
USING DIGITAL TOOLS FOR CLASSROOM ACTIVISM: EXPLORING GENDER, INFRASTRUCTURE, AND TECHNOLOGICAL DISCIPLINE THROUGH A PUBLIC BATHROOM PROJECT

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Not many people realize that public bathrooms are a relatively recent addition to urban life—and public bathrooms for women an even later addition. Major cities like Chicago and London did not allow or fund public toilets for women until well into the 20th century.¹ The gendered infrastructure of public toilets has long reflected cultural restrictions on women moving freely and independently in public spaces. Today, women's restrooms are taken as a given in the United States. Yet public and semi-public restrooms continue to discipline users in line with particular social and cultural ideals, and determine who is allowed to be where.

This issue has become an increasingly prominent topic of discussion on college campuses throughout the nation.² Trans and queer activists have drawn attention to the heteronormative underpinnings of restroom technology, and the unhelpfully binary nature of restroom provisioning. On a growing number of college and university campuses students have mounted campaigns to create gender-neutral restroom facilities.³

Against this background, students in my course on gender and technology undertook a project to look at the history and current state of the bathrooms on the main campus of Illinois Tech. The course was a feminist STS course with a strong historical component.⁴ This toolbox entry submission presents an activity appropriate to a history course, a history of technology course, a women's studies course, a gender and sexuality studies course, or a science and technology studies (STS) course. The aim of the exercise is to teach students how built infrastructure disciplines bodies and how large technological

¹ Maureen, Flanagan, "Private needs, public space: public toilets provision in the Anglo-Atlantic patriarchal city: London, Dublin, Toronto and Chicago" *Urban History*, Vol. 41, No. 2 (May 2014), pp. 265-290.

² The issue is not new: campaigns to create gender inclusive bathroom spaces reach back decades. However, more college campuses have recently confronted the issue and devoted resources to creating specific gender neutral or gender inclusive restrooms. For a representative example, see the current campaign at Vassar: <http://lgbtq.vassar.edu/projects-initiatives/gender-neutral-bathroom-initiative.html>.

³ In 2015, President Obama even inaugurated a gender neutral restroom at the White House in a show of symbolic support. See Maria Caspani, "White House Opens First Gender-Neutral Restroom," 9 April 2015, Reuters (<http://www.reuters.com/article/2015/04/09/us-gay-rights-whitehouse-idUSKBN0N02CA20150409>). Meanwhile some cities, particularly those with a historically large and visible LGBTQ population, have recently also begun to offer public facilities that are explicitly gender neutral. See Noah Smith, "Restroom Ordinance Is Just One More Sign of a City's Acceptance," 17 January 2015, *New York Times* (<http://www.nytimes.com/2015/01/18/us/restroom-ordinance-is-just-one-more-sign-of-a-citys-acceptance.html>).

⁴ Course syllabus available at: <http://mariehicks.net/syllabi.html>.

systems change over time. In addition, the exercise has an activist component: in completing this activity, students also participate in the process of change they are studying.

In order to minimize training time and technological barriers to participation, this activity employs easy-to-use digital tools with which most students will already be familiar: in particular, Google Maps, spreadsheet programs, word processing programs, and blogging software. It uses Google Maps and blogging software in order to allow the results of the activity to be easily shared outside the classroom, with the hope of sparking campus-wide dialogue.⁵ When students in my course on gender and technology completed this exercise, they found that they had indeed been able to attract interest from the Office of Campus Life, which took the data collected during the project (with their permission) and used it to lobby the upper administration for more gender inclusive facilities on campus.

The background for this exercise included study of theories of technological change from the field of STS as well as readings on gender, race, and queer theory.⁶ Students were asked to apply STS theories to historical examples of technological change, and then integrate an analysis of how gender and sexuality functioned in each case. For instance, students read an article about automotive technology and roadway infrastructure, then discussed how this nascent technological system affected men and women differently and how it reinforced or weakened existing social bonds centered around the nuclear, heteronormative family.⁷ They looked at how consumer technologies are socially constructed and how technological infrastructure gains momentum and exerts influence over different groups.

Nonetheless, this mode of learning was relatively abstract and confined to discussing and critiquing historical examples. So we designed an exercise that would allow for a more "hands-on" understanding of technological influence and technological change. First, we looked for a technology that was ubiquitous—one with which all students would have had experience. Second, students were asked to investigate, as a group, how that technology influenced users, paying particular attention to gender, sexuality, and ability. Third, students attempted to find a way to alter the technology in order to create positive change specific to the local context.

After choosing public bathroom technology, students began by testing their hypotheses that women's restrooms and gender inclusive restrooms on campus were inadequate to current needs. Each class member went to a series of buildings on campus and made notes about the restrooms. The data they collected included: the gender assigned to the bathroom; the number of sinks, stalls, toilets, and other facilities inside; the location of the bathroom and whether or not it was accessible to users with mobility

⁵ Use of a tool designed to make the results of one's research publicly accessible also presents problems: in particular, I was wary of asking students to take on a more public profile than they might be comfortable with. For this reason, students were allowed to use pseudonyms when presenting work on the open web, and students were also given the option to do different types of research if they were uncomfortable with the ways in which parts of this project would be made public. In this instance, all of the students were comfortable sharing their results publicly.

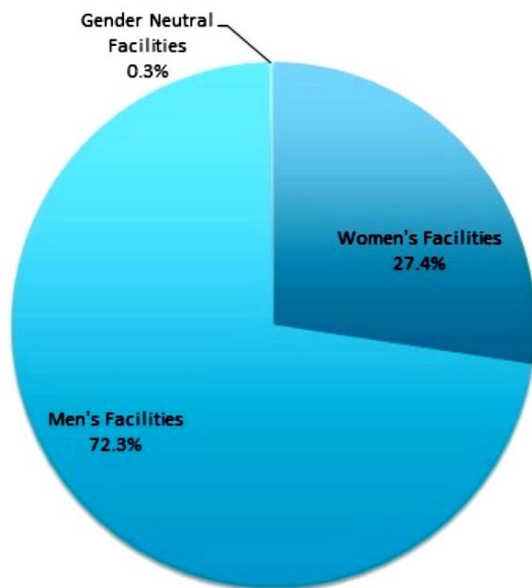
⁶ For instance, students read Donna Haraway's "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," in Simians, Cyborgs and Women: The Reinvention of Nature (New York: Routledge, 1991), pp.149-181, as well as selections from Dorothy Roberts, *Killing the Black Body* (New York: Vintage, 1999) to begin thinking about bodies and technological discipline.

⁷ For example, students read Ronald Kline and Trevor Pinch, "Users as Agents of Technological Change: The Social Construction of the Automobile in the Rural United States," *Technology and Culture*, Vol. 37, No. 4 (Oct., 1996), pp. 763-795, and Judith Butler, *Bodies That Matter: On the Discursive Limits of "Sex"* (New York: Routledge, 1993).

issues; the state of repair or disrepair; and whether the restroom was hidden or relatively out in the open.⁸

They collected their observations and coded them for consistency, then entered the data into a spreadsheet. From this shared spreadsheet, each student created a different data visualization in order to highlight a particular aspect of the campus's restroom landscape. For instance, one student's graph showed that the percentage of accessible restrooms on campus seemed high, but further investigation into the fine-grained data the class had collected showed that these "accessible" restrooms were not necessarily easily accessible.

The students found that their hypotheses had been correct. The percentage of women's restrooms was 10 percent lower than the percentage of women on campus. This finding led to an interesting class discussion of cause and effect: on our campus, the percentage of women is significantly lower than the percentage of men. Although our college's administration wants to increase the number of women on campus, the proportion on women's restrooms are already far below the actual need. At busy times, long lines in some women's restrooms make it impossible to use the facilities between classes. Given that women students on campus already feel marginalized and othered due to a lack of basic resources, how is the recruitment of more women onto campus expected to succeed? Or, does the provisioning of further resources for women require a preceding influx of women on campus?



A chart created from the data students collected for the project showing the proportions of restroom facilities on Illinois Tech's campus (Spring 2013).

The percentage of gender neutral spaces was negligible. Furthermore, these spaces were not signed as such, and so did not meet any intentional standard of gender inclusivity.⁹ Although the university

⁸ The last category was devised for two reasons: to give students a sense of how deserted a particular area might be in case they were afraid of going there alone or at night, and to give students a sense of how empty a restroom might be in the daytime, for greater privacy and less potential threat of confrontation. This category was a collaboration between several women and gender-nonconforming students in the class who each had different reasons for wanting the same information.

administration had openly called for a more LGBTQ-friendly campus, the provisioning of gender neutral restrooms for trans and genderqueer students had not been a priority. Not only was the discourse on queer issues on campus relatively muted, but—the students showed—the infrastructure of the campus had long been designed and maintained to reflect and support the fact that the majority of students and faculty are straight-identifying men.

As a result, students were able to see, in a practical and hands-on way, one powerful example of how the technological systems we live with, and within, are artifacts from the past—ones that have been constructed by particular historical contexts. From their data collection, they could see how the assumptions that constructed this technological system did not match present needs.¹⁰ Nonetheless, constant use of these technologies means they can discipline us into acting in accordance with the values and ideals previously encoded into them.

Next, the students approached the question of how technologies change and tried to apply the theory of SCOT (social construction of technology) to the bathroom system on campus. They created a public Google Map of campus and marked all the restrooms according to gender, accessibility, and resources. Once completed, they brainstormed ways in which this information might be a) made useful to a wider population on campus, b) used to draw attention to the underrepresentation of women's and gender neutral restrooms, and c) used to encourage top-down administrative change. They shared the results of their work with their peers, and I shared their results (with permission) with feminist and LGBTQ activists on campus. As a result, the Office of Campus Life became involved in the project at this stage and began to use the data to lobby the Provost of the university to include gender-inclusive restrooms in upcoming campus renovations.

The goals of this project were to give students a "hands-on" lesson in the history of technology and the co-constitutive nature of gender and infrastructure, while allowing them to participate in trying to change a technology. The project took place over the course of two weeks—four classes—but only two periods were devoted to working on it in class and both of these classes also included readings on other aspects of gender and technological change. Most of the work for the project was done outside of class, with students working cooperatively.

Although this project's particular outcomes will vary by campus, the value of the exercise lies in its ability to make more legible the social and legal systems that large technological infrastructures strengthen and simultaneously render invisible. The exercise served as a useful supplement to material we covered in class concerning the interplay between user agency and the coercive effects of technology. It also provided a clear and compelling example of how gender norms function and reproduce through technological systems, and how students can participate in processes of social and technological change that may initially seem too complex or vast to contend with.

⁹ We also looked at examples of public bathroom projects designed to highlight or make more available safe bathroom spaces, for example safe2pee.org and the recent app designed by Teagan Widmer called "Refuge Restrooms" (2014, refugerestrooms.org). These bathroom projects focus on finding safe(r) spaces, but do not focus on explicitly gender-inclusive facilities. In this regard, college and university campuses have often led the way, making specific policies to create gender neutral and inclusive bathroom spaces.

¹⁰ For further discussion and a link to the online map the students created from their data, see the following blog posts: <http://mariehicks.net/blog/?p=287> and <http://mariehicks.net/blog/?p=321>.

Using the history of public bathrooms as a jumping-off point, this exercise allowed students a new way to understand how everyday technologies tend to produce and reinforce gendered bodies and behaviors, and how cultures change in tandem with technological infrastructures. Incorporating a hands-on exercise to reinforce historical and theoretical readings is one way to make the study of historical change more immediate, personal, and meaningful. In asking students to both study, and participate in changing the infrastructure on campus, this exercise reoriented students' relationship with the outcomes of the historical processes they were studying in class. By integrating activist thinking and practices with pedagogy on gender, history, and STS, and by employing a memorable participatory learning experience, this exercise provided students an opportunity to leverage digital tools for social change and see the power of the humanities at work in the world.

SUMMARY OF THE ELEMENTS OF THE EXERCISE

APPROPRIATE CLASSES:

Gender and Sexuality Studies, History, History of Technology, Science and Technology Studies (STS), Women's Studies, Digital Humanities.

TOPICS AND THEORIES TAUGHT:

Technological momentum, social construction of technology, queer theory, gender studies, performativity, heteronormativity.

SKILLS TAUGHT:

Data collection and analysis, critical thinking, public engagement skills.

OBJECTIVES:

To give students real-world insight into how technological infrastructure functions to enforce gendered categories, and to learn how technologies impact cultural change.

TOOLS NEEDED:

Spreadsheet software, Google Maps, word processing software, blogging software or website on which to display results (in this case a Wordpress site was used).

TIME REQUIREMENT:

Roughly two class sessions separated by one to two weeks, to allow time for data collection.