



NCSEA

National Council of Structural Engineers Associations

STRUCTURAL CONNECTION - BOARD THOUGHTS

November 2016

Women in Structural Engineering

Contributed by Susan Jorgensen, P.E., SECB, LEED, NCSEA Board Treasurer

Over the last several months when I considered the possibility of our first female President, I reflected on my own career as a structural engineer. Growing up, I did not aspire to be an engineer. Once I started in this profession, I did not realize the challenges that I would face in a male-dominated industry. I believed (and still do) that I could accomplish anything if I wanted it enough. My experiences in life have proven that with hard work and determination this is true. Fortunately, I was not discouraged (as many of my peers were) from pursuing a technical career. I became a structural engineer because I love math and wanted a career that created tangible evidence of my impact in the community. But more than one female engineer has heard “girls are not good at math”, “engineering is for men”, “no one will hire a female engineer”, and reasons why “they should pursue a career more suitable for women”.

In the course of my career, I have never been faced with blatant discrimination due to my gender. This is not to say that it does not happen. Numerous stories have been related where women have been bypassed for promotions even though their background, experience, and capabilities exceeded those of the male engineers who received the promotions. Statistics show that women make less money than men for doing the same jobs, and this is true in our industry as well. How many hiring managers have selected a man over a woman out of some archaic belief that he is more capable?

Beyond the discrimination, women engineers have had to work harder to prove that they are at least as good as their male counterparts. It is not uncommon for a woman's decision to be questioned, while no one thinks twice about it when the same solution comes from a man. Some of this comes from the fact that men have traditionally been raised to be confident in their decisions and defend them, good or bad, whereas women often (unreasonably) question their own abilities and are conditioned to back down when challenged. I have seen this firsthand in mentoring young engineers; the young women were generally open to direction and constructive criticism, and were anxious to learn, on the other hand, young men seem more likely to graduate thinking that they are capable of taking on any engineering assignment, and are offended when their decisions are questioned, corrected, or criticized (even constructively).

As much as I would like to say that this has changed in our more liberated times, we as structural engineers still have more that we can do. When I went to college, the ratio of women to men in engineering was around 1 to 8 (12%). Unlike the steadily increasing percentages of women in medicine, architecture, and accounting, the percentages of women pursuing engineering, especially in the structural field, have not increased in proportion to the general participation of women in the workforce. This is a mystery to me. As a profession, we need to do more to encourage young women to consider structural engineering and recognize that their capabilities in math and other technical fields are just as good as (or better than) those of their male friends. (For ideas how, see Brian Dekker's article on Advocacy in the October Structural Connection.)

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Beyond the challenges that we face, there are actually a number of advantages to being a woman in this field. When you are the only female on the project, they remember your name. It is always intriguing to see the looks of skepticism, shock, surprise, and incredulity that we get when we [women] inform people that we are the structural engineer on projects. Once we are respected for our capabilities, however, we are often consulted in decision-making because of the different perspectives that we bring to solving problems. It is a great pleasure to show others in our profession that we actually know what we are doing. (Perhaps the best perk is that there is not a line in the ladies' room at technical conferences!)

I became a structural engineer because of my love for math, my appreciation of architecture, and the desire to have something to show for my work. I have thoroughly enjoyed the wide variety of projects that I have had the privilege to work on, continually increasing my knowledge and making so many friends across the country in our profession. I look forward to continuing to practice structural engineering, mentoring the younger generations, and making an impact by protecting the health, safety, and welfare of the public.