

Joy Lisi Rankin

# Misogyny and the Making of the Tech Fratriarchy

In 1983, the women in the Massachusetts Institute of Technology (MIT)'s computer science and artificial intelligence labs published a scathing critique of their hostile work environment. The report, *Barriers to Equality in Academia: Women in Computer Science at MIT*, was the product of collective knowledge and experience. Nineteen women who were graduate students or research staff prepared the report. *Barriers to Equality in Academia* was, by its authors' reckoning, seven years in the making and outlined "the difficulties encountered by women at MIT and the prevailing attitudes that make it hard for women to succeed."<sup>1</sup> They noted, "Efforts to address the special problems of women in EECS [the Department of Electrical Engineering and Computer Science] can be traced back to at least 1976."<sup>2</sup>

The women who wrote *Barriers to Equality in Academia* documented, analyzed, and theorized the misogyny they experienced at MIT during the 1970s and early 1980s. They observed threads of misogyny interwoven through computing programs and networks and through their computing workplaces. Their analysis enables us to reenvision personal computing and social networking through the lens of misogyny, even before personal computers such as the Apple Macintosh appeared on the American digital scene.

1 Female graduate students and research staff in the Laboratory for Computer Science and the Artificial Intelligence Laboratory at MIT, *Barriers to Equality in Academia: Women in Computer Science at MIT* (Cambridge, MA: Massachusetts Institute of Technology, 1983), 33, <http://nms.csail.mit.edu/~dcurtis/Barriers%20Report%20EECS.pdf>.

2 *Barriers to Equality*, 31.

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Other scholars have traced how computing became masculine, but no one has yet analyzed how computing became misogynist, yet this is crucially important to understanding how computer science and the tech industry became hostile and harmful to women, including trans women and non-binary femmes.<sup>3</sup> Historians of computing have written either about men and masculinity in computing or about women in computing. I am interested in the relationships, interactions, dynamics, and power structures among them. Reading the *Barriers to Equality in Academia* report through the lens of misogyny demonstrates how computer science—still a young discipline in the 1970s—became not just masculine but also hostile to women. I suggest that misogyny is a key component of what I identify as the tech patriarchy.<sup>4</sup>

The *Barriers to Equality in Academia* authors draw from their personal experiences to analyze the harms of misogynistic behavior within academic computing; the section headings comprise a list of misogynist principles and offenses: “first a woman, then a professional; invisibility; patronizing behavior; misplaced expectations; unwanted attention; obscenity; the fishbowl syndrome.”<sup>5</sup> The authors observe that “the day-to-day experiences of many women in Computer Science are characterized by a greater emphasis on their gender than on their identity as serious professionals,” such as being described as only at MIT to get a husband or being told they were flirting to get ahead.<sup>6</sup> Such behavior accords with what the feminist philosopher Kate Manne identifies as an under-recognized aspect of misogyny.<sup>7</sup> Women are consistently pushed into the roles of humans *caring* or *giving*, roles in which their primary social identity is not individuated but understood only in relationship to and especially as caring for others. The authors also identify the harms of invisibility and exclusion; they report, for example, “Only one person could use the machine at a time. Often, while I was working on a task, a male graduate student would physically push me away from the machine and interrupt my work so that he could get at the machine. This didn’t happen to the men in the group.”<sup>8</sup>

In recounting their and their women colleagues’ experiences, the *Barriers to Equality in Academia* authors are not witnessing masculinity in action, nor even toxic masculinity. Toxic masculinity is typically understood through individuals, and these authors are addressing the practice, policing, and enforcing of gender norms within a patriarchal, racist, classist, heteronorma-

3 See Mar Hicks, *Programmed Inequality: How Britain Discarded Women Technologists and Lost Its Edge in Computing* (Cambridge, MA: MIT Press, 2017); Janet Abbate, *Recoding Gender: Women’s Changing Participation in Computing* (Cambridge, MA: MIT Press, 2012); and Nathan L. Ensmenger, *The Computer Boys Take Over: Computers, Programmers, and the Politics of Technical Expertise* (Cambridge, MA: MIT Press, 2010).

4 For more on tech patriarchy, see Joy Lisi Rankin, “The Motherboard: On the Erasure of Computing’s Diverse Past,” *Spike Magazine*, no. 68 (Summer 2021): 138–141.

5 *Barriers to Equality*, i.

6 *Barriers to Equality*, 6–7.

7 Kate Manne, *Down Girl: The Logic of Misogyny* (New York: Oxford University Press, 2018). Manne’s definition of misogyny encompasses misogynoir (misogyny directed toward Black women), and her work is attentive to the intersecting oppressions of gender, race, class, ability, and so on.

8 *Barriers to Equality*, 8.

tive system. Rereading the myriad examples of harms documented in *Barriers to Equality in Academia* through this lens demonstrates that MIT's computing center was not just a masculine space but a misogynist one. The examples delineate the duality of misogyny in its norms of what "she is *obligated* to give" and what she is "*prohibiting* from having or taking . . . *away* from dominant men."<sup>9</sup> According to their men colleagues, the women in computer science at MIT are obligated to provide dates, their telephone numbers, and lap cuddles; they are further obligated to wear two-piece bathing suits for summer technical meetings; yield their computing time; endure extensive unwanted attention; and tolerate tickling, unsolicited neck and shoulder rubs, and breast fondling. The women are likewise repeatedly unrecognized in their expertise, excluded from technical discussions, pushed away from their machines, robbed of solving their own research problems, labeled as unqualified, refused supervision by faculty members, and deprived of financial support. In other words, they are prohibited from masculine-coded goods including money, professional status, and public recognition.

I want to focus on one thread of misogyny that weaves throughout postwar American computing history and media history, what the *Barriers to Equality in Academia* authors term "obscenity." They reported as one example "a picture of a nude woman on our system which is printed out and displayed. It is also used occasionally to demonstrate the graphics capabilities of the system."<sup>10</sup> Considering this picture through the lens of misogyny sharpens our focus: computer representations of women serve to enforce the norm that women give their bodies and reproductive labor to men, whereas men take the power, prestige, and wealth associated with computing.

By 1983, when *Barriers to Equality in Academia* was published, the first computer porn was nearly a quarter-century old. During the 1950s, IBM, MIT, and the US military collaborated to build the Semi-Automatic Ground Environment (SAGE), a Cold War computer-based air defense system. The state-of-the-art, multimillion dollar system featured graphical displays, typically used for monitoring radar. By the late 1950s, the screen also could display a rendering of a nearly naked woman posed in a provocative position, a computer-based replication of a December 1956 *Esquire* calendar pin-up.<sup>11</sup> Some of the men who worked on SAGE also recalled a system program displaying a topless woman hula dancer in a grass skirt, who by various accounts swayed her hips or dropped her skirt upon computer command.<sup>12</sup>

Programming women as objects continued throughout the 1960s and into the 1970s, even becoming standard fare in learning programming languages or graphics. When Lawrence Roberts, who later received recognition as a "father of the internet," completed his master's thesis on "picture cod-

9 Manne, *Down Girl*, 130.

10 *Barriers to Equality*, 17.

11 Benj Edwards, "The Never-Before-Told Story of the World's First Computer Art (It's a Sexy Dame)," *The Atlantic*, January 24, 2013, <https://www.theatlantic.com/technology/archive/2013/01/the-never-before-told-story-of-the-worlds-first-computer-art-its-a-sexy-dame/267439/>.

12 Edwards.

ing” at MIT in 1960, his sample image was a so-called *Playboy* Playmate.<sup>13</sup> As computers and computing became more widespread, so did the misogynist images. In 1973, researchers at the University of Southern California (USC) decided to use the image of another *Playboy* centerfold for their conference paper.<sup>14</sup> The woman and her image, collectively known as Lena or Lenna, became one of the most used images in computing. What is striking to me about the origin story is that someone in the USC lab just happened to be walking around with a *Playboy*; it was casually available.

A year after Lena’s digital debut, the sociologist Ted Nelson self-published his now-iconic double-titled work *Computer Lib: You Can and Must Understand Computers Now / Dream Machines: New Freedoms through Computer Screens—a Minority Report* (1974), in which he aimed to popularize and personalize computing.<sup>15</sup> The journalist Steven Levy described Nelson’s book as “the epic of the computer revolution, the bible of the hacker dream.”<sup>16</sup> This “bible of the hacker dream” replicated the nude image of a woman—composed of characters including dollar signs and parentheses—on page 49. Nelson notes, “When word got around that this nude was in a public file on the time-sharing system, my office-mates scrambled to get printouts of her. The cleverest, though, had a *deck punched*. . . . Now he can put her *back* in the computer any time, but they can’t.”<sup>17</sup>

The visual misogynist reminders that women were expected to appear attractive to men and give their sexual labor pervaded computing culture from the “hacker bible” and graphics research to programming manuals for school-aged children. As I’ve argued elsewhere, the American academic time-sharing networks of the 1960s and 1970s created a golden age of computing—mostly for affluent white boys and men—and the programming language BASIC was essential to that golden age.<sup>18</sup> In 1973, the Digital Equipment Corporation published a book titled *101 BASIC Computer Games*.<sup>19</sup> It was so popular that it was reprinted multiple times. Its author, Dave Ahl, claimed it was the first computer book to sell a million copies, and *Time* magazine later described it as “the single most influential book of the BASIC era.”<sup>20</sup> In the 1975 edition, page 62 displays the program BUNNY, which prints the

13 Lawrence G. Roberts, “Picture Coding Using Pseudo-Random Noise” (master’s thesis, Massachusetts Institute of Technology, 1960), <https://web.archive.org/web/20060926134827/http://www.packet.cc/files/pic-code-noise.html>.

14 Jamie Hutchinson, “Culture, Communication, and an Information Age Madonna,” *IEEE Professional Communication Society Newsletter* 45, no. 3 (May/June 2001): 1, 5–7.

15 Ted Nelson, *Computer Lib: You Can and Must Understand Computers Now / Dream Machines: New Freedoms through Computer Screens—a Minority Report* (Chicago: Theodor H. Nelson, 1974).

16 Steven Levy, *Hackers: Heroes of the Computer Revolution*, 25th anniv. ed. (Sebastopol, CA: O’Reilly, 2010), 171.

17 Nelson, *Computer Lib / Dream Machines*, 49.

18 Joy Lisi Rankin, *A People’s History of Computing in the United States* (Cambridge, MA: Harvard University Press, 2018).

19 David A. Ahl, *101 BASIC Computer Games* (Maynard, MA: Digital Equipment Corporation, 1973).

20 John J. Anderson, “Dave Tells Ahl—the History of Creative Computing,” *Creative Computing* 10, no. 11 (November 1984): 66; and Harry McCracken, “Fifty Years of BASIC, the Programming Language That Made Computers Personal,” *Time*, April 29, 2014, <https://time.com/69316/basic/>.

image of the *Playboy* rabbit head logo, a reminder of the magazine famous for its pictures of naked women.

Also featured in *101 BASIC Computer Games* was UGLY, described in the book as a program that “draws an ugly woman.”<sup>21</sup> When I first saw this description in the table of contents, I was both horrified and curious. What makes the woman ugly? It might be challenging to decipher from just the program listing alone, but the illustration in the book makes it clear: the woman is fat and looks alarmed as her entire body is visibly vibrated by a belt exerciser machine.<sup>22</sup> Analyzing the program reveals its sexual nature. The numbers that a programmer would input to make the woman “ugly” (or not) represented the measurements of her breasts, waist, and hips. In the program they are labeled as “A, B, and C”; however, looking at the sample program runs makes clear what they really signify.

In a book intended to teach kids about computers and programming, UGLY sends the message that girls and women are valued for their physical appearance and reproductive labor (emphatically not their intelligence or personality). BUNNY and UGLY uphold the norm that girls and women should be slim and attractive for the heteronormative male gaze; anything less is subject to cruel mockery. It’s worth noting that among the ninety-nine other programs in the book, there are no direct references to men or women. The others are categorized, for example, as sports or war games, which makes these two stand out even more.<sup>23</sup>

This brings me back to the women writers of *Barriers to Equality in Academia*. Initially I was going to write that some of their more vivid examples perhaps seem less likely to occur today, but reports of sex parties, sexual harassment, and quotidian misogyny in Silicon Valley continue.<sup>24</sup> Misogyny morphs and adapts, just as the sites of computing’s tech patriarchy have expanded from university computer centers to bedrooms, dorm rooms, and tech companies’ so-called campuses.<sup>25</sup> Manne points out that as it has become socially more acceptable for women to achieve professionally, there is often more misogynist pushback. She explains that “when women’s capabilities become more salient and hence demoralizing or threatening . . . this may result in more or less subtle forms of lashing out, moralism, wishful thinking, and willful denial.”<sup>26</sup> The rise of Silicon Valley has coincided with American women’s increasing educational and professional successes following the Civil Rights and 1960s feminist movements, and tech misogynist pushback has burgeoned in tandem.

Reading computing history through the framework of misogyny enables us to see the making of the tech patriarchy. The term *fratriarchy* resonates

21 Ahl, *101 BASIC Computer Games*, 228–229.

22 For more on these machines, see “Belt Vibrator,” Kansas Historical Society, updated July 2017, <https://www.kshs.org/kansapedia/belt-vibrator/15638>.

23 Ahl, *101 BASIC Computer Games*, appendix A.

24 See, for example, Emily Chang, *Brotopia: Breaking Up the Boys’ Club of Silicon Valley* (New York: Portfolio/Penguin, 2018); and Anna Wiener, *Uncanny Valley: A Memoir* (New York: MCD/Farrar, Straus and Giroux, 2020).

25 Mar Hicks, “De-programming the History of Computing,” *IEEE Annals of the History of Computing* 35, no. 1 (2013): 86–88.

26 Manne, *Down Girl*, 101.

with tech culture because it describes a “social structure in which power is formed through a brotherhood.”<sup>27</sup> The concept of tech fratricide invokes the ways in which those with power in the 1950s and 1960s made computing masculine *and* white. Fratricide also invokes fraternities and universities, thereby drawing out university computer centers—and, later, college dorms and tech campuses—as key sites in the making of sexist tech.<sup>28</sup> Significantly, however, my definition of tech fratricide includes not just masculinity but also misogyny.

The authors of *Barriers to Equality in Academia* documented extensive misogyny in the social environments and practices of their computing work. They also recognized how misogyny became part of computing programs and how the policing of patriarchal norms was reinforced by misogyny in all of those spaces and places. Their analysis of misogyny, like Manne’s, crucially centers women; it “should be understood from the perspective of its potential targets and victims—girls and women. Misogyny is then what misogyny *does* to some such, often so as to preempt or control the behavior of others.”<sup>29</sup>

Seeking out sources in computing history created by those upon whom misogyny, racism, transphobia, and other interlocking forms of oppression have operated and attending to their exposition and criticism of patriarchal norms (which may also be racist, heteronormative, transphobic, or ableist) is a crucial starting point in understanding the tech industry’s continued hostility to women; queer, trans, and nonbinary people; Black, Indigenous, and people of color; and people with disabilities. Tech now dominates our economic, political, and social landscapes, and it shapes our individual lives in ways we often fail to be aware of. Understanding that it’s not just a male-dominated or masculinist industry but also a misogynist one is a necessary step in working toward justice and equity.

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27 Amanda Montell, *Wordslut: A Feminist Guide to Taking Back the English Language* (New York: HarperCollins, 2019), 107.

28 Ensmenger argues that university computer centers were key to the formation of computing masculinity. Nathan Ensmenger, “‘Beards, Sandals, and Other Signs of Rugged Individualism’: Masculine Culture within the Computing Professions,” *Osiris* 30, no. 1 (2015): 38–65.

29 Manne, *Down Girl*, 20.