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GWIS Quarterly Magazine 2014
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"If I am not at home accepting things I cannot change, then I am probably out changing things I cannot accept."

This has all the makings of a fantastic philosophy: it’s a great balance of acceptance and proactivity all wrapped up in cleverly symmetric phrasing. It seems so simple when it’s rolled into a quotable moment, doesn’t it? Some things are beyond our control and it is foolish to fight them. You may strongly disagree with gravitational force - it’s keeping you down and holding you back (yes, someone actually said that!)-, but neither will-power nor a really good lawyer will stop you from falling if you walk off a cliff. There is a special class of people who risk their well-being on a blind refusal of the laws of physics and general common sense, the best of whom are winners of the prestigious Darwin Award. Other things are very clearly within our control, and it’s foolish to live with them. If the scented candle on your coffee table drives you to drink, you simply remove it. Easy, right?

These are obviously ridiculous examples of how we apply the message of this philosophy every day, which have been brought to your attention solely to point out that most people take this process for granted. How often in our everyday lives do we stop to think hard about which things we cannot change and must accept, and which things we cannot accept and should change? Most of us will admit (although maybe not out-loud) that we do not budget nearly enough energy for this thought process. Most of the problems that cause us immediate danger or malaise simply declare themselves- and the rest become issues for tomorrow. So instead of overwhelming ourselves with the magnitude of the question “what are the things that I cannot accept?”, we bargain ourselves down by creating new categories: which are the things that directly hinder my immediate well-being, and which are enough removed from my sphere of influence that I can ignore them a little longer. The fatal flaw in this modus operandi is that we never quite know how many tomorrows stand between where we are now and running straight into the brick wall that we’ve been actively ignoring.

Say for example that the government refused to look for new sources of energy, knowing full well that while we will definitely run out of fossil fuels one day, today is probably not that day, and so we can just keep consuming at our current enormous rate until we run out. (Well, some of our government officials actually feel that way, which is absolutely terrifying and a worthy discussion topic for a different venue.) Since our business at the moment is gender inequality, we need to address the equally troubling philosophy that “we don’t have time to be proactive about creating a culture of equal opportunity because we’re really, really busy working 30% harder than our male colleagues just to earn the same salary and recognition because- well- the opportunities aren’t equal…”. If you’re wondering why that statement is in quotes, it’s because someone actually told us this. So what’s the plan, then?

"How often in our everyday lives do we stop to think hard about which things we cannot change and must accept, and which things we cannot accept and should change?"

We’ll just continue to fight this uphill battle until we give up or lose it? That seems oddly irrational, particularly for otherwise rational, logical intellectual types. In our everyday, scientific endeavors, continuing with a known erroneous method of operation would be laughable (and would probably get us kicked out of grad school!). It completely defies our scientific instincts as well as our years of careful training. The beauty of science is that it self-corrects - if something no longer works, it is no longer used or accepted. So maybe we need to take a page out of our own books, focus our well-trained eyes on our own behavior, and try something else.

For as long as most of us can remember, we’ve been told that we need to be better than the
boys just to keep up, and so we’ve all been out there stockpiling skills in the hopes that we will be able to “even” the playing field just a little bit. On the surface, this seems very reasonable: if we need to be better, then let’s go get better. The problem with this way of thinking is that we’ve got plenty of scientific evidence showing that it’s not our lack of skills that is keeping us out of the professional winners circles. As things stand right now, changing the name on your resume from Jen to Jon will make you 30% more likely to get the job, and a 20% pay-raise before you even start (anybody want to buy a vowel?). Seemingly, one of the best skills we could acquire is a Y chromosome, and there is a lot more to this than being the best person for the job. We are not being fairly assessed on our qualifications, but rather on someone else’s erroneous impressions of our talent, intelligence and competence based on some very outdated opinions of what women are “capable of”. The bad news is, that’s totally messed up. The good news is, erroneous impressions can be corrected.

Insofar as we know, perceptions and opinions rarely spontaneously change themselves. Reevaluation of one’s point of view usually occurs in the light of new information or in the wake of new experiences. If we continue to work within our previous paradigm of quietly acquiring skills and achievements and hoping for the best, we will never do any better than we’re doing now. Becoming visible, serving as a new source of information for the people who are making decisions about our future is as important to our professional development as all of the traditional things that we do to further our careers. We can no longer expect our work to speak for us, we have to actually speak for ourselves, or else we risk being passed over (over and over) for opportunities that we have worked hard for and deserve.

If we haven’t convinced you of this yet, we’d like to explicitly tell you that this is not tomorrow’s problem, it is currently affecting your career and well being. Take the issue of gender inequality and consider it the way you would consider any other problem you encounter daily in your research. We’re asking that you focus your individual scientific processes on it. Think carefully about what the variables are (and what they should be), how they’re related and make new, meaningful connections, then share them with each other and with us. Each of us has a different perspective, and somewhere in the coalition of these perspectives is an answer and a path towards change. You’ve got this; you do it everyday! Then talk to your peers, parents, role models and friends about it. Everything from “hey classmate” to “Dear Mr President” will make a difference. Come up with the solutions that might work for you - and then tell us about them. A few people cannot create an all encompassing solution to this problem. We can't even create a fraction of all the possible solutions. We are working to solve this challenge in the ways that we think we can: by writing this newsletter and putting our thoughts out into the world; by planning, executing, and attending workshops and Situation Rooms and luncheons; by serving daily as our own advocates in the workplace; by supporting our female colleagues however we can; and most importantly, by being open and accepting to different approaches. We want and need your help.

We cannot promise you that you will change everyone’s’ minds about women by talking to them and showing them a different definition of competence, but you will change some. We can definitely promise you that nothing at all will happen if we don’t do anything differently. With that said, we’re asking you to think harder about whether you can accept the situation if it doesn’t change, and what you’re going to do to take a more active role in effecting that change.

We can’t do this without you,
-the GQM Editors
Joelle Labastide and Dina Navon

Click here to join the conversation
Dear GWIS...

It’s really great how much effort you’ve all put into this magazine. I think you should be really proud of what you’ve accomplished. It was really brave of you guys to put yourselves out there like that, and the way it was presented was so pretty and visually pleasing. I am hoping that there will be future issues and they will be more focused on also talking about and raising awareness for the issues we are facing and will face in the coming years as a women in science. I am so looking forward to reading it!

-@MissAngieKay

Dear GWIS...

I completely enjoyed this newsletter. I read it over a few times. Right now is a harder time for me than usual because of where I am in my career and the various choices I have to make. I’m getting to the point where I have to be more focused on what career I want to pursue upon obtaining my degree. It’s truly a motivational piece. Thank you, everyone for taking the time to put this together. Reading this letter has done a lot for me as woman in science :-).

-Lola

Dear GWIS...

The Impostor article had a lot of material that resonated with me and my experiences! Going forward it will be helpful to have a framework by to evaluate my own actions and reactions as I move forward in my STEM career. Also, the format of the magazine is fun! I like the use of hyperlinks! Cheers!

-Hannah Broadley

Thanks so much for all the great feedback you sent in and posted on our blog about the Spring issue of GQM. We look forward to your thoughts on the Summer Professional Development issue, and promise to post them (in all their honesty!) in the Fall 2014 mag.

We’re listening,

-GWIS Communications

find us on our website blogs.umass.edu/gwis
or email us gwis@grad.umass.edu
RSK: First, could you talk about your professional career path? What led you to explore the intersections of engineering and social justice, and subsequently liberative pedagogies in engineering classrooms?

DR: I grew up in Los Angeles and became interested in environmental issues in high school. It was the 1980s and I had a growing concern about US wars in Central America. I attended some events and workshops on a few different social justice issues - a nuclear freeze workshop for high schoolers, for example. I had known three men who died of AIDS in the early 80s so I helped out with an AIDS awareness dance in 1987. That kind of thing. But my primary interest was environmental issues. My father was a chemical engineer, and when I was trying to decide about college majors, considering policy/law or biology/environmental science, he suggested engineering. I was completely naive about engineering’s political orientation until much later.

In college I went from a girls’ high school that never questioned my ability in science and engineering to Princeton, where I was shocked to discover many of my peers felt that women didn’t belong - not just in engineering, but also at Princeton in general. In December of my first year, 14 women were gunned down at the Ecole Polytechnique in Montreal because they were women studying engineering, and my peers made jokes about it or dismissed the shooter as a madman. But I recognized the continuum of misogyny in my experience of sexist microaggressions and the massacre of these women engineers. It radicalized me. The Society of Women Engineers on my campus pretended it didn’t happen, but the University Women’s Center held a vigil, and I became a Women’s Center participant. On a conservative campus like Princeton, we worked in coalition with one another, so my work at the Women’s Center connected me to other social justice issues. I struggled to connect these to engineering.

Meanwhile, I noticed a stark difference between my classes in engineering and my classes in other disciplines. Where other...
professors would facilitate conversations among class members as a community of scholars, my engineering professors mostly lectured at us while we took notes. Occasionally they would pepper us with questions that were more of a call-response drill, with one right answer you were made to feel stupid for not knowing. I began to wonder then why my engineering classes couldn’t be more like the seminar style classes I took in other subject areas. But it wasn’t until I became a professor that I really worked on the question.

RSK: One way that you implemented liberative pedagogies in your thermodynamics class was to give assignments that used skills that are typically perceived as non-engineering skills, such as reflective writing. In one example, you discuss how a “thermo-to-life” assignment... ...Can you talk about the process of crafting assignments that engage the whole student? How do you assess the success of individual assignments? And how do you balance this with the strict curricular requirements of a class like thermodynamics?

DR: So taking the last question first, it's important to recognize that since 2000, engineering has given up strict curricular requirements and moved to an outcomes-based model where we have to certify that students develop a set of abilities in what's known as "ABET a-k"

So the curriculum is actually a lot more flexible than people think, or than faculty are willing to admit... A-K includes abilities in communication, lifelong learning, ethics, and social context. So I simply address those in my thermo class.

Some of my assignments are student-initiated. For example, I developed a class on the Montreal Massacre because a student approached me and said she had read about the event on the Internet but wasn’t sure if it really happened. When I told her it really did happen, she asked why the women's engineering program didn’t learn about it. She had a point... so I created a class on it.

Because I had an NSF grant to do this work [on engineering education], I had a person who ran focus groups with volunteers from the class to determine what the impact was of different assignments. Students also did usual course evaluations mid- and end-semester. I always asked about readings and assignments in specific terms. Some were more popular than others. I also look at what students seem to be getting out of the assignment based on the assignment itself - how reflective were they, what did they learn?

RSK: In From Persistence to Resistance: Pedagogies of Liberation for Inclusive Science and Engineering, you make a good argument for top-down, systemic change in engineering, and say that the traditional approaches like after-school programs for girls can only go so far. Obviously these more traditional, bottom-up approaches (many of which GWIS is taking) do make some impact on the individual and community levels, but I’m wondering if you see places for graduate student organizations like ours to affect systemic change from the top down. What can we do as graduate students to promote institutional change?

DR: So the first most important point is that systemic change does not need to be top down, and in fact most systemic change is not top down but comes from the bottom up. It's about thinking systemically when you plan an action. The analogy people use is the story where the babies are drowning in the river. Someone jumps in and starts pulling babies out of the water. Someone else rushes in to help. The third person runs away, headed upriver. They yell at them, hey! There are babies drowning in the river. And they say, yeah I'm going to stop whoever is throwing them in there.

I think the most important thing grad students can do is share their experiences and act collectively. For example, it’s one thing to help someone pass a grueling confrontational daylong comprehensive exam, but it might be better to get together as a group and approach the department about making the whole exam process more humane for everyone. And if you work together you can do that. The more opportunities there are to talk about the kinds of systemic change that would
be effective, the better ideas you will generate and more support you will gather for the cause.

**RSK:** There is a great deal of debate about if and why gender matters in math and science fields. I think (and hope) that most of us have moved passed “if” and are focused on “why”. It seems to me that one of your foundational arguments is that we have spent too much time trying to assimilate, trying to meld ourselves to fit into engineering, when rather the field of engineering ought to meld to us. Do you agree with that interpretation of your work? What does this mean for the “why gender matters” conversation? In a broader sense, how about the “why identity matters” conversation?

**DR:** The point is that the system views meritocracy as gender-neutral, race-neutral, objective. It is not. The 2002 report “Unlocking the Clubhouse” illustrates this point. At CMU they got the number of women enrolled in Computer Science to increase from 7-42% over 7 years by changing the admission requirements and some assumptions they made about students' prior knowledge in intro courses. Most people would never even consider admitting "less qualified" people! But what CMU considered qualified was prior programming experience, which girls had been systematically shut out of .... We need to take that approach more often, seek out the biases in the system and remove them.

This is related to but also distinct from issues of identity in engineering culture. I think here we need to focus on understanding masculinities in engineering, cultures of whiteness and able-bodiedness and heteronormativity. It is by revealing these cultures within engineering that we can start to examine them and reconstruct new, more inclusive cultures.

Dr. Riley’s work phenomenally exemplifies ways in which gender biases can be addressed and dismantled in STEM fields. We, scientific people who hold subordinated social identities, have needed her work in reforming engineering education for far too long. Even in this brief interview, she has demonstrated a knack for spinning personal anecdotes and scientific data into powerful, persuasive arguments that are making real change in engineering education.

Examples of Dr. Riley’s work has given herein illustrate how addressing gender bias is already a part of the work that we do as women in STEM fields. As GWIS, we are the women who continue to face new gendered hurdles each day we show up to school and work, and the women who will tear them down for generations to come. As we continue to dismantle sexism at UMass and the surrounding community, it is my hope that we can leverage Dr. Riley’s brilliant insights in our own classrooms and community.

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Read the **unabridged version**
"By developing professional development skills... we seek to empower women to achieve academic and professional excellence."
- Excerpt from GWIS mission statement

Professional development extends far beyond the formal coursework and published research that are the traditional focus of graduate students in STEM. Success in any professional environment, including academia, industry, non-profits, or policy, requires well developed leadership, communication, and interpersonal skills. Recent graduates trying to land a desirable job also benefit greatly from a strong professional network, built by developing professional relationships, mentoring, and an online presence. The path to professional success for STEM grads requires knowledge that extends beyond what’s taught in the classroom.

Getting a boost in career advancement has been difficult for UMass graduate students in STEM in the past; many departments in the College of Natural Science or College of Engineering do not organize field-specific career events, and not all campus-wide programming is relevant to STEM fields. But the GWIS professional development committee has stepped up to create programming tailored to the STEM fields and designed to help students campus-wide launch their careers.

GWIS had a very successful inaugural year, producing a wide variety of STEM-focused professional development programming. A particular highlight was the Young Professionals Networking Event in May, a three-part event funded in part by a grant awarded by the Women for UMass Fund. Over one hundred graduate students and industry professionals attended the keynote speaker, panel discussion, and social hour.

Our most popular ongoing program is the Situation Room, a series of interactive workshops designed specifically to help hone difficult public speaking, interview and scientific conversation skills. About once a month during the school year GWIS creates a situation – complete with characters – and provides the unique opportunity for students to practice navigating it with no adverse consequences. Each workshop begins with a strategies talk by an expert, and following a master class format participants receive valuable feedback from

When our budding organization first surveyed graduate women in STEM in March 2013 about the type of programming they would want to see from an organization like GWIS, professional development was the top priority. In addition to honing skills like teaching and presenting research, graduate women in STEM at UMass want to have a full view of the potential careers open to them and be prepared for job searches, interviews, and negotiations.
faculty and peers about their performance in these difficult situations.

In the past year, the GWIS professional development discussion has also organized a bi-monthly book club discussion of Lean In by Sheryl Sandberg, co-sponsored a teaching portfolio and teaching statement overview workshop with the Center for Teaching and Faculty Development, and co-sponsored career panels and seminars with the Office of Professional Development. For more details on these programs and a library of resources from past workshops, see our blog.

We are always actively seeking feedback from members and students who participate in our programs. In the near future we plan to target workshops respondents most want to see: the return of the Situation Room conference talk, online interviewing, and networking workshops, as well as more opportunities to explore careers and build a professional network.

In the longer term, we hope to build a strong network of GWIS alumni to grow our members’ professional networking base, to have a set of role models and mentors for UMass graduate students, and to invite them back to UMass to replenish speakers for continual career advancement events.

GWIS Situation Room workshops

First Impressions
This workshop focused on the versatility needed in pitching an elevator talk on your research. Four professional experts gave networking tips and mimicked the common situations you might find yourself in as someone asks about your research.

How to Survive an Online Interview
Focusing on the video and phone interviews skills needed in the digital age, students interviewed with a panel of faculty experts in front of a live audience of their peers.

Teaching Strategies for Every Classroom
Mindful that the teaching responsibilities and ambitions of graduate students span a wide variety of classroom types and style, participants prepared a short lecture in laboratory, classroom, and team-based learning settings while audience members role-played difficult students.

How to Command a Room at a Conference
Participants prepared a short talk on a topic outside of their field and audience members acted out difficult public talk situations: including disinterest, aggressive arguing, and politically loaded questions.

Have a suggestion for professional development programming you want to see?
Contact us!
gwis@grad.umass.edu
Did you know?

On average, women tend to ask for $7000 less in salary than men when negotiating for themselves, but about the same as men when negotiating for a friend. This discrepancy in negotiation may account for some of the income discrepancies between highly educated men and women in STEM fields.

Why is this the case?

Women more than men tend to be adverse to advocating for themselves - stemming from hesitancy to appear too ‘pushy’ or a desire to please others in the picture before themselves. This aversion is even stronger for new acquaintances, like potential employers and co-workers. Perhaps this concern is justified: both men and women are less likely to want to work with a woman who negotiates during a job interview.

What can we do?

GWIS looks at two successful women negotiators for insight on how to effectively advocate for yourself as an individual.

Read on to see what we found.
Below is an original email draft of a candidate seeking to negotiate a few elements of a job offer. In bold is every term and phrase that diminishes, juvenilizes, genders, sabotages or makes excuses for the candidate.

Dear XXX,

I just wanted to get back to you and discuss a little more about the offer. I would again like to let you know that xx is my priority but I also have an offer from xxx which is offering me $xxK. I understand that you may have some constraints but would you consider increasing the starting salary to some extent? Also, I was wondering if you could add a start-up research fund. I understand that conference travels are generally covered, but I would like to make sure that I get covered for two conferences each year in order to stay productive. In terms of teaching load, would it be possible to have a x course load during the second year? In addition, I will really appreciate if I could get covered for the house hunting trip for my husband and myself. It is going to be a long move from xxx, so we would like to visit and make sure that we find a nice place for our family.

Also, I would really appreciate if you could consider extending the deadline just a few more days. Again, my priority is xx but I just want to make sure that I know all the options before I make my decision and I am expecting to hear from a few schools within next week.

Revised version by Dr. Karen Kelsky:

Dear XXX,

Thank you again for the generous offer.. XXX is my top choice and I’m excited about joining the faculty there. However, I have a few issues related to the offer that need to be resolved before I can give a final commitment. I want you to know that I have another offer in hand as well as several possible offers that I am to hear about shortly. My current offer brings a salary of $xxK. I would like to request that XX match that. I would also like a start-up research fund of $xxxx, to fund things like travel for research and a research assistant.

In terms of teaching load, I’d like to request a course release for the second year as well. I would like to make a trip to xxx with my partner to look at houses, and I’d like to know if the department can cover some or all of that expense. And finally, I want to ask for a further extension of the deadline by one week. I am very grateful for your flexibility on the deadline so far. But because several offers seem to be pending, I wish to know all of my options before I make a final decision. I want to reiterate my seriousness about the xx position, and hope that we can reach an agreement quickly.

Sincerely, xx
Q: Can you isolate the key steps or strategies you use to negotiate?

A: “I have never had any formal courses in negotiating, and I am not a naturally aggressive or even outgoing person, but I have been able to “fake it until I make it” and now it is easier to fein ease at being more straightforward with what I want and need. Also, I think about negotiation logically. In a compromise or negotiation of anything, you have an end goal, think of it as the mean of a Gaussian distribution. That goal cannot be your starting position. You must ask for more. You must be 2-3 standard deviations higher than your end goal. Why? Because the person you are negotiating with may be 2-3 standard deviations lower, and you want to end up at your goal.

I spent a summer before my first year in graduate school in Beijing, China working at Tsing Hua University on Plasma Physics. In Beijing, you can haggle for anything. In this situation, the more you look like you do not want the thing, the lower the price goes. Their tactic is to always ask you for a price you want. As soon as you say your price - they have you because they will basically meet you in the middle. If your price is still above their minimum, they have you. As long as their price is below your maximum, you can come to an amiable agreement. That is how negotiating works in my mind.”

Q: Can you give us an example of a successful negotiation you have done?

A: “One of of the issues in my negotiation at UMass was that the department didn’t know how to work on getting a spousal accommodation. Thus, I turned to a network of women at UMass to help the department learn how to go to bat for me. In this way, negotiating for a tenure-track job is a bit weird, because the person you are talking to - the department chair - is in turn negotiating with the dean and/or provost above him/her. Really, the department chair should be your advocate and be on your side. He/she should be helping you negotiate, so don't be afraid to ask. If you get a weird vibe, that is probably a bad sign.

At one of the other positions where I was getting an offer, the department chair was very helpful. He basically told me that, in academia, anything is negotiable. Anything. That means you can negotiate items that seem odd. At some schools, they can help with housing - especially in expensive cities, like LA or NYC. They expect you to ask for help with housing or request university-owned housing. You can negotiate for better office furniture. You can negotiate for a great parking space. You can negotiate for a spot in the daycare.

I was very bad at negotiating my salary. I knew it was important, but I felt like I was negotiating my husband’s salary and his whole job, and I shouldn’t look too greedy. I think that was a mistake. Even starting a few [thousand dollars] ahead would have been better.

I think this is very typical for women. Society tells us that women who ask for more money, even equal pay, are greedy and [greediness] is somehow less tolerable in women than in men. Men who ask for more money are not as likely to be thought of as greedy.

There is some advice I have heard recently that I think is good to help overcome this: when you need to negotiate for more money don’t think you are negotiating it for yourself, but rather for your family. You need more money so that your family has a better life. I think that would have helped me.”
Want to practice writing, graphic design, composition and editing?

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Experience isn’t necessary (enthusiasm is).