields.

Identify people in your field who want to be like. Use them as your role models. Identify people in the field who are supportive and give you good honest feedback. Use them as your mentors.

That's great advice! We will be spending some time on Professor Dasgupta's [publication page](http://people.umass.edu/nd/pub_page.html) (link- http://people.umass.edu/nd/pub_page.html) thinking about how we might put these insights into practice in our organization and how we might help create local pockets of change in our everyday academic environments. We hope that you find her insights useful (as we do!) when designing your own leadership strategies as future educators and mentors.

Note To Our Readers

In the spirit of providing a diverse set of insights for you, we invited several prominent university officials to participate in interviews for this special edition. Though many agreed, we received interview responses from only two of them.

We therefore want to express our gratitude to Professors Dasgupta and Dumont for their dedication to and efforts on behalf of GWIS. The combination of their thoughtfulness and followthrough is invaluable to all of us.

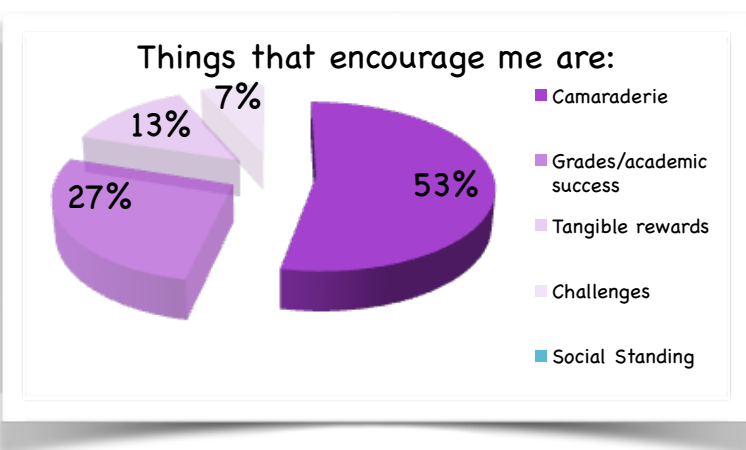
... a crucial time when someone believed in me...

As an undergraduate, during my senior year I was struggling to figure out the next step in life. I was applying to jobs and not really even sure what I was looking for or if that was what I really wanted to do. I had an older mentor (an alum of the school), whom I honestly didn't know very well. During our conversation I talked about my interests and passions and my confusion in the next step. He carefully listened to everything I had to say and suggested a career I hadn't even thought about...being a professor. He went on to describe all the unique aspects of working in academia and how my interests and passions seemed to align perfectly. I was so moved and excited by this idea I cried when I got home...totally corny I know! I wasn't sure what made me cry, the fact his suggestion made me so excited I wondered why I hadn't thought of it first, or that I knew he genuinely believed in me. That conversation was a huge reason why I applied to grad school and why I've stayed! I reflect on that conversation often when I have periods of doubt and worry. Unfortunately my mentor passed away shortly after this conversation, but I know he would be proud of what I have accomplished thus far in my career. *-CastingCall*

Applying to graduate school wasn't something that was always on my radar. Due to my lack of confidence in my writing abilities, I was convinced that writing a thesis would only lead to failure. However, it seemed like the thing to do after undergraduate so I found myself applying to a variety of programs. Now, I'll be the first to admit that I applied to schools that were a bit of a reach for me, but I had made some good contacts and I began to get excited. Unfortunately, I wasn't accepted to any of the four schools I applied to. I took it as a sign and decided that graduate school wasn't for me. My mother, on the other hand, did not share the same feelings. Her persistence that I try again and look for programs that were a bit more accessible led me back to the application program and trying to really figure out what I wanted to do. She believed in me and assured me that not only could I get in, but I could succeed. Though my mother's belief in me was crucial, she's my mom. She's always believed in me

and for that, I am fortunate. The big surprise was when I was accepted into the UMass Program. The professor that I had applied to work with had accepted me. They had shown belief in me and my ability to perform research and succeed. I've been told that every graduate student suffers from "imposter syndrome" but whenever I start to get overwhelmed by that feeling, I remind myself that they believed in me. *-StillAnonymous*

When I was a junior in college, I was on academic probation. I was in the middle of switching majors (biochem/pre-health to biology), and I was working on a dead-end project with my major academic adviser, who didn't really have much time for me. I was in crisis, and I had no idea what to do next. I enrolled in an evolution course, since I had really enjoyed genetics and thought that evolution might be a logical next step. I aced the first and second exams, and the professor of that class pulled me aside and asked if I wanted to join the lab she ran with her husband. She told me that she thought I'd do really well working with them, and that there were one or two research projects I could spearhead. That was a turning point in my academic career, and without her I would never have applied to grad school. I quite literally wouldn't be where I am today if she hadn't taken the time to show me that she believed in me, not just that first time but at several major crossroads since. *-CaptainBiology*



... a crucial time when someone did not believe in me...

My first year of graduate school it was very clear that I was in the bottom of my cohort. The days leading up to the first exam in our hardest class my cohort and I had all been discussing how we were going to fail it. Even coming out of the exam my fellow students were talking about how hard it had been. I felt like I was appropriately scared and similarly incompetent with my peers.

The next week when the exams were returned, most of the class turned out to have been worrying over nothing, earning As and Bs on the test. I earned a D. It was my first letter grade in graduate school and by far the lowest grade I had ever received in my subject. It was also the only thing my GPD knew about me when I subsequently had to visit him to plan classes and qualifying exams.

The GPD at that time was not prepared to waste his time encouraging me, he simply told me I should not study for qualifying exams that winter and focus instead on my classes. If I showed enough improvement, I could try the quals in the summer. It was clear from his tone that I wasn't going to improve and that he fully expected to eventually kick me out of the program.

I cried a lot. I talked with older, female, students. I talked with a member of my cohort I felt was an ally. I wrote the GPD an angry email. I called my parents, but they didn't believe I could do poorly in school. I called my friends, but they didn't know what a qualifying exam was. I wrote another angry email, and I didn't send either of them.

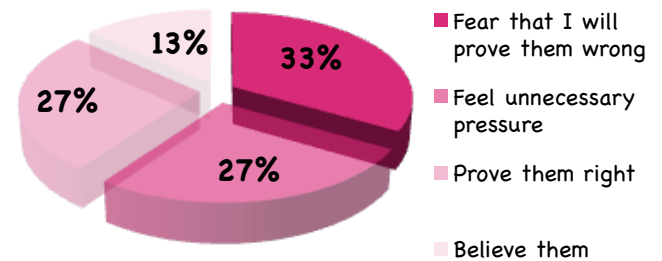
Then I added the GPD to my list. He is number 3 on the list of teachers in my field who I have succeeded in spite of. I resolved that there was no way I was going to get kicked out of the program. At least not for failing quals.

So I buckled down, got an A- in the really hard class, and passed some of my quals that winter.

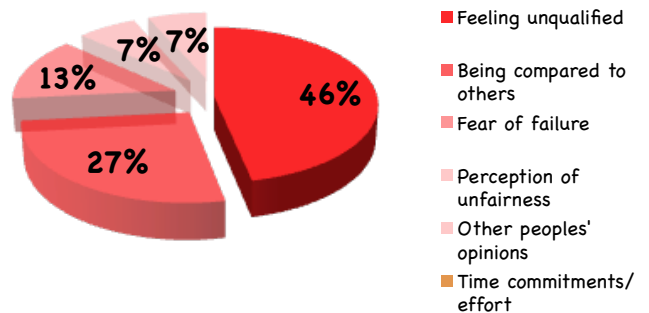
I was recently cleaning out my office as I prepare to move for a post-doc and I found a printout of the angry email I didn't send. I'm glad I didn't send it, but the anger is still there. I could send it now, but he isn't GPD anymore and I don't think he knows who I am any more. But I know who he is because he is on my list. I did well to spite him, [but] I could have done better without him.

-GPDFail

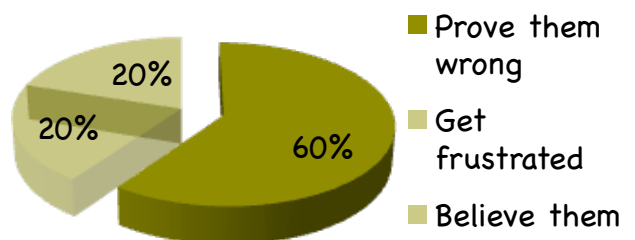
When someone tells me I can, I:



Things that discourage me are:



When someone tells me I can't, I:



... a time when I
didn't try, for
fear of failure...

I've struggled a lot with the "social" side of STEM, where there is pressure to meet and greet other scientists at mixers and "network". So many of the workshops I've gone to have put a lot of pressure on networking. Because I've always been shy and prefer more close, intimate interactions with people I've gotten to know, this pressure has followed me through grad school. I'm stuck between my fear of discomfort within these social situations and also my fear that I'm doing myself a disservice. I wouldn't say I've completely overcome this fear. It's more of a coping strategy of not putting so much pressure on myself to force interactions that feel uncomfortable, but also trying to make it so that I'm in these situations within reasonable comfort zones.

-NotYourAverageJane

I do this a lot - it's actually a habit I'm actively trying to break (with mixed results). Organic chemistry was definitely one example where I just totally shut down. I skipped exams rather than go and try (and fail). I think if I'd been willing to work a little bit at it, I would have been ok, but I was so paralyzed by my fear that I just wouldn't even try. So no, it probably wasn't a rational fear, and I haven't really overcome it. But I think it's super important to have a strong support network - my family and my cohort constitute mine. A few key people taking the time to reassure you can do wonders for your focus. And at the end of the day, you have to remember that you are capable of more than you give yourself credit for!

-CaptainBiology

The day I defended my thesis was both incredibly stressful and surprisingly calm. I had spend the days before freaking out, and even found, and then corrected, a significant error in my work. The morning of my defense I woke up feeling this sense of relief. All I had to do was talk for an hour and I would have accomplished something that no one could ever take away from me.

When it came time to give the talk, I had a big audience: colleagues from my department, members of my peer mentoring group, friends, both grad students and not, and my parents. It was such a warm fulfilling thing to see the great community I had built and joined over my time here.

During the cake portion of the defense after the hands were shaken and papers signed, I heard my mother and my advisor talking about me. They both seemed so proud of me. I felt both that the previous years of work were worthwhile, and that the work, while endless, hadn't stopped me from making many close friends.

-GPDFail

When I realized I was a natural born leader who can inspire people to work hard and produce the best work possible, I was proud. I take initiative and have the type of mind which doesn't easily give up and obsesses over completing a task well and efficiently including all the components required. Leadership and working on complex projects is much like producing a work of literature with interlocking parts. It requires patience, confidence, a smidgen of well placed obsession, and leadership. Leadership is not only taking control, it is inspiring and compromising with a group and with oneself about all the aspects of a project at hand. I'm proud of having the necessary qualities for the endeavor of leadership and I look forward to a lifetime of applying it.

-Avianne

... the moment I was
most proud of
myself...

Invited Interview

Elizabeth R. Dumont

Vice Provost, Academic Affairs

Director, Interdisciplinary Graduate Life Science Programs

Professor, Biology

College of Natural Sciences



Prof. Dumont: I never consciously set out to learn skills but I have picked up a few things that I think help. First, take the daunting pile of “things I have to do” and divide it into bite-sized pieces; they are much easier to swallow. Second, stay on top of priorities. I re-arrange my to-do list every morning so that the most urgent items are at the top. Do those things quickly and decisively and let the others wait. Third, learn your limits. A little bit of stress can be motivating, but too much will almost always result in sup-par performance. Know the quantity/quality of sleep, food, exercise and down time you need to be at your best and figure out how to get it (at least most of the time). Schedule it if you have to. Fourth, figure out what you like to do, which is not as easy as you might think, and then figure out how to make it part of your job.

GWIS:What kinds of experiences did you have as a young academic and how did they influence your current trajectory?

Prof. Dumont: When I was in high school I was discouraged from following my interest in biology because I was not “good enough” at math. What a rotten thing to tell a curious kid. So, my journey to becoming a biologist was through a PhD in physical anthropology. I was bitter about that for a few years but then realized that the training gave me an interdisciplinary perspective that has served me well. Looking back I wouldn’t want to have taken a different path, though I could have done without the doubts that stemmed from being told I wasn’t good enough to do what I wanted to do.

GWIS:We get dizzy looking at your job description! Can you pinpoint the skills that allow you to balance everything on your plate as vice provost, director of four life science interdisciplinary programs, full-time professor, P.I. and overall human being?

GWIS: Statistics suggest that the life science fields are more gender balanced than other STEM fields. Why do you think this is, and what can we do to create that environment in other fields?

Prof. Dumont: I am not a science historian, but my guess is that the relatively good gender balance in life sciences is largely a correlate of the fact that women were accepted there earlier. I can imagine that a woman who was interested in plants, for example, was less intimidating than a woman who wanted to build bridges. If sheer time is what has made a difference, then supporting girls and young women with interests in engineering and hard sciences is key, as is getting those people through the system and into research jobs. The more visible women are, the more "normal" gender equity will seem. Accomplishing that will require active mentoring at all levels and for women in research and academia to step up as role models.

GWIS: We were hoping you could expand a little on your answer to "why the gender balance is better in bio". So often we hear that it's because bio is a "soft science" and is "math-light" but we prefer your analysis. Historical contingency, for example, makes a lot of sense.

Prof. Dumont: Let me preface this by saying that I am not a science historian and this is just an idea, so it could be entirely inaccurate. My guess is there is relatively good gender balance in the life sciences because women "infiltrated" there earlier. Most cultures, and certainly western culture, view women as the caretakers of living things so perhaps the transition to studying living things was easier than moving into classically male territory. A hundred years ago, I can imagine that a woman who was interested in plants or cells, for example, was seen as less outrageous than a woman who wanted to build bridges. The first female botanist might have raised eyebrows, the second was less shocking, and no one noticed the third one. I am suggesting that over time the culture of the life sciences got "used to" women and their numbers continued to increase with the advent of broader social changes that broke down barriers for women (e.g., education, voting rights, and the right to control their bodies). The upside of this perspective is that it predicts gender equity will eventually be reached in all the sciences. The

downside is that it will take time, as all cultural changes do. I think we can play an active role in those changes by seeking out and supporting girls and young women with interests in engineering and hard sciences, getting them through the academic system, and then into jobs where they use those skills. We also know that's not enough, and that female scientists and engineers prosper when they are supported in the workplace, be it in academia or industry. Active mentoring at all levels will help, as will successful women stepping up as role models.

GWIS: You have a much broader and more comprehensive view of academia than we do as students - what guidance do you have for GWIS members and leadership about having a bigger impact on this problem?"

Prof. Dumont: GWIS is already taking some very important steps in the right direction. One is acknowledging and educating people about the existence of gender imbalances. Getting it out of the shadows and onto the agenda for discussion is critical. GWIS is also providing a forum for women to talk about shared experiences and to develop networks. As in many other male-dominated fields, mentoring networks provide both tactical and emotional support. Don't know how to respond to a biased comment from a colleague? Ask your mentoring group. You will also find that your graduate mentoring network is the foundation of your scientific network later. I am working on two collaborative grants right now, and both with women I have known and/or mentored for many years. It's been great fun and we're doing excellent science.

Having a more global impact on the problem of gender inequities has to start with understanding why they exist and persist. Based on excellent work by researchers here at UMass, we know that implicit bias has significant impact on how women are perceived by others and themselves. We also know that male and female faculty spend their time in different ways, which may affect women's ability to perform at their peak. These things can be addressed through raising awareness, taking down impediments, and promoting the image of women as leaders. Cultural change takes time, and we need to speed it up, but we are making progress.

... some non-academic obstacles I faced that have affected my academic success...

I suffered an injury midway through my graduate career that could have really set me back in my progress. However, my adviser was very understanding, and worked with me to set goals for myself that were reasonable and achievable with my temporary handicap. I've always been really grateful that I have an adviser who was willing to work with me rather than hold it against me.

-NotYourAverageJane

It was an icy Friday the 13th in December of 2013, a week before the finals of my senior year. I was walking home from school, and slipped on a patch of ice. I'm pretty clumsy so falling is nothing I'm not accustomed to, but when I tried to get up there was the cringing crunch sound coming from my ankle, and then an indescribable pain that I can only hope prepared me for the pain of labor. I had shattered both bones in my right leg as well as my phone so any hope of calling for help depended on a passerby hearing my screams. Eventually someone did hear my cries, and I was able to call a friend to pick me up and take me to the hospital. The night this happened I wasn't thinking of anything except pain reduction, but the next day when I woke up and had to make an appointment to have surgery to put my bones together I suddenly realized that this semester as well as my last semester of my undergraduate was going to be a lot different than I had planned. I fell into a depression from worry that I would have to take a semester off, and turn down the offers for graduate school I had received because my degree would not be conferred in time. This depression was short lived though because I contacted everyone- my research advisers, lab mates, teachers for next semester, school administrators, and the schools that contacted me for graduate studies, and the response was overwhelmingly supportive. I was not sure how this was going to be received because I was asking everyone to jump through hoops to accommodate me, but the response was extremely reassuring that I

was going to finish school on time, and move on with my life once I was healed.

My lab managers, advisers, and peers came to visit me in the hospital with flowers, sweets, and amusing cards about how this could only happen to me, and told me to not worry about anything. I ended up taking my finals from my teachers offices with my leg propped up on their desk to keep the swelling down during the winter break, and giving my research talks in February when I was able to hop around on crutches. My teachers for my final semester never gave me lip about coming to class late because I couldn't hop to class fast enough, or not coming at all because I didn't feel safe on crutches and icy sidewalks. Even the dean of the biological sciences would make an effort to meet me outside of one of my classes to drive me across campus to the other class so i would get there safely. All in all, I think everyone accommodated me because of my honesty and frankness regarding my injury, and if I had tried to be a trooper and suck it up like I had with every other academic or non-academic challenge I faced I would have probably broken something else. This experience taught me that sometimes you need to be vulnerable, and let others pick up the pieces that you either physically or mentally can't.

-Wild Thing

I have Tourettes and OCD. It's pretty mild and most people never notice it, but involuntary twitching is pretty noticeable to whoever is experiencing it. I know that I am extremely fortunate with my case, as it could be a lot worse, but it has affected my academic abilities. Certain ticks make it extremely hard to concentrate and reading a paper that is supposed to take 20 minutes could end up taking me 2 hours and leave me feeling exhausted with a headache. Throughout my academic career though I feel that I have always been able to be open about this obstacle. People ask how they can accommodate me and even though other than a little extra time,

there isn't really anything they can do, they are always willing. Some people don't even believe me because it's not always noticeable and sometimes that is the hardest part. Someone may not see your ticks but that doesn't mean they aren't affecting you and it's hard for them to understand. When you say you have Tourettes people expect you to shout curse words and flail your arms; they don't realize that you're not blinking so often because your eyes are dry but because you can't help it and if you're constantly blinking your eyes, that makes it pretty hard to read. People also don't realize that disorders like Tourettes don't come alone. They bring a whole host of things with them, OCD, ADD, anxiety, that can also affect your school-work.

-StillAnonymous

When I met my office mate before our first year of graduate school, he seemed pretty cool. We were in the same lab with different advisors. We got along well and he was outgoing and goofy. But a few weeks into the semester he started showing another side. He would get very condescending when asked a question or snap me for talking too loudly with a colleague or undergrad student. But then the next day would be all smiles and generosity again.

Things got darker as the semester went on. He started making inappropriate remarks about women in the program. Who was hot, who was not. He told us the reason he came to UMass is because he thought one of the female professors in the program, his advisor, was attractive. It seemed clear he had some troubling views of women, but I didn't really know how to handle it. I was unnerved, but didn't speak up.

Then he started making unwanted sexual advances toward me. Inappropriate questions and jokes at first, which progressed to unwanted touching in our shared office. I finally got up the nerve to say something to him, but he threw it in my face, telling me I was being too sensitive and huffing away. He even made a point of making dismissive jokes about my remarks to him during that confrontation in front of our peers, in and out of the office.

I was shocked and angry at first, but then I quickly grew depressed. I wanted so badly to quit the program. I even had thoughts of killing myself. I felt too embarrassed to say anything to my advisor, his

advisor, or other faculty. I thought that people would blame me for putting myself in that position, and I feared my office mate's retribution. To their credit, some of his male lab mates were angry with him about his actions, but I didn't internalize this as much as his very negative reaction. I avoided my office constantly, and my productivity suffered.

To this day, I'm not really sure how I made it through that really dark time. But about a year later, I saw him acting in a troubling way toward another woman graduate student and I finally found my voice. I talked to my advisor, who talked to his advisor, and apparently talked to him. He moved out of the office shortly afterward, and never said anything else to me.

Today I still blame myself for not saying something sooner, but I am slowly coming to terms with that initial harassment not being my fault. I can't really say how many months I wasted in my program feeling helpless and depressed, and the experience has made me extremely wary of male dominated workplaces. But I think I will continue on in my field, thanks to the encouragement of peers and mentors, both men and women.

Thanks GWIS for giving UMass women grads in STEM a voice. If you're reading this and have experienced something similar, be empowered to speak up! There are anonymous ombudsperson services on campus if you don't feel comfortable talking to someone you know.

-NotSafeAtWork

In my lab, I am the go-getter. Literally. The go-getter of things. I order lab supplies, fetch equipment, run errands, herd undergrads, rally lab meetings.

I'm not even really sure how or when exactly it started. When I first came to UMass I was one of maybe five people in my lab, the only woman of course, and we all seemed to be asked to do things more or less equally. But gradually I started to become the go-to person to ask. For everything. Hey, could you go get the projector? Sorry, can you run this over to Morrill on your way?

Was it because I said yes too much? Was it because I showed blistering competence at simple tasks? I may never know. But it was over a year that I

wasted valuable research time go-getting things for my PI and the rest of the lab before I started saying NO. So far, I've seen some very disappointed sighs, some pointed remarks. I do wonder: is this the way everyone is treated when they say no to favors, or is more go-getting expected of me as the resident grad woman? But the earth has yet to shatter and I am learning not to care so damn much about every sigh and remark.

-NotAGofer

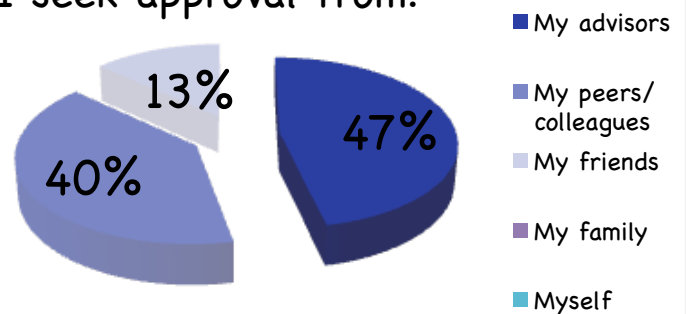
The obstacle was a medical diagnosis of bipolar disorder which arose after I suffered from a self-perpetuating delusion of grandeur in which I felt I had discovered that humans, having reached the pinnacle of evolution, had untapped mental potential only available to them if they were set free from the eraser of memory. The academic environment is non-judgmental as long as the right people do not know of the special circumstance, and therefore are as tolerant as can be, so long as I work as hard as my peers and control the sense of hopelessness which arises from being medicated. Medication seems to prevent manic tendencies, a euphoria the opposite of depression which leads to insanity, and therefore lessens intrinsic human emotions with the insidious side effect of erasing the path towards tracking these losses down. These realizations and thoughts had lead to great frustration and worry within me, and I am thankful for my friends and peers who I have been able to share these concerns with. Without them, I would be left alone in my thoughts, overwhelmed by the desire for things to go back to the way they were before my delusion began, before I was certain I would transcend the limits of my mind and be able to live forever as we rightly evolved to, so long as we achieved mental freedom. This obstacle interrupted my academic progress, but I was able to graduate with both a Bachelors of Science and a Masters of Science eventually.

-Avianne

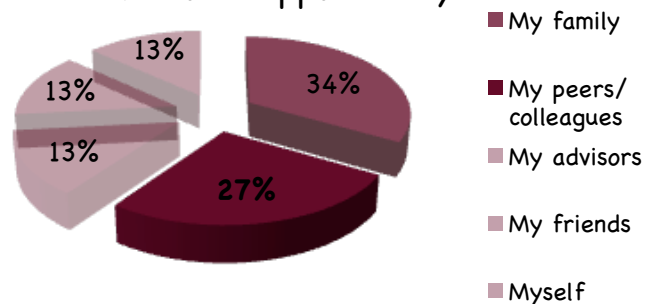
I get panic attacks and migraines pretty frequently. My migraines involve not only splitting headaches but also sensitivity to light and sound, and they can last for days at a time. Especially in undergrad, I faced some suspicion - missing class or assignments for "headaches" multiple times ends up sounding like a bad excuse. But the professors I respected most were extremely understanding. And I have a better control over the situation now, in grad school, than I ever did before - I learned how to use some biofeedback mechanisms to relieve the migraines, and that's helped immensely.

-CaptainBiology

I seek approval from:



I have felt most supported by:



... some non-academic obstacles I faced that have affected my academic success...

