Letter from the Director

Welcome to CWW’s Spring 2014 edition of Perspectives. This issue of our newsletter focuses primarily on women in male-dominated fields—from the interpersonal day-to-day experiences to the broader institutional practices and policies that affect women in STEM. We have exciting ongoing work to address barriers for academic women in STEM fields, and we devoted our Spring Gathering at the Well Forum to the issues women face when entering “non-traditional” fields. We had great fun with a “Dear Madame Curie-ous” feature and hope that you enjoy reading the Q and A’s as much as we did!

I also want to announce important new developments. I am particularly excited to announce that Mignon Duffy, a long-term member of our Leadership Team, is now CWW’s Associate Director. In addition to partnering with me to provide overall strategic leadership for the Center, she has enabled our Emerging Scholars Program to become ever-more vibrant. We also welcome two new board members, Luisa Paiewonsky and Alice Hogan. Luisa is the Program Manager for the Strategic Highway Research Program at Volpe National Transportation Systems Center, U.S. Department of Transportation and former Commissioner of the Massachusetts Highway Department. Alice was the founding Program Director for ADVANCE at the National Science Foundation, working to address the under-representation of women in academic science and engineering. Currently she is a strategic consultant for faculty development, mentoring, equity, and institutional transformation.

We thank everyone in our network for your partnerships and support—and particularly for helping our CWW Endowment to grow to support our ongoing work.

All is well at the Center for Women & Work, and we hope all is well with you!

Meg A. Bond
CWW Director
While great strides have been made through research and policy application, barriers to women's career advancement and success are still present especially for women who branch out into male-dominated fields like STEM. Below are innovative interventions being implemented by Universities around the country in an effort to advance and promote women faculty in STEM fields.

- Mentoring and networking for new faculty
- On-going faculty professional development programs
- Targeted faculty recruitment and evaluation initiatives
- Organizational climate assessment and change initiatives
- Executive coaching and leadership programs for career advancement
- Visiting scholars program
- Financial support for leadership development, travel, and scholarship
- Tenure clock delay for family care responsibilities

Challenging Subtle Gender Bias in the Academy

Women in academic science, technology, engineering, and math fields (STEM) face subtle gender biases that are often difficult to pinpoint and measure. In many ways, these “micro” biases are more insidious than more blatant expressions of bias and can have profound effects on women's success in the academy, influencing both tenure and promotion rates as well as women's well-being and sense of belongingness. One step toward institutional change is to be able to identify and measure these biases, and an NSF grant from the ADVANCE PAID program is enabling us to develop an index to address this situation. In collaboration with the University of Massachusetts Worcester, analyses of interviews with STEM women at two universities reveal subtle biases pertaining to attitudes, visibility of women's work, access and allocation of resources (formal & informal), mentoring, clarity of and assistance with promotion and tenure, and hostile work climates.

The interviews informed the first phases of developing a subtle gender bias scale specific to the experiences of STEM women in academia. Subscales include items across multiple levels: institutional, departmental, interpersonal, and individual. This NSF-funded project primarily seeks to (1) create and validate a measure of subtle gender biases; (2) assess the professional and personal impact of micro-inequalities on academic women of diverse identities; and (3) examine qualities of the academic institutions that can moderate the impact of micro-biases. Next steps for scale development will include continuing to refine items across all four levels and validate the measure. UMass Lowell Faculty on the core project team include Nellie Tran, PI, and Ivy Ho, Co-PI.
This spring CWW worked with the Office of the Vice Provost for Research, Julie Chen, to host an inaugural 50/50 Lecture where notable scientists are invited to campus to share both their research work and their unique career path in STEM (science, technology, engineering, and mathematics). The goals of the 50/50 Lecture Series is to inspire established and emerging STEM professionals to persevere not only by considering the research topics of leaders in STEM, but by also looking at their career holistically. The first lecture featured Dr. Julie Zimmerman, Associate Professor of Environmental Engineering at Yale University. Professor Zimmerman, whose research interests broadly focus on green chemistry, received the 2012 Walter L. Huber Civil Engineering Research Prize (given to top researchers under 40).

Professor Zimmerman obtained a degree in civil engineering at the University of Virginia but wanted to go to graduate school to pursue her interest in environmental science and policy while continuing with engineering. In graduate school, she embarked on a non-traditional path as she pursued a joint degree in environmental engineering and natural resource policy (University of Michigan). Dr. Zimmerman did not then go straight to the academy; instead she worked for several years on funding and policy issues as an engineer and program coordinator at the United States Environmental Protection Agency. There, she managed sustainability research grants and created EPA’s P3 (People, Prosperity, and the Planet) Award program. Dr. Zimmerman’s life story also challenges the belief that women must forgo family in order to succeed in STEM, as she has both a life partner and children.

People in STEM have Personal Lives Too

Professor Julie Zimmerman spoke about green engineering and sustainability at the 50/50 lecture series.

The Center for Women and Work is at the forefront of ongoing research to address barriers to success for women in the workplace. While our newsletter is specifically targeted to women in male-dominated fields, many of the barriers to advancement face all women, and sometimes men, in the workplace. Critical concerns that require organizational and public policy attention include:

- Wage equity
- Discrimination (e.g., based upon gender, race/ethnicity, religion, sexual orientation, disability)
- Sexual harassment
- Parental leave
- Childcare subsidies and onsite childcare
- Access to higher-lever managerial roles
- Affirmative action
- Occupational health and safety
Honoring Those Who Have Challenged Barriers

Splash! Awards are given annually to individuals or groups who have made exceptional contributions in arenas related to our forum topic. This year’s awards celebrated those who have advanced the rights of women workers in male-dominated occupations. The winners included Haylee J. Bacik, a graduate of Wentworth Institute of Technology’s Construction Management program and a recent employee of Gilbane Construction; Cynthia J. Chestnut, a senior in Greater Lowell Tech’s Computer-Aided Design and Drafting Program; and the Society of Women Engineers (SWE), a student group at UMass Lowell that empowers women to succeed and advance in their aspirations and to receive the recognition and credit for their life-changing contributions and achievements as engineers and leaders. Congratulations to all who make a Splash!

The more ways we conceptualize and understand best practices and barriers to the advancement of women in male-dominated fields, the more we as a community can address the pertinent issues and suggest sustainable changes. Many ideas were raised this spring through CWW’s 16th annual Gathering at the Well Forum.

Who Wears the Pants?

The theme for CWW’s 16th Annual “Gathering at the Well” Forum was Who Wears the Pants? Women Workers in Male-Dominated Fields. We discussed women’s experiences in historically male-dominated occupations including engineering, science, management, policing, military, and construction through examining academic research as well as through women’s stories about working in these fields. The event was high energy and well attended by a wide range of women in diverse male-dominate fields.

Our featured speakers included three CWW Associates; Kim Merriman, Melissa Morabito, and Michelle Haynes. Kim Merriman from the Department of Management focused our attention on the ways that job ads convey gendered preferences through subtle wording, e.g., using words like “individualistic” and “competitive” as opposed to “committed” and “understanding.” The research suggests that gendered wording of ads influences women’s interest in jobs (though not men’s to a significant degree). Further, gendered wording does not tend to influence women’s perceived ability to do the job, but does influence their perceived belongingness in the job. This suggests women’s reduced interest in many male-dominated jobs may be due to subtle cues of not being welcome.

Melissa Morabito from the School of Criminology and Justice Studies spoke about the history of women in policing; she discussed the “glass wall” effect and advancement pathways for women in this male-dominated field. Professor Morabito explained that although the pathways to advancement for women in policing seem to be present, women most often are confined to particular roles and are unable to move around in the organization. Consequently, most organizations do not have women in command positions. Forum participants were invited to imagine their own personal paths and barriers to advancement by visually representing them with Legos while we discussed the parallels with issues women face in the policing profession.

Michelle Haynes from the Department of Psychology described interpersonal penalties for women and challenges in coping with backlash and self-censoring. She summarized research on the ways in which assumptions about what is expected and appropriate for women in the workplace can seriously constrain options open to them. Professor Haynes challenged us to ask ourselves if we have ever felt like we needed to adjust our behavior because we were worried about penalties, i.e., concerned about how others would interpret and react to our behavior. If not consciously, do we do this unconsciously? She then engaged the audience in discussion about ways to manage the backlash to acting outside of these constraining expectations.

Other important contributions included a poetry reading by Joyce Headley, author of the original poem “My Knees are Shakin’” which depicts working in the concrete industry in the 1970s as well as clips from a video project by UMass Lowell’s Work, Labor, Society class entitled “Voices of Working Women.” Imogene Stulken from UMass Lowell Protestant Campus Ministry created and delivered our closing ritual.
INTERPERSONAL APPROACHES—WHAT CAN A WOMAN DO?

While we address institutional issues and constraining social dynamics, women all still have to contend with the day-to-day challenges of working in male-dominated fields. So we asked UMass Lowell women students in Science, Technology, Engineering and Math (STEM) to tell us what specific concerns they have as they embark on their careers. To better answer their real-world questions, we called upon our STEM expert, Madame Curie-ous,* a successful mid-career STEM woman who has personally experienced a range of issue as a woman in a male-dominated field. What follows are the students’ questions and Madame Curie-ous’ candid advice about working in this context every day.

*Madame Curie-ous channeled responses from real women in STEM into her insightful answers.

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Dear Madame Curie-ous,

What are some of the obstacles you personally faced while applying for jobs in a male-dominated STEM field?

From,

Ready to Tackle the Hard Stuff

Dear Ready,

Research in Sciences and Engineering has changed a lot from when the senior people in these fields were just starting out. They expect to see a younger copy of themselves, but new women in STEM are not that. I think that at times, people do not quite know how to evaluate women.

I have a multidisciplinary background, which has often been interpreted by others as having insufficient knowledge (lack of depth) in every field I work in. During interviews, I sometimes experienced that the interviewer mostly wanted to confirm his/her expectation that since my background wasn’t exactly in his/her field, I did not have the skills for the job. After noticing this, I tried discussing my work and skills by giving more specific examples, to make it clear that I had expertise and publication in similar areas although the traditional designation of research field wasn’t the same as the interviewers. This would often help us find some common ground.

In terms of moving up, I think it’s important to recognize what you can learn from every situation. Early in my career, I moved from one position to another many times, as the funding for the projects I was hired to work on ended. I was not exactly able to move “up” in this context. Instead I spent a number of years at the same level, starting over in new places. But on the positive side, the people I met during this time are still an important part of my network today. We are still doing joint research more than a decade later, and many of them are my personal friends.

You can do it! Stay curious and courageous!

Best,

Madame Curie-ous

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Dear Madame Curie-ous,

What were some of the avenues you took to get started? What are some ways you have seen women stand out in such competitive, male-dominated fields?

From,

Striving for Success

Dear Striving,

When I was looking for an internship, I was fortunate to meet an engineer during an industry event at school with whom I hit it off really well and had a very long technical conversation about the work that she did. I did not act any differently with her than I would any other representative at the event, but I was particularly interested in her company and product as it had been a passion of mine. My best advice, and I think this is how I was appealing to the industry rep, is research the companies that you’re going to be meeting. Ask specific questions and show that you can follow the conversation in a technical manner as an engineer.

In general, the women who stand out are those who maintain a clear head and careful approaches to adverse situations. The worst thing you can do is to get emotional because (unfortunately) it is more commonly the females who do this, and it feeds into stereotypes about women. It’s seen as not having the qualities needed by an engineer. Remaining calm and approaching a problem in a systematic manner in order to solve it, is how you demonstrate your abilities to complete your job.

You can do it! Stay curious and courageous!

Best,

Madame Curie-ous
Dear Madame Curie-ous,

Have you ever had an experience where you felt stereotyped as a “weak link” by others in your field due to your gender? Please tell us about how you overcame that challenge and whether or not you think women entering the STEM fields today will experience the same types of things.

From,
Worried about Discrimination

Dear Worried,

When I worked as a field engineer in the oil industry, there were some physical strength aspects to the job, so sometimes I quite literally felt like a “weak link”. I learned to ask for help without shame when I needed it, which was a good life lesson overall. No one has to do and learn everything all alone, even men! As my dad told me, ask for help early and often because when you get to be an older, more experienced engineer, people will expect you to know lots of things. Being a new engineer is like a free pass to admit ignorance! Now that I am no longer in the field, I still sometimes feel like the weak link but my strategy is to remind myself of all the things I have accomplished, and remember that only people with narrow perspectives and small minds will think that my voice isn’t important.

You can do it! Stay curie-ous and courageous!

Best,
Madame Curie-ous

Dear Madame Curie-ous,

What is the day-to-day life like for you at your job? And can you speak to some of the changes you personally have seen in the dynamics of the workplace as women become more visible in STEM fields?

From,
Wanting to Make it Work

Dear Wanting,

I have worked in diverse workplaces from a design firm office to a field job to academic and research settings. All three are different in terms of workplace dynamics; however, I wouldn’t say any of those environments is better or worse than the others for women’s success, just different. My advice to females in STEM fields is to choose the career that most excites you, while also considering the culture and how supported you feel in that culture. For example, a woman who cannot advance feels frustrated even if her company is doing thrilling projects. Likewise, just because you can attain a high position in a certain company, if the work is boring then that company would not make a sustainable career choice. Compromise may be necessary. One thing I have observed is that some men tend to feel threatened by or do not understand the management styles of women as they take on more leadership roles. These situations are best dealt with delicately so that you can retain allies especially among older, respected colleagues.

I have a friend who, in her first job, was one of three females in a 25-person group with all-male management. In that job, she was only treated like a “female engineer” by one of the other two women. Women can be mean to each other when they feel threatened and feel as though there is only room for one or two women in the department.

I think the attitudes all around are shifting for sure, but if you can overcome the sense of competition with other women, it will go a long way.

You can do it! Stay curie-ous and courageous!

Best,
Madame Curie-ous
Dear Madame Curie-ous,

What advice do you wish someone had given you as a young woman just starting your career in regards to becoming a well-respected and successful member of a mostly male-dominated profession?

From,
Just Starting Out

Dear Worried,

My best advice for females in STEM starting their careers is to feel responsible for your own work and understand that you will be assessed on the quality and timing of your work, not based on what others are doing. Just because there are only a few women in the office doesn’t mean you are being compared to one another. Never try to get ahead by putting others down, and this applies to all genders, roles and experience levels.

Also be respectful of other women, and don’t fall into the clique-y attitudes. They do exist, and it’s unfortunate. I have been bullied and threatened by female colleagues; not all women behave like this, but when they do, it creates a toxic atmosphere. Steer clear of this behavior.

Do your job like everyone else. Don’t think about “being a woman in a male field,” and most people won’t treat you like you are different. And if you are in a company that has a dated mindset, seek support from co-workers who understand and can support you. Keep doing your job and do it well and try to disregard negative comments. You’re better than that.

You can do it! Stay curie-ous and courageous!

Best,
Madame Curie-ous

My name is Steph Kelly and I am a senior at UMass Lowell (expected to graduate this spring) in Plastics Engineering. In regards to your questions, I’d like to help by just adding a few notes:

How to get a job in the STEM fields—APPLY YOURSELF.
Every employer is looking for a woman engineer to join their company; do whatever you can to show you’re qualified on paper. Ensure your resume is edited by Career Services, know your elevator pitch for career fairs, carry yourself confidently, always smile, be enthusiastic, and show that you are professional.

How to move up and establish oneself in the field—
Show your co-workers that you are not afraid of a challenge... work diligently, always ask for more, and be personable. Expressing these characteristics will not only get you noticed, but you will earn respect and trust in your position.

Women in male-dominated fields—Don’t be intimidated; make sure you have a voice and don’t be afraid to speak up... sometimes men don’t like to listen, so you have to make your point clear, concise, obvious, and simple. Make a name for yourself (a good one) and you will see that being a woman in a male-dominated field is empowering when you’re determined to succeed.

Miscellaneous—Being a woman in a STEM field has its benefits and complications. If you have the determination to be the best person you can and strive for success in the workplace, you will. You create your own destiny, so if others impede your ability to become who you want to be, overcome it; it’s as simple as that.
University Professor: Congratulations to One of Our “Own” STEM Women

CWW Associate and Leadership Team member Laura Punnett of the Department of Work Environment has been awarded the prestigious title of University Professor. The three-year appointment is the highest distinction bestowed on a UMass Lowell faculty member, recognizing exemplary contributions to teaching, research and service. Punnett is a founding member of the Department of Work Environment, arriving at the University in 1987. For the past seven years, she has also led the Center for the Promotion of Health in the New England Workplace, a research center of excellence funded by the U.S. National Institute for Occupational Safety and Health (NIOSH) with more than $9 million to date.

College of Health Sciences Dean Shortie McKinney described Punnett as “one of those rare academicians who excels in all three areas expected of faculty: teaching, research and service ... her students have moved on to leadership positions in academia, non-profit institutions and research institutes, making her influence on the future of her field even stronger.”

At CWW, we have also benefitted from Laura's strong commitment to mentoring other faculty and from her generosity in sharing her research expertise. Congratulations Laura—this honor is well deserved!