

“You’re all a bunch of fucking feminists:” Addressing the perceived conflict between gender and professional identities using the Montreal Massacre

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Abstract - A case study of the Montreal Massacre was employed in a core engineering thermodynamics class, using two video news clips to spur discussion about the event and about the intersection of gender identity and feminist politics with the engineering profession. In the pilot test of our lesson plan, students discussed strategies for addressing overt and subtle sexism, negotiating questions of dress in the profession, the ways they use gendered behavior or gender distancing as strategies, work-life balance, competition and women’s success as a threat. Such concerns are not typically included in professionalization aspects of engineering curricula, but their importance for both women and men is evident. We present our lesson plan and discussion outcomes, and address multiple contexts in which this case can be utilized to teach about gender and engineering.

Index Terms – gender and professionalization; women in engineering; violence against women; liberative pedagogies

INTRODUCTION AND MOTIVATION

Despite increases in the representation of women in law, medicine, and other professions in the United States, there is continued low persistence for women in engineering, computer science and technology. Low involvement and persistence has continued despite awareness of the problem and outreach efforts within the field to address it [1]-[2]. This is explained in part by a perceived conflict between gender and professional identities [3].

Models of professional socialization seek to explain how students of a profession gain a shared professional and personal identity around the norms and values of their professional community [4]-[6]. These traditional models do not consider the effect of gender identity on professional socialization. Gender identity is a complicated construct, and may become particularly salient in an environment where there is a perceived gender hierarchy, which often leads to exaggerated gender stereotypes for both sexes [7]. Women, as a minority group in engineering, computer science and technology, employ a variety of strategies (consciously or unconsciously) to adapt to the male-dominated environment.

Engineering education, and in fact the profession itself, often avoids discussion of gender inequality. Engineering

educators are not trained to lead discussions, especially ones that may have some emotional charge. Nevertheless, in order to address gender inequality it is essential that male and female engineers acknowledge it and understand its roots. One strategy that may be helpful in achieving this is the inclusion of instructional content that gives women an opportunity to voice their experiences and that engages men as allies.

At Smith College’s engineering program – the nation’s first at a women’s college – a student specifically asked about the Montreal Massacre, wondering why it was not incorporated in the curriculum. This was certainly a valid question, as the Montreal Massacre was a tragically historic moment for women in engineering.

On December 6, 1989 Marc Lépine entered an engineering classroom at the University of Montreal’s Ecole Polytechnique, separated the women from the men and opened fire on the women, exclaiming “You’re women, you’re going to be engineers. You’re all a bunch of fucking feminists. I hate feminists,” ultimately killing fourteen women and injuring another 13 people before committing suicide [8]-[10]. He left a suicide note making it clear he wanted his actions to be viewed as political, not the actions of a madman. His actions were calculated and targeted toward a particular population – women – because he felt feminists had “ruined his life” [11]. The suicide note contained a hit-list of nineteen successful women whom he had wished to kill, including prominent feminists and other women in non-traditional professions or occupations. The fourteen women he killed were in some way surrogates for these nineteen. He may have chosen the women at the Polytechnique because he had previously been denied admission there [12], and of course, they were easier targets to reach. Media coverage in both Canada and the United States downplayed the role of gender in the events, casting it as a random act of violence.

The Montreal Massacre is studied in social science courses, particularly in women’s studies, but it is not taught in engineering. While the social sciences use it as a case study on violence against women or violence in society [13], different issues emerge when this event is discussed in the context of an engineering classroom. For example, we might ask what is the significance of the fact that 13 of the 14 people murdered were women *engineers*?

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Although this seems a stark example to use to introduce issues of gender bias in engineering, the educational objectives of our lesson plan go much further than simple identification of sexism. By choosing a complex case that requires social analysis, we enable students to view the problem of women's under-representation in engineering in context, so that the sources of the problem can be located and understood. By employing a complex case that connects issues of women in engineering with issues of violence against women, students' analysis must focus on larger questions about gender in society. Our classroom intervention is intended specifically to speak to the perceived conflict between gender and professional identities. We sought to provide students with critical tools for understanding their own experiences and addressing the systemic sources of this conflict. This has the potential to impact persistence for women in engineering.

Teaching this case study accomplishes an additional objective related to ending the silence of the engineering community about this event. This is an "engineering disaster" that should be taught, just as the Tacoma Narrows Bridge collapse or the Challenger accident have become part of the engineering canon. Breaking this silence supports the visibility of women in the profession and creates a space for discussion of more subtle forms of sexism.

This lesson plan fits into a larger curriculum that considers gender and engineering at multiple points in a student's career. Because this is taught in the junior or senior year, students bring maturity and insight from their experiences as students and interns. It is important to discuss gender in engineering both early and late in the curriculum because persistence remains an issue beyond the undergraduate years. In addition to impacting persistence, discussion can also help students develop critical communication skills and awareness of engineering in a social context, which are now required for accreditation [14].

Here we describe the lesson plan itself, with an eye to its adaptation in engineering courses at other institutions. We discuss student reactions and offer suggestions for future use of these materials in engineering classrooms.

LESSON PLAN

We piloted the lesson plan in a core engineering thermodynamics course taken by juniors and seniors. The professor introduced the discussion by explaining that the day's date was December 6, the anniversary of an important event in the history of women in engineering. The professor also explained that a student had approached her about teaching the event. She asked how many had heard of the Montreal Massacre – only 3 of about 30 students raised their hands. She warned that the topic was violent and that some of the descriptions were graphic. To set the mood and engage the students, the professor provided an outline of what happened, and presented the names of the women who were killed with a brief description of their areas of study [13]. The students were asked to each read one of the names of the women aloud for the class, creating a reflective sense of focus in the class.

To present the initial information, the professor showed a news clip from the night of the killings, with footage of eyewitness accounts from several male students, a male professor, and one female survivor [15]. Then a second clip was shown profiling Nathalie Provost, one of the survivors, five years later [16]. The clip describes her attempt to reason with the killer by answering his statement "You're all a bunch of fucking feminists" by saying "No, it's not true. We're not feminists." [12] This clip enabled the exploration of the role of feminist labels and identity in the killer's motive and the response to the killings. Nathalie Provost is interviewed by Francine Pelletier, one of the nationally known feminists named in the killer's suicide note as one of the women he had wished to kill that day.

We only needed to pose one question for discussion when this was piloted; however, this was tested in a classroom where students were accustomed to discussion and familiar with a variety of tools for social analysis from courses outside of engineering. The total discussion took 20 minutes of class time, leaving 60 minutes for the day's lecture on refrigeration.

We began the discussion by pointing out the contrast between the mainstream media and feminist reactions to the killings, in which the media characterized them as the act of a madman, while feminists made the connection to other forms of male violence against women. Thus we asked, "Is it legitimate to ask why women, or why women in engineering were targeted?"

STUDENT REACTIONS

The class was observed by an independent sociology researcher, who took ethnographic notes of the discussion. All students were women engineering majors in their junior or senior year. Here we report student responses and group them thematically, informed by our own feminist analysis and the literature on women in non-traditional professions (see e.g., [1]-[3], [7]).

In response to the first question, a student raised her hand and said that she thought women were targeted "because of new roles for women and change in our society." Her astute statement nicely introduced an important theme – changing gender roles in society. The discussion grew organically from there as the students brought up the following important themes relating to gender and their experiences in engineering:

- Changing gender roles in society
- Feminism
- Control and power
- Gender/professional identity
- Overt & subtle sexism
- Gendered behavior as a strategy
- Competition and women's success as a threat
- Work-life balance
- Questions of dress
- Gender distancing

Continuing with the discussion of the effects of the introduction of women into a male dominated workplace, one student explained, "Any area that is dominated by men is going to have harsh reactions when women enter it." Another student followed that statement, explaining that the threat posed by women's advancement in traditionally male fields "...has to do with what jobs we hold sacred in our society. Which ones make money, or that we hold dear. Like a firefighter, they are heroes." These statements by the students show their awareness of the impact of changing gender roles, the importance of occupational and professional identity, and the perceived threat that is felt by a dominant group when a minority group enters the workforce.

The students then moved onto the themes of feminism and issues of control and power. Some social scientists use the concepts of control and power to explain hierarchies, group dynamics, and social inequality. These constructs are a lens through which violence against women can also be analyzed. All students had an introduction to this social theory because they had been assigned a Foucault reading earlier in the semester [17], in order to promote critical understandings of course content and the use of liberative pedagogies in the classroom.

One student remarked "it is like those people that beat a dog. It's about control and power." Also thinking in these terms, this same student said that in the second clip the survivor "...doesn't see herself as a feminist or as someone that is doing anything radical. I mean, the poor thing. It looks like he had stolen something from her. Her mannerism looks diminished. Maybe she would have been stronger if this hadn't happened." While a more Foucauldian analysis might have recognized the survivor's agency in confronting the killer, this student interpreted her continued disidentification with feminism as disempowerment as a result of her attack.

One of the students said "Lépine generalized any woman trying to succeed as a feminist." This prompted yet another student to ask her "Well, what is the difference between a feminist and a woman trying to succeed?" She responded, "Correct me if I am wrong, but I think that the definition of a feminist is a woman that believes that men and women are equal in all aspects." The professor noted that this is one definition among many that are commonly accepted.

The students then began to talk about gender stereotypes and overt and subtle forms of sexism based on their own experiences. This line of discussion began when a student said, "You're constantly fighting this stereotype. I think we've all had internships when we are one out of maybe a few females, and even if we are not discriminated against, it can be uncomfortable and you need to stand your ground."

Another student, who is Black, took this a step further and said "I think that being a woman in engineering is a bold move. I have a story from my internship." She then told a story of her internship the previous summer when a man walked up to her desk and asked her if she was a secretary. She said no, and he said "Well, what are you doing here." She replied that she was an engineering student intern, and he said "You don't look like an engineer." The students in the class

nodded their heads and voiced agreement at this story, indicating that they are familiar with that type of statement. The student then summed up this point for herself by saying, "You're constantly having to overcome the hurdle of being a person of color, and a woman."

This story was followed by another that illustrated that the students experienced sexism in multiple forms at internships. This student said "It is not just the men, but women also stereotype you, like the secretaries," and told of how when she would request to meet with her supervisor, the supervisor's female secretary would tell her that he wasn't in when he clearly was, but when a male intern asked for a meeting he was allowed into the office. The student felt that the secretary did not take her seriously because she is a female engineer, and that the secretary felt she was competing with her as woman.

Continuing with this theme they had introduced of competition and women's success as a threat, another student said "it is often a balancing act, because also sometimes the men are so intimidated, so it's not that they don't take you seriously, but that they are scared. In my last relationship it was all competition." She then told an anecdote of how her previous boyfriend always needed to make his computer better than hers because he was intimidated by the fact that she was a "tech geek," to which the class broke out in laughter and applause. She concluded by saying "you have to say that it is not about trying to compete with you, I do this for me."

Another student then introduced the theme of work-life balance and its intersection with gender and professional identity. She said that she knows that a lot of women engineers "...when they have children basically stop being an engineer." She also described a conference she went to where there were workshops to teach women engineers "how to act more like a man, and interact in that environment." She then said that she doesn't see how you can be a "woman woman – like a traditional woman – and be an engineer." This shows the perception that there is mutual exclusivity between being an engineer and being a stereotypical woman, or even a woman with a family. This student (even in a women's engineering program) is concerned that the professional identity of an engineer is at odds with the gender identity of a woman.

Answering this statement, a different student said "But you can also use being a woman to your advantage, you can work with it and get what you can out of it," which introduced the theme of using gendered behavior as a strategy. Another student said that she thinks that using gender is "like using any knowledge of a personality." She then told a story about how at her internship if she could tell that her supervisor was in a bad mood, she would sit back and listen and let him vent before she began talking. She said, "You can use their general personality as a male against them. It's a game. No matter what field, you're going to have to play some game."

The same student also introduced the theme of questions of dress when she said "I like to dress. At my job I wore a suit everyday, no matter what. The men wore jeans or whatever,

and the fact that I looked more professional than they did was a major intimidation factor.”

Another student addressed this theme in a different way and introduced the theme of gender distancing by telling how she began her internship dressing “normally,” meaning in a female gendered way, and “it was bad and I would get comments on a daily basis.” She said she began to wear coveralls and a baseball cap and had to “physically transform myself,” and then it got better. The student felt that she needed to actually transform herself to distance herself from her gender to fit in or blend into the professional identity of engineering and mitigate the sexist comments she got when she was viewed as a woman.

These quotes show the extra identity work that the women engineering students are doing on a daily basis. Students brought a lot to the discussion because of their experiences. Similar stories have been related by other women; these themes have been reported in other research on women in non-traditional fields, including women in engineering, computer science, and technology [see, e.g., 3, 7].

DISCUSSION: APPLICATION TO A COED ENVIRONMENT

Due to a number of factors, this lesson took place in a unique engineering environment. Adaptations need to be made in order to teach this elsewhere, and it is likely that the discussions that ensue would be necessarily different. In this section we offer suggestions to maximize the impact of such efforts.

As stated earlier, the most distinct aspect of our classroom environment is that all the students and the instructor were women. Thus, it is likely that issues were raised that these same students might not feel comfortable broaching in a coeducational environment. Second, Smith is a small liberal arts college, providing for a relatively small class size, with students accustomed to discussion and facile with a number of ideas in the social sciences. Finally, the thermodynamics course used liberative pedagogies (learner-centered processes that empower students in their learning through active engagement and self-reflection) [18], so that students were comfortable connecting classroom ideas to their lives. Additionally, the course itself, and previous courses in the engineering curriculum, had raised issues of women in science. Gender inequality in engineering and its root causes were not new ideas for this group of juniors and seniors, and they also brought to the discussion a certain perspective informed by their experiences, such as engineering internships.

Other engineering classrooms may be relatively large, making discussion more challenging. Other classrooms may not feel safe for women because of size, gender ratio or other factors. Men may not feel comfortable talking about violence against women because of a tendency to feel blamed and defensive or responsible and guilty. Many students may have had no introduction to gender issues or, more generally, issues addressing prejudice in society. We suggest here an adaptation for a classroom that fits these characteristics, recognizing that

instructors must determine the appropriate tools and lesson plans for their classrooms:

- **Introduction:** The instructor sets the tone by explaining the importance of this event and prepares students for watching footage with eyewitness accounts that are at times graphic. The instructor gives a brief summary of what happened that day in Montreal and then shows the video. The instructor presents the names and fields of the women who were murdered, and asks class members to participate in reading them.
- **Video:** For a student group that is not well versed in feminism or issues for women in engineering, it may make sense to only show the first video news clip that presents the events of the massacre as told by eyewitnesses. The second clip would require a greater depth of discussion and instructor preparation.
- **Small group discussion:** After showing the first clip, the instructor breaks the class into small groups. Explaining that many initially suggested that this was a random act of a madman, while others cited the killer’s words during the crime and the contents of his suicide note as proof that it was a highly pre-meditated act against a specific target [19], the instructor asks the small groups to discuss whether it matters that the victims were *women*, and whether it matters that they were *engineers*.
- **Large Group:** In the large group, small groups report out what they observed was the significance of the victims being women engineers. Students or the instructor make the point that this is a stark act of misogyny, but that subtler forms of sexism exist in engineering. A letter from a concerned parent [20] of a female engineering student at the University of Montreal that makes these connections may be a good resource to include. If it hasn’t come up in the small groups, the instructor may ask about the impact of the tragedy on the men who left the room. The men who did not intervene are subject to gendered expectations that they should have stepped in to protect the women, despite the fact that the killer was armed with a semi-automatic weapon. They have to live with their decision to leave the room and people’s questioning of their actions [21]. Critically examining societal expectations for male behavior provides an opportunity for men to see how constructions of gender affect both men and women. This can be a pathway for men to move beyond the limited roles presented in the case study (men as perpetrators or cowards) into new roles as allies.
- **Brainstorm:** In the same small groups that then again report out to the larger classroom, students name some of the more subtle ways that women of all races and ethnicities (and men of color) are not treated equally in engineering, and brainstorm ways that everyone can resist these forms of prejudice.

Instructors leading this exercise should be prepared for a discussion that can become heated at times. There are contentious issues that may come up, such as feminism and affirmative action. The definition of feminism is very much at

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play here because the killer accused the engineers of being feminists – to him, any woman that dared to enter a male-dominated profession was a feminist. Notably, as shown in the second video clip, at least one female engineer takes issue with that label as she pleads with the killer to spare her life, and later as she differentiates herself from a prominent feminist journalist [16]. We recommend acknowledging that there are multiple definitions of feminism that are claimed in different contexts.

The issue of affirmative action could come up if students register that the killer had been denied admission to the Polytechnique and blamed women for his life's failures. We recommend a process of critical questioning as a response to anti-affirmative action arguments, for example, what is the evidence that Marc Lépine would have been the one to get a spot if a woman had been denied admission? Or, why would you point to one of the few women students (or male students of color) rather than another white male student – with such a supermajority of white males in engineering, aren't the odds that his spot would have been taken by a white man?

It may also be helpful to recognize explicitly the tendency we all have when learning about violence to focus on the perpetrator rather than the victims. While it is certainly interesting to consider how the killer came to commit such a horrific act, the purpose of this lesson is to focus attention on women in engineering, which necessitates a primary focus on the victims and the social dynamics that surround women in engineering.

Finally, for those instructors not used to leading discussion, it is important to note that successful discussions are often provocative and may leave some participants feeling uncomfortable. It is not necessary to resolve all issues or bring students into agreement. The goal of this exercise is to get students thinking about these issues, and the work does not stop when the class ends. Hopefully, the students will continue to think about and process the discussion, relating it to their lives. By opening this discussion, the instructor is sending a message that she or he cares about these issues. Strong reactions from students can be positive signs of engagement. At the same time, it is important to intervene when classroom conflict becomes inappropriately personal or when it is necessary to challenge student assumptions. During office hours, an instructor might want to follow-up with particular students who need support or were not comfortable participating in the classroom discussion.

CONCLUSION

Teaching about the Montreal Massacre served as an opening for discussion among female engineering students about their experiences as women in the profession. Students raised a number of issues related to the perceived conflict between gender identity and professional identity. The lesson plan presented here can be adapted, as suggested, for use in coeducational classrooms, or among students with less knowledge of social science concepts.

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