

WISEMS blog – My Reflections

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On Saturday October 13th, I attended the first annual Women in Science, Engineering and Medicine Symposium (WISEMS). I am a graduate student, studying in the field of ecology and conservation biology. I've had a passion for biology since I was three years old, and I haven't wavered in my choice to follow it through to graduate school. I was fortunate enough to be accepted to McGill University, where so many important historical women have graduated from, and this symposium showed me in detail how many significant contributions to science women from McGill University have made. It was very interesting to hear what these speakers had to say about their own experiences in the field of science and engineering as women. I honestly hadn't given it much thought in the past, but now that I reflect on the symposium as a whole, women really did, and still do, have to put more effort into their jobs to prove they deserve to be where they are, especially if it is any high-calibre academic position, positions of authority or positions where men tend to dominate.

I found the first presentation, about Carrie Derick, to be the most educational for me. Firstly, because I didn't know much about her – in fact I had only ever heard of her a couple weeks prior to the symposium (shame on me!), and second, because of her views in the controversial "Eugenics" movement. This first speaker was Peter Campbell, a History professor from Queen's University. His presentation elaborated on Carrie Derick's involvement in Eugenics as well as her legacy as the first female to be appointed as a full professor at McGill University, and in Canada in 1912.

Eugenics was a movement which basically promoted the use of practices aimed at improving the gene pool of the human population. According Derick, the human gene pool could do without "feeble-minded" people, and therefore should be sterilized. "Feeble-minded" in Derick's view, tended to point towards people of lower-class, European background... basically immigrant populations. This part of Derick's history was obviously quite controversial and has resulted in her being heavily criticized by the public. I have to say, it was very brave of Campbell to speak about this controversial subject. I think the way he chose to present the topic perhaps made it easier for people to understand and relate to. His spin on the topic was telling us the facts about Derick's life and accomplishments, along with some of his own interpretations, for example suggesting how Derick's legacy paved the way for the higher development of our education system and Canada's embracement for multiculturalism.

The next few talks before the break informed us about the history of women working in Science and Engineering positions since Carrie Derick in the early 1900s. Ariane Marelli, from McGill University continued educating us on the history and milestones of women in medicine. Then Ruby Heap, a professor from the University of Ottawa, spoke to us about the activism of Canadian women scientists and engineers from the 1970s to 1990s.

On a side note, listening to these talks made me think of my own inspirations that led me to be where I am today. That inspiration is my Mom. My mother is a biologist for the Ontario government back at home. She was the only woman biologist in her office when she first started there over 25 years ago. I remember her stories about what it was like being a woman in a male-dominated work environment. There were two small anecdotes that stuck

with me. The first was when she was conducting a creel census, where part of the job was speaking to the local fishermen about the species of fish they've been catching. Apparently my mother's boss told them to wear "tube tops and cut-off jeans" so the fishermen would answer their questions for the survey. I asked her about it, and yes, she did end up wearing the skimpy clothes. She even has a picture of it! She was 19 years old and wore short-shorts and a tank top, just so she can do her job – sampling fish! She looked good – but I can think of many things wrong with that situation as I'm sure anyone else can as well... in any case I'm sure the fish were very impressed with the effort she made to sample them! The second story was where she was a guest speaker for a meeting, and the speaker before her had a slideshow presentation where the very first slide was a picture of a playboy pin-up girl! Apparently my mother was very pregnant (with me) at the time, and was clearly offended. I suppose the work environment has improved over the last 25 years, and according to my mother no one has included play-boy bunnies in their presentations since then.

Julie Payette was the keynote speaker, and I found her to be the most influential and entertaining speaker overall. I very much enjoyed listening to her experiences at NASA and on the international space station as a woman engineer and as a Canadian. Throughout her talk, I noticed women in the audience laughing and crying and it didn't even seem like she was speaking for one whole hour! I found her personality to be refreshing; she was spirited, light hearted and energetic. It was also clear that she was an engineer. She had a very scientific way of thinking which showed when she answered questions from the audience. Her answers were simply the truth in her view – and very succinct! A trait I think can be applied to those trained in science and engineering; no extra emotion or sentimental mushiness was shown than needed to be. I am used to conferences where researchers get to their point quickly in 15 minutes, so I appreciated it! The message Julie was getting across was that she, as a female astronaut, always had to work harder to prove to everyone that she belonged where she was, and that being a women does not hinder her ability to do her job in any way. Julie explained her idea in terms of how many standard deviations you fall from "the norm" dictates the how difficult it would be to prove you belong where you are. She was able to go to space because of her passion for innovation and science as well as the support from her family. I think she is a great role model for young women in science, especially for those who think they are too many standard deviations from the norm!

On the whole I found the symposium covered a lot of information and different perspectives and experiences from women working in science-related fields. I did find there to be a bit of overlapping information given in the second half of the symposium, where the idea of women being drawn to work in more social-type sciences like biology rather than mathematical-type sciences like physics (with the exception of astrophysics) was mentioned many times. Women also tend to be better at managing their funding, meaning they can conduct the same research with a much smaller budget. Marianna Newkirk suggested that perhaps the male scientists like spending money on super expensive equipment, whereas women tend to budget for practical laboratory supplies. My interpretation is that women are much better at multi-tasking, therefore can maximize their output with minimal resources. However, in the end it seems that the males tend to ask for more money, therefore they receive more money than women.

Unfortunately, the talk about women in Physics was least interesting to me, mostly because the main message was brought to the forefront in the beginning of the talk and was repeated for the remaining 20 minutes or so. What I wanted the speaker, Tracy Webb, to do was make the connection between this "anomaly" in female physicist's gravitating towards studying astrophysics, the study of stars, to the idea that the subject itself can be considered the social-side of physics. As mentioned by previous speakers, women working in science tend to focus their research on more social-type subjects. I would think studying stars, which are visually awesome in my opinion, can be considered more social than studying string-theory.

In reflection I think having an annual WISEMS symposium would be very influential and a good idea. This will allow more time for students and other people to learn the existence of it and join in on the discussions. It will also help inform the public of the issues women are still having in the workforce, particularly in science and engineering. I really think most people don't even realize women would have issues like these, largely because they don't think of women working in science-related positions in the first place. I think having more speakers, even non-famous people with different experiences and would be interesting to hear from as well. Based on what I've learned from these talks, I am very grateful for the progress our society has made in its view of women in dominant positions in science and engineering, but as we move forward I feel we still have a ways to go.