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The Quixotic Quest for Gender Equality in the Workplace

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THE QUIXOTIC QUEST FOR "GENDER EQUALITY" IN THE WORKPLACE

*Kingsley R. Browne**

INTRODUCTION

THIS conference, titled "Gender Equality: Progress and Possibilities," follows a common theme in the literature: progress toward "gender equality" has been made, but it is too slow and much remains to be done. "Gender equality" is treated, at least implicitly, as something definable and potentially achievable through adoption of enlightened policies. But what is "gender equality" in the workplace, and how will we know when it has been achieved? Under what conceivable set of circumstances could the question "have we achieved gender equality in the workplace?" be answered with an unqualified "yes"?

There are two principal reasons for believing that the answer to the foregoing question is that there are no circumstances under which victory in the war for gender equality will be declared. First, there is a vast industry that depends on the perception that women suffer from oppression in the workplace (and virtually everywhere else, for that matter). Untold numbers of academics, nonprofit organizations, government agencies, private-sector bureaucracies, and politicians depend for their existence or power on continued perceptions of sexual inequality. A declaration that the problem is cured would require some unwelcome retooling. It is much better to creatively identify other, heretofore unappreciated, forms of inequality and continue to bemoan equality's absence.[1] Second, the term "gender equality" lacks sufficiently specific agreed-upon content that one might ever expect consensus about its achievement. The operational meaning for many,

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1. Thus, for example, when it becomes difficult to find any discriminators, one simply redefines the problem as one of "institutional bias" or "implicit bias," obviating the need to identify anyone who has acted with discriminatory intent. *See* Tristin K. Green, *The Future of Systemic Disparate Treatment Law*, 32 BERKELEY J. EMP. & LAB. L. 395, 452, 454 (2011) (lamenting that current law allows a defendant in a systemic disparate-treatment case "to challenge each of those alleged instances of discrimination as being otherwise explained," and arguing instead that employers should be held "responsible for the organizational structures, systems, and cultures that frame the context for day-to-day interaction and decision making at work"); Samuel R. Bagenstos, *Implicit Bias, "Science," and Antidiscrimination Law*, 1 HARV. L. & POL'Y REV. 477, 483 (2007) (stating that "[a] key point of implicit bias, to proponents of the theory, is that it is invisible"). It is not overly cynical to suggest that it is precisely the invisibility of "implicit bias" that makes it such an appealing explanation to those proponents. To paraphrase Muhammad Ali, "Float like a butterfly, sting like a bee; you can't disprove what you can't see."

however, demonstrates why it is unlikely to be achieved to the satisfaction of advocates. That meaning, in practice, seems to be: "Women must get *at least* fifty percent of everything that is perceived as 'good' and *no more than* fifty percent of anything that is perceived as 'bad.'" If that principle is violated, then there can be no gender equality. It is for these reasons that I call the quest for "gender equality" quixotic and put the term in scare quotes.

This essay will focus on the workplace, in which there are (at least) three important features that often attract claims of inequality and discrimination: occupational distributions ("occupational segregation"), organizational rank (the "glass ceiling"), and compensation (the "gender gap" in compensation). This essay will discuss all three but will focus primarily on the first. My purpose is not to argue that there is never discrimination in these areas (although discrimination that does occur may favor, as well as disadvantage, women), but rather to show that common assertions of inequality in these areas are oversimplified, if not simplistic.

I. OCCUPATIONAL SEGREGATION: WHY ARE MEN AND WOMEN NOT EQUALLY REPRESENTED IN ALL JOBS?

Like many labels, the technical term "occupational segregation" can imply something that is not necessarily, or even generally, true. To the extent that it implies the active participation of a "segregator," it is misleading because the term simply refers to a statistical outcome and not a process.[2] Going back to hunter-gatherer times, occupational segregation has been a consistent feature of the human economy.[3] The question for us is whether "gender equality" requires an end to occupational segregation—in other words, whether it requires proportional representation in all fields.

Advocates of gender equality do not decry an absence of proportional representation in all occupations. There seems to be little concern, for example, that most "ditch diggers" and similar kinds of low-skilled physical occupations are largely male.[4] There likewise seems to be no concern at all that many "good" occupations—high-skilled and historically male-dominated jobs, such as veterinarian, pharmacist, and psychologist—are, or are becoming, disproportionately female.[5] These are not problems but merely facts that play little

2. Similar wordplay is engaged in with the term "glass ceiling," an expression that refers to the perceived paucity of women at the highest reaches of organizations. *See generally* Kingsley R. Browne, *Sex and Temperament in Modern Society: A Darwinian View of the "Glass Ceiling" and the "Gender Gap"*, 37 ARIZ. L. REV. 971, 1064-75 (1995) [hereinafter Browne, *Sex and Temperament*]. The "ceiling" is simply inferred from statistical rarity, yet it is sometimes reified as a process. *See* KARINE MOE & DIANNA SHANDY, GLASS CEILINGS AND 100-HOUR COUPLES: WHAT THE OPT-OUT PHENOMENON CAN TEACH US ABOUT WORK AND FAMILY 6 (2009) (describing the "glass ceiling" as "a form of discrimination that limits a woman's advancement at work").

3. *See, e.g.*, Michael Gurven & Kim Hill, *Why Do Men Hunt? A Reevaluation of "Man the Hunter" and the Sexual Division of Labor*, 50 CURRENT ANTHROPOLOGY 51 (2009).

4. For example, 97% of all construction laborers and 94% of all construction helpers are male. BUREAU OF LABOR STATISTICS, U.S. DEP'T LAB., WOMEN IN THE LABOR FORCE: A DATABOOK 80-81 tbl.11 (2017), https://www.bls.gov/opub/reports/womens-databook/2017/pdf/home.pdf [hereinafter WOMEN IN THE LABOR FORCE 2017].

5. *See infra* text accompanying notes 31, 72-73.

or no role in discussions of equality. As long as desirable occupations are at least half female and undesirable occupations are more than half male, the operational definition of "gender equality" described above is not implicated. It is only when less than fifty percent of workers in desirable jobs are female that concerns about a lack of gender equality are raised.

Although a hundred years ago most jobs were segregated by sex (either formally or *de facto*), today almost all jobs are formally sexually integrated, but many continue to persistently resist *de facto* integration.[6] Thus, the jobs of speech pathologist, dental hygienist, preschool and kindergarten teacher, and registered nurse are 90% or more female, while jobs such as mechanical engineer, firefighter, pest control, auto mechanic, and electrician remain 90% or more male.[7] Occupational segregation declined substantially during the 1970s and 1980s, but the rate of decline slowed dramatically in the 1990s and has been flat throughout the current century.[8] Today, approximately half of female (or male) employees would have to change occupations in order to eliminate statistical disparities, whereas the proportion that would have been required to switch in 1970 was approximately two-thirds.[9]

Again, the question is whether (and why) "gender equality" requires that sexual parity exist in all jobs, both jobs that are now disproportionately male and those that are disproportionately female. Less concern is expressed about "over-representation" of women in mostly female jobs than about under-representation of men in mostly female jobs.[10] Even when concern is raised about the sex ratio in mostly female jobs, the complaint is not that it reflects a lack of sexual equality for men, but rather that it is bad for the women in these occupations that there are so few men.[11] Thus, too few men in a job and too few women in a job are both treated as problems for women but not for men.

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6. *See generally* WOMEN IN THE LABOR FORCE 2017, *supra* note 4.

7. *Id.* at 69-83 tbl.11.

8. Francine D. Blau et al., *Trends in Occupational Segregation by Gender 1970-2009: Adjusting for the Impact of Changes in the Occupational Coding System*, 50 DEMOGRAPHY 471, 482 (2013). The most common measure of occupational segregation is the Duncan Index, which is expressed as a percentage of the proportion of women (or men) who would have to change occupations in order to balance out all occupations. *Id.* at 477.

9. *Id.* at 481.

10. *See generally* Hadas Mandel, *Up the Down Staircase: Women's Upward Mobility and the Wage Penalty for Occupational Feminization, 1970-2007*, 91 SOC. FORCES 1183 (2013).

11. *See, e.g.*, *id.* at 1189 (reporting that as women move into previously male jobs, compensation decreases); Asaf Levanon et al., *Occupational Feminization and Pay: Assessing Causal Dynamics Using 1950-2000 U.S. Census Data*, 88 SOC. FORCES 865, 886 (2009) (same); CHRISTINE L. WILLIAMS, GENDER DIFFERENCES AT WORK: WOMEN AND MEN IN NONTRADITIONAL OCCUPATIONS 102-03 (1989) (noting the widespread perception that increasing the number of men in nursing would enhance the status and prestige of the profession); *Women Docs 'Weakening' Medicine*, BBC NEWS (Aug. 2, 2004, 10:38 AM), http://news.bbc.co.uk/2/hi/health/3527184.stm (reporting comments by Carol Black, president of the Royal College of Physicians, to the effect that the increasing feminization of the medical profession threatens to reduce its status).

A. *Sex Differences in Preferences*

What accounts for women's varied representation in disparate fields? The largest contributor is probably women's preferences, although that is an answer that some find unpalatable. In fact, there are consistent differences between jobs that have many women and those that have few. I have already mentioned mostly female jobs such as preschool teacher and registered nurse and mostly male jobs such as mechanical engineer and firefighter. Is it really plausible that many people, either male or female, who chose a job in one of these groups could as comfortably have chosen one in the other group with the right kind of encouragement (and without coercion)?

If the sexes had identical preferences and talents, then one might expect, at least as a first cut, that the sexes would be evenly distributed throughout the workforce. But their preferences and talents are not identical. Consistent sex differences exist in occupational interests.[12] The largest difference is along what has been called the "People-Things dimension," with women having a much stronger preference than men for working with people and men having a greater preference for working with things.[13] Other investigators have described the axis as being an "organic vs. inorganic" one.[14] However the distinction is characterized, even if one had no prior knowledge of the sex composition of jobs such as nursing, preschool teaching, firefighting, or engineering, one could predict it pretty well. The assertion that the sexes differ in occupational interests should not be surprising, given that they differ substantially in non-occupational interests as well.[15]

The area of occupational segregation that gets the most attention today is the perceived under-representation of women in STEM (science, technology,

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12. Rong Su et al., *Men and Things, Women and People: A Meta-Analysis of Sex Differences in Interests*, 135 PSYCHOL. BULL. 859, 880 (2009).

13. Richard Lippa, *Gender-Related Individual Differences and the Structure of Vocational Interests: The Importance of the People-Things Dimension*, 74 J. PERS. & SOC. PSYCHOL. 996, 999 (1998).

14. David Lubinski et al., *Gender Differences in Engineering and the Physical Sciences Among the Gifted: An Inorganic-Organic Distinction*, *in* INT'L HANDBOOK OF GIFTEDNESS AND TALENT 633, 642 (Kurt A. Heller et al. eds., 2d ed. 2000).

15. Dara Greenwood, *Of Sad Men and Dark Comedies: Mood and Gender Effects on Entertainment Media Preferences*, 13 MASS COMM. & SOC'Y 232, 242 (2010) (finding that women, compared to men, have substantially greater preference for romantic comedies and romantic dramas, while men have greater preference for action-adventure, suspense, and dark comedies); Richard A. Lippa, *How Do Lay People Weight Information About Instrumentality, Expressiveness, and Gender-Typed Hobbies When Judging Masculinity–Femininity in Themselves, Best Friends, and Strangers?*, 53 SEX ROLES 43, 46 (2005) (finding that "hobbies more preferred by men were 'computers,' 'fishing,' 'going to car shows,' 'home electronics,' 'playing basketball,' 'playing poker,' 'video games,' 'watching sports on TV,' 'watching thriller and action movies,' 'weight lifting,' and 'working on cars;'" while "hobbies more preferred by women were 'aerobics,' 'clothes shopping,' 'collecting stuffed animals,' 'cooking,' 'dancing,' 'interior decorating,' 'keeping up with new fashions,' 'reading romance novels,' 'singing,' 'taking and collecting photos of family and friends,' and 'watching romance movies.'"). *See also* Alison F. Garton & Chris Pratt, *Leisure Activities of Adolescent School Students: Predictors of Participation and Interest*, 14 J. ADOLESCENCE 305, 319 (1991) (finding that sex is the strongest predictor of adolescent leisure activities).

engineering, and mathematics) fields.[16] As discussed below, however, women are not uniformly under-represented in STEM fields[17] (and, in fact, there is some disagreement about which fields should count as STEM fields[18]). Moreover, the position that equality requires that women constitute half the STEM workforce leads to the question of what should happen to the women who now occupy fields where women are "over-represented," of which there are many. Consider the sex composition of those earning bachelor's degrees, for example. As can be seen in Figure 1, although women in 2015 earned a majority of bachelor's degrees (57%) (and have since 1982[19]), they were somewhat under-represented in mathematics (43%) and physical sciences (39%), but even more under-represented in engineering (19%) and computer science (18%).[20] On the other hand, they were overwhelming majorities in health professions (84%), public administration and social services (82%), education (79%), and psychology (77%), and they were a majority in biological and biomedical sciences (59%).[21] To get the numbers in engineering and computer science up, some women would have to have chosen differently. Should women who elected to study to become social workers or preschool teachers have chosen instead to go into engineering or computer science?

16. More attention used to be paid to blue-collar occupations. *See generally* Brigid O'Farrell, *Women in Blue Collar and Related Occupations at the End of the Millennium*, 39 Q. REV. ECON. & FIN. 699 (1999). Such jobs are heavily male dominated, largely because they tend to involve working with "things." KINGSLEY R. BROWNE, BIOLOGY AT WORK: RETHINKING SEXUAL EQUALITY 61-64 (2002) [hereinafter BROWNE, BIOLOGY AT WORK]. However, the economy has changed in such a way that blue-collar occupations seem to attract less attention today.

17. *See generally* Sapna Cheryan et al., *Why Are Some STEM Fields More Gender Balanced Than Others*?, 143 PSYCHOL. BULL. 1 (2017).

18. For example, everyone would agree that physics, chemistry, and biology are scientific fields, but those who complain about the dearth of women in science would not include psychology as a scientific field (if for no other reason than the large numbers of women in psychology), although the American Psychological Association disagrees. *See generally* 2009 PRESIDENTIAL TASK FORCE ON THE FUTURE OF PSYCHOLOGY AS A STEM DISCIPLINE, AM. PSYCHOLOGICAL ASS'N, PSYCHOLOGY AS A CORE SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) DISCIPLINE (2010), http://www.apa.org/pubs/info/reports/stem-report.pdf. Because of women's numerical majority in biology, undermining complaints about women's under-representation in STEM fields, some have now redefined the "problem area" as "pSTEM," with the "pS" standing for physical science. *See* David I. Miller & Jonathan Wai, *The Bachelor's to PhD STEM Pipeline No Longer Leaks More Women Than Men: A 30-Year Analysis*, 6 FRONTIERS IN PSYCHOL. 1, 1-2 (2015), https://doi.org/10.3389/fpsyg.2015.00037.

19. THOMAS D. SNYDER ET AL., DIGEST OF EDUCATION STATISTICS 2016, tbl.318.10 (2018), https://nces.ed.gov/pubs2017/2017094.pdf [hereinafter DIGEST OF EDUCATION STATISTICS].

20. *Id.* at tbls.325.35, 325.45, 325.65, 325.70.

21. *Id.* at tbls.325.20, 325.40, 325.60, 325.80, 325.85.

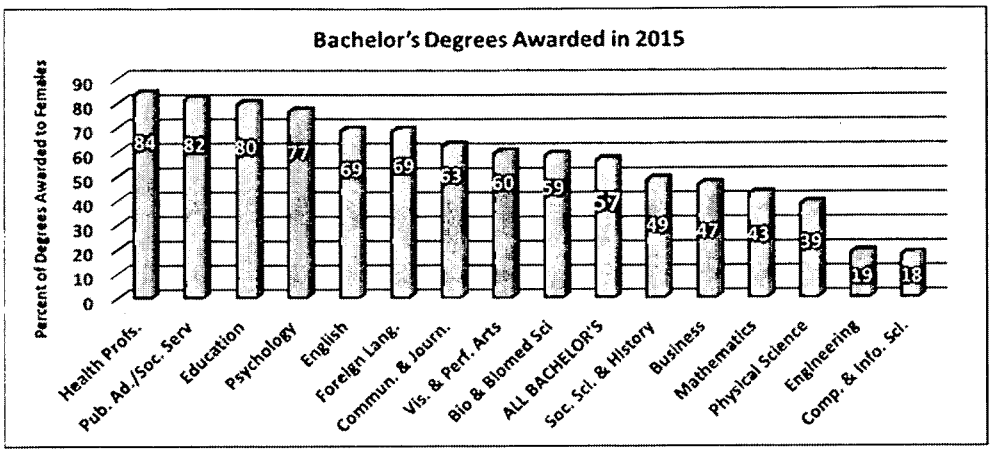

Figure 1[22]
(*National Center for Education Statistics*, 2018)

At the PhD level, similar disparities exist. Women earn a majority of all doctoral degrees (52%) (and have since 2006)[23] and 46% of Ph.Ds.[24] But, again, males and females are not randomly distributed within fields. As Figure 2 reveals, in 2016, women earned majorities of PhDs in education (70%), social sciences (59%), and life sciences (55%), but much lower proportions of degrees in mathematics (29%) and engineering (23%).

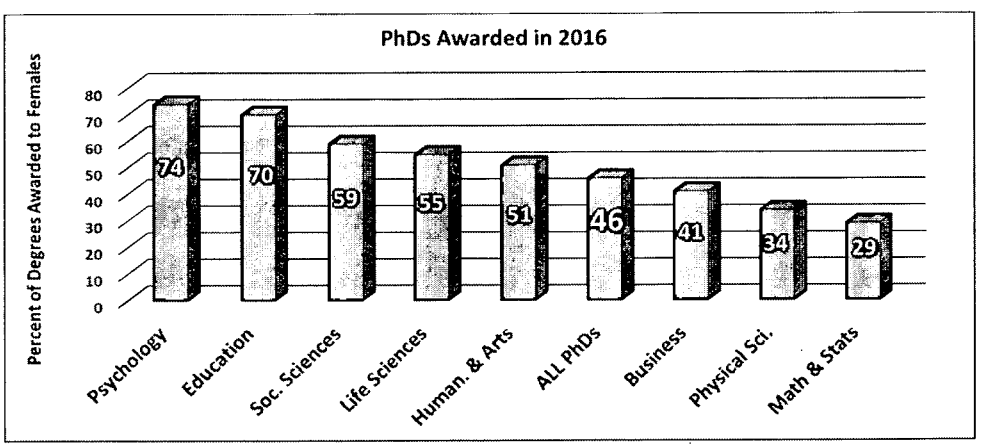

Figure 2[25]
(*National Science Foundation*, 2017)

22. *Id.* at tbls.318.20-325.95.

23. *Id.* at tbl.318.10.

24. *Table 16. Doctorate Recipients, by Subfield of Study and Sex: 2016*, NAT'L SCI. FOUND. (2017), https://www.nsf.gov/statistics/2018/nsf18304/data/tab16.pdf [hereinafter *Table 16*].

25. *Id.*

Similar patterns prevail in subdisciplines, as well. In engineering, women in 2016 earned a large number of PhDs in environmental and environmental health engineering (44%) and bio/biomedical (37%) engineering, but much smaller numbers of degrees in computer (15%) and nuclear (14%) engineering.[26] In the life sciences, women earned large majorities of PhDs in nursing science (93%),[27] environmental health and public health (75%), and nutrition sciences (78%), but were much more sparsely represented in biophysics (30%) and medical physics and radiological science (34%).[28] In the physical sciences, female PhDs were plentiful in geochemistry and mineralogy (49%) and analytical chemistry (45%) but were scarcer in astrophysics (29%), theoretical chemistry (28%) and plasma physics (14%).[29] In education, women earned 84% of PhDs in school psychology but only 47% of those in physical education.[30] In the social sciences, women earned substantial majorities in psychology (71%), anthropology (63%), and sociology (58%), but minorities in political science (38%) and economics (34%).[31] In the business field, women were well represented among PhDs in human resources (50%) but earned only a minority of degrees in finance (22%) and management information systems and statistics (23%).[32] In the arts and humanities, women earned large majorities in art history (75%), drama (61%), and foreign languages (62%), but a smaller fraction in philosophy and ethics (35%) and theology (26%).[33] In medicine, the situation is similar, as Figure 3 reveals. Women are over-represented in obstetrics and gynecology (80%), pediatrics (70%), dermatology (53%) and family medicine (52%) but under-represented in neurosurgery (18%), nuclear medicine (15%), and orthopedic surgery (15%).[34]

26. DIGEST OF EDUCATION STATISTICS, *supra* note 20, at tbl.318.30; *Table 16*, *supra* note 24.
27. DIGEST OF EDUCATION STATISTICS, *supra* note 20, at tbl.318.30.
28. *Id.*
29. *Id.*
30. *Id.*
31. *Id.*
32. *Id.*
33. *Id.*
34. *Table C-2: Residency Applicants from U.S. M.D.—Granting Medical Schools to ACGME-Accredited Programs by Specialty and Sex, 2017-2018*, ASS'N AM. MED. C. (Dec. 31, 2017), https://www.aamc.org/download/321560/data/factstablec2.pdf.

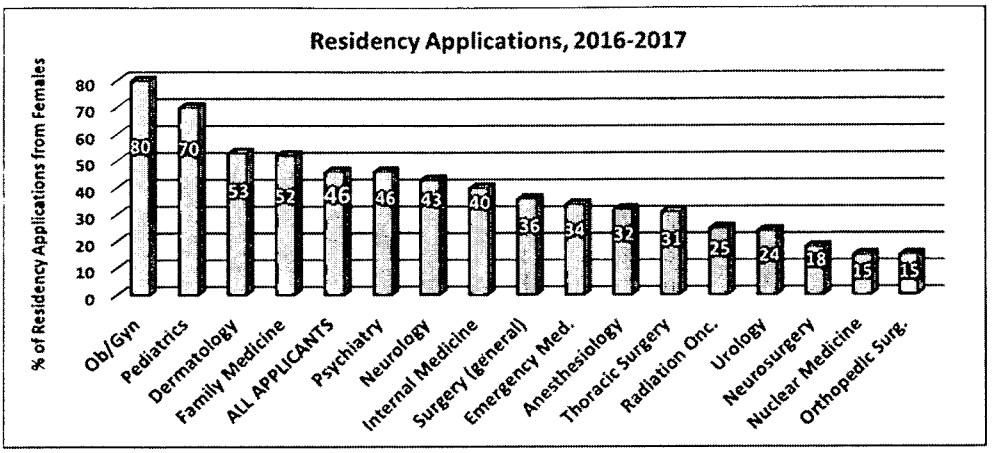

Figure 3[35]
(*Association of American Medical Colleges*, 2017)

Isn't there something meaningful that can be inferred from these patterns? A number of factors are undoubtedly at work, but there is a clear tendency for the occupations that attract a lot of women to have large social components and occupations attracting a lot of men to be more oriented toward things and abstract concepts. Engineering and computer science, the fields that get the most attention, are among the most thing-oriented and least people-oriented academic disciplines.[36] Amanda Diekman and colleagues found that an important reason for women's under-representation in STEM fields was the perception that these fields are less likely than other fields to serve communal goals and that individuals who strongly endorse communal goals (more characteristic of women than men) tend to be less interested in these fields even if they have the necessary abilities.[37] Moreover, conformity to feminine norms has been found to significantly lower the odds of majoring in a STEM field.[38]

The question, then, is why the relatively low number of women in those fields is a problem, whereas the numbers in fields with similar imbalances running the other way are just "facts." A further question is what principle implies that women

35. *Id.*

36. *See* Joshua L. Rosenbloom et al., *Why Are There So Few Women in Information Technology? Assessing the Role of Personality in Career Choices*, 29 J. ECON. PSYCHOL. 543, 553 (2008) (finding that "much of the difference in entry into IT is the result of the fact that, on average, men and women value different aspects of work, and therefore, make different career choices," and arguing that even if any differences in ability or discrimination that might exist were eliminated, "women would still be under represented in Information Technology because of differences in their occupational preferences relative to men").

37. Amanda B. Diekman et al., *Seeking Congruity Between Goals and Roles: A New Look at Why Women Opt Out of Science, Technology, Engineering, and Mathematics Careers*, 21 PSYCHOL. SCI. 1051, 1055-56 (2010).

38. Ann M. Beutel et al., *Femininity and Choice of College Major*, GENDER ISSUES (2017), https://doi.org/10.1007/s12147-017-9195-8.

who chose not to go into engineering and computer science (or other predominantly male fields) chose poorly? There is a zero-sum aspect to the problem. Women who might have gotten PhDs in engineering did not end up flipping burgers at a fast-food restaurant; instead, they probably got PhDs or professional degrees in other fields—likely ones with more women.

B. Other Relevant Sex Differences

In addition to sex differences in general occupational interest, there are other sex differences that contribute to differential representation in some STEM fields. Both cognitive differences and personality differences (beyond the people-things dimension) contribute to the sexes' disparate outcomes.

1. Sex Differences in Cognitive Patterns

Mathematical and spatial ability are important in STEM fields, especially the ones in which relatively few women are found. There are often arguments about whether males are better than females at math, but to make sense of that discussion, it is necessary to specify the population of interest. Only trivial differences in math performance exist between males and females in broad samples, such as those taking the National Assessment of Educational Progress, which is given to school children throughout the country.[39] Thus, one could fairly say that there is no meaningful sex difference in average mathematical ability in the general population. However, in more elite groups, males consistently do better. For example, males consistently outperform females on the mathematical portion of entrance tests such as the SAT and the GRE.[40] In 2016, boys scored 30 points higher on the SAT-M (about one-quarter of a standard deviation)[41] and 4.4 points higher on the GRE-Q (more than half a standard deviation).[42] The principal reason

39. For example, in 2015, fourth-grade boys averaged a 241 compared to the girls' 239; eighth-grade boys and girls both averaged 282; and twelfth-grade boys averaged 153, compared to girls' 150. DIGEST OF EDUCATION STATISTICS, *supra* note 19, at tbl.222.10.

40. *See generally* COLL. BD., 2016 COLLEGE-BOUND SENIORS: TOTAL GROUP PROFILE REPORT (2016), https://secure-media.collegeboard.org/digitalServices/pdf/sat/total-group-2016.pdf [hereinafter "2016 COLLEGE-BOUND SENIORS"]; EDUC. TESTING SERV., A SNAPSHOT OF THE INDIVIDUALS WHO TOOK THE GRE® GENERAL TEST (2016), https://www.ets.org/s/gre/pdf/snapshot_test_taker_data_2016.pdf.

41. 2016 COLLEGE-BOUND SENIORS, *supra* note 40, at 1 tbl.2. Among test-takers scoring in the 700-800 range (about 7 percent of test-takers), males outnumbered females by 1.6 to 1. *Id.* at 2 tbl.5. Some attempt to deny the importance of the sex difference in SAT-M scores, asserting that the reason for the sex difference is that more girls than boys take the SAT, so low-achieving girls pull down the girls' average score. *See* Tamar Lewin, *Math Scores Show No Gap for Girls, Study Finds*, N.Y. TIMES (July 25, 2008), https://www.nytimes.com/2008/07/25/education/25math.html. However, the higher number of female test-takers can hardly explain the disproportionate *number* of males among high-scorers. In the most recently reported period, 875,342 girls and 762,247 boys took the test, for a 53.5 to 46.5 split. 2016 COLLEGE-BOUND SENIORS, *supra* note 40, at 1 tbl.2. However, there were 71,999 males and only 45,068 females who scored between 700 and 800. *Id.* at 2 tbl.5. The presence of less-able females at the bottom of the score distribution cannot explain that fact.

42. EDUC. TESTING SERV., *supra* note 40, at 6 tbl.1.2. *See also* April Bleske-Rechek & Kingsley Browne, *Trends in GRE Scores and Graduate Enrollments by Gender and Ethnicity*, 46

for the marked sex difference in more elite samples, despite the lack of a difference in the population as a whole, is that males are more variable than females on cognitive (and other) traits, meaning that there are more males at both the extreme high end and extreme low end.[43] Though this sex difference in ability at the extremes may explain, in part, a sex difference in world-class scientists and mathematicians,[44] it does not, by itself, explain the overall differences in STEM fields, which do not necessarily require extremely high levels of ability, especially at the undergraduate level.

In contrast to the male advantage in mathematical ability, at least in elite samples, females often outperform males on tests of verbal ability. In broad samples, there is a larger female verbal advantage than there is a male mathematical advantage.[45] In more elite samples, the results are somewhat more mixed. On the 2016 SAT, girls averaged 495 to the boys' 493 on the critical reading portion, a difference only 1/15 the size of the male advantage in mathematics. However, there was a twelve-point gap on the writing portion of the test (girls, 487; boys, 475). On the GRE, males outperformed females 154.3 to 151.7 in verbal reasoning and slightly outperformed females in analytical writing (3.9 to 3.8).[46] The overall question of sex differences in verbal ability is clouded by the fact that there are many verbal abilities, some substantially favoring females (verbal fluency) and others favoring males (verbal reasoning, especially analogies).[47]

Although absolute levels of mathematical ability are given the lion's share of attention in discussions about women in STEM fields, they are not the only relevant cognitive influences. Rather, ability "tilt"—that is, the level of an

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INTELLIGENCE 25, 27 (2014) (finding a consistent sex difference on the GRE-Quantitative portion of about one-half of a standard deviation dating back to the early 1980s, during which time the percentage of women in STEM fields increased substantially).

43. *See* DIANE F. HALPERN, SEX DIFFERENCES IN COGNITIVE ABILITIES 102-03 (4th ed. 2012) (noting "that females and males are very similar when we consider the average performance, and they are highly dissimilar when we consider performance at the high and low extremes"). *See also* Rosalind Arden & Robert Plomin, *Sex Differences in Variance of Intelligence Across Childhood*, 41 PERSONALITY & INDIVIDUAL DIFFERENCES 39, 40 (2006) (noting that "[a] small difference in variance can have a large influence on the ratio of males to females at the tails").

44. *See* Jonathan Wai et al., *Studying Intellectual Outliers: Are There Sex Differences, and Are the Smart Getting Smarter?*, 21 CURRENT DIRECTIONS IN PSYCHOL. SCI. 382, 383 (2012) (noting that "[t]he fact that we continue to find sex differences in math ability within the very smartest group means that sex differences in math ability are likely part of the explanation for female underrepresentation in high-level math and science careers"); Joni M. Lakin, *Sex Differences in Reasoning Abilities: Surprising Evidence That Male–Female Ratios in the Tails of the Quantitative Reasoning Distribution Have Increased*, 41 INTELLIGENCE 263, 263 (2013). *See also* Kingsley R. Browne, *Women in Science: Biological Factors Should Not Be Ignored*, 11 CARDOZO WOMEN'S L.J. 509, 513-15 (2005).

45. In 2015, fourth-grade girls averaged 226 compared to the boys' 219 on the NAEP; eighth-grade girls averaged 270 compared to 261 for boys; and twelfth grade girls averaged 292 and boys averaged 282. DIGEST OF EDUCATION STATISTICS, *supra* note 19, at tbl.221.10.

46. EDUC. TESTING SERV., *supra* note 40, at 8 tbl.1.3.

47. Wendy M. Williams & Stephen J. Ceci, *Introduction: Striving for Perspective in the Debate on Women in Science*, *in* WHY AREN'T MORE WOMEN IN SCIENCE? 3, 12-13 (Stephen J. Ceci & Wendy M. Williams eds., 2007).

individual's mathematical ability relative to his verbal ability—is also important.[48] Dividing individuals into high-math, moderate-math, and low-math, Wang and colleagues found, not surprisingly, that most individuals who selected STEM careers fell into the high-math group and none fell into the low-math group.[49] High-math individuals generally have either high or moderate verbal ability (as opposed to low ability), but the two groups of high-math individuals had substantially different likelihoods of ending up in STEM fields.[50] Almost half of the high-math/moderate-verbal individuals (that is, students having "math tilt") ended up in STEM fields, compared to only about one-third of the high-math/high-verbal individuals.[51] This makes sense because those having high levels of both kinds of ability have more options—critically, more non-STEM options—open to them. Significantly, Wang et al. found that only 30% of those with math-tilt were female, compared to 63% of the high-math/high-verbal students.[52] Even among STEM majors, women take a more diverse set of courses, being more likely to take electives in the humanities and social sciences.[53] Thus, it seems, the more "math-tilted" profile of males, independent of math ability, and the greater desire of women for a more "liberal" education, may in part be responsible for men's greater representation in STEM fields.[54]

2. *Sex Differences in Personality*

Personality traits, including competitiveness and risk-preference, also appear to affect choice of STEM fields. Males tend to be both more competitive and risk-preferring than females, and both of these traits are linked with choosing prestigious math- and science-intensive fields. Buser, Niedlerle, and Oosterbeek found that even controlling for academic performance, Dutch boys chose more

48. Gregory Park et al., *Contrasting Intellectual Patterns Predict Creativity in the Arts and Sciences: Tracking Intellectually Precocious Youth Over 25 Years*, 18 PSYCHOL. SCI. 948, 949 (2007).

49. Ming-Te Wang et al., *Not Lack of Ability but More Choice: Individual and Gender Differences in Choice of Careers in Science, Technology, Engineering, and Mathematics*, 24 PSYCHOL. SCI. 770, 772 (2013).

50. *Id.* at 772-73.

51. *Id.* at 772.

52. *Id.* at 771-72.

53. Allison Mann & Thomas A. DiPrete, *Trends in Gender Segregation in the Choice of Science and Engineering Majors*, 42 SOC. SCI. RES. 1519, 1534 (2013). Mann and DiPrete suggest that one reason that women may shy away from engineering is that because so much of the engineering curriculum is prescribed, "[i]t is much more difficult to indulge a preference for humanities or social science courses if one's goal is to become a professional engineer." *Id.* at 1533.

54. In general, math tilt predicts STEM majors and verbal tilt is associated with humanities majors. Thomas R. Coyle et al., *Ability Tilt on the SAT and ACT Predicts Specific Abilities and College Majors*, 46 INTELLIGENCE 18, 22-23 (2014). *See also* Mark L. Davison et al., *Patterns of SAT Scores, Choice of STEM Major, and Gender*, 47 MEASUREMENT & EVALUATION IN COUNSELING & DEV. 118, 122 (2014) (finding that the majority of students in STEM majors had higher SAT-Q scores than SAT-V scores, although this was true for only a bare majority in the life sciences, while the opposite pattern prevailed in non-STEM majors other than business).

prestigious academic tracks than girls.[55] Controlling for competitiveness reduced the gender gap by 20% and controlling for risk attitudes reduced the gap by an additional 16%.[56] Competitiveness does not always have happy results, however, since some students (especially boys) who were high in competitiveness but not so high in mathematical ability tended to "'overreach' and enter study tracks that [were] too difficult for them."[57]

Why would risk preferences affect the choice of scientific fields? One reason is that study in these fields is riskier than study in "softer" fields, such as the humanities and social sciences. There are often "right answers" in the former fields to an extent that is not true in the latter. Greater objectivity of scientific fields may explain why those fields have been spared, at least to some extent, the grade inflation that has characterized the humanities and social sciences.[58] It is far easier to give a bad grade to a student whose answers are objectively and non-controversially wrong. Studying science thus presents a greater possibility of failure, or at least mediocre grades, than exists in other fields.[59] Both male and female students tend to be drawn away from STEM fields by high grades in non-science courses and pushed away from STEM fields by low grades in science courses, with the effect in the physical sciences being stronger for females than males.[60] This is consistent with the fact that women tend to cluster in fields occupied by people with relatively low math test scores (to a greater extent than would be expected just from the average difference between the sexes), a pattern to be expected for people who are less motivated by status.[61] As can be seen in Figure 4, there is a strong tendency for women to gravitate to low-math fields, with

55. Thomas Buser et al., *Gender, Competitiveness, and Career Choices*, 129 Q.J. ECON. 1409, 1412 (2014) [hereinafter Buser et al., *Career Choices*]. *See generally* Thomas Buser et al., *Gender, Competitiveness, and Study Choices in High School: Evidence from Switzerland*, 107 AM. ECON. REV. 125 (2017) (reporting similar results from Switzerland).

56. Buser et al., *Career Choices*, *supra* note 55, at 1412-13. Risk attitudes and competitiveness were largely independent of each other, such that controlling for them together reduced the gap by 33% (or 92% of the sum of the separate effects). *Id.* at 1438.

57. *Id.* at 1443.

58. *See* HENRY ROSOVSKY & MATTHEW HARTLEY, EVALUATION AND THE ACADEMY: ARE WE DOING THE RIGHT THING? 5-6 (2002), http://www.amacad.org/publications/monographs/Evaluation_and_the_Academy.pdf. *See also* Kevin Rask, *Attrition in STEM Fields at a Liberal Arts College: The Importance of Grades and Pre-Collegiate Preferences*, 29 ECON. EDUC. REV. 892, 892-93 (2010) (noting that "in most colleges and universities STEM majors are among the lowest grading departments" and suggesting that retention in STEM departments could be increased by grade inflation (i.e., by bringing grade distributions in STEM departments "more in line with non-STEM departments")).

59. *See* Jonathan Osborne et al., *Attitudes Towards Science: A Review of the Literature and Its Implications*, 25 INT'L J. SCI. EDUC. 1049, 1070-71 (2003).

60. Ben Ost, *The Role of Peers and Grades in Determining Major Persistence in the Sciences*, 29 ECON. EDUC. REV. 923, 932 (2010). A similar dynamic has been found to occur in economics. *See* Kevin Rask & Jill Tiefenthaler, *The Role of Grade Sensitivity in Explaining the Gender Imbalance in Undergraduate Economics*, 27 ECON. EDUC. REV. 676, 677 (2008).

61. DIGEST OF EDUCATION STATISTICS, *supra* note 20, at tbls.325.20–325.95.

there being a correlation of about -.75 between the percentage of women receiving bachelor's degrees in a field and the SAT-M of students entering the field.[62]

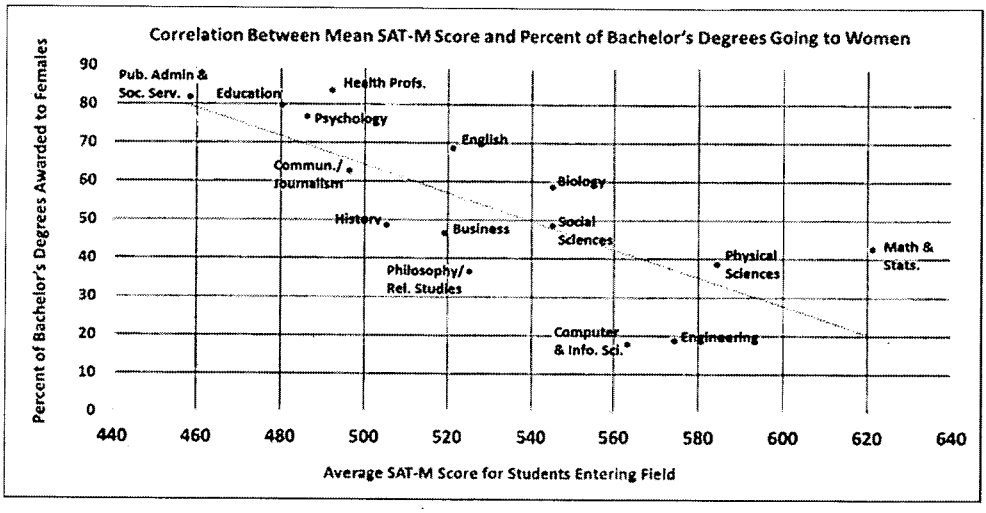

Figure 4

(Data from *National Center for Education Statistics*, 2016; *College Board*, 2016)

One explanation that has been given for the low representation of women in STEM fields is that girls have been taught that "math is for boys."[63] Thus, the argument goes, women have avoided engineering and computer science because of the centrality of mathematics in those disciplines. Yet, in 2015, women earned 43% of the bachelor's degrees and 28% of PhDs in mathematics[64]—in both cases, more than in either engineering[65] or computer science[66]—a strange result if indoctrination into the "math is for boys" belief is responsible for the dearth of women in the latter fields. Indeed, for the past 45 years, women have earned 40% or more of the bachelor's degrees in math.[67] Moreover, in high school, girls and

62. *Id.* In fact, the effect is probably greater overall than Figure 4 indicates. For example, the quantitative SAT for all "Social Sciences" is 545, with 49% of bachelor's degrees being awarded to females. But that overall statistic masks the fact that the most quantitative of the social sciences is economics, which is also the most male (30% bachelor's degrees going to females). *Id.* at tbl.318.30 (30%). Among takers of the GRE from 2013 to 2016, the average GRE-Q score for those seeking admission to graduate programs in anthropology, sociology, and psychology was 149, whereas that for applicants to economics programs was 160. EDUC. TESTING SERV., GRE®: GUIDE TO THE USE OF SCORES 27 tbl.4 (2017), https://www.ets.org/s/gre/pdf/gre_guide.pdf.

63. *See* Kelly Wallace, *The "Boys Are Better at Math" Mindset Creates Gender Gap in Sciences*, CNN (Oct. 12, 2016, 10:50 AM), https://www.cnn.com/2016/10/12/health/female-scientists-engineers-math-gender-gap/index.html.

64. DIGEST OF EDUCATION STATISTICS, *supra* note 19, at tbl.325.65.

65. *Id.* at tbl.325.45.

66. *Id.* at tbl.325.35.

67. *Id.* at tbl.325.65.

boys are about equally likely to take calculus (including AP or Honors calculus).[68] Yet, in 1992, women's advocates were apoplectic when Mattel offered a Barbie doll that said, among other things, "math class is tough," raising the alarm that the doll would discourage girls from studying mathematics.[69] But, that year, 47% of math bachelor's degrees went to women.[70] One must have a pretty low opinion of girls' judgment to think that Barbie's statement (just one of 270 different statements that iterations of the doll could make) would alter girls' career trajectories. This seems quite the opposite of "she persisted."

The fundamental question that advocates of "gender equality" must answer is why it is specifically engineering and computer science that have remained largely male. The easy answer—that these fields are "hostile" to women[71]—is a tautological one, since that hostility is inferred primarily from the relatively low number of women in the fields. The same arguments could have been made fifty years ago about law, medicine, biology, and many other fields. The real answer requires somewhat more analysis and must explain what distinguishes engineering and computer science (and, to a lesser extent, other non-life-sciences) from other professions that were also mostly male just a few decades ago.

In just about all fields, women have made substantial advances in recent decades. In 1970, women earned 11% of the degrees in veterinary medicine; in 2017, they earned 81%.[72] In 1970, women earned 18% of pharmacy degrees, compared to 60% in 2016.[73] In 1970, women earned 5% of law degrees, 8% of medical degrees, and less than 1% of dentistry degrees, compared to 48% for each of the fields in 2015.[74] In engineering, women have also increased dramatically, from less than 1% for both bachelor's degrees and PhDs in 1970 to 19% and 23%, respectively, in 2015.[75] Finally, in computer and information sciences, the representation of women among recipients of bachelor's degrees has increased from 14% in 1971 to 18% in 2015, and among PhDs from 2% to 23%.[76] Thus, although women have made major advances in both engineering and computer science, they make up only about 20% of those fields, whereas in many of the others they range from near parity to majorities. It should be noted that women's advances in so many fields were made without the kind of decades-long, heroic,

68. *Id.* at tbl.225.30.19.

69. *COMPANY NEWS: Mattel Says It Erred; Teen Talk Barbie Turns Silent on Math*, N.Y. TIMES: ARCHIVES (Oct. 21, 1992), https://www.nytimes.com/1992/10/21/business/company-news-mattel-says-it-erred-teen-talk-barbie-turns-silent-on-math.html.

70. DIGEST OF EDUCATION STATISTICS, *supra* note 20, at tbl.325.65.

71. Marguerite Holloway, *A Lab of Her Own*, 269 SCI. AM. 94, 94-95 (1993) (describing science as a "well fortified bastion of sexism" and quoting philosopher Sandra Harding as saying that it is "shocking ... that there are any women in science at all").

72. ASS'N AM. VETERINARY MED. COLLS., ANNUAL DATA REPORT 2016-2017, at 13 (2017), http://www.aavmc.org/data/files/data/2017%20aavmc%20public%20data-%20final.pdf.

73. AM. ASS'N COLL. PHARMACY, FALL 2016 DEGREES CONFERRED—PROFILE OF PHARMACY STUDENTS 16-17 tbl.5 (2016), https://www.aacp.org/sites/default/files/2017-10/PPS_2016_DegsConf.pdf.

74. DIGEST OF EDUCATION STATISTICS, *supra* note 19, at tbl.324.40.

75. *Id.* at tbl.325.45.

76. *Id.* at tbl.325.35.

but not entirely successful (by the lights of advocates), measures that have been undertaken to achieve parity for women in science.

The experience of women in computer science does require something of an explanation. It was mentioned earlier that the percentage of women receiving bachelor's degrees in the field had increased only slightly from 14% to 18% in four-and-a-half decades.[77] But as shown in Figure 5, that four-percentage-point growth over the period masks a great deal of activity in the interim.[78] In fact, the increase of women in computer science was about as steep as the increase of women in biology until around 1984. Unlike the other STEM trend lines, however, which generally reveal a steady increase in early decades followed by a later plateauing, the percentage of women in computer science increased sharply for about fifteen years and then dropped to roughly half of what it had been at its peak.[79] Thus, the curves for computer science and engineering look very different even though they have similar endpoints.

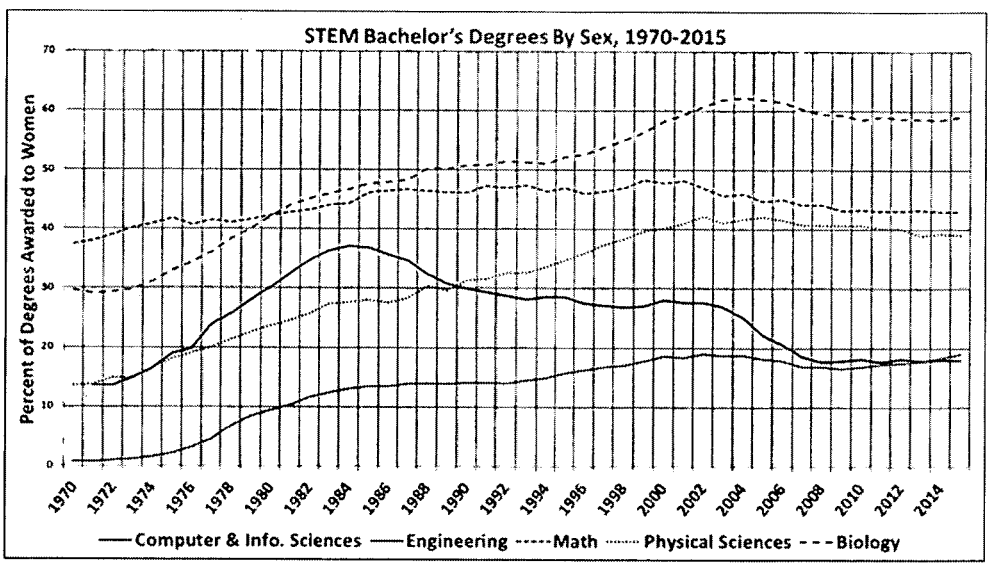

Figure 5.
(Data from *National Center for Education Statistics*, 2016)

There may well have been a variety of responsible causes, but a plausible explanation for the abrupt about-face is that it is tied to the introduction and penetration of home computers.[80] In the 1970s, few students came to college with computer experience; they simply had never been exposed to them, so they all

77. *Id.*
78. *Id.*
79. *Id.*
80. Steve Henn, *When Women Stopped Coding*, NPR: PLANET MONEY (Oct. 21, 2014, 8:54 AM), https://www.npr.org/sections/money/2014/10/21/357629765/when-women-stopped-coding.

started at the same point. But, in the late 1970s, home computers such as the TRS-80, the Apple II and the Commodore PET came on the market offering the technically inclined a hobby outlet.[81] By the mid-1980s, personal computers, such as the IBM PC and Apple Macintosh, were increasingly common, having been named the Time Magazine "Machine of the Year" for 1982, usurping an accolade heretofore reserved for entities of the human persuasion.[82] By that time, many students came to college with pre-existing knowledge, and most of those students were boys because it was mostly boys who tinkered with computers. The uninitiated, arriving at college and trying to decide what to study, would likely have felt disadvantaged compared to the "computer nerds" who arrived at college speaking a language that was unfamiliar to the novice. Students who might have elected computer science when everyone started from a position of ignorance may not have wanted to enter a field where they were already behind.[83] Now, this may not be the full story, or even a part of it. However, it seems a more plausible explanation than the suggestion that for fifteen years computer science was welcoming to women, but in 1984, computer scientists finally remembered that they did not like women and acted to keep them out thereafter.

In retrospect, it is easy to claim science as a bastion of patriarchy based solely on current demographics. Yet, prospectively, those who believe in the power of the patriarchy might have predicted that law and medicine would be the last citadels to fall. After all, lawyers often view themselves as knights-errant roaming the countryside doing battle in the name of truth, justice, and corporate profits. Doctors are often accused of having a God-complex. But these highly paid, prestigious fortresses surrendered early. Who would have thought that the last redoubt of the patriarchy would have been manned by the pocket-protector brigade?

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81. Jeremy Reimer, *Total Share: 30 Years of Personal Computer Market Share Figures*, ARS TECHNICA (Dec. 15, 2005, 5:00 AM), https://arstechnica.com/features/2005/12/total-share/.

82. *Id.*

83. Human capital gained through leisure pursuits is often not considered when looking at individuals' experience, either educational or occupational, yet in some cases it can make a big difference in the extent of an individual's experience. In the wake of the brouhaha over the "Google Memo," Columnist Megan McArdle recounted her experience working for a tech company. She enjoyed the work and her co-workers, but she realized that the field was not for her when she learned that her male co-workers had an enthusiasm for building networks in their spare time that she did not share. She realized at that point that that she "was never going to be as good at that job as the guys around me." Megan McArdle, *As a Woman in Tech, I Realized: These Are Not My People*, BLOOMBERG VIEW (Aug. 9, 2017, 11:34 AM), https://www.bloomberg.com/view/articles/2017-08-09/as-a-woman-in-tech-i-realized-these-are-not-my-people. Although this is just one anecdote, it is a commonly heard one. When I was a teenager in the 1960s, there were not computers to work on, but there were cars. Many of my friends were mechanical wizards, taking out the engines in their cars and either rebuilding them or replacing them with more powerful engines. (I knew no girls with similar interests, although I am sure some small number of them existed.) If, upon high-school graduation, these boys and some of their female classmates elected to enter the local community college, one would imagine that when they decided what career path to pursue, the auto mechanics program would have been forbidding to the girls, given that they would be competing against boys who already had years of experience.

C. *No End in Sight to Occupational Segregation*

There is little reason to expect that proportional representation throughout the workplace is just around the corner and, therefore, little reason to think that advocates of "gender equality" will ever declare victory and go home.[84] Sex differences in occupational interest have been remarkably stable. A meta-analysis examining several decades of studies of occupational interest concluded that despite the dramatic changes in the workplace over the prior four decades, "sex differences are remarkably consistent across age and over time."[85] Given that several decades of programs designed to increase the number of women in science have not been able to eliminate disparities,[86] perhaps the disparities simply are not going to go away.

It may well be that the constant drumbeat of complaints about the hostility of STEM fields to women has actually increased women's disincentives to enter them.[87] After all, if you were a high-school girl who had been inundated for years with claims that STEM fields are not congenial to girls, why would you choose such a field?[88] A recent study purporting to demonstrate that "gender bias" is a cause of gender gaps in STEM engagement supports this notion.[89] Female subjects who were exposed to a simulated news article reporting that studies had shown that STEM fields are biased against women reported less-positive attitudes toward such fields and fewer aspirations to work in those fields than those exposed to an article reporting that studies had found no evidence of gender bias. Although the authors interpreted their results as suggesting that "the existence of gender bias

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84. Although the causes of sex differences discussed herein are beyond the scope of this essay, there is substantial evidence that many of them are products of biological evolution, with proximate hormonal causes, and thus are not likely to be erased by a little "attitude adjustment." *See* BROWNE, BIOLOGY AT WORK, *supra* note 16, at 61-65. *See generally* Browne, *Sex and Temperament*, *supra* note 2.

85. Rong Su et al., *supra* note 12, at 880.

86. *See* COMM. ON EQUAL OPPORTUNITIES IN SCI. & ENG'G, NAT'L SCI. FOUND., BROADENING PARTICIPATION IN AMERICA'S SCIENCE AND ENGINEERING WORKFORCE 27 (2004), https://www.nsf.gov/attachments/102806/public/CEOSE2004Report.pdf; Nancy Morrison, *NSF Support of Women in Academia Since 1982*, STATUS, Jan. 2014, at 13, 13, https://cswa.aas.org/status/Status_2014_Jan_links-corrected.pdf.

87. ADRIANA D. KUGLER ET AL., CHOICE OF MAJORS: ARE WOMEN REALLY DIFFERENT FROM MEN? 23-24 (2017), http://ftp.iza.org/dp10947.pdf (concluding that "the current policy focus on increasing women in STEM fields might have paradoxically strengthened the associated masculinity of STEM majors"). *See also* Aagoth Elise Storvik & Pål Schøne, *In Search of the Glass Ceiling: Gender and Recruitment to Management in Norway's State Bureaucracy*, 59 BRIT. J. SOCIOL. 729, 747 (2008) (suggesting that women may apply for fewer management positions because they expect to be discriminated against).

88. *See* Wendy M. Williams & Stephen J. Ceci, *National Hiring Experiments Reveal 2:1 Faculty Preference for Women on STEM Tenure Track*, 112 PROC. NAT'L ACAD. SCI. 5360, 5564 (2015) (after finding a substantial preference for hiring women for tenure-track STEM professorships, arguing that "[t]he perception that STEM fields continue to be inhospitable male bastions can become self-reinforcing by discouraging female applicants (26-29), thus contributing to continued underrepresentation, which in turn may obscure underlying attitudinal changes") (citations omitted)).

89. Corinne A. Moss-Racusin et al., *Gender Bias Produces Gender Gap in STEM Engagement*, 79 SEX ROLES (forthcoming 2018), https://doi.org/10.1007/S11199-018-0902-Z.

produces STEM gender gaps," it would be more accurate to say that telling people that a field is biased against them results in less-positive feelings toward it, a somewhat common-sense proposition. Indeed, one would imagine that such explicit, even if well-intentioned, messages by authority figures would be a considerably greater impediment to female pursuit of scientific careers than a plastic doll's saying "Math class is tough." One predictable consequence of these prophecies, to the extent that they become self-fulfilling, is that gender-equality proponents will never be out of work.[90]

At bottom, the question is why it matters whether women constitute half of all engineers and computer scientists. Advocates of "gender equality" are placed in somewhat of a bind by that question. Is it important to have proportional representation of women because they bring something unique to the table? Do they do engineering and computer science differently? If they do, then perhaps they are also differentially attracted to the fields, or, heaven forfend, perform at different levels in them. On the other hand, if male and female scientists are fungible, then why is it important to increase the number of women who go into those fields? Some argue that society needs more scientists, but that is not an argument for preferring female scientists to male ones. In fact, that argument might suggest that we should recruit into college a group that tends to have greater interest in the fields in question and that is substantially under-represented among college students. That group, of course, is males.[91] If a shortage of scientists is the

90. One set of researchers, in light of interviews with adolescents who attributed women's under-representation in physics to factors such as motivation and interest, expressed concern over "the risk that these individualistic narratives which consign discrimination to history thus 'responsibilise' ... young women for their 'incorrect choices' and lack of access." Becky Francis et al., *The Construction of Physics as a Quintessentially Masculine Subject: Young People's Perceptions of Gender Issues in Access to Physics*, 76 SEX ROLES 156, 161 (2017). It seemed important to them to keep alive a sense of victimization, complaining that "discourses of equality of opportunity and meritocracy" have "the potential effect of positioning women as individually responsible for their lack of access to Physics." *Id.* at 164. Note that the authors do not say "individually responsible for their not pursuing a career in physics," but rather characterize the situation as women's having a "lack of access" to physics.

91. One sees the same dynamic in discussions of the military. One of the principal arguments for opening up combat positions to women was that it would "double" the pool of recruits. *See* Terry Gross, *A Purple Heart Warrior Takes Aim at Military Inequality in 'Shoot Like a Girl'*, NPR (Mar. 2, 2017, 2:56 PM), https://www.npr.org/templates/transcript/transcript.php?storyId=517944956 (plaintiff in lawsuit challenging female combat exclusion stating that "[w]e were trying to double the pool of candidates that could apply for any position"). Yet only about 15% of the military is female, and no one seriously expects that opening combat positions to women will increase that figure much, if it increases it at all. *See* KINGSLEY BROWNE, CO-ED COMBAT 268-69 (2007). In fact, opening combat jobs to women may decrease the military's attractiveness to them, as women who would like to serve in the military but are reluctant to be exposed to combat risk may simply choose not to join. *Id.* at 269-70 (noting that after the War in Iraq began, enlistments of women went down). Nonetheless, the military is eager to increase the number of women, even though they are more costly to recruit and retain, and even though the active-duty military has shrunk by about one-third since 1990. *See generally* AGNES GEREBEN SCHAEFER ET AL., *Integrating the Marine Corps Infantry: Representation and Costs*, *in* IMPLICATIONS OF INTEGRATING WOMEN INTO THE MARINE CORPS INFANTRY 101-26 (2015); Kim Parker et al., *6 Facts About the U.S. Military and Its Changing Demographics*, PEW RES. CTR. (Apr. 13, 2017), http://www.pewresearch.org/fact-tank/2017/04/13/6-facts-about-the-u-s-military-and-its-changing-demographics/.

problem, the resources spent on trying to increase the number of women in science might be more productively spent on trying to increase the number of *people* in science, a goal that might require different strategies.

II. WHAT ABOUT THE GLASS CEILING AND THE GENDER GAP?

Just as occupational segregation is mostly about sex differences in tastes and talents, so also are the glass ceiling and gender gap. There is a large literature on this subject, which I will not rehearse here;[92] instead, I will make just a few points.

A. The Glass Ceiling

1. The Executive Suite: Employer Selection or Self-Selection?

Much of the glass-ceiling literature assumes that highly qualified women are unfairly retarded in their advance up the corporate (or other institutional) ladder. Admittedly, it is often true that the higher one goes up the executive ladder, the fewer women one will find. So, at each level, the argument goes, women are being winnowed out, causing higher organizational levels to become increasingly male. Critics of the glass ceiling, however, may be identifying the wrong culprit. Whereas they view employers as the agent screening women out, either through discriminatory actions or discriminatory institutions, in many cases it is women who are screening themselves out.

Elizabeth Becker and Cotton Lindsay have persuasively shown that at least part of what is going on is that women are bailing out on their way up the ladder in order to devote effort to household production rather than market work.[93] This, in itself, should not be a controversial statement, as a trip to a suburban country club on a summer afternoon will confirm, with mothers—former lawyers, investment bankers, stockbrokers, etc.—lunching at pool-side while their children frolic in the swimming pool nearby and their highly paid husbands toil at the office.[94] This is not to suggest that it is all fun and games for women who opt out, as their lives are often quite busy with household management, charity work, and so forth. The critical point, however, is that these women are not a random sample of the female workforce from which they exited, such that their removal from the workforce left the profile of the remaining workforce much as it was, albeit somewhat shrunken. Rather, these are typically among the most highly able women, and, not coincidentally, they tend to be married to highly able men. Becker and Lindsay's explanation for the male disproportion at the highest reaches of institutions is that within the pool of highly talented persons in the labor force

92. *See generally* BROWNE, BIOLOGY AT WORK, *supra* note 16; Browne, *Sex and Temperament*, *supra* note 2 (some of my thoughts are more extensively described).

93. Elizabeth Becker & Cotton M. Lindsay, *Assortative Mating or Glass Ceiling: Under-Representation of Female Workers Among Top Earners*, *in* ACCOUNTING FOR WORKER WELL-BEING 237 (Solomon W. Polachek ed., 2004).

94. *See* Ross Finnie & Ian Irvine, *Mobility and Gender at the Top Tail of the Earnings Distribution*, 37 ECON. & SOC. REV. 149, 167-70 (2006) (finding that among all tax filers in Canada in a twenty-year period, half of the men in the top 0.1% of earnings had spouses who had no earnings).

competing for the top positions, there are proportionately more men than women precisely because many of the most able women have opted out of the pool.[95]

Becker and Lindsay's main argument rests on three propositions. First, productivity and leadership potential are highly correlated with intelligence, such that those who make it to the top (whether male or female) tend to be among the most intelligent.[96] Second, marriages tend to reflect assortative mating for intelligence and other traits associated with labor-market productivity.[97] Thus, smart people tend to marry other smart people, and not-so-smart people tend to marry other not-so-smart people. Third, participation of women in the labor force declines with increased spousal earnings substantially more than it does for men.[98] These three propositions suggest that as husbands' intelligence increases, the labor-force participation of their wives declines, and, because of assortative mating, it declines with the wives' own intelligence as well.[99] Thus, many of the women who otherwise might be best positioned to ascend the corporate ladder have selected themselves out of the race.[100]

The three propositions on which the argument rests should be relatively uncontroversial. The relationship between intelligence and occupational success is well established and has been for decades.[101] Likewise, the existence of assortative marriage for intelligence and other traits has long been known.[102] Finally, the tendency of women married to high-status men to forsake the labor market is well

95. Becker & Lindsay, *supra* note 93, at 238.

96. *Id.*

97. *Id.*

98. *Id.*

99. *Id.*

100. *Id.* (reporting that "[a] disproportionate number of the more intelligent women of each age cohort leave the labor force prematurely or never enter, leaving those in the labor force on average with an intelligence deficit compared with male workers for whom no selection bias operates").

101. *See generally* CHARLES MURRAY, INCOME INEQUALITY AND IQ (1998). *See also* Tarmo Strenze, *Intelligence and Socioeconomic Success: A Meta-Analytic Review of Longitudinal Research*, 35 INTELLIGENCE 401, 415 (2007) (finding that "intelligence is one of the central determinants of one's socioeconomic success"); Frank L. Schmidt & John Hunter, *General Mental Ability in the World of Work: Occupational Attainment and Job Performance*, 86 J. PERS. & SOC. PSYCHOL. 162, 162-69 (2004) (finding a strong relationship between general mental ability and job performance (and stronger than between personality and job performance)); Linda S. Gottfredson, *Why g Matters: The Complexity of Everyday Life*, 24 INTELLIGENCE 79, 79 (1997) (reviewing evidence of the importance of intelligence to job performance, especially, but not only, in complex jobs); Nathan R. Kuncel et al., *Academic Performance, Career Potential, Creativity, and Job Performance: Can One Construct Predict Them All?*, 86 J. PERS. & SOC. PSYCHOL. 148, 158 (2004) (finding that tests of general mental ability predict not only academic success but also job performance); Jonathan Wai & Heiner Rindermann, *The Path and Performance of a Company Leader: A Historical Examination of the Education and Cognitive Ability of Fortune 500 CEOs*, 53 INTELLIGENCE 102, 105 (2015) (reporting that not only are Fortune 500 CEOs characterized by high ability, higher CEO education and cognitive ability was associated with higher revenues for their company).

102. *See* R. Plomin & I.J. Deary, *Genetics and Intelligence Differences: Five Special Findings*, 20 MOLECULAR PSYCHIATRY 98, 102-03 (2015); Marieke van Leeuwen et al., *A Twin-Family Study of General IQ*, 18 LEARNING & INDIVIDUAL DIFFERENCES 76, 77, 85-86 (2008); C.G.N. Mascie-Taylor, *Spouse Similarity for IQ and Personality and Convergence*, 19 BEHAVIOR GENETICS 223, 226 (1989).

known,[103] and, in fact, provides one basis for the complaint that men have an advantage over women in the race to the executive suite, because male executives often have a spouse keeping the home fires burning, while female executives seldom do.[104]

Becker and Lindsay found substantial empirical support for their hypothesis. They found that among married males, labor-force participation increased across the top three quintiles of intelligence; for married females, in contrast, the pattern was just the opposite.[105] Indeed, at the highest intelligence quintile, the full-time labor participation rate for men was 2.66 times that of women (88.7% for men, 33.4% for women).[106] Thus, what these results suggest is that rather than being stopped by a glass ceiling, many highly able women voluntarily choose (and I do not use scare quotes around either "voluntarily" or "choose"[107]) to pursue other priorities, leaving behind a male-skewed pool of highly able candidates for top positions. Becker and Lindsay concluded that the relatively low number of women in the highest positions is not due to employers' barring them from these jobs; instead, the "presence of women in the best paying positions is more or less representative of the pool of qualified females available to fill them."[108] These findings call into question efforts to equalize the sexes in the executive suite, as that would require the elevation of less-able women over more highly able men, potentially leading to poorer institutional performance, as well as a perception that men make better executives than women.[109]

2. *Academia: "Assisting" Women Through Revised Tenure Policies*

The fact that men and women respond differently to opportunities and incentives has other consequences, as well. In the academic world, much concern

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103. Boris Groysberg & Robin Abrahams, *Manage Your Work, Manage Your Life*, HARV. BUS. REV. (Mar. 2014), https://hbr.org/2014/03/manage-your-work-manage-your-life (in a study of 4,000 executives, finding that 60% of men had spouses who did not work outside the home, compared to only 10% of the women). These executive wives are, in a sense, the lucky ones, as their husbands make enough money to allow them the opportunity to stay home if they want, which many women do. In fact, a majority of working mothers (as well as of nonworking mothers) prefer to stay home and take care of the family and the house. Valentina Zarya, *Poll Finds Most Working Moms Would Rather Stay Home*, FORTUNE (Oct. 5, 2016), http://fortune.com/2016/10/05/working-moms-stay-home/ (but that is not perceived as economically practicable for many).

104. *See* Joan Williams, *Gender Wars: Selfless Women in the Republic of Choice*, 66 N.Y.U. L. REV. 1559, 1602-03 (1991) (complaining that "elite males tap a flow of domestic services that reinforces their ability to conform to workaholic norms").

105. Becker & Lindsay, *supra* note 93, at 252. In contrast, there was little effect for unmarried individuals.

106. *Id.*

107. *Cf.* Williams, *supra* note 104.

108. Becker & Lindsay, *supra* note 93, at 257. Becker and Lindsay note that intelligence coupled with availability is not sufficient to qualify for a top job. Important also is work experience, which men tend to have more of than women. Indeed, the group of full-time employees who were in the top decile for both intelligence and lifetime work experience was only 5.7% female. *Id.* at 258.

109. It should go without saying—but these days it usually cannot—that this is not an argument that men are smarter than women but rather that smart men and smart women often make different work-related choices.

has been expressed over the fact that the tenure clock and the biological clock are running at the same time for women.[110] Thus, women in academia are disadvantaged, the argument goes, by a short tenure clock that is running just when they are likely to be starting families.

One response to the concern over the concurrent running of these two clocks has been to provide maternity leave, during which time the tenure clock is paused. Out of concern that providing only maternity leave but not paternity leave would reinforce traditional notions of women as the primary nurturers of children—not to mention concerns about Title VII liability—many universities make parental leave available for both sexes. Whatever the merits of these policies on other grounds, they seem to have a perverse effect from the perspective of those who see parental leave as a solution to women's perceived disadvantage.

Parental leave may, in fact, exacerbate women's disadvantage, because men and women differ in their response to it. The first "problem" is that men are less inclined than women to take parental leave,[111] but potentially even more problematic is the use they make of those leaves when they do take them. While women who take parental leaves typically use the time for actual parenting, men are more likely than women to use the time off to burnish their resumes. Even when male faculty members have time off and their wives do not, their wives still perform more childcare (apparently because they enjoy it more).[112] Thus, Steven and Christopher Rhoads report that male faculty members were taking paid leaves even when their wives were not working or when their children were in full-time day care.[113] They report one of their female professor subjects as saying, "If women and men are both granted parental leaves and women recover/nurse/do primary care and men do some care and finish articles, there's a problem, though a problem with no clear solution."[114] The authors suggest that one potential solution is to allow leaves only for mothers, arguing that sex-neutral leaves "injure females seeking tenure by giving their male counterparts an unfair advantage."[115]

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110. Although complaints of discrimination against women in academic science are often expressed, data are not supportive of that claim. A large-scale survey of doctoral recipients found that although women were less likely to take tenure track positions in science, the disparity was completely explained by fertility decisions. Also, after controlling for a variety of factors that legitimately affect tenure and promotion decisions, there was no sex difference in the granting of tenure or promotion to full professor. *See generally* Donna K. Ginther & Shulamit Kahn, *Does Science Promote Women? Evidence from Academia 1973-2001* (Nat'l Bureau of Econ. Research, Working Paper No. 12691, 2006).

111. Men's reluctance to take parental leave is the basis for Michael Selmi's suggestion that men be required to take parental leave (although he concedes that the proposal is unlikely to garner political support). *See* Michael Selmi, *Family Leave and the Gender Wage Gap*, 78 N.C. L. REV. 707, 773-74 (2000).

112. Steven E. Rhoads & Christopher H. Rhoads, *Gender Roles and Infant/Toddler Care: Male and Female Professors on the Tenure Track*, 6 J. SOCIAL, EVOLUTIONARY, & CULTURAL PSYCHOL. 13, 27 (2012).

113. *Id.* at 28.

114. *Id.*

115. *Id.* To the extent that the leave is short enough to be fairly characterized as disability leave due to pregnancy, leave for mothers alone is probably consistent with Title VII. *See generally* California Fed. Sav. & Loan Ass'n v. Guerra, 479 U.S. 272 (1987) (holding that the Pregnancy Discrimination Act does not prohibit treating pregnancy better than non-pregnancy-related medical

Similar unintended consequences attend policies extending the tenure clock generally for parents. Responding again to concerns about the effect of the tenure clock on female faculty, many universities have adopted policies extending the clock for parents, the idea being that scholarly productivity will slow for parents of small children, but this slowing is not indicative of a generally reduced productivity. The earliest policies tended to be restricted to women, but most universities now have sex-neutral policies. A study of tenure outcomes in Top-50 economics departments found that adoption of gender-neutral policies resulted in the exact opposite of the intended effect.[116] Female assistant professors were 22 percentage points less likely to obtain tenure at the university, while male professors were 19 percentage points *more* likely to do so, after the adoption of such policies.[117] The mechanism by which this effect occurred seems to be that men's rates of publication in top-5 economics journals rose under tenure-extension policies.[118]

The sex difference in response to parenthood and labor-force attachment cannot help but have an impact on statistical measures of "equality." Left to their own devices, men and women respond differently to marriage and parenthood in ways that are bound to affect their representation at the highest levels of organizations. As long as they do—and there is no indication that the difference is going to disappear—the quest for "gender equality" will continue to be in vain.

B. The Gender Gap in Compensation

Much has been written about the gender gap in compensation,[119] and there is insufficient room here to deal with the subject in detail. A few observations will have to suffice.

One of the more mendacious tropes in the "gender equality" oeuvre is the claim that women earn substantially less than men for doing the same job, with females earning 77 cents on the dollar compared to men being a common figure

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conditions). Female-only *parenting* leaves, however, would be more difficult to defend under current doctrine. *See, e.g.*, OFFICE OF LEGAL COUNSEL, U.S. EQUAL EMP. OPPORTUNITY COMM'N, EEOC ENFORCEMENT GUIDANCE ON PREGNANCY DISCRIMINATION AND RELATED ISSUES 35 (2015), https://www.eeoc.gov/laws/guidance/upload/pregnancy_guidance.pdf ("Leave related to pregnancy, childbirth, or related medical conditions can be limited to women affected by those conditions. However, parental leave must be provided to similarly situated men and women on the same terms.").

116. HEATHER ANTECOL ET AL., EQUAL BUT INEQUITABLE: WHO BENEFITS FROM GENDER-NEUTRAL TENURE CLOCK STOPPING POLICIES? 23-24 (2016), http://ftp.iza.org/dp9904.pdf.

117. *Id.* at 24. The study dataset consisted of all assistant professors hired at top-50 economics departments from 1985 to 2004. *Id.* at 3.

118. *Id.* at 22, 24. There was no evidence that the policies reduced the fraction of women who eventually earned tenure somewhere, suggesting that the women who failed to earn tenure probably ended up earning tenure at lower-ranked institutions. *Id.* at 20.

119. *See generally* Francine D. Blau & Lawrence M. Kahn, *The Gender Wage Gap: Extent, Trends, and Explanations* (Nat'l Bureau of Econ. Research, Working Paper No. 21913, 2016). *See also* BROWNE, BIOLOGY AT WORK, *supra* note 16, at 68-90.

invoked.[120] That claim has been debunked so often[121] that one can only assume that its proponents are either actively dishonest or simply impervious to facts. In fact, little if any of the so-called gender gap is related to sex differences in compensation for doing the same work in the same way.[122] Rather, it is primarily a consequence of the fact that men and women (on average) do different work and exhibit different workplace behaviors.[123] Thus, the gender gap has causes similar to those responsible for occupational segregation and the glass ceiling, and it is no more likely to go away than the other measures of "gender inequality" discussed above.

One of the principal reasons that men earn more than women is that they work more hours. This difference affects earnings in two ways. The first is the obvious fact that if you work more hours, you earn more money. Were this not true, it would be difficult to get people to work. In 2014, men worked, on average, 14% more hours than women (41 hours for men, 35.9 hours for women).[124] Among high-earning employees, however, the disparity is even greater. Joan Williams and Heather Boushey reported that professional-managerial men are 2.7 times as likely as equivalent women to work 50 or more hours per week.[125] As discussed

120. Louis Jacobson, *Barack Obama Ad Says Women Are Paid "77 Cents on the Dollar for Doing the Same Work as Men"*, POLITIFACT (June 21, 2012, 5:43 PM), http://www.politifact.com/truth-o-meter/statements/2012/jun/21/barack-obama/barack-obama-ad-says-women-are-paid-77-cents-dolla/.

121. *See* Mark J. Perry, *Evidence of Employers Paying Women 20% Less than Men for the Exact Same Work Is as Elusive as Bigfoot Sightings*, AEI (Mar. 27, 2017, 5:39 PM), http://www.aei.org/publication/evidence-of-employers-paying-women-20-less-than-men-for-the-exact-same-work-is-as-elusive-as-bigfoot-sightings/.

122. "In the same way" is an important condition, because even when men and women hold identical jobs, they may perform them differently in ways that affect compensation. For example, a recent study found that men earn 7% more per hour driving for Uber than do women, despite the fact that the earnings of all drivers are computed through an invariant formula, there is no negotiation of earnings, and hourly earnings are not tied directly to hours worked per week or tenure on the job. Cody Cook et al., *The Gender Earnings Gap in the Gig Economy: Evidence from over a Million Rideshare Drivers* (Stanford Graduate Sch. Bus., Working Paper No. 3637, 2018), https://www.gsb.stanford.edu/faculty-research/working-papers/gender-earnings-gap-gig-economy-evidence-over-million-rideshare (select "Download" icon). The researchers found that three factors accounted for the disparity: (1) men tend to drive in more lucrative locations; (2) men accrue greater work experience, thereby learning "where to drive, when to drive, and how to strategically cancel and accept trips"; and (3) men drive faster. *Id.* at 2. The 7% difference in earnings per hour would in most industries be "unexplained variance" that would be attributed to discrimination, because there are seldom data of sufficient granularity to allow the kind of analysis performed in this study.

123. *See generally* Kimberlee A. Shauman, *Occupational Sex Segregation and the Earnings of Occupations: What Causes the Link Among College-Educated Workers?*, 35 SOC. SCI. RES. 577 (2006); Kristin J. Kleinjans et al., *Occupational Prestige and the Gender Wage Gap*, 70 KYKLOS 565, 583 (2015) (finding that approximately half of the gender wage gap caused by occupational segregation is due to sex differences in occupational tradeoffs between contribution to society and wages).

124. BUREAU OF LABOR STATISTICS, U.S. DEP'T OF LABOR, WOMEN IN THE LABOR FORCE: A DATABOOK 80 (2015), https://www.bls.gov/opub/reports/womens-databook/archive/women-in-the-labor-force-a-databook-2015.pdf [hereinafter WOMEN IN THE LABOR FORCE 2015].

125. JOAN C. WILLIAMS & HEATHER BOUSHEY, THE THREE FACES OF WORK-FAMILY CONFLICT: THE POOR, THE PROFESSIONALS, AND THE MISSING MIDDLE 7 (2010), http://www.americanprogress.org/wp-content/uploads/issues/2010/01/pdf/threefaces.pdf. *See also* Youngjoo Cha & Kim A. Weeden, *Overwork and the Slow Convergence in the Gender Gap in*

previously, the presence of children decreases the number of hours worked for women but not for men.[126]

The second way that high hours affect earnings is that those who work longer hours tend to earn more *per hour*. Put another way, many occupations have nonlinear pay structures, such that a person who works fifty percent more hours is likely to earn more than fifty percent more money.[127] Occupations with more linear structures are associated with a lesser (or no) premium with respect to the number or timing of hours. Most jobs filled by individuals with JDs and MBAs fall into the former category; others, such as pharmacy, fall into the latter.[128] In the nonlinear occupations, employees tend not to be easily substitutable. Except in unusual cases, it would be very costly and disruptive for a law firm with a need for one full-time-equivalent lawyer to split that position into five part-time positions and have each lawyer work for one day of the week. The need for client meetings, communication of information among lawyers, court appearances, and so forth, would make this an unworkable solution.

The nonlinear nature of compensation in some occupations explains why although women with JDs and MBAs start out with largely equal earnings, by 15 years after graduation, there are substantial sex differences in earnings.[129] These differences are largely accounted for by sex differences in hours worked, time out of the labor force, and years of part-time employment.[130] The difference is particularly acute among women with high-earning husbands, who, as previously mentioned, have substantially lower labor-force participation rates than those with husbands having lesser earnings, and they also work substantially fewer hours per week when they do work. The principal cause of these sex differences, of course, is children, which substantially increase the likelihood of a woman's leaving the labor force or working part-time, especially if she has a high-earning husband.[131]

Compare the situation in law or business with pharmacy. There is little cost to flexible employment in pharmacy, because the extensive use of computer

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Wages, 79 AM. SOC. REV. 457, 476 (2014) (finding that the wage premium for overwork—defined as working more than 50 hours per week—has increased and partially offset the wage-equalizing trends of increasing similarity in men's and women's education and work experience); Patricia Cortes & Jessica Pan, *Cross-Country Evidence on the Relationship Between Overwork and Skilled Women's Job Choices*, 107 AM. ECON. REV.105, 105 (2017) (finding "that the prevalence of overwork in an occupation significantly lowers the share of tertiary-educated young ever-married women in that occupation").

126. Nikolay Angelov et al., *Parenthood and the Gender Gap in Pay*, 34 J. LAB. ECON. 545, 569 (2016) (finding that the within-couple gender gap in income for parents increased by 28 percentage points during the 15-year period after becoming parents). *See generally* Inés Hardoy et al., *Children and the Gender Gap in Management*, 47 LAB. ECON. 124 (2017) (finding that the within-couple gender gap in the likelihood of having a managerial position increases sharply after the birth of children).

127. Claudia Goldin, *A Grand Gender Convergence: Its Last Chapter*, 104 AM. ECON. REV. 1091, 1104 (2014).

128. *Id.* at 1110.

129. *Id.*

130. *Id.*

131. *See* Cortes & Pan, *supra* note 125, at 109 (finding that a requirement of high hours in an occupation negatively affects female labor-force participation and occupational choice, including in the corporate and technology sectors).

systems that keep track of patients across pharmacies, insurance companies, and physicians means that any pharmacist can know a patient's needs as well as any other. Thus, other than for managers who have a greater need to know what everyone else is doing, flexible hours are not burdensome to the employer. As a result, the relationship between hours and earnings is fairly linear, and there is no penalty for part-time work and little penalty to time out of the labor force.[132] In fact, relatively few female pharmacists actually have substantial interruptions from employment, because they are so easily able to work part-time. "[M]ore than 40 percent of female pharmacists with children work part-time from ... their early thirties [until they are] about 50 years old."[133] Male pharmacists still earn more than females, though, but that is almost entirely because they work about twenty percent longer hours.[134]

As should be clear from the above discussion, the extent of nonlinearity of compensation in an occupation is a strong predictor of whether, and to what extent, there is a gender gap in compensation. Where employees are largely substitutable, as in pharmacy, the gender gap tends to be small or nonexistent. When they are not, such that the number and timing of hours are important, then substantial gender gaps will continue even though male and female employees start out with compensation parity.

Although the principal claim of advocates for gender equality is that men and women should be paid the same amount, even that circumstance would not ultimately satisfy some proponents. As Brockmann and colleagues concluded, "women have an equivalent level of life satisfaction compared to men only when they receive significantly more money for each hour of spare time sacrificed to work."[135] Put another way, female managers have a higher preference for spare time (or at least non-labor-force time) than male managers.[136] Because of women's preference for shorter hours, the researchers concluded that "in order to reach better gender equality in leadership positions, women must be either paid higher incomes (on average around 10%) or must be incentivized with more spare time than men."[137]

Although hours of work are important contributors to the gender gap in compensation, they are not the only ones. Attitudes toward risk affect compensation, as well. One obvious way they do so is that, all else being equal, occupations associated with a high risk of physical injury or death will pay more

132. This situation has changed a great deal in recent decades. The proportion of pharmacists who were self-employed decreased from 40% in the mid-1960s to less than 5% in 2010, as more pharmacists became employees, principally in chain drug stores. As Goldin and Katz noted, "These changes are probably the single most important factors prompting the enormous increase in female pharmacists and accounting for the fact that women are the majority of pharmacists." Claudia Goldin & Lawrence F. Katz, *The Most Egalitarian of All Professions: Pharmacy and the Evolution of a Family-Friendly Occupation* 9 (Nat'l Bureau of Econ. Research, Working Paper No. 18410, 2012).

133. Goldin, *supra* note 127, at 1116.

134. *Id.*

135. Hilke Brockmann et al., *Why Managerial Women Are Less Happy than Managerial Men*, 19 J. HAPPINESS STUD. 755, 774 (2017), https://doi.org/10.1007/s10902-016-9832-z.

136. *Id.* at 772.

137. *Id.* at 755.

than safer jobs. There may be no greater predictor of the sex composition of a job than the physical risk associated with it. Every year, about 93% of workplace fatalities are men,[138] and the civilian occupations with the highest fatality rates are overwhelmingly male. The top five dangerous occupations are logger, fisher, aircraft pilot and flight engineer, roofer, and refuse and recyclable material collector.[139] Each of these occupations is well over 90% male.[140] But other risks, such as economic risks, influence compensation. Women have less taste than men for contingent compensation, such as working on commissions and bonuses, where financial risk falls directly on the employee rather than the employer.[141] Moreover, as discussed previously, risk preferences have more subtle effects, such as their influence in selecting STEM fields.

The above reasons are not the only reasons for the gender gap in compensation,[142] but they seem to be underappreciated as contributing factors.

III. THE POWER OF THE VICTIM NARRATIVE

One of the reasons to doubt that "gender equality" will be declared anytime soon is the stubborn attachment to the woman-as-victim perspective. Female success in education has been previously described, with the majority of bachelor's, master's, and doctoral degrees going to women. But there are still some fields where men get more degrees than women, so it seems that there can be no rest until women outnumber men in all of them. A naive observer, not steeped in female victimology, might well look at the educational system as a whole and find that males are disadvantaged. But that is not the world we live in.

One ironic aspect of the critique of "gender inequality" is how often it infantilizes women and perceives them as lacking agency and accountability. That is, rather than being seen as independent actors, females are viewed as being acted upon, at least when the discussion concerns disfavored outcomes. Consider this statement: "Although the Council of Graduate Education report shows that women are *earning* more doctoral degrees (52.4%) than men, women are still *held back* in

138. BUREAU OF LABOR STATISTICS, U.S. DEP'T OF LABOR, https://www.bls.gov/bls/proghome.htm (follow "Workplace Injuries" hyperlink; then follow "Publications" hyperlink; then follow "Charts and Tables" hyperlink under "Fatal Occupational Injuries;" then follow "Miscellaneous CFOI data tables" hyperlink; then follow "All worker profile, 2003-2016" hyperlink).

139. *Id.* at 3.

140. *See* WOMEN IN THE LABOR FORCE 2015, *supra* note 124, at 42-46 tbl.1.

141. Jeffrey A. Flory et al., *Do Competitive Workplaces Deter Female Workers? A Large-Scale Natural Field Experiment on Job Entry Decisions*, 82 REV. ECON. STUD. 122, 152 (2015).

142. For example, just as competitiveness affects choice of occupation, see *supra* text accompanying notes 57-59, it also affects compensation. *See, e.g.*, ERNESTO REUBEN ET AL., COMPETITIVENESS AND THE GENDER GAP AMONG YOUNG BUSINESS PROFESSIONALS 18 (2015), http://ftp.iza.org/dp9446.pdf (finding in a cohort of MBA graduates from the University of Chicago Booth School of Business that "the single experimental measure of competitiveness explains around half as much of the gender gap in earnings as a rich set of variables that include demographic characteristics, academic performance, and experimental and survey measures of important psychological attributes").

achieving successful careers in academics."[143] Thus, the "good" thing—women's being awarded degrees—is a consequence of women's "earning" them; but the "bad thing—women's failure to obtain as many positions as the authors think they should—is not a consequence of their "failure" to earn them but rather of their being "still held back" by someone or something else.

Another example of the "acted upon" narrative came from a study examining attrition among female engineering students, which labeled both women's "lack of interest" in the subject matter and their "lack of self-confidence" as "barriers" to women in the field.[144] One might as well say that I face barriers to eating at a particular restaurant because I hate its food. Barriers are generally thought of as features external to the actor, rather than simply a reflection of the actor's motivational state. Here, women's motivations are viewed as external to themselves. So, when women leave engineering because of a lack of interest in the subject matter, they are not viewed as making free choices based upon their own preferences but rather as being impeded by "barriers" (from an occupation that they are not interested in).[145] In other words, it is someone else's fault (as if fault had to be assigned to someone).

One recurring characteristic of the "gender equality" discussion is the reflexive "spin" that is placed on stories that can turn virtually any state of affairs into a tragedy for women. I have already mentioned the educational arena, but I will give just a couple of other examples, narrow in scope, but similar in character to those we have grown used to seeing. I previously mentioned the dramatic disproportion of male workplace fatalities, with there being about thirteen dead male bodies for every female one. If the sexes were reversed, this fact would be prominent in the argument for female workplace disadvantage. Instead, for the most part, the disparity is simply treated as a fact rather than a problem, assuming that it is acknowledged at all. There is at least one exception, however. In 1993, the *New York Times* called dramatic attention to sex disparities in workplace deaths.[146] But the story was not titled "*Holocaust for Men on the Job*," but rather "*High Murder Rate for Women on Job*."[147] According to the *Times*, a full 40% of female workplace deaths were homicides (although the story referred to them as murders) compared to only 15% of male deaths.[148] The *Times* quoted then-

143. E. Ioannidou et al., *Gender Equity in Dental Academics: Gains and Unmet Challenges*, 93 J. DENTAL RES. 5, 5 (2014) (emphasis added and internal citation omitted).

144. Suzanne G. Brainard & Linda Carlin, *A Six-Year Longitudinal Study of Undergraduate Women in Engineering & Science*, 87 J. ENGINEERING EDUC. 369, 373 tbl.6 (1998).

145. A pair of researchers recently explained that one of the unfair burdens facing female STEM students is the perception of the "ideal STEM student." Laura Parson & C. Casey Ozaki, *Gendered Student Ideals in STEM in Higher Education*, NASPA J. ABOUT WOMEN IN HIGHER EDUC., Dec. 2017, at 8. They describe the "ideal ... student as one who had an adequate academic background, put school first, was motivated and persistent, was not afraid to ask questions, demonstrated the capacity for abstract and rational thought in order to identify and solve problems, was individualistic, and was not afraid to fail." It seems that this complaint should require comment, but I am at a loss as to what to say.

146. *High Murder Rate for Women on Job*, N.Y. TIMES (Oct. 3, 1993), http://www.nytimes.com/1993/10/03/us/high-murder-rate-for-women-on-job.html.

147. *Id.*

148. *Id.*

Secretary of Labor Robert Reich's explanation: "Relative to common perceptions, sales work is dangerous. There are a lot of all-night convenience stores that simply are the scenes of crimes."[149] So, there you have it: women are being murdered in the workplace right and left at rates far higher than men. Finally, some attention was being paid to the sex disparity in workplace deaths.

But the *Times*'s story line and the Secretary Reich's argument were all wrong. As the story itself pointed out, 7% of total workplace deaths were women.[150] That means that just 2.8% of all workplace deaths (40% of the 7% of workplace deaths that were females) were female homicides. However, a full 14% of workplace deaths (15% of the 93% of workplace deaths that were males) were male homicides. Thus, there were five times as many male as female homicides, hardly demonstrating a "high murder rate" for women. The reason that the relatively small number of female homicide victims amounted to 40% of female workplace deaths was not because the workplace is dangerous for women but rather because it is so safe—that is, there are few women, relative to men, killed on the job by causes other than homicide.[151] Moreover, to the extent that the fatality rate is taken to be a measure of the dangerousness of the work itself, it overestimates that danger for women. In 2015, the most common assailant for male victims was "robber," while the most common assailant for female victims was "relative or domestic partner," with the rate of women's deaths due to robbery assailants being less than half that.

Another example of the fixation on female victimhood came in a study of racial and gender profiling in traffic stops in Massachusetts.[152] Not surprisingly, the researchers found that women were substantially less likely to be stopped, cited, or subjected to search than men were (would anyone have predicted otherwise?).[153] So, did the researchers conclude that *men* were being profiled? No, they did not even mention the possibility. Did the fact that women were subjected to less adverse attention from the police cause the researchers at least to conclude that women were *not* being profiled? Not explicitly. In fact, they called for gathering more data "on the traffic stop behavior of individual officers ... to determine if some officers are stopping larger number of female drivers compared to their similarly situated peers."[154] Thus, the *fact* that police were, as a whole, much harder on male drivers than female ones did not call for scrutiny to determine whether men were victims of profiling; rather, it was the *possibility* that some individual officers *might* be harder on female drivers than male drivers (though there was nothing in the data to raise that possibility) that prompted the call for further research.

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149. *Id.*

150. *Id.*

151. Nonetheless, the *Times* article has been cited for the proposition that "[w]omen are disproportionately represented in high-risk sales positions, and their health is therefore disproportionately affected." JUDITH A. LEWIS & JUDITH BERNSTEIN, WOMEN'S HEALTH: A RELATIONAL PERSPECTIVE ACROSS THE LIFE CYCLE 300 (1996).

152. AMY FARRELL ET AL., MASSACHUSETTS RACIAL AND GENDER PROFILING STUDY 24 (2004), https://repository.library.northeastern.edu/files/neu:344627/fulltext.pdf (finding that across virtually all Massachusetts communities "[m]ales were uniformly more likely to be ... cited than women").

153. *Id.*

154. *Id.* at 32.

These kinds of examples are even more reason to think that victory in the drive for gender equality will never be declared, irrespective of whether it is achieved.

CONCLUSION

It is difficult to avoid the conclusion that the call for "gender equality" has little to do with equality and more to do with special pleading—a view that women should get more of whatever resource is at issue. Those who make the most noise about sexual inequality seem to have little energy left when it comes to things like the disproportionate number of men among workplace deaths (93%) and among prison inmates (also 93%), or the fact that men are "burdened" with working more hours than women and dying younger.[155] Although many universities, my own included, have a "Commission on the Status of Women"—ostensibly concerned with issues of sexual equality—little attention is paid by them to the fact that men as a whole earn only a minority of bachelor's, master's, and doctoral degrees.

"Gender equality" advocates might respond that "nobody forced men to take dangerous jobs," "nobody forced men to commit crimes," and "nobody forced men to work those hours." All of those responses might be reasonable ones, but they represent a kind of argument that is applied only to men and not to women. It could equally be said that no one forced highly able women to leave the workforce and concentrate on domestic production, to become veterinarians or psychologists rather than engineers, or to work fewer hours than men.

The quest for "gender equality," as currently understood, is indeed a quixotic one. As long as equality is defined as requiring either what some argue it requires—an equal share of everything—or what many implicitly seem to require—*at least* an equal share of everything—equality will be elusive. If "equality" were redefined as meaning that both sexes are equally free to act pursuant to their own interests and preferences—recognizing that this will often mean that they act differently—it is much more likely to be achieved, if it has not been already.

155. *See* Kingsley R. Browne, *Mind Which Gap? The Selective Concern over Statistical Sex Disparities*, 8 FLA. INT'L U.L. REV. 271, 271-80 (2013).