## UCLA <br> UCLA Women's Law Journal

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## Permalink

## https://escholarship.org/uc/item/5sf6r681

## Journal

UCLA Women's Law Journal, 21(2)

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## Publication Date

2014

## DOI

10.5070/L3212025374

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# NARROWING THE GENDER PAY GAP BY PROVIDING EQUAL OPPORTUNITIES: <br> The Need for Tenured Female Professors in Higher STEM Institutions in an Effort to Recast Gender Norms 

Claire R. Rollor*

Introduction: Building Equal Opportunity from Unequal Pay<br>\& Unequal Work

Men and women in the United States do not perform "equal work." The slogan "equal pay for equal work" has become heavily associated with modern data suggesting that women earn around 81 cents for every dollar men earn (.81/1), but is misleading and a misrepresentation of the United States' employment environment. The $.81 / 1$ figure represents the median earnings of all U.S. women divided by the median earnings of all U.S. men. ${ }^{1}$ The "median wage" is the estimated data point that represents "the boundary between the highest paid 50 percent and the lowest paid 50 percent. ${ }^{2}$ The .81/1 figure does not represent the salaries of men and women with similar background training who are employed in the same field. When a man and woman have similar background training, and they are newly employed in the same field, there is still an unaccountable salary difference of $5 \% .^{3}$ Ten years later, the wage gap between these male and female counterparts increases to $12 \% .{ }^{4}$

[^0]These $5-12 \%$ salary differences, however, are a fairly small part of the problem. The median U.S. male's salary is $\$ 42,848$ ("Median U.S. Male pay"). ${ }^{5}$ A woman making $95 \%$ of the Median U.S. Male pay would earn $\$ 40,705.60$, and a woman making $88 \%$ of the Median U.S. Male pay would earn \$37,706.24 ("Median U.S. Female pay"). Shockingly, the Median U.S. Female pay is only $\$ 34,788$, which is still significantly less than either the $95 \%$ or $88 \%$ figures. ${ }^{6}$ Aside from this unaccountable difference in salary, there remain mainstream societal issues that must be tackled to promote equal employment opportunities among men and women.

Unsurprisingly, men and women have traditionally gravitated to different types of employment. According to the Bureau of Labor Statistics, the top ten most common fields of employment for women in the U.S. ("Female Track Jobs") are secretaries and administrative assistants, elementary and middle school teachers, registered nurses, nursing, psychiatric, and home health aides, customer service representatives, first-line supervisors of retail sales workers, cashiers, accountants and auditors, first-line supervisors of office and administrative support workers, and receptionists and information clerks. ${ }^{7}$ The top ten most common occupations for men in the United States ("Male Track Jobs") are driver/sales workers and truck drivers, managers, first-line supervisors of retail sales workers, janitors and building cleaners, laborers and freight, stock, and material movers, construction laborers, cooks, software developers, and sales representatives in wholesale and manufacturing. ${ }^{8}$ The average salary for the top twenty Female Track Jobs is around

[^1]$\$ 34,534.21$ a year, whereas the average salary for the top twenty Male Track Jobs is around \$45,452.63. ${ }^{9}$

A quick scan of these employment titles and corresponding salaries sparks several philosophical and theoretical discussions. First, are Female Track Jobs worth, on average, \$8,460.40 less than Male Track Jobs? Second, is the physical labor-intensive element found in many of the Male Track Jobs accountable for the pay differences? Third, do the Male Track Jobs pay more because they are more often populated by male employees, or do they pay more because the sort of work performed in these jobs is actually worth more to society? ${ }^{10}$ These questions, while interesting to think about, do not lend themselves easily to solutions. However, a more useful series of propositions can be drawn from these employment and salary facts.

First, Male Track Jobs are associated with higher salaries than Female Track Jobs. Second, females tend to not populate Male Track Jobs. A combination of these two propositions and common sense yields the underlying premise: for females to earn, on average, higher salaries, they need to seek employment in more Male Track Jobs. ${ }^{11}$ The following discussion addresses barriers preventing women from entering science related fields (and all of the associated Male Track Jobs), and suggests how altering the interplay between legal redress and female faculty members who have been denied tenure in science related fields may increase equal employment opportunities for the next generation of women.

Women face extreme obstacles in breaking into the fields of science, technology, engineering, and math ("STEM"). The dearth of women in these higher paying fields has resulted in negative repercussions for female careers in today's economy. ${ }^{12}$ One particular-

[^2]ly challenging issue career STEM women face is achieving tenure status. Part I of this article describes the current role female faculty play in STEM fields and the typical tenure policies in higher educational institutions across the U.S. ${ }^{13}$ Part II then looks at the laws and regulations associated with females achieving tenure in the STEM fields, ${ }^{14}$ with Part III analyzing the discriminatory effects felt by STEM female faculty members. ${ }^{15}$ Finally, Part IV explores several approaches to cure the deficiency of tenured STEM females. ${ }^{16}$

## I. Unequal Work: Women Are Not Adequately Represented Among Tenured Academic Employees at Various STEM

 Educational InstitutionsAcross the country at higher-level educational institutions, female faculty members almost invariably remain in the minority among the tenured STEM faculty members. ${ }^{17}$ Several factors must be considered in support of this assertion: a) the number of women entering into STEM fields; ${ }^{18}$ b) the number of women entering into the STEM academia environment; ${ }^{19} \mathrm{c}$ ) the number of women applying for STEM tenure track positions; ${ }^{20} \mathrm{~d}$ ) the factors considered in granting tenure for STEM applicants at various institutions; ${ }^{21}$ e) the number of female faculty who are actually granted tenure at STEM institutions; ${ }^{22}$ and $f$ ) the options available to STEM female faculty after being denied tenure. ${ }^{23}$

## A. Women Entering STEM Fields

After high school, men and women both enter into institutions of higher education in approximately equal numbers, but there are far fewer women entering STEM fields of study. ${ }^{24}$ STEM fields
jobs than in other career options).
${ }^{13}$ See infra Part I.
${ }^{14}$ See infra Part II.
${ }^{15}$ See infra Part III.
${ }^{16}$ See infra Part IV.
${ }^{17}$ See generally Joan Burrelli, Nat’l Science Found., NSF o8-308 Thir-ty-Three Years of Women in S\&E Faculty Positions 4 (2008), available at http://www.nsf.gov/statistics/infbrief/nsf08308/ (discussing that tenure or tenure track faculty in science and engineering related fields were still only $28 \%$ female in 2006).
${ }^{18}$ See infra Part I.a.
${ }^{19}$ See infra Part I.b.
${ }^{20}$ See infra Part I.c.
${ }^{21}$ See infra Part I.d.
${ }^{22}$ See infra Part I.e.
${ }^{23}$ See infra Part I.f.
${ }^{24}$ Palash R. Ghosh, Women Surpassing Men in U.S. Colleges, Int'l Bus. Times, Sept. 29, 2010, http://www.ibtimes.co.uk/articles/66528/20100929/
of study may include, but are not limited to: engineering, biology, chemistry, physics, mathematics, and computer science. ${ }^{25}$ One scholar has provided a variety of reasons why women are not well-represented in STEM fields, including women's scores on the SAT mathematics section, women's lack of interest in math and science, and women's inaccurate judgments of their mathematical abilities. ${ }^{26}$ Others suggest that women's under-representation relates to "innate biological differences" between males and females. ${ }^{27}$ However, most scholars argue that there is no empirical evidence suggesting females, generally, are not as capable as men in STEM fields, but rather that societal influences have impressed upon women
education-colleges-men-women.htm (providing that as of 2010, women represent around $57 \%$ of college students while men represent the remaining $43 \%$ ). According to the 2010 Census, around $55.7 \%$ of college freshmen were female students and the remaining $44.3 \%$ were male students. U.S. Census Bureau, Statistical Abstract of the United States: 2012, Table 286. College Fresh-men-Summary Characteristics: 1980 to 20io, available at www.census.gov/ compendia/statab/2012/tables/12s0286.pdf; see also AAUW, supra note 11, at 6-12 for statistical and graphical support that women are lagging behind male counterparts in entering almost every academic STEM field.
${ }^{25}$ The U.S. Immigration and Customs Enforcement lists STEM disciplines as including, in part: Physics, Actuarial Science, Chemistry, Mathematics, Computer Science, Biochemistry, Robotics, Computer Engineering, Electrical Engineering, Mechanical Engineering, Civil Engineering, Aerospace Engineering, Chemical Engineering, Astrophysics, Astronomy, Nanotechnology, Nuclear Physics, Mathematical Biology, Operations Research, Neurobiology, Biometrics, Bioinformatics, Engineering Acoustics, and Atmospheric Sciences. See U.S. Dep’t of Homeland Sec., Stem Designated Degree Programs (2012), available at http://www.ice.gov/doclib/sevis/pdf/stem-list.pdf.
${ }^{26}$ Virginia Valian, Why So Slow?: The Advancement of Women 192 (1999).
${ }^{27}$ See Psychoanalysis Q-and-A: Steven Pinker, Harv. Crimson, Jan. 19, 2005, available at http://pinker.wjh.harvard.edu/articles/media/2005_01_19_crimson. html; see also The Science of Gender and Science: Pinker vs. Spelke, Edge (May 16, 2005), http://www.edge.org/3rd_culture/debate05/debate05_index.html (transcript, audio, and video of a debate between Professors Elizabeth Spelke and Steven Pinker discussing discrepancies between the abilities of men and women with respect to their quantitative and spatial reasoning); see also Lucy M. Stark, Exposing Hostile Environments for Female Graduate Students in Academic Science Laboratories: The McDonnell Douglas Burden-Shifting Framework as a Paradigm for Analyzing the "Women in Science" Problem, 31 Harv. J.L. \& Gender 101, 102 (2008) (referring to a group of MIT professors that noted the low incidence of women in the sciences was evidence of systemic discrimination).
that science and math are improper intellectual pursuits for females. ${ }^{28}$ Regardless of the reason, women tend to avoid majors in these fields. ${ }^{29}$

The lack of women studying in STEM fields has obvious negative consequences for post-graduate employment opportunities. Occupations in fields that pay well often involve engineering and natural sciences, which not only require that employees have strengths in science and math, ${ }^{30}$ but also almost always require that they have a degree in a STEM field. As a result, women are over-represented as employees in lower paying fields. ${ }^{31}$ This over-representation has several effects.

First, women workers have traditionally been most susceptible to layoffs during a recession, and in the current recession, unemployed women have struggled to find work more than their male counterparts. ${ }^{32}$ Second, female employees are more likely than their male household partner to leave the workplace to care for a family. Finally, and perhaps most discouragingly, females earn less money on average than men. ${ }^{33}$

## B. The STEM Academic Environment \& Women

Many women who intend to pursue a teaching career in STEM fields remain in school in order to obtain a postdoctoral degree. Women particularly face many challenges attempting to continue their studies in STEM fields. For example, the requirements

[^3]driven by the inflexible laboratory environment place pressure on women who would like to start a family. ${ }^{34}$

Beyond the laboratory, there is rampant sex discrimination in awarding fellowships. Fellowships are commonly granted as a program, and an associated award, that allows the postdoctoral student to bypass a basic teaching requirement that tends to detract from their research opportunities. ${ }^{35}$ In fact, an evaluation of fellowships granted by the Swedish Medical Research Council showed that women had to be objectively ranked around five times higher than the male applicants in order to achieve a similar subjective ranking from a senior scientist. ${ }^{36}$ Furthermore, female applicants made up $46 \%$ of the applicants, but only $20 \%$ of those awarded fellowships. ${ }^{37}$ This data seems to suggest that the odds are against a women's entry into STEM employment from the beginning. ${ }^{38}$

## C. Female Applicants for STEM Tenure Track Positions

In academia, the concept of tenure is widespread and well accepted. In a traditional academic environment, faculty members are hired to fill specific positions, such as assistant professorships, associate professorships, and professorships. ${ }^{39}$ Some institutions also employ part-time professors called adjuncts, who may also maintain a parallel active position in their field. ${ }^{40}$ Each of these positions is categorized by the educational institution as either tenure-track or non-tenure track. It is typical for the tenure decision to be made

[^4]and divulged to the faculty candidate at some point between her fifth and seventh year of employment at the institution. ${ }^{41}$

Tenure-track positions are highly coveted as they have a distinct likelihood of leading to tenure. Tenure is defined as "a promise of lifetime employment awarded to scholars who demonstrate excellence in scholarship, teaching, and service. ${ }^{42}$ Most successful career paths to tenure begin with an assistant professorship position. ${ }^{43}$ A candidate most frequently receives tenure while either at the professional rank of full professorship or associate professorship. ${ }^{44}$ Statistics show that " 95 percent of full professors, 83 percent of associate professors, 14 percent of assistant professors, 3 percent of instructors, and 2 percent of lecturers held tenure. ${ }^{45}$

Non-tenure track positions are generally considered less prestigious. Adjuncts are nearly always considered non-tenure track positions, which earn significantly less money and are reviewed on a semester or yearly basis. ${ }^{46}$ Non-tenure track positions may last an indefinite number of contract terms, but these faculty members are often encouraged or required to leave if they are not promoted to a tenure position within a certain time period.

With respect to tenure-track positions, around $60 \%$ of STEM women were in tenured or tenure track positions, but $77 \%$ of their male counterparts were in tenured or tenure track positions in 1993. ${ }^{47}$ Unsurprisingly, there is a higher percentage of women in STEM non-tenure track positions, with 14 percent of women, as compared to 8 percent of men, in these positions. ${ }^{48}$

[^5]
## D. Factors Considered in STEM Tenure Decisions

Tenure decisions are highly regulated at each educational institution. The decisions take place after a "probationary period" review, which usually occurs within four years of the initial appointment, and also after a "tenure review," ${ }^{49}$ which occurs around five to seven years after a candidate begins working at an institution. ${ }^{50}$ Typically, each institution has a predetermined policy regarding its "tenure clock," and there are varying rules as to when the tenure clock starts and stops. ${ }^{51}$ Many institutions also offer policies that allow a candidate to pause the tenure clock for personal, health, or pregnancy absences. ${ }^{52}$

During the tenure review, a candidate's particular department within the institution will perform a detailed analysis of the candidate's credentials. ${ }^{53}$ The department, or a review committee from within, looks to a set of criteria ("Tenure Factors") when forming a recommendation. The Tenure Factors vary across institutions and departments, but they generally include a review of the candidate's research, teaching, and service. ${ }^{54}$ Some institutions have also begun to include "Collegiality" as a fourth major factor. ${ }^{55}$ Other criteria may include peer evaluations from faculty, outside expert recommendations, student evaluations, and projected needs. ${ }^{56}$ The department review committee inspects the supporting Tenure Factors and reports on these credentials in an informal recommendation, which is forwarded to the dean of the institution. The dean of the

[^6]institution then issues a formal recommendation. The dean's decision is then sent to the final decision-maker, either the institution's provost or a board of trustees, who almost always defer to the dean's recommendation. The provost or board of trustees then announces the tenure decision to the candidate.

This comment will review the detailed tenure policies of ten STEM higher education institutions; five public universities and five private universities. Tenure in public institutions tends to be governed by statute, and tenure in private institutions is more often governed by contract. ${ }^{57}$ The five public institutions include the University of Maryland, College Park ("UMCP"), University of Minnesota ("UMN"), University of Illinois, Urbana-Champaign ("UIUC"), Purdue University ("Purdue"), and University of Michigan, Ann Arbor ("UMI"). The five private institutions include Johns Hopkins University ("JHU"), Carnegie Mellon University ("CMU"), Massachusetts Institute of Technology ("MIT"), Princeton University ("Princeton"), and Duke University ("Duke"). Overall, each institution generally reviews the three typical Tenure Factors. ${ }^{58}$

## i. Public Institutions

Each STEM higher education institution weighs the Tenure Factors in a different manner. UMCP mandates that "each of the categories shall be considered in every decision." ${ }^{59}$ However, the academic departments at UMCP are allowed to weigh the Tenure Factors differently according to their own needs. ${ }^{60}$ The UMCP tenure policy states that "decisions must also take account of the academic needs of the department ... and institution at the time of appointment and the projected needs at the time of consideration for tenure. ${ }^{" 11}$ UMI tenure policies mirror those of UMCP. They also require a traditional review of the three Tenure Factors and further allow each individual school "to develop...procedures" consistent with its overarching institutional policy. ${ }^{62}$

On the other hand, the UMN tenure policy requires the committee to review relevant material to the candidate's tenure application, including the candidate's "scholarly research or other creative

[^7]work, teaching, and service." ${ }^{63}$ The UMN tenure policy states that scholarly achievement and teaching are to be given "primary emphasis" and that "service alone cannot qualify the candidate for tenure." ${ }^{64}$ UMN also considers, if applicable, "[i]nterdisciplinary work, public engagement, international activities and initiatives, attention to questions of diversity, technology transfer, and other special kinds of professional activity . . ." ${ }^{65}$

The UIUC tenure policy, however, states that the "overriding criterion" is whatever is in the best interest of the University of Illinois. ${ }^{66}$ In the UIUC review of the three typical criteria, the school recognizes that "the three need not be treated equally." At UIUC, the "primary basis" for tenure is evidence of teaching and research, while only some consideration is given to "evidence of valuable public engagement or service to the University and professional communities." ${ }^{67}$

Currently, Purdue is undergoing dramatic changes to its tenure policy. In the past, it has considered "discovery, learning and engagement" as the necessary elements of review, which are merely variations of the typical research, teaching, and service Tenure Factors. ${ }^{68}$ To update its tenure policy, Purdue is now considering the addition of a "Collegiality" factor, and it has also proposed additional tenure factors to measure interdisciplinary work and joint appointments. ${ }^{69}$

Although each public institution appears to be reviewing the same Tenure Factors, the Tenure Factors themselves vary from institution to institution. Each school's policy either describes the factor with broad, sweeping language or with extreme particularity that includes various additional factors. For instance, definitions of "research" vary across the public institutions. One school merely

[^8]describes the Tenure Factor as an evaluation of "performance in research, scholarship, and creative activity." ${ }^{\prime 7}$ At another institution, the research factor is defined as including "research or other scholarly contributions or creative work" that is conducted on the "basis of descriptions and evaluations" of the scholarship, not the actual scholarship itself, and a research statement from the candidate including plans for future work. ${ }^{71}$ The third school, UIUC, focuses on the "two most important publications or creative works," "the departmental evaluation of future potential," "a statement of research goals and accomplishments," and the "quality of execution, the significance of the topics, and the impact on the field." ${ }^{72}$ Research at Purdue and UMI, however, is even more complex. At Purdue, the research factor requires a review of a laundry list of aspects including "citations and h-indices vs. number of publications in high impact journals" and "licensed technology instead of invention disclosures or both." ${ }^{73}$ At UMI, a candidate's reviewable research includes both "scholarly ability and attainments," where attainments may include successes "in the realm of scientific investigation, in the realm of constructive contributions, or in the realm of creative arts." ${ }^{34}$

The Tenure Factor "service" also includes a range of review criteria. The criteria may merely include "performance of professional service to the university, the profession, or the community."75 Alternatively, service may be reduced to a review of a "summary and narrative of the candidate's service activities." ${ }^{, 76}$ Meanwhile,

[^9]UIUC, provides in its tenure policy that the service factor encompasses "public engagement activities, professional/disciplinary service and university service" matters. UIUC's policy goes on to state that public engagement efforts will be evaluated with the same rigor that is used in evaluations of "Teaching" and "Research." ${ }^{77}$ It is unclear from the UIUC tenure policy if this heightened review of service is intended to increase or diminish the role of that Tenure Factor, especially given that elsewhere in the tenure policy, it is described as playing a secondary role to the other two Tenure Factors. ${ }^{78}$ Service may also include a review of the candidate's "impact on policy as well as or instead of participation on committees." ${ }^{\text {79 }}$ Other criteria that may go into a service review are "administrative tasks, counseling, clinical duties, and specialty training programs" along with rendering "extramural services." ${ }^{80}$

The criteria for "teaching" follow the same ambiguous mold as the other two Tenure Factors. UMCP requires a Teaching evaluation to review candidates with the expectation of "[s]uperior teaching and academic advisement." ${ }^{11}$ Both UMN and UIUC evaluate the candidates in part on a statement by the candidate regarding her teaching philosophy. ${ }^{82}$ Additionally, most of the programs require student and peer evaluations regarding teaching prowess, although they differ on whether current students should be included in the student evaluations. ${ }^{83}$ Some schools also look to less typical review criteria, including "the number and kind of courses and students taught vs. how creative pedagogy changed the teaching and learning of a discipline." ${ }^{84}$

## ii. Private Institutions

Private STEM institutions also vary in their balancing of the importance of the three Tenure Factors. Overall, the language of the

[^10]private STEM tenure policies promotes agendas that, in particular, encourage competitive faculty retention. For example, JHU Engineering School's tenure policy states, "[e]ach appointment or promotion should be conducted so as to attract or retain faculty whose scholarly achievements, teaching ability, and qualities of university citizenship are superb. ${ }^{885}$ In comparison to public STEM institutions, these five private STEM institutions place less emphasis on the service factor. ${ }^{86}$ MIT tenure policy also requires a review of the same three Factors, but renames the service factor, which by itself is not a sufficient basis to award tenure, "extramural activity." 87 However, at CMU, the tenure policy includes only two factors, including "Teaching and Other Educational Activities" and "Research, Scholarly or Artistic Activities." ${ }^{88}$ Although a quick glance might suggest that CMU has scrapped the service Tenure Factor entirely, it has instead definitively re-delegated it to a level subsidiary to the other prominent Tenure Factors. ${ }^{89}$ Different than the other institutions, Duke requires its tenure candidates to "document a continuous high-quality performance in at minimum two of the . . . three components ..." without suggesting that teaching and research factors always take the primary roles. ${ }^{90}$
"Research" at these STEM institutions plays even more of an important role. Scholarly achievements are measured by their peer acceptance and by comparisons to other work performed by peers

[^11]in the field. ${ }^{91}$ Private institutions, like CMU, require their STEM faculty to have more of a record of their accomplishments. This includes "publications, commissions, inventions and works of art; the record of recognition, including prizes, honors from professional societies, exhibitions and critical reviews of publications, artistic production and research proposals, and the considered opinions of outstanding experts in the candidate's field ... ${ }^{92}$ These scholars must be "of first rank" and "show promise of continued contribution to scholarship." ${ }^{93}$ Princeton, on the other hand, merely requires that their candidates prove "abilities as an outstanding scholar." ${ }^{44}$ Duke follows suit and asks only that candidates demonstrate "intellectual development and leadership" that "reflect a serious and sustained commitment to the life of scholarship."95

With respect to "teaching," the private STEM institutions have instituted a somewhat secondary review process. According to an opinion column in The Daily Princetonian in December of 2003, the University President went so far as to advise "junior faculty not to focus so much on teaching undergraduates" and instead suggested that "if they want to obtain the holy grail of tenure they should concentrate on scholarly research...as their 'first and foremost' priority." ${ }^{96}$ However, the Princeton tenure policy itself states that candidate"s "[p]roved abilities as an outstanding...teacher with the capacity to make important contributions to the department shall be essential qualifications for appointment as professor," and does not express such a disregard for the teaching Tenure Factor. MIT tenure policy follows the University President's advice from The Daily Princetonian and deemphasizes teaching. ${ }^{97}$ Nonetheless, CMU, JHU, and Duke take a more traditional approach to the teaching Tenure Factor. CMU policy dictates that STEM faculty must show "competence in teaching," and states that this can be demonstrated through "colleague evaluations and meaningful student evaluations" in addition to a review of new course development, advising undergraduate and graduate students, laboratory or classroom instruction, and educational publications. ${ }^{98}$ The JHU

[^12]teaching Tenure Factor focuses on a consultation of student evaluations and a review of the record of work performed in graduate dissertations. ${ }^{99}$ At Duke, "[g]ood teaching...should be expected." ${ }^{100}$

As stated previously, "service" is not really a serious consideration in these private STEM institutions. Of the policies reviewed, the most attention provided to the subject is available from the JHU tenure policy. JHU's tenure policy suggests looking to see whether "the candidate's expertise is helpful or necessary to the support of other programs at Hopkins . . ""101

Overall, a review of ten STEM tenure policies suggests that the use of these "objective" Tenure Factors has become a façade that actually facilitates subjective tenure decision-making. At private STEM institutions, the ultimate emphasis for a tenure decision is almost entirely on the research Tenure Factor. However, these institutions place an inordinate amount of emphasis on scholarly acceptance of that research, which may run contrary to the objectives of tenure. ${ }^{102}$ At public STEM institutions, there is more of a balanced weighing of the three Tenure Factors, but the variety of un-weighted criteria that are used in the decision-making process for each Tenure Factor allow for arbitrary results and little accountability.

## E. Women with Tenure for STEM Positions

Females who have achieved tenure in STEM positions are still not on equal footing with their male peers. Women in tenured STEM positions are still likely to experience inequality in terms of pay. ${ }^{103}$ In addition, the tenured women in STEM fields remain greatly outnumbered by their male counterparts. In science and engineering fields around $61 \%$ of men had tenure as opposed to around $35 \%$ of women in 1993. ${ }^{104}$ In their paths to tenure, STEM female faculty as compared to social science female faculty, have also fallen behind. Women with STEM Ph.Ds tend to be a rank behind their male peers, while women with doctorates in the social sciences tend to be slightly closer in rank to their male peers. ${ }^{105}$ The largest discrepancies are visible in engineering, where female engineering faculty members make up only $4 \%$ of the faculty in engineering departments in 1993. ${ }^{106}$
${ }^{99}$ JHU Tenure Policy, supra note 85, at 2.
${ }^{100}$ Duke Tenure Policy, supra note 90, at 3-2.
${ }^{101}$ JHU Tenure Policy, supra note 85, at 2.
${ }^{102}$ See infra Part IV.c.
${ }^{103}$ See AAUW Educ. Found. \& AAUW Legal Advocacy Fund, supra note 38, at 1.
${ }^{104}$ Valian, supra note 26, at 233.
${ }^{105}$ Id. at 234.
${ }^{106}$ Id. at 233.

However, some modern trends provide an encouraging outlook for future female STEM faculty pursuing tenure. Women who have more recently obtained doctorates in STEM fields are more likely to be on a tenure track status than women with doctorates had previously. There is only a $7 \%$ differential in percentages of tenure-track applicants who achieved a Ph.D after 1985, but there is a $16 \%$ differential between male and female applicants who achieved their Ph.Ds prior to 1985. ${ }^{107}$

## F. Tenure Denial: Options Available for STEM Female Faculty

Once female STEM faculty members are denied tenure at their educational institution, they have a few options. First, the female faculty member could stay at the institution. It is unlikely that her contract will expire at the same time she receives the tenure review decision, and she will likely have to finish out her con-tract-term. Some institutions allow for applicants who have been denied tenure to seek renewal of their current positions, or to shift to a definitively non-tenure track position. This option is available at many institutions and provides for little change in the faculty member's life, but carries with it emotional disappointment, professional embarrassment, and career stagnation.

Alternatively, the female faculty member could leave the institution or the profession. This female faculty member would stay until the end of her contract-term and then not seek renewal. She would then find an alternative institution where she could begin the tenure-seeking process again, seek an industry-oriented career, leave the profession entirely to become a primary caregiver in her home, or leave the profession entirely to find an alternate career. The first option most likely means that the candidate will have to start working at a less reputable school. No similarly ranked school will likely take a candidate denied tenure, as that denial carries with it implications of either professional or character failures. ${ }^{108}$ Should the candidate choose the second option, she will likely have a difficult time entering the industry if she has maintained a fulltime faculty position without industry-related experience. The most common results involve options three and four. These options relegate well-educated women to careers outside of their expertise and below their deserved pay.

The last option available to a female faculty candidate denied tenure is to appeal the decision. This could be done either through the internal institutional appeals process or through an appeal to
${ }^{107}$ Id..
${ }^{108}$ See Hora, supra note 43, at 350-51 (emphasizing that professors who do not receive tenure "may find it impossible to obtain another academic job").
the judiciary. An appeal to the institution usually involves the candidate appearing before a review committee and presenting her case. The committee may, in a fairly liberal appeals setting, turn over documents to the faculty member with some redactions providing her with insight into the personal details of the decision. The details of the decision may be helpful in revealing the level at which the denial took place (e.g., department review committee, dean, or provost/board of trustees).

Internal institutional appeals are unlikely to result in a positive outcome for the applicant and a reversal of the initial decision. The difficulties of inter-institutional tenure appeals was fully recognized by Dr. Quinetta Shelby, a chemistry professor at DePaul University in Chicago, who tried to appeal her tenure denial. ${ }^{109}$ Dr. Shelby had many reputable publications (some that had been cited more than 300 times), was thought of highly by her students, and had been the winner of an NSF CAREER Award. ${ }^{110}$ Appallingly, despite her above-average credentials, Dr. Shelby was denied tenure. ${ }^{111}$ The internal institutional appeals committee at DePaul found that the Department had changed policies after the tenure review started, some of the female candidate's publications and awards were not considered despite meeting objective criteria, and that there had been too much of a focus on small negative elements of the application. ${ }^{112}$ Despite the appeals committee's findings that favored Dr. Shelby, the decision to deny her tenure was shockingly upheld. ${ }^{113}$

## II. Laws and Regulations On Denial of Tenure

When a female candidate has exhausted institutional appeals, she may attempt to pursue a judicial appeal available to candidates who have been denied tenure. Different statutes provide approaches and remedies to assist a plaintiff seeking redress. The following

[^13]sections address the standard of review in a typical tenure suit, ${ }^{114}$ Title IX of the Education Amendments, ${ }^{115}$ the Fourteenth Amendment's Due Process Clause and Equal Protection Clause, ${ }^{116}$ and the Civil Rights Acts, Title VII, and the Pregnancy Discrimination Act. ${ }^{117}$

## A. Typical Tenure Suit

A typical tenure suit is fairly limited. Courts will ask whether there was "noncompliance with the internal rules of the institution, and whether the decision was made arbitrarily, capriciously, or if it is clearly wrong." ${ }^{118}$ The reviewing court will not focus on the "correctness" of the decision, but only on whether proper procedures were followed by the institution. ${ }^{119}$ Usually plaintiffs bringing suit are required to have exhausted their institution's internal appeals process. ${ }^{120}$

However, it has quickly become obvious that state courts are unwilling to intervene in most tenure and hiring-related decisions. In Hooker v. Tufts University, ${ }^{121}$ a female physical education faculty member, Mrs. Hooker, brought suit against Tufts University alleging that she was wrongfully denied tenure pursuant to Title VII. ${ }^{122}$ After analyzing all relevant factors, the District Court for the District of Massachusetts found that Mrs. Hooker failed to make an adequate showing of sex discrimination on the tenure issue. In its analysis, the court noted that it was "clearly bound to accord the university decision-makers certain deference. ${ }^{123}$ Similarly, in Keddie v. Pennsylvania, ${ }^{124}$ an assistant university professor sued Pennsylvania State University for his tenure denial. ${ }^{125}$ In the court's review of the circumstances, it became evident that a variety of subjective criteria, along with some objective criteria, were used to dismiss him. The criteria considered included publications below

[^14]minimum publishing standards, some positive and some negative teaching reviews, and minimal contributions to the service of the University. ${ }^{126}$ His tenure denial was affirmed. ${ }^{127}$

A professor-plaintiff is likely to find similar reasoning and outcomes in federal courts. Federal courts have been equally concerned about interfering in tenure and hiring review decisions. In Namenwirth v. Board of Regents of the University of Wisconsin System, ${ }^{128}$ a female professor brought suit alleging that she had been denied tenure on the basis of her sex. After reviewing the factors, the court could not find clear and convincing evidence that her tenure denial was made on an impermissible basis, and instead the court deferred to the University's conclusion that she was not well-qualified for the tenured position. ${ }^{129}$ The court drew a distinction between being a qualified candidate and being a candidate that "ought to have been awarded tenure. ${ }^{1130}$ A federal court further emphasized this narrow and hands-off approach in Zahorik v. Cornell University. ${ }^{131}$ In Zahorik, the court stated that "determination of the required level [of achievement] in a particular case is not a task for which judicial tribunals seem aptly suited." ${ }^{132}$

## B. Title IX of the Education Amendments

Title IX of the Education Amendments ${ }^{133}$ was passed to prohibit sex discrimination in educational programs and to prevent educational activities endorsing sex discrimination from receiving federal funds. ${ }^{134}$ Title IX, like Title VII, covers employees facing

[^15]discrimination from an educational institution, but most tenure cases are filed under Title VII. ${ }^{135}$

Title IX operates by granting federal agencies the authority to promulgate regulations that support the enforcement of the Act's purposes. ${ }^{136}$ The result of current noncompliance however, is only the discontinuance of federal funding. ${ }^{137}$ Such a lackluster remedy has resulted in suits brought under the Title merely becoming a temporary annoyance to the institution, primarily due to the associated media and news involvement.

## C. The Fourteenth Amendment: The Due Process and Equal Protection Clauses

## i. The Due Process Clause

The Due Process Clause of the Fourteenth Amendment to the Constitution provides "nor shall any State deprive any person of life, liberty, or property, without due process of law..." ${ }^{138}$ For a plaintiff to show that she has a valid claim, she must show that there is either a property or liberty interest that is entitled to procedural due process. ${ }^{139}$ A property interest may still be valid even if it is not typical tangible property such as real estate, chattels, or money. ${ }^{140}$

In Board of Regents of State Colleges v. Roth, ${ }^{141}$ the Supreme Court reviewed a claim by a professor who had been denied tenure pursuant to the Due Process Clause. The Court found his property interest in continued employment insufficient given that there was no university policy or regulation that allowed him this interest in the first place. ${ }^{142}$ Most tenure claims brought pursuant to the Due Process Clause share the same fate as in Roth.

[^16]
## ii. The Equal Protection Clause

The Equal Protection Clause of the Fourteenth Amendment to the Constitution provides that " $[\mathrm{n}] \mathrm{o}$ State shall... deny to any person within its jurisdiction the equal protection of the laws." ${ }^{143}$ Based on the legislative history of the amendment, it is clear that the amendment targeted race discrimination and is ambiguous in respect to sex discrimination. ${ }^{144}$ Nevertheless, equal protection has since been extended to women as a class as a result of the Supreme Court's decision in Reed v. Reed. ${ }^{145}$

Discrimination suits are reviewed with a specific scrutiny that is dependent upon the targeted class. The default scrutiny standard, rational basis, evaluates whether a party's particular contested action is a reasonable means to a legitimate governmental end. ${ }^{146} \mathrm{~A}$ heightened scrutiny standard, strict scrutiny, is applied in contexts involving race, affirmative action, religion, ethnicity, and state regulation of aliens. ${ }^{147}$ Strict scrutiny evaluates whether the law under question is a necessary means to a compelling government end. ${ }^{148}$ For a long time, gender discrimination was evaluated under the rational basis standard. ${ }^{149}$

The standard of review was arguably changed in the Supreme Court case United States v. Virginia. ${ }^{150}$ In Virginia, the Court was asked to review the admissions policy for the Virginia Military Institute and evaluate its constitutionality. ${ }^{151}$ The Court did so with an "intermediate scrutiny" test. ${ }^{152}$ The Court described intermediate scrutiny as needing either an "exceedingly persuasive justification"

[^17]or "substantial relation to an important objective" for the policy at hand. The Court on one occasion titled the requirement "skeptical scrutiny." ${ }^{153}$ Some scholars argue that the Court used "needlessly confusing language" in its opinion and that the standard of review for gender matters remains the rational basis standard. ${ }^{154}$

The Equal Protection Clause has been used on many occasions to challenge sex discrimination. Beginning as early as Reed v. Reed, the Supreme Court found matters of sex discrimination a valid basis for suit. ${ }^{155}$ Since Reed, numerous sex discrimination challenges have been brought before the Court based on the Equal Protection Clause. ${ }^{156}$ To prevail in an Equal Protection Clause suit, the plaintiff must provide evidence that she was treated differently on the basis of gender from someone else who is prima facie identical in all relevant respects. ${ }^{157}$ To assist in this respect, modern courts will also apply a Title VII burden-shifting analysis, discussed in the following section, to determine if there was a violation of the Equal Protection Clause. ${ }^{158}$

Some legal scholars, however, have voiced strong opinions that the Fourteenth Amendment's Equal Protection Clause was "not penned for the goal of preventing sex discrimination." ${ }^{159}$ Justice Scalia, who often employs an originalist interpretive approach to the U.S. Constitution, has stated that " t$]$ he only issue is whether [the Constitution] prohibits [sex discrimination]. It doesn't." ${ }^{160}$ The
${ }^{153}$ Virginia, 518 U.S. at 531.
${ }^{154}$ See Bowsher, supra note 152 , at 308 (arguing that the judges promoting intermediate scrutiny as the standard of review are mistaken and that the rational basis standard is appropriate).
${ }^{155}$ See generally Reed, 404 U.S. 71, 71 (1971) (holding that a "mandatory preference" for of an Idaho law violated the Equal Protection Clause).
${ }^{156}$ See, e.g., Frontiero v. Richardson, 411 U.S. 677 (1973); see also Craig v. Boren, 429 U.S. 190 (1976); see also Kirchberg v. Feenstra, 450 U.S. 455 (1981).
${ }^{157}$ See Neilson v. D’Angelis, 409 F.3d 100, 104 (2d Cir. 2005); see also Vill. of Willowbrook v. Olech, 528 U.S. 562, 564 (2000).
${ }^{158}$ See, e.g., Molthan v. Temple Univ. 778 F.2d 955, 961 (3d Cir. 1985).
${ }^{159}$ Jonathon M. Seidl, Scalia: Sex Discrimination Not Inherently Prohibited in Constitution, The Blaze (Jan. 4, 2011, 11:03 AM), http://www.theblaze.com/ stories/scalia-sex-discrimination-not-inherently-prohibited-in-constitution/.
${ }^{160}$ The Constitution states that there is a "judicial Power" but fails to provide further clues as to what that means. The Supreme Court has attempted to interpret the extent of the judiciary's authority; as one commentator has said, "[W]ith five votes anything is possible." Antonin Scalia, The Rule of Law as a Law of Rules, 56 U. Chi. L. Rev. 1175, 1184-85 (1989) (voicing his opinion that originalism and "textual anchors" are necessary for proper judicial interpretation of the law); see also John O. McGinnis \& Michael B. Rappaport, Originalism and the Good Constitution, 98 Geo. L.J. 1693, 1695 (2010) (advocating interpreting the Constitution through originalism). But cf. Mitchell N. Berman, Originalism Is Bunk, 84 N.Y.U. L. Rev. 1, 24 (2009) ("[O]riginalism threatens
solution, Justice Scalia says, is for active citizens to convince the legislature of the need for laws banning sex discrimination. ${ }^{161}$

## D. Civil Rights Acts, Title VII, and the Pregnancy Discrimination Act

## i. Background

Title VII of the Civil Rights Act of $1964^{162}$ is the backbone of employment suits involving sex discrimination. ${ }^{163}$ Under the provision, employers cannot discriminate against employees on the basis of sex without facing legal repercussions. ${ }^{164}$ Specifically, Title VII prohibits employers from discriminating with respect to hiring, employment terms, or other opportunities because of the individual's race, color, religion, sex, or national origin. ${ }^{165}$

Congress intended Title VII to have broad application. ${ }^{166}$ Title VII has a distinctive legislative history that includes an express congressional intent to apply Title VII broadly, and that its enactment would remedy the nationwide issue of employment discrimination. ${ }^{167}$ In numerous opinions, courts have highlighted this congressional intent as indicating that the purpose of the Act was to
to undermine the judiciary's unique and essential role in our system of government.").
${ }^{161}$ Seidl, supra note 159.
${ }^{162} 42$ U.S.C. §§ 2000e-2000e-17 (2006). The text of the statute, in relevant part, reads:

It shall be an unlawful employment practice for an employer-
(1) to fail or refuse to hire or to discharge any individual, or otherwise to discriminate against any individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, sex, or national origin; or
(2) to limit, segregate, or classify his employees or applicants for employment in any way which would deprive or tend to deprive any individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, sex, or national origin.
Id. at § 2000e-2(a).
${ }^{163}$ See, e.g., Hora, supra note 42, at 351 (stating that discrimination claims for tenure decisions are most commonly made under the Civil Rights Act).
${ }^{164} 42$ U.S.C. § 2000e-2 (a) (2006) (creating a cause of action for an individual who experienced employment discrimination because of his or her sex).
${ }^{165}$ Id.
${ }^{166}$ See generally Civil Rights Act of 1964, Pub. L. No. 88-352, 78 Stat. 241 (1964) (codified at 42 U.S.C. §§ 2000e-2000e-17 (2006)).
${ }^{167}$ H.R. REP. NO. 92-238, at 1062 (1972), reprinted in 1972 U.S.C.C.A.N. 2137, 2138-39 (stating Congress's intent was to end employment discrimination); H.R. Rep. No. 88-914 at 788 (1963) (describing the primary purpose of Title VII as addressing the problems associated with employment discrimination).
specifically end employment discrimination. ${ }^{168}$ Congress has also on two separate occasions amended Title VII to include further remedies and increase the scope of Title VII. ${ }^{169}$ The provision also had emphatic support from President Nixon, who stated that "discrimination of any kind based on factors not relevant to job performance must be eradicated completely from Federal employment." ${ }^{170}$

Alternatively, some women facing gender discrimination may find a sufficient legal remedy through provisions provided by the Pregnancy Discrimination Act of $1978 .{ }^{171}$ The Act amended Title VII and "prohibits discrimination on the basis of pregnancy, childbirth, and related medical conditions." ${ }^{172}$

Given that professor-plaintiffs bringing suit have traditionally faced difficulties meeting the necessary discovery burden, courts have ordered that the university-defendants meet the burdens of production. ${ }^{173}$ In University of Pennsylvania v. EEOC, ${ }^{174}$ the Supreme Court took this discovery issue to heart and definitively disallowed universities special privileges relating to the nondisclosure of hiring or tenure records. ${ }^{175}$ Instead, the burden of production is required to be borne by the academic institution. ${ }^{176}$

## ii. Analytical Framework of Title VII Claims

Most sex discrimination cases are brought under Title VII, with plaintiffs taking one or the other of two judicially developed approaches to sex discrimination litigation. ${ }^{177}$ One approach used by plaintiffs seeking remedies for sex discrimination in tenure decisions is often called the "disparate impact" theory. ${ }^{178}$ The disparate impact theory provides remedies for practices that appear facially

[^18]neutral but actually discriminate against a protected class. ${ }^{179}$ Few tenure cases pursuing the disparate impact theory, however, have been successful. ${ }^{180}$

The majority of Title VII sex discrimination plaintiffs pursue their claims under the theory of "disparate treatment." ${ }^{181}$ A disparate treatment claim is available if plaintiffs can prove intentional discrimination by direct or circumstantial evidence. ${ }^{182}$ The process of making the initial prima facie case, and in turn countering all necessary burdens, is sometimes labeled the McDonell-Douglas context analysis. ${ }^{183}$ To create a prima facie case for discrimination, the plaintiff must prove she: 1) is a member of a protected class; 2) is qualified for the position at hand; 3) suffered an adverse employment action; and 4) was replaced with someone outside the protected class. ${ }^{184}$

After the prima facie case is met, the burden shifts to the employer who then must provide a legitimate, nondiscriminatory reason for the employment decision. ${ }^{185}$ According to the Supreme Court's decision in Texas Dept. of Community Affairs v. Burdine, ${ }^{186}$ the burden has become a less weighty challenge for defendants. A defendant employer must now only provide a nondiscriminatory explanation for the employment decision, and courts do not hear evidence on whether or not the employer's provided explanation was the actual motivation behind the decision. ${ }^{187}$ Strikingly, the court takes the defendant at its word. ${ }^{188}$

[^19]If the employer is able to satisfactorily provide a nondiscriminatory reason, the burden then shifts back to the employee. ${ }^{189}$ The plaintiff's only option is to show that the employer's presented motivation was a pretext for actual discrimination. ${ }^{190}$ The Supreme Court has approached plaintiffs skeptically in sex discrimination suits, which has resulted in a higher burden being placed on these plaintiffs. ${ }^{191}$ In St. Mary's Honor Center v. Hicks, ${ }^{192}$ the Court noted that even if a plaintiff managed to show that an employer lied about its motivation in making hiring decisions, the plaintiff must further prove that the lie was an effort to further discriminatory practices. ${ }^{193}$

Title VII claims using the McDonnell-Douglas context analysis also require that in the event that a professor-plaintiff proves discriminatory practices are afoot, the professor-plaintiff is also responsible for providing evidence that these discriminatory practices were what led to the tenure denial. In other words, the analysis looks for a nexus between the discrimination and the tenure result. This nexus element has been exceedingly difficult for plaintiffs to prove. In Harel v. Rutgers, ${ }^{194}$ a plaintiff attempted to prove that two members who submitted reports as part of his tenure review were likely to have discriminated against him because of his Israeli national origin. ${ }^{195}$ However, that demonstration was not enough by itself to overcome the pretext element of the McDonnell-Douglas analysis. The court emphasized that the plaintiff would be required to show that there was some link between the faculty with purported anti-Israeli tendencies and alleged deviations from procedure or improper conduct. ${ }^{196}$

A similar fate befell a plaintiff-professor at Cornell University in Grant v. Cornell University. ${ }^{197}$ Although the plaintiff was able to show that some exchanges had been made between himself and an administrator with racial undertones, the fact that the administrator did not play a role in the tenure decision process rendered the plaintiff's argument insufficient in establishing discrimination in the actual tenure decision. ${ }^{198}$ Most relevant to the discussion at

[^20]hand is the case of Weinstock v. Columbia University. ${ }^{199}$ In Weinstock, the female Chemistry professor-plaintiff was able to show that she had been described as "nice" and "nurturing" by members of the tenure review committee. ${ }^{200}$ However, evidence of her name being associated with traditionally female phrases by members of the review committee was still not enough to present evidence of discrimination in the tenure decision. ${ }^{201}$ The court stated that "'nice' and 'nurturing' are simply not qualities that are stereotypically female," and continued to argue that "any reasonable person of either sex would like to be considered 'nice.'" 202

A redeeming element of the sex discrimination jurisprudence is available in judicial doctrine surrounding "mixed motive" hiring decisions. ${ }^{203}$ If the record before a court reveals both discriminatory and non-discriminatory motives for an employment decision, the court will look to whether "gender was a factor in the employment decision at the moment it was made. ${ }^{\prime 204}$ The Court in Price Waterhouse v. Hopkins ${ }^{205}$ held that evidence of sex discrimination in a mixed motive decision provides direct evidence of discrimination. ${ }^{206}$ Such a finding does not then require a plaintiff to demonstrate pretext. ${ }^{207}$
iii. Evidence of Discrimination Sufficient for a Title VII Claim

Generally, courts hear two types of evidence in order to prove sex discrimination, including gender stereotyping and procedural irregularities. ${ }^{208}$ Gender stereotyping may be described as including "the use of gendered words to describe an employee, or general assumptions based on the individual's gender. ${ }^{209}$ Procedural irregularities may constitute changes or alterations in employment decisions based on an individual's gender. ${ }^{210}$

[^21]
## III.Inherent and Direct Discrimination in Tenure Review Processes for STEM Female Faculty Members and the Failure of Judicial Appeals

At even the most prestigious STEM institutions, tenure-track female faculty members face bias capable of negatively influencing either their Tenure Factors or the tenure decision-making process. The bias that these women face is documented as both unintentional and actual discrimination, and the bias is pervasive in both private and public institutions. Female faculty members who face these destructive biases, however, have found little success in either federal or state litigation. The following discussion reviews the challenges facing female STEM faculty regarding unintentional bias, actual discrimination, and family \& timing bias ${ }^{211}$ and the corresponding failure of the judicial process in providing adequate remedies for these female faculty members. ${ }^{212}$

## A. Discrimination and Bias in STEM Faculty Workplaces That Influence Female Tenure Decisions

While maintaining active STEM faculty positions, women face unintentional bias from their environments that influence Tenure Factors and departmental recommendations. With respect to the teaching Tenure Factor, most female faculty are surrounded by peers and students who are unaccustomed to interacting with females in more typically masculine roles. Studies have shown that women have a narrower range of socially acceptable personalities than men and females at institutions have found that there is "an expectation of niceness, sweetness. It's everywhere. Students, collaborators all make this mistake. ${ }^{213}$ Women are also often placed in either undesirable teaching positions or teaching positions that vary dramatically from semester to semester, causing women to spend significantly more time on lecture preparation than their colleagues. ${ }^{214}$

The most important of the Tenure Factors, research, is also often affected by unintentional bias. The research factor places great weight on publication, and even more so on publication in prestigious journals. Prestigious publications, however, may be harder for

[^22]these STEM female faculty candidates to secure: studies suggest that applications face inherent bias when associated with traditional female names. ${ }^{215}$ The research factor is often bolstered by general acceptance in the applicant's field. This again puts female tenure applicants at a disadvantage. Men tend to boast about and draw attention to their successes, but women tend to devalue their successes or attribute them to luck. ${ }^{216}$ To complicate the situation, other parties writing letters of recommendation for women will also tend to downplay the candidate's intellectual characteristics and focus instead on the applicant's temperament. ${ }^{217}$

The research factor mainly considers the variables of funding and collaboration. Women also fall behind in both of these driving forces due to unintentional bias. Women are provided with fewer funding opportunities and do not necessarily feel comfortable filling out as many grant requests. ${ }^{218}$ In the collaboration realm, one female faculty member at MIT stated that "many men who are in positions of power within and outside MIT still only work with men, or with women ten or more years younger than they are, but seldom seem able to work with women their own age as equals." ${ }^{219}$ These women also have a hard time finding collaborative partners outside of the country because the science programs in other countries are even less accepting of the female STEM community than those in the U.S. ${ }^{220}$

In terms of service, which is often the least important Tenure Factor, women sometimes come out ahead. Frustratingly, this does nothing to put women ahead of their male colleagues who have spent more time focusing on "research" and "teaching." Women at many institutions have expressed concern that they are "on too many committees" and that up to " $25-50 \%$ of ... research time was wasted. ${ }^{2221}$ Some of the women on these panels and committees are not even necessarily comfortable with the fact that female candidates are asked to discuss their personal issues in work/life panels, while men are able to keep their work and personal lives

[^23]separate. ${ }^{222}$ The "service" component also seems to take away time from women that could be used to seek "lucrative consultancies." ${ }^{223}$ Despite the hyper-involvement of women in panels and committees, there is still a severe lack of female representation in academic leadership roles. ${ }^{224}$

These unintentional biases in Tenure Factors are further compounded by the departmental tenure recommendation process, which also has some inherent biases. The statistics cannot lie; the STEM higher education departments are stacked with male faculty. The departmental tenure review committees are therefore filled with men. These male dominated decision-making groups perpetuate the problem as they "give too much weight to paper credentials, overvalue old-boy connections, and misevaluate the quality of written work. ${ }^{225}$ And these male-dominated decisions are not only made at the departmental level, but are perpetuated throughout the entire tenure review chain, where each reviewer (university presidents, provosts, and trustees) has another opportunity to lay down a decision adverse to the female STEM candidate's interests.

At some STEM academic institutions, female faculty also must deal with actual discrimination in their environment before and during their tenure decision process. First of all, there is direct evidence that some men in STEM higher education environments are unresponsive to the influx of female faculty members. At Princeton University, $24 \%$ of the women faculty in natural science and engineering reported that their colleagues "occasionally" or "frequently" engage in unprofessional behavior on gender-related matters. ${ }^{226}$ Around the same number of responses indicated that their colleagues "occasionally" or "frequently" excluded women. ${ }^{227}$ In addition to the direct confrontation issues, there is evidence of intentional redirection of women away from research. MIT has gone so far as to tell its department heads that they must ensure that teaching and committee assignments are fair and that faculty mem-

[^24]bers are treated with respect. ${ }^{228}$ Women attempting to research also often find themselves with smaller or unequal allotments of laboratory space, and they are regularly excluded from group research grants or doctoral committees. ${ }^{229}$

Actual discrimination is also currently being introduced more formally into some tenure decisions with the addition of "collegiality" as a Tenure Factor. Women regularly report that they do not find their departments to be as comfortable of an environment as that reported by their male counterparts. ${ }^{230}$ Such feelings of unease may be compounded by the salary differentials in place at most institutions. A Princeton publication revealed that across the board in natural sciences, physical sciences, life sciences, and engineering from 1991 to 2003, women have received lower salaries than men. Data shows that there has not been a distinguishable improvement over time in narrowing the gap between these salaries. ${ }^{231}$

In addition to actual and unintentional bias, female faculty members also regularly face bias that results from their responses to institutional policies regarding tenure timing and family matters. As a result of their childcare, partner, and familial roles, female STEM faculty face responses from other faculty that range from unintentional bias to actual discrimination. The pressure on these women has possibly contributed to female STEM faculty falling statistically below the national average marriage rates and averages for children. ${ }^{232}$ Some women face actual discrimination from older colleagues stating that they will "not get tenure if [they are] bouncing a kid on [their] knee at night." ${ }^{233}$ Meanwhile, other STEM women face possible unintentional bias from others' evaluations of

[^25]their automatic tenure extension for childbirth or adoption. ${ }^{234}$ In systems without automatic tenure extensions, STEM female faculty have been so concerned about bias that they have passed up the option to take an extension and instead subjected themselves to the demands of work and simultaneous infant-rearing. ${ }^{235}$

## B. Appeals to the Judicial Process Yield Few Positive Results for Females Denied Tenure

Despite the broad range of available legal statutes and remedies for combatting the obvious bias and discrimination facing these female faculty members, appeals to the judicial process fail on a fairly consistent basis. Appeals to the judicial process fail for two main reasons. First, the judiciary has taken an anti-interventionist stance to appeals, and instead acts with a great deal of deference to tenure decisions. ${ }^{236}$ Second, there are numerous difficulties plaintiffs encounter while bringing either a basic tenure suit or a suit alleging disparate treatment pursuant to Title VII. ${ }^{237}$ Although tenure applicants are not left without any available remedy, it is usually true that the scope of available remedies is predominately available outside of the judicial arena. ${ }^{238}$

## i. Inordinate Judicial Deference is Given to Defendants in Tenure Suits

Federal and state judges respond to tenure suits with great deference towards the "academic freedom of the universities." ${ }^{339}$ Tenure itself was advanced in the 1950s and 1960s as the solution to the "academic freedom" issues and also to recruit candidates into faculty careers at a time when university faculty was in high demand. ${ }^{240}$ Now, judges hesitate to intrude on tenure decisions in both
${ }^{234}$ Id. at 25 ("Many women are concerned about how their male colleagues view [automatic tenure extensions for women] and also about how it would affect letter writers for a promotion case.").
${ }^{235}$ Zakian et al., supra note 226, at 4 ("[S]ix men and one woman in the Natural Sciences and Engineering requested a tenure extension ... [W]omen faculty who had younger children while at Princeton ... were much more likely than their male colleagues to view such extensions as detrimental ( $27.8 \%$ versus $3.8 \%) . "$.
${ }^{236}$ See infra Part III.b.i.
${ }^{237}$ See infra Part III.b.ii.
${ }^{238}$ See infra Part III.b.iii.
${ }^{239}$ Hora, supra note 42, at 350.
${ }^{240}$ Id. Academic freedom is connected to the argument that " $[i] n$ nstitutions of higher education are conducted for the common good and not to further the interest of either the individual teacher or the institution as a whole. The common good depends upon the free search for truth and its free exposition." Am. Assoc. of Univ. Professors ig4o Statement of Principles on Academic Freedom and Tenure with i970 Interpretive Comments 3 (i970), available at
federal and state courts. ${ }^{241}$ Almost across the board, courts have held that "academic standards should not be compromised by discrimination allegations, even when those standards excluded many qualified candidates from the hiring and tenure process. ${ }^{242}$ The denial of effective tenure review has also predominately eviscerated many claims under Title VII. ${ }^{243}$ The courts have somehow begun to give academic freedom the amount of deference given to a freedom in the Bill of Rights. Academic freedom, however, is not and should not be afforded any higher level of deference. Tenure discrimination suits need to be treated like any other discrimination suit. ${ }^{244}$

## ii. Plaintiffs in Tenure Suits Encounter Extreme Barriers to Remedies

Plaintiffs in tenure discrimination suits tend to face extreme barriers in the judicial process including methods of analysis, bur-den-shifting, and other barriers inherent to tenure review. Plaintiffs to typical discrimination suits proceeding under Title VII have the option to proceed either with a "disparate treatment" approach or with a "disparate impact" approach. Due to the more favorable treatment by courts of the disparate treatment analysis, most tenure plaintiffs proceed with this approach. The disparate treatment theory, unfortunately, has not been kind to tenure discrimination plaintiffs. Tenure discrimination plaintiffs have an extremely difficult time finding a "similarly situated" employee for the analysis, and so as a result, the challenges almost always ultimately fail. ${ }^{245}$ However, tenure plaintiffs are also unable to turn to disparate impact analysis because outside of "industry" situations, disparate impact analysis is not triggered. ${ }^{246}$

Faculty appealing tenure decisions also face burden-shifting issues that arise during a disparate treatment analysis. Although the burden of production is on the defendant-institution, the plaintiff is still charged with having to prove discrimination amid a myriad

[^26]of subjective factors. ${ }^{247}$ Proving that a university made an unreasonable decision from a list of factors is considerably more difficult than analyzing a decision to see if it is a reasonable one.

Additionally, tenure discrimination plaintiffs are plagued with the difficulties of proving discrimination in light of an institution's subjective explanations for tenure decisions, the difficulty in proving a nexus between discrimination and a tenure decision, and the complications of tenure review. Courts themselves allow subjective explanations from universities because they consider their own opinions, including that of the judge and/or the jury, unqualified to make hiring decisions. ${ }^{248}$ Most courts also require plaintiffs to prove that discrimination was the reason for the tenure decision, even where evidence of some discrimination or bias is clear. ${ }^{249}$ The process is further complicated by the court-imposed requirements that relate to the structure of the tenure decision process. Candidates who have been denied tenure are often required to show that discrimination was evinced at every level of the tenure decision process including, the departmental review committee, the Dean of the institution, and the provost/board of Trustees. ${ }^{250}$ Since they only have access to redacted files and personal experiences, candidates often face an insurmountable challenge.

## iii. Potential Tenure Suit Plaintiffs Have Found Better Remedies Outside of the Judicial Process

Given the extreme failings of the judicial process, STEM female faculty members appear to have few remedies that remain available. Nonetheless, previous generations of women have noticed the trend of judicial failure and still have managed to recover substantial awards. The catch is that these awards have been recovered predominately outside of the judicial arena.

One option available to female faculty, particularly if there are several female faculty members in similar situations, is to organize a class action lawsuit against the institution. Institutions deal in reputation, not only money, so to quash an untimely and large, female driven lawsuit against the university, most cases will settle quickly. ${ }^{251}$ The threat of a class action lawsuit was enough to drive a

[^27]settlement for a group of female faculty at University of Minnesota that increased their salaries. ${ }^{252}$ The University of Minnesota female faculty members were also able to keep their jobs.

Another option available to STEM female faculty is to conduct a media blitz to draw attention to the unequal conduct at the institution. A media blitz action was prompted by a group of female faculty at MIT, and it resulted in recognition from the university president that there had been misconduct, and restitution was ordered. ${ }^{253}$ These examples of alternate options not only show resourcefulness on behalf of female faculty members, but also demonstrate how hard it is for female faculty to effectively challenge policies and practices around tenure.

## IV. Remedies: Approaches to Cure the Deficiency of Tenured STEM Female Faculty

A solution must be generated to assist these disadvantaged intellectual women, and it is readily apparent that the state and federal judicial process is not the appropriate method for change. Several factors that lead to tenure decision bias are easily recognizable and an institution's elimination of these causes may assist women in achieving tenure without resorting to drastic and useless formal measures. However, fair and strict informal and formal measures must be implemented to induce institution compliance. ${ }^{254}$

To implement these measures, I propose a multi-faceted solution. First, there must be more accountability in the tenure review process. ${ }^{255}$ Accountability can be increased by requiring Title IX Compliance Reviews of Tenure, and by the monitoring of tenure reviews by a network of interested professionals. Second, there must be immediate institutional procedural and substantive changes to tenure review. ${ }^{256}$ Internal review procedures must be implemented at all STEM higher-level institutions and these procedures must at least address changes in hiring processes. Third, interested professional organizations or government institutions must initiate anew

[^28]conversations about why tenure exists. ${ }^{257}$ In many ways, the goals of tenure are incidentally stifled by the tenure review process and the nation is largely unsupportive of tenure grants. Fourth, judicial appeals procedures on both federal and state levels need to be more thorough, particularly with respect to Title VII claims. ${ }^{258}$ The judiciary often deals in specialized matters, and appeals from tenure review should not be an exception. I further describe each part of my multi-faceted proposal below.

## A. Increasing Accountability in the Tenure Review Process

To increase accountability in the tenure review processes, I propose increasing Title IX Compliance Reviews of Tenure and instituting a compulsory tenure filing process with the American Association of University Professors (AAUP). Title IX has become a largely toothless threat to most higher educational institutions. ${ }^{259}$ Title IX, however, is administered by an administrative agency (the Department of Education) and funded in part by NASA. ${ }^{260}$ These agency bodies are capable of imposing and enforcing requirements on recipients of federal monies. ${ }^{261}$ NASA has begun this process by initiating what it calls "Title IX onsite review of STEM departments. ${ }^{,{ }_{262}}$ NASA currently provides around 1 billion dollars to approximately 600 institutions. ${ }^{263}$ To provide the requisite compliance with Title IX, NASA has fielded these onsite reviews at many institutional STEM departments to "ensure equal opportunities, regardless of gender in STEM programs, and may have application in-stitution-wide. ${ }^{2664}$ Nevertheless, NASA can do more for the STEM female faculty seeking tenure. ${ }^{265}$ NASA has Title IX statutory au-

[^29]thority to perform more in-depth reviews of either tenure decisions or the tenure decision-making process, and all it is currently doing is reminding institutions of their need to self-evaluate such procedures. ${ }^{266}$ NASA or the Department of Education needs to create a set of criteria that it will use to review tenure decision-making processes at STEM institutions, publish and promote those criteria, and enforce those criteria by expanding NASA's onsite reviews to include review of appeals procedures for candidates denied tenure because of bias.

Another way to increase accountability for these tenure de-cision-making processes is to institute a compulsory filing system with a third party for all STEM higher education institutions, preferably an interested party with active members like AAUP. Finding the policies and procedures for tenure review decisions for Part I of this discussion was challenging, and several STEM institutions were not selected for discussion solely because their policies and procedures were either extremely difficult to find or unavailable to the general public. By instituting a mandatory filing system with AAUP for three specific documents per institution, faculty seeking appointments at STEM institutions may be better able to play to their strengths in the tenure process. It should be mandatory that institutions file at least the following three documents, including faculty position titles and their relationships to tenure tracks, tenure factors and criteria that constitute the tenure decision-making process, and the tenure decision-making procedure.

## B. Internal Institutional Changes

STEM schools should also initiate internal changes in institutional procedures. This proposal is really nothing new, because STEM institutions are already charged to do so by Title IX. ${ }^{267}$ However, I propose that all STEM institutions rise to meet these inherent biases and actual discrimination matters head on. Some
relevant part states that a recipient shall not: "(b) Maintain or establish separate lines of progression, seniority lists, career ladders, or tenure systems based on sex, or (c) Maintain or establish separate lines of progression, seniority systems, career ladders, or tenure system for similar jobs, position descriptions, or job requirements that classify persons on the basis of sex, unless sex is a bona fide occupation qualification for the positions...").
${ }^{266}$ NASA Report, supra note 262, at 4. NASA has also suggested that in addition to self-evaluation Institutions begin training about the tenure deci-sion-making process. Nat'l Aeronautics \& Space Admin., Title IX Compliance Program, Of Diversity \& Equal Opportunity, http://odeo.hq.nasa.gov/compliance_program.html (last updated Mar. 14, 2013).
${ }^{267}$ Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance, 14 C.F.R. § 1253.110(c) (2012).
schools, like MIT and Princeton, have already begun the process of doing so and they have released public reports containing the results of their self-studies. ${ }^{268}$ By implementing self-reporting procedures, these schools were able to investigate institution-specific causes of the bias and identify areas to change. ${ }^{269}$ At both Princeton and MIT, self-reporting publications have noted the importance of making changes to the hiring process. ${ }^{270}$ The publications have suggested that the faculty and hiring committees consider women with non-traditional backgrounds and also women who are not necessarily applying for the position at hand.

Some schools, like UMCP, UMI, and Purdue, have started a National Science Foundation (NSF)-sponsored effort called "ADVANCE," which has as a core mission of "ensuring that women faculty with earned STEM degrees consider academia as a viable and attractive career option." ${ }^{271}$ However, ADVANCE "does not support projects to increase or retain the number of women entering into or persisting in STEM doctoral degree programs." ${ }^{272}$ Although the goals of ADVANCE appear to vary from institution to institution, the program seems like another viable option to assist in the creation and implementation of self-reporting guidelines regarding tenure decision processes.

## C. The Applicability of Tenure in Modern-Day Society

Tenure is effectively a secondary employment review that is performed absent any legal ramifications, which are more typically associated with an initial employment review. Tenure decisions are extremely deferential to academic institutions because courts recognize that the end result of the tenure process encourages free speech and " academic freedom." However, to achieve tenure, the candidate must successfully navigate the three Tenure Factors and wait for the duration of the tenure review process to expire for the grant or denial of tenure. At most reputable institutions, an emphasis is placed on the research Tenure Factor, and the scholarship investigated by the faculty member must achieve critical and

[^30]community acclaim. ${ }^{273}$ Not all work in all fields is capable of achieving community acclaim necessary to be granted tenure at an excellent institution. The result is that some of the brightest scientific minds in the country are not being allowed to fully explore the subject matter that interests them. That is undoubtedly not academic freedom. Additionally, the current trend in higher education institutions has been to increase the term length of the tenure process to accommodate familial needs. ${ }^{274}$ By increasing the tenure review period, there is now a longer time during which the faculty members are restricted in their intellectual pursuits. Modern STEM higher education institutions are seemingly stifling academic freedom by continuing the tenure process.

Additionally, a large majority of the American population does not support the tenure process. In a poll instituted by the American Association of University Professors, $82 \%$ of Americans wanted to modify or eliminate tenure. ${ }^{275}$ From an associated Zogby poll, $65.3 \%$ of Americans also believe that non-tenured professors do a better job. ${ }^{276}$ The disagreement between the American population and the university faculty of the United States undoubtedly can be boiled down to two Tenure Factors. University faculty care about research, not teaching, and the American population is predominately composed of people who have been at one time or who currently are students. Students care about teaching. The reason that university faculty focus on research over teaching is largely because an impressive research portfolio is more likely to be weighed heavily during the review process for a tenure position at the institution. This leaves students, on occasion, with untenured professors who ignore them to focus on their research or tenured professors who are "lazy" and "soak up campus resources and block energetic underlings from advancement." 277

Given academic tenure's inability to provide academic freedom to a generation of young, bright, and willing STEM faculty in higher education, and also given the American population's concern and need for better teachers, not researchers, it is time for tenure itself to "be up for review."

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## D. Changing Results and Attitudes From Judicial Appeals

Title VII challenges to tenure denials are plagued with obstacles, predominately those imposed by the federal and state judiciary. As stated before, these denials of effective adjudication run contrary to the original purpose of Title VII, which was to avoid discrimination in higher education institutions because discrimination there, "more than in any other area, tend[s] to promote misconceptions leading to future patterns of discrimination., ${ }^{2278}$ In providing a higher degree of judicial deference to tenure decisions as well as by shifting the burden of proof to the plaintiff, courts have made it increasingly difficult for Title VII suits to be successfully litigated. ${ }^{279}$ Courts need to fundamentally alter both of these policies. First of all, courts should not always defer to a college or university's tenure decisions. Rather, they should treat these tenure decisions with the same deference that they treat an initial employment decision. Second, courts should place the burden of proof on the universities to prove non-discrimination. ${ }^{280}$ Given the subjectivity of every tenure decision-making process, the current standard of requiring the plaintiff to prove discrimination is too high. ${ }^{281}$ By reversing the roles and requiring the STEM institution to provide evidence that it has made a reasonable decision in light of all relevant circumstances provided in its tenure policy, courts may review the totality of the circumstances and then determine the reasonableness of the decision.

## Conclusion

Female faculty in STEM academia face inherent bias and actual discrimination on a regular basis, and these biases are capable of affecting the tenure decision-making process. ${ }^{282}$ When female faculty face tenure discrimination in higher education STEM settings, the remedy least likely to yield positive results involves petitioning a court to review the tenure decision. ${ }^{283}$ A plethora of statutes have been promulgated that are capable of dealing with employment and sexual discrimination evident in the tenure process. ${ }^{284}$ However,

[^32]these statutes are regularly disregarded due to judicial deference to university tenure decisions. ${ }^{285}$

To promote the accessibility of tenure track positions to female faculty members in STEM areas, higher education institutions and the federal government need to implement measures that are capable of providing equal opportunity to both female tenure track applicants and their male counterparts. ${ }^{286}$ Such measures will increase accountability in the tenure decision process; ${ }^{287}$ procedurally and substantively alter the internal institution tenure process, ${ }^{288}$ drive conversations about discarding the tenure process entirely; ${ }^{289}$ and alter the judiciary's response to tenure discrimination claims. ${ }^{290}$ By creating an equal playing field for men and women in STEM higher education, there is hope that the next generation of females will advance into STEM careers and accordingly decrease the gender pay gap. ${ }^{291}$

[^33]
[^0]:    *Associate, Kenyon \& Kenyon LLP, New York City, New York. J.D., 2013 University of Maryland School of Law.

    1 Women's Bureau, U.S. Dep't of Labor, Women in the Labor Force in 2010, available at http://www.dol.gov/wb/factsheets/Qf-laborforce-10.htm (providing that the median weekly earnings of women were $\$ 669$ [or $\$ 34,788$ when extrapolated out for a year] and that the median weekly earnings of men were $\$ 824$ [or $\$ 42,848$ when extrapolated out for a year]).
    ${ }^{2}$ Bureau of Labor Statistics, Glossary, BLS Information, www.bls.gov/bls/ glossary.htm (last modified Feb. 28, 2008).
    ${ }^{3}$ Sarah Jane Glynn, Pay Equity More Important Than Ever Before, US News (May 4, 2012), http://www.usnews.com/debate-club/should-the-senate-pass-the-paycheck-fairness-act/pay-equity-more-important-than-ever-before.
    ${ }^{4}$ Id.; see also Econ. \& Statistics Admin., U.S. Dep't of Commerce, ESA Issue

[^1]:    Brief \#o4-if, Women in STEM: A Gender Gap to Innovation 5 (20il), available at http://esa.gov/sites/default/files/reports/documents/womeninstemagaptoinnovation8311.pdf (using regression analyses with several controlled factors, such as workers' age, educational attainment, and region of residence, to show that there is a $14 \%$ wage gap between men and women in science, technology, engineering and math fields).
    ${ }^{5}$ See Women's Bureau, U.S. Dep't of Labor, supra note 1.
    ${ }^{6}$ It should be noted here however, that as salary increases, so does the actual dollar amount of the corresponding gap between male and female earnings. For example, $95 \%$ of the Median U.S. Male pay may be $\$ 40,705.60$ ( $\$ 2,142.40$ less), but $95 \%$ of a male earning $\$ 100,000$ would be $\$ 95,000$ ( $\$ 5,000$ less). The amount of unaccountable differences become more pronounced at higher pay, which is more of an issue for women with advanced degrees, who tend to earn higher wages.
    ${ }^{7}$ See Bureau of Labor Statistics, 39. Median weekly earnings of full-time wage and salary workers by detailed occupation and sex, Labor Force Statistics from the Current Population, http://www.bls.gov/cps/cpsaat39.htm (last modified Feb. 5, 2013).

[^2]:    ${ }^{9}$ Id.
    ${ }^{10}$ The data provided for Female Track Jobs and Male Track Jobs included salary representations for men and women who worked full-time positions only. One common theory that often pops up in gender wage gap discussions is that women tend to work fewer hours than men, and that women more often work part time jobs. See, e.g., Glynn, supra note 3 (stating that some critics argue that the wage gap is perpetuated by men's longer hours and by women taking time out of the workforce when they have children). Although that information is pertinent to the gender pay gap discussion as a whole, the data included here represents full-time pay behavior only and allows for analysis beyond hourly discrepancies.
    ${ }^{11}$ See Catherine Hill, Christianne Corbett \& Andresse St. Rose, Am. Ass'n of Univ. Women, Why So Few? Women in Science, Technology, Engineering, and Mathematics 3 (2010) [hereinafter "AAUW"] (emphasizing that occupational segregation accounts for the majority of the wage gap).
    ${ }^{12}$ See generally Econ. \& Statistics Admin., U.S. Dep’t of Commerce, supra note 4 , at 7 (stressing that college-educated women earn $20 \%$ more in STEM

[^3]:    ${ }^{28}$ See AAUW, supra note 11, at 22; see also Susan Fisk, Negative + Math + Stereotypes= Too Few Women, The Clayman Institute for Gender Research (Feb. 14, 2011), http://gender.stanford.edu/news/2011/ negativemathstereotype-stoo-few-women- 0 .
    ${ }^{29}$ AAUW, supra note 11, at 5-12.
    ${ }^{30}$ See Valian, supra note 26, at 192; see also News Release, U.S Bureau of Labor Statistics, U.S. Dept' of Labor, USDL-12-0548, Occupational Employment and Wages - May 2011 (March 27, 2012), available at http://www.bls.gov/ news.release/pdf/ocwage.pdf ("The highest paying occupational groups [in May 2011] were management, legal, computer and mathematical, and architecture and engineering occupations ... [O]f the 35 architecture and engineering occupations, only one $\ldots$ had an average wage below the U.S. all-occupations mean.") (emphasis added).
    ${ }^{31}$ See Valian, supra note 26, at 192.
    ${ }^{32}$ Susan Gunelius, Women Vulnerable to Layoffs During Recessions, Women on Business (July 23, 2008); see also Annie Lowry, Where's the Shecovery?, Slate (Jul. 11, 2011, 6:06 PM), http://www.slate.com/articles/double_x/ doublex/2011/07/wheres_the_shecovery.html.
    ${ }^{33} I d$., at 2 (showing that in 2010 the median weekly earnings of women was only $\$ 669$, while men's earnings were $\$ 824$; women earned roughly $81 \%$ of the male earnings).

[^4]:    ${ }^{34}$ See generally Stark, supra note 28, at 113-14; see also AAUW, supra note 11 , at 12 , fig. 9 (showing that although major progress has been made by women earning doctorates, as of 2006, women represent around $20 \%$ or fewer of the degrees earned in subjects such as computer science [21.3\%], engineering [20.2\%], and physics [16.9\%]).
    ${ }^{35}$ See Stanley Coben, Foundation Officials and Fellowships: Innovation in the Patronage of Science, 14 Minerva 225, 226 (1976) (providing that post-doctorate students often use fellowship grants to escape the tedium of the basic teaching requirements and instead spend their time investigating math and science matters in laboratories).
    ${ }^{36}$ Valian, supra note 26, at 234-35.
    ${ }^{37}$ Id. at 234.
    ${ }^{38}$ Nonetheless, progress is being made on the postdoctoral front. In the 2000-2001 academic year, women represented around $44 \%$ of doctoral recipients. Am. Ass'n of Univ. Women Educ. Found. \& Am. Ass'n of Univ. Women Legal Advocacy Fund, Tenure Denied: Cases of Sex Discrimination in Academia 1 (Susan K. Dyer ed., 2004) [hereinafter AAUW Educ. Found. \& AAUW Legal Advocacy Fund]. Twenty years earlier, in 1980-1981, women had been only $32 \%$ of the doctoral recipients.
    ${ }^{39}$ Valian, supra note 26, at 218.
    ${ }^{40}$ See Marianna Torgovnick, How to Handle an Adjunct, 33 C. Composition \& Сомм. Dec. 1982, at 454-55.

[^5]:    ${ }^{41}$ Valian, supra note 26, at 218.
    ${ }^{42}$ AAUW Educ. Found. \& AAUW Legal Advocacy Fund, supra note 38, at 2. According to the landmark Statement of Principles on Academic Freedom and Tenure made in 1940 by the American Association of University Professors and the Association of American Colleges, tenured faculty can be fired "only for adequate cause except in the case of retirement for age, or under extraordinary circumstances because of financial exigencies." Id. at 2-3. Once a faculty member becomes tenured, she may be dismissed only for "adequate cause, financial exigency, or a change in university programs." Mary Hora, The Courts and Academia: Tenure Discrimination Claims Against Colleges and Universities, 30 J.L. \& Educ. 349, 350 (2001).
    ${ }^{43}$ See Valian, supra note 26, at 218.
    ${ }^{44}$ AAUW Educ. Found. \& AAUW Legal Advocacy Fund, supra note 38, at $1, \mathrm{n} .1$.
    ${ }^{45}$ Id. (citing the U.S. Dep't of Educ. tbl. 242 (2002)).
    ${ }^{46}$ See Torgovnick, supra note 40, at 454-56 (describing that schools use adjuncts to avoid paying an assistant professor salary and to maintain flexibility within the department).
    ${ }^{47}$ See Valian, supra note 26, at 233.
    ${ }^{48}$ Id.

[^6]:    ${ }^{49}$ Jared L. Bleak, On Probation: The Pre-Tenure Period, http://www.eric. ed.gov/PDFS/ED446576.pdf.
    ${ }^{50}$ AAUW Educ. Found. \& AAUW Legal Advocacy Fund, supra note 38, at 3 .
    ${ }^{51}$ See, e.g., II-1.00(A) University of Maryland Policy on Appointment, Promotion, and Tenure of Faculty, Consolidated USM and UMD Policies and Procedures 29-30 (2012), available at http://www.president.umd.edu/policies/ docs/II-100A.pdf [hereinafter UMCP Tenure Policy].
    ${ }_{52}$ See, e.g., Faculty Tenure, Policy Index: Human Resources $\S 5.5$ (2011), available at http://regents.umn.edu/sites/default/files/policies/FacultyTenure1. pdf [hereinafter UMN Tenure Policy] (allowing a 1 year extension for new parent, caregiver, or personal medical reasons).
    ${ }^{53}$ See AAUW Educ. Found. \& AAUW Legal Advocacy Fund, supra note 38 , at 3.
    ${ }^{54}$ Id. "Teaching" typically covers all teaching, advising, and mentoring categories. "Research" generally includes all research, scholarship, and creative activity, and "Service" is defined as professional service to the Institution, the profession, or the community. Id.
    ${ }^{55}$ Id. at 33 . "Collegiality" is a much more modern consideration in tenure review. See Hora, supra note 42, at 351.
    ${ }^{56}$ AAUW Educ. Found. \& AAUW Legal Advocacy Fund, supra note 38, at 3 .

[^7]:    ${ }^{57}$ Hora, supra note 42 , at 351.
    ${ }^{58}$ Id.
    ${ }^{59}$ UMCP Tenure Policy, supra note 51, at 11-12.
    ${ }^{60} I d$. at 11.
    ${ }^{61} I d$.
    ${ }^{62} 201.50$ Guidelines Related to Tenure Reviews and Reappointment Reviews, Standard Practice Guide Policies (1993), available at http://spg.umich.edu/ sites/default/files/201X50_0.PDF [hereinafter UMI Tenure Policy].

[^8]:    ${ }^{63}$ UMN Tenure Policy, supra note 52, §9.2.
    ${ }^{64} \mathrm{Id}$.
    ${ }^{65}$ Id.
    ${ }_{66}$ Communication No. 9: Promotion and Tenure, Office of the Provost 1 (2012), available at http://www.provost.illinois.edu/communication/09/2013/ Communication_9.pdf [hereinafter UIUC Tenure Policy].
    ${ }^{67} I d$. at 6.
    ${ }^{68}$ Provost Promotion and Tenure Guidelines on 2012-13, Purdue University Office of the Provost 1 (2012), available at http://www.purdue.edu/ provost/documents/Promotion\%20and\%20Tenure\%20Policy\%20WL\%20 Campus\%20fv\%20-\%202012-13AY\%20Key.pdf [hereinafter Purdue Tenure Policy].
    ${ }^{69}$ Purdue University Office of the Provost, Charge to the Promotion and Tenure Task Force 2 (Nov. 7,2011), available at http://www.purdue.edu/provost/ documents/Promotion \% 20\%20Tenure \%20Task \%20Force \% 20Charge \% 20 -\%20Final\%2011\%2007\%2011.pdf.

[^9]:    ${ }^{70}$ UMCP Tenure Policy, supra note 51.
    ${ }^{71}$ UMN Tenure Policy, supra note 52.
    ${ }^{72}$ UIUC Tenure Policy, supra note 66, at 13.
    ${ }^{73}$ Change to the Promotion and Tenure Task Force, Office of the Provost, Nov. 7, 2011, available at http://www.purdue.edu/provost/documents/ Promotion\%20\%20Tenure\%20Task \%20Force \%20Charge\%20-\%20Final\%20 $11 \% 2007 \%$ 2011.pdf. Purdue also looks to "outcomes of sponsored research instead of or in addition to dollars awarded." Id.
    ${ }^{74}$ 5.B Criteria for Appointment and Promotion of Instructional Faculty, The University of Michigan Faculty Handbook (1954), http://www.provost.umich. edu/faculty/handbook/5/5.B.html [hereinafter "UMI Criteria for Promotion"]. For research factors, UMI also looks to the traditional "quality of their published and other creative work, the range and variety of their intellectual interests, their success in training graduate and professional students in scholarly methods, and their participation in professional associations and in the editing of professional journals."
    ${ }^{75}$ UMCP Tenure Policy, supra note 51, at 11.
    ${ }^{76}$ Procedures for Reviewing Tenure and/or Promotion: Tenure-Track and Tenured Faculty, Human Resources Policies: Contracts and Governing Documents, II.F.4.v, http://policy.umn.edu/Policies/hr/Contracts/TENURE_ PROC01.html.

[^10]:    ${ }^{77}$ UIUC Tenure Policy, supra note 66, at 12-13.
    ${ }^{78}$ UIUC Tenure Policy, supra note 66, at 7.
    ${ }^{79}$ Change to the Promotion and Tenure Task Force, supra note 73.
    ${ }^{80}$ UMI Criteria for Promotion, supra note 74.
    ${ }^{81}$ UMCP Tenure Policy, supra note 51, at 12.
    ${ }^{82}$ See Procedures for Reviewing Tenure and/or Promotion, supra note 76.
    ${ }^{83}$ Id..; see also UIUC Tenure Policy, supra note 66, at 11-12 (specifying that students not currently enrolled in the candidate's classes should be approached); see also UMCP Tenure Policy, supra note 51, at 12 (opinions of students should be generally included in a teaching evaluation).
    ${ }^{84}$ Change to the Promotion and Tenure Task Force, supra note 73. UIUC also advocates strongly for peer observation and classroom visits conducted by other faculty members. UIUC Tenure Policy, supra note 66, at 11. Michigan looks to numerous factors not discussed in other policies including: "ability to stimulate youthful minds, capacity for cooperation, and enthusiastic devotion to teaching." UMI Tenure Policy, supra note 74.

[^11]:    ${ }^{85}$ Appointment and Promotion Procedures for Tenure Track Faculty in the Krieger School of Arts and Sciences and the Whiting School of Engineering, Whiting School of Engineering Faculty and Staff Resources i (2004), available at http://engineering.jhu.edu/include/content/pdf/adr/Procedures2. pdf [hereinafter JHU Tenure Policy].
    ${ }^{86}$ See, e.g., Rules and Procedures of the Faculty of Princeton University and Other Provisions of Concern to the Faculty, Office of the Dean of the Faculty Policies and Procedures, http://www.princeton.edu/dof/policies/publ/fac/ rules_toc/chapter4/\#comp000045d572a900000003204af9 (last updated October 2012) [hereinafter Princeton Tenure Policy] ("the quality of scholarship and teaching shall be primary considerations and service to the University community an important consideration).
    ${ }^{87}$ 3.2 Tenure Process, MIT Policies \& Procedures http://web.mit.edu/ policies $/ 3 / 3.2 . \mathrm{html}$ [hereinafter MIT Tenure Policy].
    ${ }^{88}$ Appointment and Tenure Policy of Carnegie Mellon University, Carnegie Mellon University Faculty and Research Policies, http://www.cmu.edu/ policies/documents/Tenure.html (last updated Feb. 8, 2000) [hereinafter CMU Tenure Policy].
    ${ }^{89}$ Id. (providing the essence of the service factor in a category called "other considerations").
    ${ }^{90}$ Duke University Office of the Provost The Duke University Faculty Нandbook 3-2 (2011), available at http://www.provost.duke.edu/pdfs/fhb/FHB. pdf [hereinafter Duke Tenure Policy].

[^12]:    ${ }^{91}$ See JHU Tenure Policy, supra note 85, at 2.
    ${ }^{92}$ CMU Tenure Policy, supra note 88.
    ${ }^{93}$ MIT Tenure Policy, supra note 87.
    ${ }^{94}$ Princeton Tenure Policy, supra note 86.
    ${ }^{95}$ Duke Tenure Policy, supra note 90, at 3-1, 3-2.
    ${ }^{96}$ William Potter, Taming Tenure, The Daily Princetonian, Feb. 16, 2011, available at http://www.dailyprincetonian.com/2011/02/16/27610/.
    ${ }^{97}$ MIT Tenure Policy, supra note 87. MIT documentation states that these candidates "must also demonstrate outstanding teaching and university service; however, teaching and service are not a sufficient basis for awarding tenure." Id.
    ${ }^{98}$ CMU Tenure Policy, supra note 88.

[^13]:    ${ }^{109}$ See Group of Professors Alleges Racism at DePaul, CBS Chi. (Nov. 17, 2010, 5:30 PM), http://chicago.cbslocal.com/2010/11/17/group-of-professors-al-lege-racism-at-depaul/.
    ${ }^{110}$ David Kroll, Tenure Denial Case of DePaul Chemistry Prof, Quinetta Shelby, PLOS BloG (November 22, 2010), http://blogs.plos.org/takeasdirect-ed/2010/11/22/tenure-denial-case-of-depaul-chemistry-prof-quinetta-shelby/.
    ${ }^{111}$ See Deanna Iasaacs, More Tenure Troubles at DePaul, Chi. Reader, (April 7, 2011), http://www.chicagoreader.com/chicago/depaul-tenure-problems/Content?oid=3553432.
    ${ }^{112}$ DePaul Accused of Bias in Tenure Denial, Inside Higher Ed (November 18,2010), http://www.insidehighered.com/quicktakes/2010/11/18/depaul-ac-cused-bias-tenure-denial.
    ${ }^{113} I d$.

[^14]:    ${ }^{114}$ See infra Part II.a.
    ${ }^{115}$ See infra Part II.b.
    ${ }^{116}$ See infra Part II.c.
    ${ }^{117}$ See infra Part II.d.
    ${ }^{118} 14 \mathrm{~A}$ C.J.S. Colleges and Universities § 24 (2011).
    ${ }^{119}$ Id.
    ${ }^{120}$ Id; see also Neiman v. Yale Univ., 851 A.2d 1165, 1171-72 (Conn. 2004).
    ${ }^{121}$ Hooker v. Tufts Univ., 581 F. Supp. 104 (D. Mass. 1983).
    ${ }^{122}$ Id. at 112.
    ${ }^{123}$ Id. (citing Sweeney v. Bd. of Trs. of Keene State Coll., 569 F.2d 169, 176 (1st Cir. 1978)). The court went on to state, "it is neither appropriate nor necessary for me to make an independent academic evaluation of plaintiff. Rather, the court's task is to scrutinize defendants' evaluation in order to ascertain whether it was both procedurally fair and substantively reasonable." Id.
    ${ }^{124}$ Keddie v. Pa. State Univ., 412 F. Supp. 1264 (M.D. Pa. 1976).
    ${ }^{125} \mathrm{Id}$. at 1267.

[^15]:    ${ }^{126} \mathrm{Id}$. at 1279-81.
    ${ }^{127}$ Id. at 1278.
    ${ }^{128}$ Namenwirth v. Bd. of Regents of the Univ. of Wis., 769 F.2d 1235, 1236-37 (7th Cir. 1985).
    ${ }^{129} \mathrm{Id}$. at 1243.
    ${ }^{130} \mathrm{Id}$. at 1242.
    ${ }^{131}$ Zahorik v. Cornell Univ., 729 F.2d 85 (2d Cir. 1984).
    ${ }^{132}$ Id. at 93; see also Kunda v. Muhlenberg Coll., 621 F.2d 532, 548 (3d Cir.
    1980) ("Determinations about such matters as teaching ability, research scholarship, and professional stature are subjective, and unless they can be shown to have been used as the mechanism to obscure discrimination, they must be left for evaluation by the professionals, particularly since they often involve inquiry into aspects of arcane scholarship beyond the competence of individual judges.).
    ${ }^{133}$ Mink Equal Opportunity in Education Act of 1972, 20 U.S.C. §§ 16811688 (2010) ("No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program or activity receiving Federal financial assistance.").
    ${ }^{134}$ Id.

[^16]:    ${ }^{135}$ AAUW Educ. Found. \& AAUW Legal Advocacy Fund, supra note 38, at 6, n.2.
    ${ }^{136}$ Mink Equal Opportunity in Education Act, supra note 133, at §1682. The Department of Education is the federal agency that has taken the lead on Title IX enforcement.
    ${ }^{137}$ This is largely an empty threat. The government has not ever actually removed funding from a higher education institution.
    ${ }^{138}$ U.S. ConSt. amend. XIV, § 1.
    ${ }^{139}$ Id. See generally Cleveland Bd. of Educ. v. Loudermill, 470 U.S. 532 (1985) (holding that the property interest in continued employment may be terminated if there is good cause); Paul v. Davis, 424 U.S. 693 (1976) (creating the caveat that a due process liberty interest may only be found if there is an associated stigma with the deprivation of that liberty interest).
    ${ }^{140}$ See, e.g., Goldberg v. Kelly, 397 U.S. 254, 264 (1970) (providing the plaintiff with a due process property interest in an intangible entitlement).
    ${ }^{141}$ Board of Regents of State Colleges v. Roth, 408 U.S. 564 (1972).
    ${ }^{142}$ Id. at 578.

[^17]:    ${ }^{143}$ U.S. Const. amend. XIV, § 1.
    ${ }^{144}$ See Eric Schnapper, Affirmative Action and the Legislative History of the Fourteenth Amendment, 71 VA. L. Rev. 753, 753-58 (1985).
    ${ }^{145}$ Reed v. Reed, 404 U.S. 71, 77 (1971) (finding that estate administrator codes granting mandatory preference to male administrators violated the Equal Protection Clause).
    ${ }^{146}$ See, e.g., City of Cleburne v. Cleburne Living Ctr., Inc., 473 U.S. 432, 454 (1985); Loving v. Virginia, 388 U.S. 1, 9 (1967).
    ${ }^{147}$ See, e.g., Clark v. Jeter, 486 U.S. 456, 461 (1988) (noting that strict scrutiny is applied to classifications based on race or national origin or affecting national origin).
    ${ }^{148}$ See Adarand Constructors, Inc. v. Pena, 515 U.S. 200, 227 (1995) (citing Wygant v. Jackson Bd. of Educ., 476 U.S. 267, 274 (1986)).
    ${ }^{149}$ See, e.g., Reed, 404 U.S. at 77 (applying the rational basis standard to gender based estate preferences); see also Goesaert v. Cleary, 335 U.S. 464, 466 (1948) (instituting the rational basis standard in a dispute over whether certain women could act as bartenders).
    ${ }^{150}$ United States v. Virginia, 518 U.S. 515 (1996).
    ${ }^{151}$ Id..
    ${ }^{152}$ Id.; see also David K. Bowsher, Note, Cracking the Code of United States v. Virginia, 48 Duke L.J. 305, 306 (1998).

[^18]:    ${ }^{168}$ See, e.g., Int’l Bd. of Teamsters v. United States, 431 U.S. 324, 364 (1977); see also Albemarle Paper Co. v. Moody, 422 U.S. 405, 421 (1975); see also Hart v. J.T. Baker Chem. Co., 598 F.2d 829, 831 (3d Cir. 1979); see also Rogers v. EEOC, 454 F.2d 234, 238 (5th Cir. 1971).
    ${ }^{169} 42$ U.S.C. § 1981(a) (1994) (amending Title VII by providing plaintiffs with the right to demand jury trials); see also 42 U.S.C. § 2000e-1 (1976) (amending Title VII to no longer provide exemptions for educational institutions).
    ${ }^{170}$ Exec. Order No. 11,478, 3 C.F.R. 803 (1966-1970) (memorandum accompanying).
    ${ }^{171}$ Pub. L. No. 95-555, 92 Stat. 2076 (codified as amended at 42 U.S.C. § 2000e(k) (2006)).
    ${ }^{172}$ AAUW Educ. Found. \& AAUW Legal Advocacy Fund, supra note 38, at 7, n.3.
    ${ }^{173}$ See generally Univ. of Pa. v. EEOC, 493 U.S. 182 (1990).
    ${ }^{174}$ Id. at 182.
    ${ }^{175}$ Id. at 192.
    ${ }^{176}$ See id. at 199-200.
    ${ }^{177}$ See AAUW Educ. Found. \& AAUW Legal Advocacy Fund, supra note 38, at 6 .
    ${ }^{178} \mathrm{Id}$.

[^19]:    ${ }^{179}$ AAUW Educ. Found. \& AAUW Legal Advocacy Fund, supra note 38, at 7; see also Griggs v. Duke Power Co., 401 U.S. 424 (1971) (applying the disparate impact theory to hiring practices involving aptitude tests and high school diploma required for employment that discriminated against a protected class, African American men).
    ${ }^{180}$ AAUW Educ. Found. \& AAUW Legal Advocacy Fund, supra note 38, at 7; see also Campbell v. Ramsay, 631 F.2d 597 (8th Cir. 1980); see also Davis v. Weidner, 596 F.2d 726 (7th Cir. 1979); see also Scott v. Univ. of Del., 601 F.2d 76 (3d Cir. 1979) (all rejecting disparate treatment claims).
    ${ }^{181}$ AAUW Educ. Found. \& AAUW Legal Advocacy Fund, supra note 38, at 7.
    ${ }^{182} \mathrm{Id}$.
    ${ }^{183}$ See McDonnell Douglas Corp. v. Green, 411 U.S. 792 (1973).
    ${ }^{184} \mathrm{Id}$. at 792-93. A showing that a comparable non-protected person received favorable treatment may suffice to satisfy element four. AAUW Educ. Found. \& AAUW Legal Advocacy Fund, supra note 39, at 7. Classes sufficient to qualify for element one protected class status are listed by Title VII as race, sex, religion, and national origin. 42 U.S.C. § 2000e-2(a))(1).
    ${ }^{185}$ McDonnell Douglas, 411 U.S. at 802.
    ${ }^{186}$ Texas Dept. of Comm'y Affairs v. Burdine, 450 U.S. 248 (1981).
    ${ }^{187}$ Id. at 260.
    ${ }^{188} \mathrm{Id}$. at 259 . The burden then shifts back to the plaintiff for the remainder of the case. Id. at 248-49.

[^20]:    ${ }^{189}$ McDonnell Douglas, 411 U.S. at 804.
    ${ }^{190} \mathrm{Id}$.
    ${ }^{191}$ St. Mary's Honor Ctr. v. Hicks, 509 U.S. 502 (1993).
    ${ }^{192}$ Id.
    ${ }^{193}$ Id. at 508 (stating that a viable reason for the lie might merely be personal dislike for the plaintiff).
    ${ }^{194}$ Harel v. Rutgers, 5 F. Supp. 2d 246 (D.N.J. 1998).
    ${ }^{195}$ Id. at 269.
    ${ }^{196}$ Id. at 269-71.
    ${ }^{197}$ Grant v. Cornell Univ., 87 F. Supp. 2d 153 (N.D.N.Y. 2000).
    ${ }^{198}$ Id. at 161.

[^21]:    ${ }^{199}$ Weinstock v. Columbia Univ., 224 F.3d 33 (2d Cir. 2000).
    ${ }^{200} I d$. at 44 .
    ${ }^{201}$ Id.
    ${ }^{202}$ Id.
    ${ }^{203}$ Price Waterhouse v. Hopkins, 490 U.S. 228, 241 (1989).
    ${ }^{204}$ Id.
    ${ }^{205}$ Id. at 247 \& n. 12.
    ${ }^{206}$ Id. This matter was later codified in the Civil Rights Act of 1991. See Civil Rights Act of 1991, Pub. L. 102-166, 105 Stat. 1072 (1991) (codified as amended at 42 U.S.C. §§ 1981-1988 et. seq. (2006)).
    ${ }^{207}$ Price Waterhouse, 490 U.S. at 247 \& n. 12.
    ${ }^{208}$ Courtney T. Nguyen, Note, Employment Discrimination and the Evidentiary Standard for Establishing Pretext: Weinstock v. Columbia University, 35 U.C. Davis L. Rev. 1305, 1320 (2002).
    ${ }^{209}$ Id.
    ${ }^{210} I d$.

[^22]:    ${ }^{211}$ See infra Part III.a.
    ${ }^{212}$ See infra Part III.b.
    ${ }^{213}$ Sch. of Sci. \& Sch. of Eng'g, Mass. Inst. of Tech., A Report on the Status of Women Faculty in the Schools of Science and Engineering at MIT, 20 II 16 (2011) [hereinafter MIT Report](noting that another woman in the study restated the other premise that "the acceptable personality range is narrower for women than men").
    ${ }^{214} I d$. at 24.

[^23]:    ${ }^{215}$ See Valian, supra note 26, at 127-28.
    ${ }^{216}$ See, e.g., Lynn S. Muster, Note, A Proposal for the Hire and Tenure of Faculty of Color in Higher Education, 20 T. Marshall L. Rev. 45, 66-67 (1994).
    ${ }^{217}$ See, e.g., MIT REPORT, supra note 213, at 14 ("The proportion [of a recommendation letter] devoted to intellectual brilliance compared to temperament is much less than for men.").
    ${ }^{218} I d$. at 17 ("[T]here were some concerns that women did not ask for resources as frequently as men, and did not have the same level of support.").
    ${ }^{219} \mathrm{Id}$. at 13 .
    ${ }^{220} \mathrm{Id}$. ("My field is bad [for women] in Europe.").
    ${ }^{221} \mathrm{Id}$. at 6,16 .

[^24]:    ${ }^{222}$ Id d at 16.
    ${ }^{223} \mathrm{Id}$.
    ${ }^{224}$ Id. at 7 .
    ${ }^{225}$ Muster, supra note 216, at 65; see also Stephen L. Carter, Academic Tenure and "White Male" Standards: Some Lessons from the Patent Law, 100 Yale L.J. 2065, 2075 (1991).
    ${ }^{226}$ Virginia Zakian et al., Report of the Task Force on the Status of Women Faculty in the Natural Sciences and Engineering at Princeton 4-5 (2003).
    ${ }^{227}$ Id. at 4; see also MIT Report, supra note 213, at 17 ("The senior [male] STEM faculty [at MIT] split into three groups: (1) those with no respect for women; (2) those that think they are inclusive; and (3) those that get it. Things are changing.").

[^25]:    ${ }^{228}$ MIT Report, supra note 213, at 6.
    ${ }^{229}$ Id. at 7.
    ${ }^{230}$ See, e.g., Zakian et al., supra note 226, at 5 ("Women faculty rated their departments as being less collegial than men did: $29 \%$ of women and $52 \%$ of men rated the collegiality in their departments as 'very good.'").
    ${ }^{231}$ Id. at 24; see also MIT Report, supra note 213, at 24 ("[A] single raise to bring a woman faculty member's salary up to what it should be does not compensate for the lost salary over the years when she was underpaid.").
    ${ }^{232}$ See generally Mary Ann Mason \& Marc Goulden, Do Babies Matter (Part II)? Closing the Baby Gap, 90 Academe io, 10 (2004), available at http://www. aaup.org/publications/Academe/2004/04nd/04ndmaso.htm (supporting the tendency for female academics to have more of an unfulfilled desire to have children as compared to their male academic peers). But see Jennifer Glass et al., Retention of Women in the STEM Labor Force: Gender Similarities and Differences with a Focus on Destination Status, Presentation at the Annual Meeting of the Population Association of America 14 (May 4, 2012), available at http://paa2012.princeton.edu/papers/121492 (finding a statistically negligible difference between STEM women with children and without children).
    ${ }^{233}$ MIT Report, supra note 213, at 15.

[^26]:    http://www.aaup.org/file/principles-academic-freedom-tenure.pdf.
    ${ }^{241}$ See supra Part IIa.
    ${ }^{242}$ Muster, supra note 216, at 50 (citation omitted).
    ${ }^{243}$ Id.
    ${ }^{244}$ Id.; see also i Emp’t Discrim. Coord. Analysis of Federal Law § 19:94
    (2012) (stating that courts have gone too far and that this is sometimes seen as a "judicial abdication of the responsibility entrusted to the courts").
    ${ }^{245}$ See, e.g., Lawrence v. Curators of the Univ. of Mo., 204 F.3d 807, 809-10 (8th Cir. 2000).
    ${ }^{246}$ See, e.g., Gilinsky v. Columbia Univ., 488 F. Supp. 1309, 1312-13 (S.D.N.Y. 1980) (dismissing a class action suit), aff'd., 652 F.2d 53 (2d Cir. 1981); see also EEOC v. Tufts Inst. of Learning, 421 F. Supp. 152, 159 \& n. 7 (D. Mass. 1975) (providing that salary differentials do not trigger disparate impact analysis). See also Muster, supra note 216, at 53-54.

[^27]:    ${ }^{247}$ See Muster, supra note 216, at 51; see also John Anthony Palombi, Note, The Ineffectiveness of Title VII in Tenure Denial Decisions, 36 DePaul L. Rev. 259, 279 n. 142 (1987) (citing Barbara A. Lee, Balancing Confidentiality and Disclosure in Faculty Peer Review: Impact of Title VII Litigation, 9 J.C. \& U.L. 279, 302-03, 308 (1982-1983)).
    ${ }^{248}$ See Hora, supra note 42, at 352.
    ${ }^{249}$ Id. at 352, 354.
    ${ }^{250}$ Id. at $351,353$.
    ${ }^{251}$ Id. at 349 (citing Mary Beth Marklein, Finding a Formula for Equality:

[^28]:    Female Scientists Bond Over MIT Bias, Become a Catalyst for Change, USA TODAY, July 27, 1999, at 1D).
    ${ }^{252}$ Id. at 355.
    ${ }^{253}$ Id. at 356.
    ${ }^{254}$ See i Emp’t Discrim. Coord. Analysis of Federal Law§ i9:94 (20i2) ("[U]se of fair and established procedures that standardize a decision-making process can rid a process that relies on subjective elements of the arbitrariness that concerns some courts.").
    ${ }^{255}$ See infra Part IV.a.
    ${ }^{256}$ See infra Part IV.b.

[^29]:    ${ }^{257}$ See infra Part IV.c.
    ${ }^{258}$ See infra Part IV.d.
    ${ }^{259}$ See supra Part II.b.
    ${ }^{260}$ Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance, 14 C.F.R. § 1253 (2012).
    ${ }^{261}$ See generally Arne Duncan \& Russlynn Ali, U.S. Dep't of Educ., Title IX: Enforcement Highlights (2012), available at http://www2.ed.gov/documents/ press-releases/title-ix-enforcement.pdf.
    ${ }^{262}$ Nat’l Aeronautics \& Space Admin., Title IX and STEM: Promising Practices for Science, Technology, Engineering, and Mathematics (2009) [hereinafter NASA Report], available at http://odeo.hq.nasa.gov/documents/71900_ HI-RES.8-4-09.pdf.
    ${ }^{263} \mathrm{Id}$.
    ${ }^{264} \mathrm{Id}$.
    ${ }^{265}$ See U.S. Gov’t Accountability Office, GAO-04-639, Gender Issues: Women's Participation in the Sciences Has Increased, but Agencies Need to Do More to Ensure Compliance with Title IX (2004) (NASA, if it instituted a more in depth tenure review would already have statutory coverage from Title IX in Sections 1253.500 \& 1253.520, Job Classification and Structure, which in

[^30]:    ${ }^{268}$ See generally MIT Report, supra note 213; see also Zakian et al., supra note 226.
    ${ }^{269}$ See MIT Report, supra note 213, at 18, 26; see also Zakian et al., supra note 226, at 5-6.
    ${ }^{270}$ See MIT Report, supra note 213, at 26; see also ZaKian et al., supra note 226, at 5.
    ${ }^{271}$ ADVANCE: Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers, Nat'l Sci. Found., http:// www.nsf.gov/funding/pgm_summ.jsp?pims_id=5383 (last visited Mar. 22, 2013).
    ${ }^{272}$ Id.

[^31]:    ${ }^{273}$ See supra Part I.d.
    ${ }^{274}$ See, e.g., David Epstein, Slowing Down Tenure Time, Inside Higher Ed (Feb. 28, 2006, 4:00 AM), http://www.insidehighered.com/news/2006/02/28/ michigan.
    ${ }^{275}$ See Anne D. Neal, Reviewing Post-Tenure Review, 94 Academe 27, 27 (2008).
    ${ }^{276} I d$.
    ${ }^{277}$ Potter, supra note 96.

[^32]:    ${ }^{278}$ See supra Part I.d; see also H.R. Rep. No. 92-238, at 1062 (1972), reprinted in 1972 U.S.C.C.A.N. 2137, 2138-39; Muster, supra note 216, at 47.
    ${ }^{279}$ See supra Part III.
    ${ }^{280}$ See Muster, supra note 216, at 52.
    ${ }^{281}$ See generally supra Part I.
    ${ }^{282}$ See supra Part III.a.
    ${ }^{283}$ See supra Part III.b.
    ${ }^{284}$ See supra Part II.

[^33]:    ${ }^{285}$ See supra Part III.b.
    ${ }^{286}$ See supra Part IV.
    ${ }^{287}$ See supra Part IV.a.
    ${ }^{288}$ See supra Part IV.b.
    ${ }^{289}$ See supra Part IV.c.
    ${ }^{290}$ See supra Part IV.d.
    ${ }^{291}$ See supra Part I.

