

# INST 713: Futures of Work

Instructor: Daniel Greene

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Class time: Wednesday 11-1:45

Class location: HBK 0115

Office hours: Tu/Th afternoons by appointment (on zoom or in HBK 4105D as preferred):

<https://calendly.com/dgreene1/office-hours>



## **Catalog Description:**

Are robots taking our jobs? Are there any jobs even worth taking? What other futures of work might we build? This course examines these questions by focusing on the labor process of computer-supported collaborative work (CSCW) in domains ranging from transportation to software development to sex work, drawing on research and theory from sociology, organizational studies, HCI, and more. Design-oriented students will be encouraged to develop interventions to enhance not just productivity but autonomy and democracy. Research-oriented students will learn to study workplaces and situate shopfloor developments in global political economy.

## **Course Description:**

Are robots taking our jobs? Are there any jobs even worth taking? What other futures of work might we build? This course examines these big questions by focusing on the details of the

labor process of computer-supported collaborative work (CSCW), in domains ranging from transportation to software development to sex work. To better understand what's actually changing, we will ground contemporary CSCW themes in historical and theoretical frameworks from labor economics, organizational studies, the sociology of work, and histories of business and technology. Design-focused students will be pushed to identify the technical foundations of the labor process in different domains (e.g., taskflow analyses, user experience journeys), and to propose alternative designs that increase not just productivity but cooperation, autonomy, fulfillment, and sustainability. Research-focused students will be pushed to distinguish between the abstract content of the labor process and its concrete appearance in different workplaces, and to identify the social forces changing these workplaces. All students will be required to observe actually-existing workplaces and document novel technical developments in industries of their choosing. Emphasis is placed throughout on the interaction between changing labor processes and the recomposition of the working class in different places, at different scales; not just a shift in the race, gender, sexuality, nationality, or class of particular workers, but fundamental changes in the nature of those social relations.

## **Learning Outcomes**

*After completing this course, students will be able to...*

- Situate novel technological developments in contemporary workplaces in historical and organizational context
- Explain and apply core CSCW concepts
- Explain and apply core concepts from labor process theory
- Propose designs to enhance productivity, collaboration, autonomy, and democracy
- Observe the labor process in actually-existing workplaces

## **Required Text**

Braverman, Harry (1998). *Labor and monopoly capital: The degradation of work in the twentieth century*. Monthly Review Press.

We will read the majority of Braverman for the second week of class and it will be a useful reference for the rest of the semester's reading and students' research. The bookstore will stock physical copies (and cheap used ones are readily available online) but the UMD library also holds a free ebook.

## **Assignments**

*Participation* -- 300 points [weekly]

Like most graduate seminars, this class does not work without regular, considered, and collegial participation from everyone involved. The instructor will manage discussion and provide context when necessary but by and large will not lecture. Please bring copies of all readings to class

every day (print or digital), along with your notes on them. Students must complete all assigned readings prior to the start of class to effectively participate in class. Effective participation can look like:

- Asking open-ended questions to seek clarity or prompt discussion
- Quoting or paraphrasing a reading to make a point
- Collaborating on small-group activities
- Providing your analysis of an issue or reading, or responding to a colleague's
- Giving context colleagues may need on a particular point of discussion

It is not necessary to master every point of every reading to effectively participate. Indeed, it is sometimes most helpful to arrive to class with questions in mind. To receive full credit, students need only 1) come to class ready to share a question or discussion point (we will often start class by writing these on the board); 2) engage with their peers through one or more of the methods above. Only 14 of our 16 class sessions are graded for participation, meaning you have two "freebie" days. These can be used in lieu of providing an explanation for an excused absence, or just as a moment to recharge during (another) crisis year. There is no need to contact the instructor to request permission to use a freebie day.

*Blogs* -- 300 points [weekly]

Beginning in week 2, students will be required to write a weekly blog post of approximately 500 words that engages with some aspect of the assigned readings. The instructor will include prompts--generally around implications for design, or analyses of labor processes--but students should write posts that are useful to them in processing these ideas. To encourage this process of reflection, posts are only graded for participation. Only 10 of a possible 14 blog posts are graded, meaning students can choose which to complete. All blog posts are due at midnight Tuesday, the night before class.

*Workplace Observation* -- 100 points [proposal due Mar. 8, report due Apr. 12]

Whether students' goals are to design better workplaces or better understand our experiences in them, the starting point is the same: Defining how that work works. Students will choose a site in which they can observe work for a minimum of 6 hours, over as many days as needed. This could be their own workplace, an online space, or a business or agency through which they regularly travel. The end result of this mini-ethnography is a descriptive report on work tasks, the division of labor, and the role of technology in that workplace. Experience with qualitative methods--as taught in INST 710: User Experience Research Methods, or elsewhere--will be very helpful.

*Show-and-Tell* -- 100 points [assignments by Feb. 9, due dates vary]

Students will be assigned different weeks in class for which they must lead the class in an informal show-and-tell session, with an accompanying brief report. Students may choose to

either review a new book on the world of work--a terrific first publication opportunity--or a new technology that is actively reshaping that week's workplace. We will create shared documents to provide inspiration for both options.

*Final Paper -- 200 Points [due May 15]*

The final paper provides students with the opportunity to expand on course content in a way that serves their own professional goals. Students may choose to either write a literature review on a particular aspect of work and technology (e.g., automated scheduling in retail, collaboration in eldercare) or propose a design intervention that would ameliorate some of the problems discussed in one of our worksites. The latter may substitute some text for paper prototypes, renderings, etc. and could be a speculative, fictional design.

### **Course Schedule**

Readings marked with [ELMS] are available on ELMS. All other readings are available either on the open Web or through UMD library subscriptions. Learning to use the latter is an important part of graduate study. Article downloads are also an important metric for library staff seeking to justify subscription costs.

From Week 4 on, readings are divided into required and recommended. All students will read required readings, and should sample from the recommended as they see fit. Doctoral students will read both.

#### *1) Jan 24: Introductions*

- In-class screening of Chaplin (1936) *Modern Times*

#### *2) Jan 31: The labor process*

- Braverman, Harry (1998). *Labor and monopoly capital: The degradation of work in the twentieth century*. Monthly Review Press.
  - Students should feel free to skip chapters 11-14 and 17-19.
- [Edwards, Paul. "How to read a book."](#)

#### *3) Feb 7: Information and management*

### **Class meeting canceled, blogs still due.**

- Yates, JoAnne (1993). Chapters 1 and 5 in *Control through communication: The rise of system in American management*. [ELMS]
- Zuboff, Shoshana (1988). Introduction, Chapter 7, and Chapter 10 in *In the age of the smart machine: The future of work and power*. Basic Books. [ELMS]

#### 4) Feb 14: What's actually changed?

##### Required

- Bailey, Diane E. and Paul Leonardi (2015). "Explaining Technology Choices in the Workplace: Proposing an Occupational Perspective" in *Technology Choices: Why Occupations Differ in Their Embrace of New Technology*, MIT Press: 19-42.
- Benanav, Aaron (2019). "Automation and the future of work" [Part 1](#). *New Left Review* 119. [ELMS]
- Greif, Irene (2019). "How we started CSCW." *Nature Electronics* 2(3): 132-132.
- Kellogg, Katherine C., Melissa A. Valentine, and Angele Christin. (2020). "Algorithms at work: The new contested terrain of control." *Academy of Management Annals* 14(1): 366-410.

##### Recommended

- Greenbaum, Joan. 1996. "Back to Labor: Returning to labor process discussions in the study of work." In Proceedings of the 1996 ACM conference on Computer supported cooperative work, pp. 229-237.
- Schmidt, Kjeld. (2011). The concept of 'work' in CSCW. *Computer Supported Cooperative Work (CSCW)*, 20, 341-401.

#### 5) Feb 21: Manufacturing

##### Required

- Zhang, Lu. (2008). "Lean Production and Labor Controls in the Chinese Automobile Industry in An Age of Globalization." *International Labor and Working-Class History* 73(1): 24-44.
- Beck, Eevi E. 2002. "P for Political: Participation Is Not Enough." *Scandinavian Journal of Information Systems* 14 (1): 77-92.
- Khovanskaya, Vera, Lynn Dombrowski, Jeffrey Rzeszotarski, and Phoebe Sengers. (2019). "The Tools of Management: Adapting Historical Union Tactics to Platform-Mediated Labor." *Proceedings of the ACM on Human-Computer Interaction* 3: 1-22.

##### Recommended

- [Boggs, James \(1963\). \*The American Revolution: Pages from a Negro Worker's Notebook\*. Monthly Review Press.](#)
- Klein, Heinz K., and Philip Kraft. (1993). "Social control and social contract in NetWORKing." *Computer Supported Cooperative Work* 2(1): 89-108.
- Krzywdzinski, Martin. (2021). Automation, digitalization, and changes in occupational structures in the automobile industry in Germany, Japan, and the United States: a brief

history from the early 1990s until 2018. *Industrial and Corporate Change*, 30(3), 499-535. [ELMS]

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#### 6) Feb 28: Transportation

##### Required

- Bentley, R.; Hughes, J.A.; Randall, D.; Rodden, T.; Sawyer, P.; Shapiro, D.; Sommerville, I. (1992). "Ethnographically-informed systems design for air traffic control". *Proceedings of the 1992 ACM conference on Computer-supported cooperative work*. ACM Press New York, NY, USA. pp. 123–129.
- Levy, K. E. (2015). The contexts of control: Information, power, and truck-driving work. *The Information Society*, 31(2), 160-174.
- Rosenblat, Alex, and Luke Stark. "Algorithmic labor and information asymmetries: A case study of Uber's drivers." *International journal of communication* 10 (2016): 27.

##### Recommended

- Christian Heath and Paul Luff. (1992). "Collaboration and Control: Crisis Management and Multimedia Technology in London Underground Line Control Rooms," *Journal of Computer Supported Cooperative Work* 1(1): 24-48
- Edwin Hutchins. (1995). "How a Cockpit Remembers Its Speeds," *Cognitive Science* 19: 265-288.
- Park, So Yeon, Dylan James Moore, and David Sirkin. (2020) "What a driver wants: User preferences in semi-autonomous vehicle decision-making." In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*, pp. 1-13.

#### 7) Mar 6: Galleries, Libraries, Archives, and Museums (GLAM)

##### Required

- Cash, Debra. (1999) "The invisible world of intermediaries: A cautionary tale." *Computer Supported Cooperative Work* 8(1): 147-167.
- [Caswell, Michelle. \(2016\) "The future of the painful past: archival labor and materiality in the South Asian American Digital Archive." In Starzman, Maria Theresia and John Roby \(eds\) \*Excavating Memory: Sites of Remembering and Forgetting\*. University Press of Florida: 376-394. \[ELMS\]](#)
- [Webster, Ben. \(2013\). "Notes of a library worker." \*Viewpoint Magazine\*.](#)

##### Recommended

- [Borgman, Christine L. \(1997\). "From acting locally to thinking globally: a brief history of library automation." \*The Library Quarterly\* 67\(3\): 215-249.](#)
- Ciolfi, Luigina. (2013). "The collaborative work of heritage: open challenges for CSCW." *Proceedings of the 13th European Conference on Computer Supported Cooperative Work*.
- DiMaggio, Paul. (1991). "Constructing an organizational field as a professional project: The case of US art museums." In Walter Powell and Paul DiMaggio (eds) *The New Institutionalism in Organizational Analysis*, University of Chicago Press: 267-292. [ELMS]

## Workplace Observation Proposals Due March 8

### 8) Mar 13: Healthcare

#### Required

- Bowker, Geoffrey and Susan Leigh Star (1999). "What a difference a name makes: The classification of nursing work" and "Organizational forgetting, nursing knowledge, and classification" in *Sorting things out: Classification and its consequences*. MIT Press. [ELMS]
- [Beane, Matthew. \(2023\). Resourcing a Technological Portfolio: How Fairtown Hospital Preserved Results While Degrading Its Older Surgical Robot. \*Administrative Science Quarterly\*, 00018392231174450.](#)
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#### Recommended

- Fitzpatrick, Geraldine, and Gunnar Ellingsen. (2013). "A review of 25 years of CSCW research in healthcare: contributions, challenges and future agendas." *Computer Supported Cooperative Work* 22(4): 609-665
- Reddy, Madhu C., Paul Dourish, and Wanda Pratt. (2006). "Temporality in medical work: Time also matters." *Computer Supported Cooperative Work* 15(1): 29-53.
- Barley, Stephen R. (1986). "Technology as an occasion for structuring: Evidence from observations of CT scanners and the social order of radiology departments." *Administrative science quarterly* 31(1): 78-108.

### 9) Mar 27: Sex work

#### Class held online via zoom

#### Required

- Berg, Heather (2021). "A scene is just a marketing tool: Hustling in porn's gig economy" in *Porn work: Sex, labor, and late capitalism*. University of North Carolina Press: 95-125. [ELMS]

- [Hacking/Hustling \(2021\). "Digital simulation: Sex invents the internet." \[Video\]](#)

#### Recommended

- Bernstein, Elizabeth (2007). "The privatization of public women" in *Temporarily Yours: Intimacy, authenticity, and the commerce of sex*. University of Chicago Press: 70-111. [ELMS]
- Barwulor, Catherine, Allison McDonald, Eszter Hargittai, and Elissa M. Redmiles. (2021). "'Disadvantaged in the American-dominated Internet': Sex, Work, and Technology." In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*.
- [Selena the Stripper \(2022\). "Sex workers unite!" Logic \(15\).](#)

#### 10) Apr 3: Cleaning

#### Required

- Cowan, Ruth (1984). "An introduction: Housework and its tools" (3-16) and "Twentieth-century changes in household production" (69-99) in *More Work for Mother: The ironies of household technology from the open hearth to the microwave*. [ELMS]
- Fox, S. E., Sobel, K., & Rosner, D. K. (2019). "Managerial Visions: stories of upgrading and maintaining the public restroom with IoT." In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*

#### Recommended

- Fox, Sarah, Catherine Lim, Tad Hirsch, and Daniela K. Rosner. (2020). "Accounting for design activism: On the positionality and politics of designerly intervention." *Design Issues* 36,(1): 5-18.
- Star, Susan Leigh, and Anselm Strauss. (1999). "Layers of silence, arenas of voice: The ecology of visible and invisible work." *Computer supported cooperative work* 8(1): 19-30.
- Magolda, Peter M. (2016) Chapters 5 and 12 *The lives of campus custodians: Insights into corporatization and civic disengagement in the academy*. Stylus Publishing, LLC, 2016. [ELMS]

#### 11) Apr 10: Software development

#### Required

- Kraft, Philip. (1979). "The routinizing of computer programming." *Sociology of Work and Occupations* 6(2): 139-155.
- Devika Narayan (forthcoming 2022) "Monopolization and competition under platform capitalism: Analyzing transformations in the computing industry." *New Media and Society*.



- Cohn, Marisa Leavitt, Susan Elliott Sim, and Charlotte P. Lee. (2009). "What counts as software process? Negotiating the boundary of software work through artifacts and conversation." *Computer Supported Cooperative Work* 18(5): 401-443.

#### Recommended

- Chun, Wendy Hui Kyong (2005). "On software, or the persistence of visual knowledge." *grey room*: 26-51.
- Neff, Gina, and David Stark. (2004). "Permanently beta." *Society online: The Internet in context* 173-188. [ELMS]
- Shestakofsky, Benjamin. (2017). "Working algorithms: Software automation and the future of work." *Work and Occupations* 44(4): 376-423.
- Cherubini, Mauro, Gina Venolia, Rob DeLine, and Amy J. Ko. (2007). "Let's go to the whiteboard: how and why software developers use drawings." In *Proceedings of the SIGCHI conference on Human factors in computing systems*, pp. 557-566.

#### Workplace Observations due April 12

12) Apr 17: Beauty

#### Required

- Raval, Noopur, and Joyojeet Pal. (2019). "Making a 'Pro': 'Professionalism' after platforms in beauty-work." *Proceedings of the ACM on Human-Computer Interaction* 3: 1-17.
- Bishop, Sophie. (2018). "Anxiety, panic and self-optimization: Inequalities and the YouTube algorithm." *Convergence* 24(1): 69-84.

#### Recommended

- Cottom, Tressie McMillan. (2020). "The hustle economy." *Dissent* 67(4): 19-25.
- Duffy, Brooke Erin, and Emily Hund. (2015). "'Having it all' on social media: Entrepreneurial femininity and self-branding among fashion bloggers." *Social media+ society* 1(2): 2056305115604337.
- Williams, Christine L., and Catherine Connell. (2010). "'Looking good and sounding right': Aesthetic labor and social inequality in the retail industry." *Work and Occupations* 37(3): 349-377.
- Anjali Anwar, Ira, Joyojeet Pal, and Julie Hui. (2021). "Watched, but moving: Platformization of beauty work and its gendered mechanisms of control." *Proceedings of the ACM on Human-Computer Interaction* 4: 1-20.

13) Apr 24: Micro-work

#### Required

- Gray, Mary and Siddartha Suri (2019). "Part 1: The paradox of automation's last mile" in *Ghost Work*. HarperCollins: 1-68. [ELMS]
- Irani, Lilly C., and M. Six Silberman. (2013). "Turkopticon: Interrupting worker invisibility in amazon mechanical turk." In *Proceedings of the SIGCHI conference on human factors in computing systems*, pp. 611-620.

#### Recommended

- Harmon, Ellie, and M. Silberman. (2019). "Rating working conditions on digital labor platforms." *Computer Supported Cooperative Work* 28(5): 911-960.
- Jarrahi, Mohammad Hossein, Will Sutherland, Sarah Beth Nelson, and Steve Sawyer. (2020). "Platformic management, boundary resources for gig work, and worker autonomy." *Computer supported cooperative work* 29(1): 153-189.
- Altenried, Moritz. (2020). "The platform as factory: Crowdwork and the hidden labour behind artificial intelligence." *Capital & Class* 44(2): 145-158.

#### 14) May 1: Policing

#### Required

- Brayne, Sarah. (2017). "Big data surveillance: The case of policing." *American sociological review* 82(5): 977-1008.
- Joh, Elizabeth E. (2017). "Automated policing." *Ohio State Journal of Criminal Law* 15: 559-564.
- Erete, Sheena L., Ryan Miller, and Dan A. Lewis. (2014). "Differences in technology use to support community crime prevention." In *Proceedings of the companion publication of the 17th ACM conference on Computer supported cooperative work & social computing*, pp. 153-156.
- Zhang, Min, Arosha K. Bandara, Blaine Price, Graham Pike, Zoe Walkington, Camilla Elphick, Lara Frumkin et al. (2020). "Designing Technologies for Community Policing." In *Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems* 1-9.

#### Recommended

- Stop LAPD Spying Coalition (2018). ["Before the bullet hits the body: Dismantling predictive policing."](#) [ELMS]
- Wood, Stacy E. (2019). "Policing through platform." *Computational Culture* 7.
- [Warren, Rachel B., and Niloufar Salehi. "Trial by File Formats: Exploring Public Defenders' Challenges Working with Novel Surveillance Data." \*Proceedings of the ACM on Human-Computer Interaction\* 6, no. CSCW1 \(2022\): 1-26.](#)

## 15) May 8: Education

### Required

- O'Day, Vicki, Daniel Bobrow, Kimberly Bobrow, Mark Shirley, Billie Hughes, and Jim Walters. (1998). "Moving practice: From classrooms to MOO rooms." *Computer Supported Cooperative Work* 7(1): 9-45.
- [Mitchell, Nick \(2023\). "What is a university? Gender, race, surplus." \[video\]](#)

### Recommended

- Zárate, Salvador. (2021). "Malinowski's Latinx Gardeners: Domestic Interruptions and the Manicured Resplendence of Zoom University." *Anthropology and Humanism* 46(2): 414-421.
- Rhoads, Robert A., Maria Sayil Camacho, Brit Toven-Lindsey, and Jennifer Berdan Lozano. (2015). "The massive open online course movement, xMOOCs, and faculty labor." *The Review of Higher Education* 38(3): 397-424.
- Greiffenhagen, Christian. (2008) "Unpacking tasks: The fusion of new technology with instructional work." *Computer Supported Cooperative Work* 17(1): 35-62.

**Final Paper Due May 15**