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Leaving Tenure Behind: Lessons Learned

Introduction

The goal of many Ph.D. engineering graduates who aspire to an academic position is to land a tenure-track job at a large research university. Certainly, this was my goal – I had been trained at a large engineering research institution (ERI), and was unaware of that the majority of engineering colleges in the U.S. were smaller, undergraduate-focused engineering teaching institutions (ETI). Indeed, when I was considering whether or not to pursue an academic career after graduating, I was encouraged by my Ph.D. advisor and student peers to apply only to the top-ranked research universities. I also assumed that a tenure-track faculty position at a large research university would give me the necessary flexibility to balance my career with my family life.

My husband and I were the proverbial “two-body” problem when searching for academic positions in engineering. We were fortunate to land tenure-track positions in engineering at the same large research university. We both successfully built research labs and were awarded tenure. Fifteen years and three children later, however, we both left to teach at an ETI that does not award tenure, but instead awards one-year contracts to faculty. This school, however, has excellent students and facilities, and an administration that is genuinely interested in improving the academic quality of the institution. Since I was looking for a significant change in professional direction, toward undergraduate teaching and individual scholarship, this was an ideal opportunity. Without doubt, many of my friends and colleagues thought—to not put too fine a point on it—I was crazy. Yet, I have found great satisfaction being at my current, smaller institution: I am able to focus on undergraduate scholarship and thus play a large role in shaping the intellectual lives of students and in actively mentoring the students.

In this paper, I share my experience at both institutions. While I gave up tenure and the tremendous institutional resources that foster cutting-edge research, I gained more flexibility for balancing my career and my family, in addition to the benefit of a smaller institution that has the ability to make quick decisions and craft teaching assignments to foster family life and can better address dual-career issues. There is great security that comes with tenure, but there is also security in a non-tenure system that carefully mentors its faculty. There is clearly no “one size fits all” solution; indeed, I have succeeded at both a large research university as well as at a small undergraduate school.

My experiences have given me insights into careers at both types of institutions that can provide guidance to new faculty entering academic positions. In addition, these insights can aid chairs and deans in fostering the development of women faculty, as well as addressing career and family balance issues, with solutions that are independent of the type of institution.
My Life at an ERI

Both my husband and I pursued our graduate studies at a large research university – an ERI. We were fortunate to be surrounded by world-class scholars and to be immersed daily in the rich intellectual atmosphere that is unique to an ERI. So, it was only natural that we considered only top-ranked ERIs when searching for academic positions. We were fortunate to land tenure-track positions in engineering at the University of Michigan. We were hired in with a large cohort of young engineering faculty, about twenty in total.

The first few years at this institution were a blur, as anyone who has started an academic career can relate to this. I built research labs and taught the requisite one course per semester. I was busy writing research proposals and journal articles. I traveled frequently to conferences to report on the results of my research, to funding agencies to sit on review panels, to industrial research partners to work on collaborative research, to other universities to give seminars…and the list goes on and on. I was named a NSF Presidential Young Investigator, and I later received an award from the University of Michigan given to young faculty for teaching and service. I was also fortunate to have the support and rapport of other young female faculty members in engineering.

I was appointed to numerous College of Engineering and University committees, as were many of my (then few) female colleagues in engineering. We often joked that there was a perception that each committee needed at least one woman from engineering, and we were she. I was elected to the University Senate and even chaired a university committee on faculty compensation prior to gaining tenure. After receiving tenure, I directed two different professional masters programs in engineering, one of which had a substantial distance-learning component.

And, in my mind, I had achieved a satisfactory balance between my work life and my family life. My husband and I shared child rearing and home duties. We were able to arrange our teaching schedules so that we never taught classes at the same time, allowing us the flexibility to stay at home with a sick child, for example. We also developed a trusting relationship with the daycare center that all three of our children attended. I requested and was granted an extra year for my tenure clock because of the birth of my oldest child. In retrospect, however, I had not achieved a healthy balance between my work life and my family life. There was constant tension between the time devoted to my career and the time devoted to my family. I may have felt this more acutely because my husband was also a professor with a large, active research program.

My career was on track – but something was missing. Throughout my education, I was taught that I could achieve just about anything if I worked hard enough: if I worked hard enough in high school I would be accepted into a good college; if I worked hard enough in my undergraduate schooling, I would be accepted into a top-ranked graduate school; if I worked hard enough in graduate school, I could get a faculty position at a top-ranked research university; and, if I worked hard enough in the faculty position, I would be awarded tenure. But, then what? And, in a nutshell, that was my problem.

I had worked so hard to gain tenure that I had not put much thought into where my career was headed and where my talents would best be put to use. I did complete yearly self-evaluations,
summarizing what I had accomplished in the past year and what I wanted to accomplish in the next three years. Only occasionally did I meet with my department chairs over the years to discuss my career, however. I also started my faculty career before the implementation of a formal faculty mentoring system, and did not have the friendly advice of a trusted colleague to guide me, nor did I actively seek out such advice.

I was in a quandary: according to the plan—never articulated in the academy, but generally understood by all—everything was fine. Like Balboa upon finding the Pacific Ocean, rather than joy, I was professionally void. While large-scale research was fun and rewarding, I found that it lacked a certain satisfaction. Perhaps it was that as projects get bigger, one moves away from the day-to-day research that draws us to the career in the first place. Satisfaction in teaching, which is truly a passion of mine—was not to be found. I felt more like, and was, a person on stage attended by a cohort of TAs, speaking to an audience of 150 (sort of) interested students. Personal contact with students: to be avoided lest it take time from research, or more important, proposal writing. In a word (or three): what a mess.

I felt a desire to focus more on personal scholarship, removed from the pressure of constantly seeking money. I also enjoyed teaching, including working with more than 40 undergraduates in my laboratory over the years at Michigan. This led to my search for positions in a smaller institution focused on teaching and personal scholarship.

**My Life at an ETI**

Today, I teach at Grove City College. The total student enrollment at this comprehensive college is approximately 2450, with over 380 students in engineering and computer science. An unusual feature of my current institution is that faculty are not tenured, but instead are on one-year contracts. Hence, moving to this institution required that I give up tenure. This was not an easy decision to make, and led to many sleepless nights.

An interesting facet to the story behind our move to Grove City College is that I was the “second body” in our two-body problem. The short version of the story is that my husband was hired to build a computer science department, and all that Grove City College could offer me at that time was a part-time position in mechanical engineering. In my second year at the college I became a full-time faculty member, filling an unexpected vacancy in mechanical engineering. Toward the end of my second year the Dean of the School of Science and Engineering announced his retirement. I, along with others, interviewed for this position and was subsequently appointed as Dean just prior to my third year at the College.

At this institution, the normal engineering course load is 12 credit hours per semester, which typically translates into four three-credit-hour courses each semester. In general, the faculty are assigned between two and three “preparations,” or different courses in a semester. While I was a seasoned teacher after my fifteen years at the University of Michigan, I was not prepared for the intellectual and physical intensity of teaching twelve contact hours in a semester. Indeed, it has been recognized that research universities do little to train students to become faculty at teaching institutions.¹
I had worked so hard to gain tenure and the job security that goes along with it – how could I just throw it away? That question was foremost on my mind. I was particularly concerned about the perceived loss of flexibility in our working hours and the impact that would have on my children. At the time of the move, two of my children were in elementary school and one was in preschool. However, as I will discuss, I gained flexibility and work-family balance that I did not have at the larger research university. I must emphasize that my experience is not universal, in that I believe that it is possible to achieve a work-family balance at both ERIs and ETIs. To do so will take a shift in the culture of engineering schools as addressed by my comments below.

Lessons Learned – The Research Institution versus the Teaching Institution

There are substantial differences between an ERI and an ETI. Course loads are higher for faculty teaching at ETIs and there is not as much time or resources to support research. ETI faculty also do not have a cadre of teaching assistants to help with grading and office hours. We are the front line (and usually the only line) for the students. But, we develop closer relationships with the undergraduate students. It is easier for me to get to know my students on a first-name basis: I generally teach between 25 and 45 students in a class instead of 150 students. The recommendation letters that I write for my students are more personal, indeed more meaningful, than most of the letters that I wrote while at my former institution.

In addition, relationships among the faculty are more cordial. Our primary focus is on undergraduate education, not on acquiring space or graduate student support. The faculty are also willing to pitch in and teach a course in case of an unexpected absence of a colleague.

I do miss the excitement of discovery that comes with cutting-edge research. I also miss the opportunities to hear world-class scholars speak on a variety of topics, and the vibe that permeates a large research university. But, I can experience these things by forming cooperative relationships with large research universities in our area. We can work on joint projects together, provided that we can surmount the energy barrier of traveling to another campus. Not only is this type of work healthy for the faculty member but it is also healthy for our students. It keeps our courses current and provides research opportunities for the students.

I have grown to appreciate the work done by ETIs. While ERIs graduate more engineers, ETIs outnumber ERIs. ETIs, in general, have smaller administrations and as a result can make quick decisions regarding curricular changes. In this sense, ETIs are the ideal locations to test new curricular ideas and pedagogical techniques. For example, many of the pedagogical reforms suggested by the NAE report “Educating the Engineer of 2020” can, in principle, be more easily and quickly implemented by ETIs. Most importantly, ETIs have a single focus on teaching undergraduates. At my current institution, for example, this is the sole source of income for institution (we accept no federal or state money). Thus, it is essential to develop faculty into excellent teachers and to continually improve curriculum and teaching facilities. In other words, it is what we do and are expected to do.

We do an excellent job educating our engineering students. Many of our students attend top-ranked graduate schools and professional schools. Our students who enter the work force are highly sought after by a variety of employers. We are active mentors of our students, instilling in
them a sense of their obligation as engineers to serve society. As I incorrectly believed early in my career, teaching at an ETI is not a consolation prize.

**Lessons Learned – Implications for Developing Women Faculty**

The ability of ETIs to make quick decisions also has implications for personnel decisions. In my experience, ETIs are more sensitive to the need to balance work-family issues. Faculty at my current institution are able to craft teaching schedules that allow them to meet family obligations. There is a philosophy here that family is first and career is second. I have found, as I am sure that many of you have found, that when my family life is unsettled I do not perform well at work. Hearing this philosophy stated by the administration was eye-opening for me. For years, I had struggled to achieve the right balance between work and family, usually feeling like I was short-changing both in the process. This philosophy was recently put to the test when one of my children was hospitalized for an extended period. Other faculty and administrators were willing to pitch in and take over some of my duties as necessary to allow me the time to focus on the needs of my ill child, as well as the needs of my other children.

As a Dean, I view faculty mentoring and development as one of my primary roles. The faculty complete yearly self-evaluations focusing on the areas of teaching, advising, professional development, and service; the respective department chairs then write evaluations of their faculty. After reviewing both the self-evaluations and the chair’s evaluations, I meet individually with the chairs to discuss the evaluations of their faculty. This gives us the opportunity to focus on areas of concern and to discuss strategies for the chairs to mentor the faculty in those areas. Finally, I write my own evaluations of the faculty, in collaboration with the Provost, which are used as the basis for contract renewals and salary recommendations. I expect my chairs to also meet with their faculty to discuss the self-evaluations and chair’s evaluations. This process is carefully done, with checks and balances at the levels of the chairs and the Provost. In addition, I visit the classes of new faculty and faculty being considered for promotion. I write a review of the lecture observation and meet with the faculty member to discuss my review, giving encouragement for things done well and suggestions for improvement.

A critical feature of this evaluation process is that while I do review all faculty in the same areas, I do not put equal weight on these areas for all faculty. Each faculty member has a different set of talents – some excel at traditional classroom lectures, some excel in laboratory classes, some excel as mentors and advisors, some excel in guiding the students in independent research projects. What I ask of my faculty is that they use their talents to the fullest to teach and mentor our students. In essence, I evaluate each faculty member against what I believe to be his or her fullest potential. Such an evaluation process is time-consuming, but it is the only way to ensure a fair evaluation of the faculty.

So, while we do not offer tenure, we promote job security through extensive annual evaluations of our faculty. If we perceive that there is a problem in any area, the chairs, Deans, and Provost work together to mentor the faculty member to correct the problem. This type of review system gives more feedback than in a typical tenure-track job.
This leads me to suggestions that can aid chairs and deans in fostering the development of women faculty, as well as addressing career and family balance issues, with solutions that are independent of the type of institution. Most importantly, these suggestions put the individual, not the institution, first, supporting the philosophy that man is made for work, not work for man.

- **Allow women faculty to put family first.**
  This requires buy-in at all levels, from the faculty to chairs to Deans, Provosts, Presidents, and Boards. This also requires that women faculty are reassured that they will not be penalized for putting their families first. At my institution, we craft teaching assignments that can allow women to be home when their children get out of school, for example. Many times I have heard the comment that female faculty will be “happier” if on-site childcare is offered. I would argue that this is not necessarily so. Having on-site childcare readily available to the engineering faculty at the University of Michigan would not have altered the balance between my work life and my family life if the culture at the institution did not change. Women faculty members are, in general, part of a two-career household. This, by its very nature, puts a set of constraints on the female faculty member that a male faculty member with a stay-at-home spouse may not have. If the culture at the institution does not recognize these constraints, on-site childcare will make little difference in the satisfaction of female faculty.

- **Allow women faculty to develop their own career paths that are not necessarily centered on research, while not making them feel like second-class citizens**
  At my former institution, a faculty member who wanted to focus primarily on teaching was required to pursue a non-tenure-track career path. In general, the contributions of those faculty were not viewed as important at those who pursued cutting-edge research in terms of university ranking and prestige. But, it is precisely those faculty who connect on a daily basis with the undergraduate students and can play the largest role in shaping those students. At ETIs this distinction between research-focused faculty and teaching-focused faculty is generally not an issue. We are all expected to pursue some type of student-faculty research but the degree to which that occurs depends on the talents and interests of the individual faculty. I have faculty that are gifted classroom teachers and faculty that are gifted research mentors, and I design their teaching assignments to highlight their individual strengths.

- **Provide thorough, periodic feedback on performance**
  This requires significant time and careful analysis at a number of levels – chairs, Deans, Provosts – but promotes the development of the faculty member to attain her fullest potential. If there are areas of concern, concrete suggestions must be given for change, and the performance of the faculty member should be carefully monitored in this area. For example, if there is concern about lecture organization or how effectively a faculty member answers questions during lectures, then the chair or Dean can conduct classroom observations and provide timely feedback to the faculty member. I view this role as my obligation to help my faculty become the best that they can be.
In addition, these suggestions are supported by the findings of a number of studies. For example, The Study of New Scholars conducted by the Harvard Graduate School of Education identified a number of factors that are important in making an excellent academic workplace.\textsuperscript{3} What stands out from this study is that the junior faculty members surveyed stressed work-life balance, clear performance expectations, mentoring, and formal periodic feedback as being important in this regard. In addition, women faculty in particular have identified a desire for compassion, integrity, and respect in their careers.\textsuperscript{4} A model proposed to describe a faculty member’s sense of their career is termed “perceived self efficacy.”\textsuperscript{5} A woman will perceive herself as being successful in her career only when she believes that her work can be used to make a difference in society.\textsuperscript{4} Following the suggestions that I give above will increase a woman faculty member’s sense of worth in the campus community and ultimately lead to increased retention. In essence, we create a sense of inclusion, and this promotes the retention of the faculty.

There have been numerous studies that focus on the lack of women on engineering faculty. Most start with the “pipeline” issue, also referred to as “gender filtration”\textsuperscript{6} – the drop off of women at each decision point along the path to a faculty career – and then touch on recruiting and retention, with recommendations for institutional programs and resources to address each issue. My experience at an ERI has been that institutional programs can only do so much to increase the hiring and retention of women faculty. Unless the underlying culture changes, these programs will have minimal long-term effect. ERIs tend to judge the success of faculty in terms of research excellence only; we should judge the success of faculty based on their strengths and their potential to excel in different areas that promote excellence in education, be it education of graduate or undergraduate students. That is, we should consider the person before the position. ETIs, by their nature, do not have substantial institutional resources to put toward creating programs suggested by the reports authored at ERIs. My recommendations detailed in this paper are a bit simpler, and can be accomplished with limited financial resources.

\textbf{Summary}

In this paper I provide the following suggestions for promoting the development of women faculty: putting family first, allowing women faculty to pursue their own career paths that may not be research-centric, and providing periodic feedback on performance. These suggestions are based on my experiences at teaching at both an engineering research institution and an engineering teaching institution, and are supported by the findings of numerous studies on the issues surrounding the relatively low percentage of women who pursue academic careers. These suggestions can be applied at both types of institutions and should aid in the retention of women faculty. The key idea is to consider the person before the position; engineering faculty positions are not “one size fits all,” and administrators should help faculty members to develop their talents to the fullest, even if those talents lie in different areas.

\textbf{Bibliography}


