TECHNOLOGY AND GENDER

Harvard University
Department of the History of Science
Tuesdays 3:00– 5:45 pm
Science Center 469

Fall 2018
Instructor: Alma Steingart
Office Hours: Monday 11-1 (SC 256)
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Description: How have ideas about femininity and masculinity impacted the design and use of technological artifacts? Is technology gender-neutral? How have technological developments changed the roles of women in the home and the workplace? Why are women underrepresented in engineering and computing professions? Using readings from the history of science and science studies, this seminar will examine the co-construction of gender and technology. Topics will range from medical and reproductive technologies to early household and consumer technologies to computing and gaming cultures.

Assessment:
Attendance and Participation: 20%
Class Presentation: 10%
One Short Paper: 25%
Final Paper and Final Presentation: 35% + 10%

Attendance and Participation: This is a seminar course. You are expected to attend each class having done the readings and arrive ready to discuss them. In order to have a productive discussion, it is crucial that you spend time prior to class reflecting on the material and formulating questions and topics you wish to discuss with your fellow class members. <u>If I find that students have not carefully read the assigned materials, for the duration of the semester you</u>

In-Class Assignment: Beginning in the third week, one or two students will be responsible for preparing and presenting a *visual guide* to the readings. The presentation should last about ten minutes and should serve as an opportunity for students to explore on their own some of the ideas presented in the week's articles. You are encouraged to contact me ahead of your presentation to discuss the topic covered. I will provide additional guidance on the nature of the presentation during our first meeting.

First Assignment: Two weeks before the paper is due, I will model in class how to do an "implosion assignment" – this means mapping out different social, political, bodily, economic, material dimensions of an object or thing (in this case, with our eyes opened particularly to gender). Following this model, choose an object that we did not read about (be specific!) and construct a diagram, map, or chart that delineates the same thematic dimensions of how your technology is embedded in the world.

Final Paper (9-10 pages): Following on the first assignment, build upon this "rough draft" to compose a polished paper addressing the following questions: What are the gendered conditions and contexts of your object's production and distribution? What is your technology's history? In what contexts is it manufactured and consumed? Has it been appropriated for different ends than intended, or by groups of people to whom it was not initially marketed? How does its production and use articulate with scientific constructions of sex, gender, or sexuality? Engage with class readings in your analysis and provide a bibliography in a standardized academic style. You are not required to use the same object from the first assignment, although you are welcome to do so.

Final Presentation: During the last day of class, you will have the opportunity to present your chosen artifact to your colleagues and share some of your findings with them. This oral presentation should include some visual materials and speak to the historical and cultural contexts in which your artifact is embedded.

Disabilities. Please contact me by the end of the second week of the semester if you have a documented disability so that we can make any necessary accommodations.

SCHEDULE

September 4: Intro
No reading assignment

September 11: What is Gender? What is Technology?
Fausto-Sterling, Anne. 1993. "The Five Sexes: Why Male and Female Are Not Enough." *The Sciences* 33 (2): 20-2.
Herzig, Rebecca. 2005. "Gender and Technology," in *A Companion to American Technology* (Malden: Blackwell): 199-211.
Jasanoff, Sheila. 2006. "Technology as a Site and Object of Politics," in *The Oxford Handbook of Contextual Political Analysis* eds. Robert E. Goodin and Charles Tilly (New York:

Oxford University Press): 745 – 766.

Faulkner, Wendy. 2000. "The Power and the Pleasure? A Research Agenda for
'Making Gender Stick' to Engineers," *Science, Technology and Human Values*, 25: 87-119.
Scott, Joan. 1986. "Gender: A Useful Category of Historical Analysis," *American Historical Review* 91 (5): 1053-1075.

September 18: Some Historical Perspective

Frehill, Lisa. 2004. "The Gendered Construction of the Engineering Profession in the United States, 1893–1920." *Men and Masculinities* 6 (4): 383-403.
Oldenziel, Ruth. *Making Technology Masculine: Men, Women and Modern Machines in America, 1870-945*. (Amsterdam: Amsterdam University Press, 1999): 19-50.
Lubar, Steven. 1998. "Men/Women/Production/Construction," in *His and Hers: Gender, Consumption, and Technology* (Charlottesville: University Press of Virginia): 7-38.

Bray, Francesca. 1997. *Technology and Gender: Fabrics of Power in Late Imperial China* (Berkeley: University of California Press).

DESIGNERS AND USERS IN FOUR ACTS

September 25: The Razor

Herzig, Rebecca. 2015. *Plucked: A History of Hair Removal* (New York: New York University Press): 75 – 98, and 115-134.
Van Oost, Ellen. 2003. "Materialized Gender: How Shavers Configure the Users' Femininity and Masculinity," in Nelly Oudshoorn and Trevor Pinch, Eds., in *How Users Matter* (Cambridge: MIT Press): 193-208.

October 2: The Car

Kline, Ronald and Trevor Pinch. 1996. "Users as Agents of Technological Change: The Social Construction of the Automobile in the Rural United States," *Technology and Culture* 37 (4): 763-795.
Landström, Catharina. 2006. "A Gendered Economy of Pleasure: Representations of Cars and Humans in Motoring Magazines." *Science Studies* 19 (2): 26-48.
Seiler, Cotton. 2008. *Republic of Drivers: A Cultural History of Automobility in American* (Chicago: University of Chicago Press): 36-68, 105-128.

Hubak, Mira. 1996. "The Car as a Cultural Statement: Car Advertising as Gendered Socio-technical Scripts," in *Making Technology our Own? Domesticating Technologies into Everyday Life* (Oslo: Scandinavian University Press)
Behling, Laura L. 1997. "Fisher's Bodies: Automobile Advertisements and the Framing of Modern American Female Identity," *The Centennial Review* 41 (3): 515-528.
Scharff, Virginia. 1991. *Taking the Wheel: Women and the Coming of the Motor Age* (New York: Free Press)

Oldenziel, Ruth. 2001. "Boys and Their Toys: The Fisher Body Craftsman's Guild, 1930-1968, and the Making of a Male Technical Domain." In *Boys and Their Toys: Masculinity, Technology, and Class in America* (New York: Routledge): 55-91.

October 9: The Pill
Tone, Andrea. "Medicalizing Reproduction: The Pill And Home Pregnancy Tests." *Journal of Sex Research* 49, no. 4 (2012): 319-327.
Oudshoorn, Nelly. ""Astronauts in the Sperm World" The Renegotiation of Masculine Identities in Discourses on Male Contraceptives." *Men and Masculinities* 6, no. 4 (2004): 349-367.
Tone, Andrea. 2001. "Developing the Pill." In *Devices and Desires: A History of Contraceptives in America.* Hill and Wang, 203-232.

October 16: The Computer
Edwards, Paul. 1990. "The Army and the Microworld: Computers and the Politics of Gender Identity" *Signs* 16 (1): 102-127.
Ensmenger, Nathan. 2015. "Beards, Sandals, and Other Signs of Rugged Individualism: Culture & Identity within the Computing Professions." *Osiris* 30 (1): 38–65.
Hicks, Marie. 2010. "Only the Clothes Changed: Women Operators in British Computing and Advertising, 1950–1970." *IEEE Annals of the History of Computing* 32 (4): 5-17.
Mundy, Liza. 2017. "Why is Silicon Valley so Awful to Women?" *The Atlantic* (April). Online: https://www.theatlantic.com/magazine/archive/2017/04/why-is-silicon-valley-so-awful-to-women/517788/

Kolhatkar, Sheelah. 2017. "The Tech Industry's Gender-Discrimination Problem," *The New Yorker* (November 20). Online: https://www.newyorker.com/magazine/2017/11/20/the-tech-industrys-gender-discrimination-problem
Light, Jennifer. 1999. "When Computers Were Women." *Technology and Culture* 40 (3): 455-483.

THE CONSTRUCTION OF SPACE

October 23: The Home
Wajcman, Judy. 1991. "The Built Environment: Women's Place, Gendered Spaces," in *Feminism Confronts Technology* (Philadelphia: Pennsylvania University Press): 110-136.
Bijker, Wiebe E. and Karin Bijsterveld. 2000. "Women Walking through Plans: Technology, Democracy, and Gender Identity" *Technology and Culture* 41: 485-515.
Cowan, Ruth Schwartz. 1976. "The 'Industrial Revolution' in the Home: Household Technology and Social Change in the 20th Century" *Technology and Culture* 17: 1-23.
Lupton, Ellen. *Mechanical Brides: Women And Machines From Home To Office*. Princeton Architectural Press, 1993: 15-28.
Fox, Margalit. 2017. "Frances Gabe, Creator of the Only Self-Cleaning Home, Dies at 101," *The New York Times* (July, 18). Online: https://www.nytimes.com/2017/07/18/us/frances-gabe-dead-inventor-of-self-cleaning-house.html.

Andrews, William D. and Deborah C. Andrews. "Technology and the Housewife in Nineteenth-Century America," *Women's Studies*, 2, 3 (1974): 309-328.

Glucksmann, Miriam and Jane Nolan. 2007. "New Technologies and the Transformations of Women's Labour at Home and Work." *Equal Opportunities International*, Vol. 26, No. 2 (2007) 96-112.

October 30: The Office

Boyer, Kate and Kim England. 2008. "Gender, Work and Technology in the Information Workplace: From Typewriters to ATMs," *Social & Cultural Geography*, 9 (3): 241-256.

Spain, Daphne. 1992. *Gendered Space* (Chapel Hill: The University of North Carolina Press): 199-230.

Forty, Adrian. 1986. *Objects of Desire: Design and Society Since 1750* (London: Cameron Books): 120-155.

Lupton, Ellen. *Mechanical Brides: Women And Machines From Home To Office*. Princeton Architectural Press, 1993: 43-57.

Pam Belluck, "Chilly at Work? Office Formula Was Devised for Men," *The New York Times*, July 2, 2018, sec. Science, https://www.nytimes.com/2015/08/04/science/chilly-at-work-a-decades-old-formula-may-be-to-blame.html.

Hoffmann, Jeanette. 2010. "Writers, Texts and Writing Acts: Gendered User Images in Word Processing Software," in eds. Donald MacKenzie and Judy Wajcman *The Social Shaping of Technology* (New York: Open University Press): 222-243

Davidson, Janet. 2001. "'Now That We Have Girls in the Office': Clerical Work, Masculinity, and the Refashioning of Gender for a Bureaucratic Age," in *Boys and Their Toys: Masculinity, Technology, and Class in America* (New York: Routledge): 55-91.

November 6: Virtual Space and Representation

Nieborg, David and Maxwell Foxman. 2018. "Mainstreaming Misogyny: The End Of The Beginning And The Beginning Of The End In Gamergate Coverage." In *Mediating Misogyny: Gender, Technology, and Harassment* (Palgrave): 111-130.

Nakamura, Lisa. 2013. "'It's a N****r in Here! Kill the N****r!': User-Generated Media Campaign Against Racism, Sexism, and Homophobia in Digital Games," in *The International Encyclopedia of Media Studies*, ed Kelly Gates (Blackwell Publishing):1-14.

Leonard, David. 2006. "Virtual Gangstas, Coming to a Suburban House Near You: Demonization, Commodification, and Policing Blackness," in. Garrelts, ed., *The Meaning and Culture of Grand Theft Auto: Critical Essays*. (Jefferson: McFarland): 49-69.

Penny, Laurie. 2014. *Unspeakable Things: Sex, Lies and Revolutions* (New York: Bloomsbury): 152-200.

Zdenek, Sean. 2007. "'Just Roll Your Mouse Over Me': Designing Virtual Women for Customer Service on the Web." *Technical Communication Quarterly* 16 (4) 397 – 430.

Tran, Kelly Marie. 2018. "I Won't Be Marginalized by Online Harassment." *The New York Times* (August 21). Online: https://www.nytimes.com/2018/08/21/movies/kelly-marie-tran.html.

THE BODY

November 13: Visibility

Cartwright, Lisa. 1998. "A Cultural Anatomy of the Visible Human Project." In *The Visible Woman: Imaging Technologies, Gender, and Science* (New York: New York University Press): 21-43.

Eckman, Anne K. "Beyond 'The Yentl Syndrome' Making Women Visible in Post-1990 Women's Health Discourse." In *The Visible Woman: Imaging Technologies, Gender, and Science* (New York: New York University Press): 130-170.

Stabile, Carol. 1998. "Shooting the Mother: Fetal Photography and the Politics of Disappearance." In *The Visible Woman: Imaging Technologies, Gender, and Science* (New York: New York University Press): 171-197.

Hartouni, Valerie. "Fetal Exposure: Abortion Politics and the Optics of Allusion." In *The Visible Woman: Imaging Technologies, Gender, and Science* (New York: New York University Press): 198 - 216.

November 20: Plasticity

Meyerowitz, Joanne. 2002. *How Sex Changed: A History of Transsexuality in the United States* (Cambridge: Harvard University Press): 51-97.

Serlin, David. 2004. *Replaceable You: Engineering the Body in Postwar America* (Chicago: University of Chicago Press): 159-190.

Plemons, Eric. 2017. "Formations of Femininity: Science and Aesthetics in Facial Feminization Surgery," *Medical Anthropology* 36 (7): 629–41.

November 27: Sexuality

Waidzunas, Tom and Steven Epstesin. 2015. "'For Men Arousal is Orientation': Bodily Truthing, Technosexual Scripts, and the Materialization of Sexualities Through the Phallometric Test," *Social Studies of Science* 45: 187-213.

Maines, Rachel. "Socially Camouflaged Technologies: The Case of the Electromechanical Vibrator."

Carpanter, Laura and Monica Casper. 2009. "A Tale of Two Technologies: HPV Vaccination, Male Circumcision, and Sexual Health" *Gender and Society* 23: 790-816.

Terry, Jennifer. *An American Obsession: Science, Medicine and Homosexuality in Modern Society* (Chicago: University of Chicago Press): 178-219.

December 4: Final Presentations