The Godiva Effect

A Woman's Reflections on Engineering

at the University of Alberta

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Foreword: In the Beginning

I began my university career in the Faculty of Engineering, and spent two-and-a-half years there\(^1\). It was not only because of my strength in math and physics that I chose engineering, but also because of cultural expectations. I had no idea what an engineer did. I could argue that I still don't know. But I had had mostly male friends in high school, and I expected that I could navigate the social life and the student image in the same way. Boy, was I wrong.

Why did I leave engineering? Why did I not just “suck it up” and keep going? I think that factors involved included that engineering turned out to be nothing that I really wanted in terms of career prospects as well as the highly gendered environment which I describe below. I felt that it was better for my sanity and my productivity to choose a career goal that could utilize my overall abilities rather than a select few.

It is not an experience that I regret having been through, and I try not to get too angry and rant too much about it, but of course there will be some (possibly unfair) generalizations...

Looking Out and Looking In

I was not aware of any WISEST or women-in-math-and-science programming that was available at my high school, so I signed up to study engineering, quite literally, “sight unseen.”\(^2\) Fortunately, for those not quite sure what engineering is after entering the program, an information seminar course is given throughout the first year. It is intended, in one of its capacities, to explain what engineering is all about. These consisted first of some general

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1  Technically four years, before I was able to successfully transfer into my current program.
2  I wanted to shadow an engineer for my high school job shadow project, but I could not get security clearance to enter my friend’s father’s workplace.
remarks about the profession as a whole, and then presentations from each discipline of engineering in turn: civil, mechanical, electrical, etc.

The presentations were essentially sales pitches, culminating in each student choosing which discipline he/she would like to enrol in. For each presentation there was usually a faculty member and at least one current or recently-graduated student, who would talk about their jobs and the opportunities in their fields. While both female and male students delivered presentations, the foci of their “sales pitches” were different.

Male students tended to promote prestige, citing examples of big multi-million-dollar projects they were involved with and opportunities for travel with multinational corporations. They showed photos of the places they had been and the plants they worked in. Female students also described their experiences abroad (either as students or employees) and the responsibilities of their current jobs, but also liked to show photos of themselves smiling proudly next to some enormous truck (such as those used in the oil sands) or piece of machinery. One might wonder if these photos were some display of Freudian penis envy, but I think that they sent a message and a warning to us: “You can be a female engineer, but you have to be this 'butch' to do it.”

Indeed, there was perceived to be something special about female first- and second-year engineering students. They were special because they were not afraid to stand up to men. They were special because they were good at math. They were special because they were empowered. And they were proud of this, giving them a sense of unity.
In the upper years, when only the best and most successful students were left, these were no longer the female students' reasons to be proud. They were now proud because they had survived, and proud that they could be “conceptual men” not only in their training but also in their adoption (or exaggeration) of masculine traits as observed in their male peers. At this point in our lives, the idea of parenthood (or even romance) probably had not even crossed our minds, which might be why motherhood compounds difficulties in reconciling mother-engineer identities in Ranson's 2005 study of female engineers. We just never considered the possibility, and when faced with it, I expect that female engineers are surprised by it.

If someone asks a female student, “what do you study?” and she answers “engineering,” the response will often be of admiration and “wow, that must be really hard.” Such a remark is rarely made to male engineering students, because they are assumed to be able to handle the work load and the material.

Who Will Write Your Papers For You?

The “masculinization” of female engineering students is most salient from observation of females (and males) who happen to be talented in the creative arts, such as drawing, writing, and music. Among engineering students (and broader society also), these skills are considered feminine. Despite a large proportion of well-known male artists, writers and musician throughout history, the feminine association with these activities could be a relic from primary and secondary school years, where, at least, girls were better writers than boys.

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3 It should be noted, however, that I am probably biased here, because the upper-level students I socialized with most often were the “popular” students and those (often the same) most involved in engineering student group affairs. More on engineering student social life later.
But it seemed that nowhere on campus were students less tolerant of other students' creative talents than within groups of engineering students. Appreciation of the arts was barely tolerated; interest, skill, and discipline in producing art (unless it was in amateur rock musicianship) was immediately dismissed: “Why are you in engineering? You should be in fine arts.” The disdain expressed by this statement was more intense when directed at a female, since there is more femininity that needs to be “shed” from a female than from an effeminate man in order to become the idealized, conceptually masculine engineer.

I am aware, though, that engineers need to be somewhat proficient in drawing technical diagrams and very proficient in reading and writing technical, official, and sometimes legally binding documents. So could it be envy that drives male engineering students to put down females' drawing and writing skills, even though engineering requires technical rather than creative drawing and writing? It is possible. I did not take a drawing course, but in writing class I observed that females struggled no less than males in technical writing\(^4\), and so perhaps it is not envy.

While nearly all professors in the engineering faculty were men, the office and support staff were generally women. The writing professors were brought in from the Department of English and were mostly female. Students criticized them for not understanding the scientific jargon they used in technical writing assignments, and so considered these professors “out of touch” with the engineers' world because they were women who were only good enough to study English.\(^5\)

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\(^4\) Sometimes students' writing was so atrocious that it would make any arts major weep.

\(^5\) The Engineering versus Arts “rivalry” (with Science trapped in between) is also a fascinating subject of study (albeit not to be discussed here). The lack of respect for English classes was exacerbated by the fact that the engineering English requirement need not be literature-based. The default engineering English class, in my opinion, felt a lot like remedial high school writing because far less grammar was taught there than in other
It would be an exaggeration to say that the Faculty of Engineering is still a fortress of misogyny as it has historically been. I recall a professor who made inappropriate and discriminatory remarks to a female student, such as “girls shouldn't be in engineering” and “I'm not surprised that you're having trouble with this problem. None of the women here have solved it yet.” This student wrote up a two-page grievance and kept it in her notes, to turn in when it was time for instructor evaluations.

The Godiva Effect

In the English folk legend of Godiva, Lady Godiva agrees to ride naked on a horse around the town of Coventry in exchange for her husband, Leofric, lowering taxes. The citizens of Coventry were asked to stay indoors and keep their shutters and curtains closed while she rides, but one man disobey and peeps at her as she goes by, hence the phrase “Peeping Tom.”

Lady Godiva is, in engineering student culture across the United Kingdom and Canada, considered the “Patron Saint of Engineers.” The origin of this is unknown, but given that the traditional engineering class consisted of exclusively young men, the legend had appeal in that the young men wanted to see themselves as the character of Peeping Tom. Lady Godiva idolatry was, historically, so important to engineering student culture that students would arrange for a young woman to ride (nearly) naked around campus to celebrate engineering school spirit. This tradition has since ceased due to protest from feminist groups, but its legacy remains in the name of the Geer Week (engineering spirit week) newsletter (The Godiva), and in traditional freshman English courses. Among engineers there was gloating in having to do less. But that is typical of adolescents and young adults.
engineering drinking songs – of which some lyrics are quite derogatory toward women.

Do male engineering students still objectify their female peers? Not in my experience. While a male nursing student would be assumed to be in that faculty in order to pick up girls, the reverse is not so for females in engineering. Instead of being there to choose boyfriends, girls are assumed (by male engineering peers) to be in engineering because they are tomboyish and masculine.

The dress code was casual, T-shirt and jeans. Not only was “feminine” clothing impractical in the laboratory, it drew attention to oneself as a female (and possibly an object). We learned to dress to blend in (or already did so), and I did not find myself or other females being aggressively flirted at. Similarly with eloquence: The vernacular was vulgar and crass, and well-spoken words drew negative attention. That too I learned to hide.

Enforcement of (masculine) expectations was constant. Just as with the “fine arts” remark mentioned above, if someone was vocal about anything counter to the engineering stereotype, there would be social consequences from the peer group. If you did not conform to the culture, you were powerless, even if you were in a decision-making position. After I had given a statement suggesting that we should do what we can to discourage the use of alcohol as tokens of (friendly) bribery between engineering student groups, I was approached by an older female

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6 In my opinion, many male engineering students were too assertive and obnoxious to make good boyfriends anyway. Or this could be because of the discourse of masculinity with their male peers; they may not actually be so vulgar and obnoxious in mixed company.

7 I kept journals throughout high school. I noticed an acute change in expressive and creative ability in my language after spending time in engineering. For one, I ceased writing in the journal daily – I had the time; I just couldn't put my thoughts into words anymore.
student: “Give it up. If you're against drinking now, you will find that you will to learn to drink like us,” she forewarned.

When they were not living up to the “play hard” part of the “work hard; play hard” motto, I found male junior engineering students usually studying together in groups that did not include females unless required to (e.g. in a group project). I, like many other females in the faculty, did our homework by ourselves, getting help from male students or professors only as necessary. In senior years, those who had adopted a more “masculine” identity to fit in were readily embraced by male study groups.

There is still enormous pressure for female engineering students to assimilate the masculine engineering student culture, values, and identity that have been around for so many decades. I feel that those females who are the most successful at fulfilling this expectation are the ones who are best able to succeed at being one of Ranson's “conceptual men” engineers. And as more and more women become engineers, I can expect that the men will “[retreat] into smaller and smaller pristine preserves of 'pure' masculinity that become increasingly hyperbolic in their assertions... as the men themselves become increasingly anxious and defensive”8 of their territory – and the pressure on female engineering students to conform to the stereotype of the male engineering student to increase accordingly because of the greater magnitude of “differences” that need to be “reconciled.”

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Appendix: A (Mostly) Unrelated Tangent

One of the few surviving overtly gendered policies at university does not concern the academic administration, but student housing. Maybe it is a legacy from one of the first such policies at the University of Alberta a century ago: the housing of all woman students in Pembina Hall. Presently, freshmen may generally only apply to live in a shared apartment in HUB, or in a dormitory room in “classic” Lister Centre. Both are gender-segregated spaces, and I have spent time in both.

The application form to live in HUB comes with a space to choose whether one would prefer a single-sex or co-ed flat. Most people prefer single-sex, and it's more difficult to arrange for all occupants of a double- or quad-occupancy apartment to all move out at the same time in order to accommodate a new co-ed group of roommates. During my freshman year, I lived with two girls, and we had very little in common. Later on, I discovered that I got along quite well with a group of three males in a neighbouring apartment. Since two of the three guys were engineering students, I considered living with them for the next year and we had almost finished the paperwork for the application. My parents were worried about potential sexual relations and so were very tentative about granting me permission, but the reason that the plan fell through was that the parents of one of the guys did not want him living with one girl!

“Classic” Lister, as opposed to the more general and formal term Lister Centre, refers specifically to the three older dormitory towers in the Lister Centre complex: Henday, Kelsey, and Mackenzie Halls. Henday Hall was originally a male-only dormitory and Kelsey Hall female-only. Mackenzie Hall was built later and was designed to have alternating male-only and
female-only floors. Historically, students were not allowed to visit the dormitories of the other sex, and in Mackenzie Hall, wide, obscuring walls were built in front of the elevator and stairwell doors so that women could not look into the men's floors and vice versa. Today, all three towers are co-ed, but the students' rooms on each floor were contained within three single-sex wings, each with a shared, single-sex bathroom. The Mackenzie Hall walls have been torn down as much as structurally possible.

My time spent in “classic” Lister was rationalized as an escape from the girls I lived with in HUB. My boyfriend (at the time; an engineering student) lived in Lister, and I would spend evenings there with him. Instead of going back to HUB at night I would sometimes sleep on the floor of his room. “You can use the bathroom in this [male] wing,” he said. “I'm sure the other guys don't mind.” The actual facilities were the same as those in the female wing (given that the building was designed for single-sex floors), but I felt obligated to go across the floor and use the bathroom shared by the girls.

Eventually, there was one time that I thought to myself, “okay, I'll walk into the 'wrong' bathroom and see what happens.” I waited until there was no one inside, then slipped in. It was quite a shock, given my cultural and social standards of cleanliness. I took the longer trip to the “female” bathroom from then on.

Maybe I did not really want to become so “masculine” after all...