

COMPUTERS, THE INTERNET, AND SOCIETY

CSE 252 / EMC 252 / STS 252

TR 2:35 p.m. - 3:50 p.m.

Packard Lab 466

Spring 2018

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Facebook. PRISM. Uber. Fake news. #Occupy. 4chan. It's easy to find evidence for the effect that technology has on society. It's a bit harder, though, to pin down exactly *how* these effects happen.

This course considers the **nature of the relationship between computing and society**. In it, we explore different accounts for this relationship. By the end of the course, you will be able to:

- identify social or ethical issues in computing technology development and deployment using a variety of conceptual and theoretical frameworks.
- enumerate the various positions that people can and do take on that issue.
- articulate and defend your own position for an appropriate course of action, drawing on examples from previous sociotechnical systems.

The above constitute the *learning objectives and outcomes* for this course.

This is a **writing intensive** course. Writing will occur through a combination of individual and group assignments. These assignments are structured to help you develop your ability to present well-supported arguments. They will also provide you experience discussing the kinds of issues and decisions that you will face after graduation. Anyone who goes into a technology sector will unavoidably need to deal with complex ethical issues. Anyone not directly involved in technology development will also need to consider issues of how different possible configuration of computers and people may affect their work and their lives.

DEBATES

The course structured hinges on a series of debates, each of which focuses on a particular topic. Debates will be conducted in the following manner.

- Each student will be assigned to a debate team of ~4 members. Assignments will be made on Monday, January 29, in case of any adds or drops during the first week of class.
- For each debate, a subset of teams will be assigned as discussion leaders. The position your team should argue will be assigned when you arrive in class for the debate.

- Debates will be structured as follows. In the interest of time, no slides (e.g., Power Point) or other A/V materials will be allowed.
 - **Opening Arguments:** Each team will have 3 minutes to make opening remarks. Attract the audience's attention, clearly state your position, offer evidence in support of your position. Pro speaks first, then Con.
 - **Cross Examination and Rebuttal:** Each team will have 2 minutes to ask questions of the other side. Identify and exploit the weaknesses in arguments. Each team will then have 3 minutes to respond. Defend your claims, with additional evidence as necessary. Pro examines first, and Con responds. Then Con examines, and Pro responds.
 - 3 minute recess – Leading teams discuss strategy, audience teams (those not leading the debate) formulate questions.
 - **Floor Discussion:** Audience teams will each ask one question of the Pro teams and one question of the Con teams. Floor discussion is limited to 7 minutes.
 - **Final Response and Close:** Each team will have 4 minutes to respond to audience questions, summarize the debate, and conclude their arguments.
- During debates, all those students **not presenting** will use argüman to create an **argument map** of the issue. You may use an existing Twitter account to log into argüman, or you can register to create a new account for the site. In either case, please send the Professor the name of the account you will be using. Use of argüman will be demonstrated in class prior to the first debate.
- Premises added in argüman will be recorded and used as part of the participation grade for those students not presenting during a debate.

At the conclusion of the debate, you will draft a **position paper**. The debate will focus on a pro/con framing. Your position paper, however, will answer a more open-ended question related to but different from the debate prompt. This position paper should articulate your group's position on the issue and clearly respond to the provided prompt. More details about position statements and debate topics will be made available on CourseSite for each debate.

ASSIGNMENTS

All written assignments should be submitted in 10-12 point font, single column, single spaced, with 1" to 1.5" margins, in a legible and appropriate typeface of your choosing. Any references should be cited using APA format or similar. Assignment lengths are specified in word count, exclusive of references, tables, captions, footnotes, etc.

DISCONNECTION ASSIGNMENT

In an effort to understand the reach of technology's influence in our lives, students will spend **24 hours without electronic communication technology**. This includes computers, phones, portable devices, social networking, TV, radio, and others – even for academic or scholastic purposes¹.

This assignment will be difficult and will likely require some advance planning. Therefore, you are *highly encouraged to complete this assignment early* in the semester. That way, if you are unable to complete the full 24 hours, you will still have time to try again before the assignment is due. During your disconnection time, you will take hand-written field notes. After completing the disconnection, you will write and submit a paper about the experience. Further details, as well as a template for the field notes, will be made available on CourseSite.

OPINION-EDITORIAL

During the course of the semester, your group will write four position papers. As a group, you must select one of these position papers to submit as an op-ed piece to a regular periodical of your choice. You may choose something on par with the New York Times or Wall Street Journal, you may choose something more like The Morning Call, you may choose something like Wired, or any other legitimate journalistic venue with open op-ed submissions.

There are two elements to the op-ed submission. The first is the piece itself. Most op-ed venues require that submissions be much shorter than your position papers, usually around 750 words. It will likely involve a non-trivial amount of effort to condense your argument to this length. The second is a reflection that you will write about this process. The reflection will cover the revision of your position paper, the submission process of your op-ed piece, what response you receive, and how you make sense of those experiences through the lens of the material covered in this class. More details will be made available on CourseSite.

IN-CLASS

A writing or other exercise will often be given at the beginning of class, at the end of class, during the middle of class, or some combination thereof. These should be submitted using a **blue book**, which you can obtain from the campus book store, online, or other fine retailers. Blue books will be handed in at the end of each class and returned at the beginning of the next class. Once a blue book is full, the full book may be kept and a new one should be started. After the first day, in-class assignments **will not be accepted** on loose leaf sheets of paper.

Due to the volume of students in this course, your work on these assignments will be graded according to one of two randomly selected rubrics. There is a 2/3 chance your assignment will be graded simply for completion. There is a 1/3 chance your work will be graded on a basic letter

¹ For valuable suggestions on this assignment, thanks to Melissa Mazmanian at UC Irvine, who in turn drew on ideas from Keri Stephens at UT Austin.

scale according to the following rubric:

- A: Thorough comprehension of material, well-reasoned and articulate argument, and thorough use of readings.
- B: Sufficient comprehension of the material and cogent reasoning grounded in readings.
- C: May be missing one or two minor points, use of readings may show misunderstanding.
- D: Misses the central point of the prompt, little to no use of readings
- F: Off-topic, no response, or similar issues.
- A+: Truly outstanding, novel insights or arguments that go beyond the class material.

If you are absent and have no personal days remaining (see the policy below regarding Attendance), you will receive no credit.

DEBATE POSITION PAPERS

Immediately following each debate, you and your team members will collaboratively draft a position paper. Position papers should be written using Google Docs and your Lehigh login, which will make tracking of each team member's contributions easier.

On the class day following each debate, your team will be paired with another to share position papers. During class, you will read through the other team's draft position paper and provide comments. This process will likely be best facilitated by sharing your draft with the other team in comment mode. Doing so will allow the other team to add comments or suggest changes without inadvertently removing any content from your draft.

The final version of each position paper is then due by the beginning of class on the date noted on the syllabus, usually one week after the original debate. More details will be made available on CourseSite.

FINAL VIDEO

Rather than a term paper, the final deliverable for this class will be a video. It should be about 5 to 10 minutes in length and will be completed in groups of four to five. Students will choose their own groups for this project. Groups must be chosen with lists of a group name and group members sent to the TA and Prof. Baumer by Tuesday, February 20. A written or multimedia summary of your planned video should be submitted by Thursday, March 8, and the final version of the complete video is due by Thursday, April 26.

This video should be persuasive. It should engage with a complex issue about the relationship between computing and society, it should take a position on that issue, and it should make an argument in support of that position. The exact format and genre of the video are open. It could be a public service announcement, an infomercial, investigative journalism, science fiction, a

documentary, etc. If you have a creative idea but are unsure about the appropriateness, please take up your concerns with the Professor prior to when the summary is due. Further details about this assignment will be made available on CourseSite.

ATTENDANCE

Attendance is **mandatory**. A significant portion of the course involves developing an ability to make arguments, both in terms of articulating your own and in terms of understanding others. As such, in-class activities are integral, both to your own and to others' learning, as well as a non-negligible portion of your grade.

Sometimes, though, life happens. In such instances, you will receive **two personal days** to use at your discretion during the semester. To use a personal day, simply do not show up to class. No excuse or justification need be given. Any in-class assignments or participation grade that day will not count toward your total. If you miss additional days, those will be counted as a zero toward your in-class assignment and discussion participation grades.

GRADING

You will receive a grade based on the following break down.

15% in-class assignments, ~1% each week

15% in-class discussion participation, ~1% each week

10% disconnection write-up

10% debate leading

20% debate position papers (5% each for 4 debates)

5% position paper feedback (1.25% for 4 papers)

15% final video project

10% grand finale (aka, final exam)

Grading Scale

97% – 100% A+	77% – 79.9% C+
93% – 96.9% A	73% – 76.9% C
90% – 92.9% A-	70% – 72.9% C-
87% – 89.9% B+	67% – 69.9% D+
83% – 86.9% B	63% – 66.9% D

80% – 82.9% B-

60% – 62.9% D-

< 60% F

POLICIES

Technology in Class – While in class, your attention should be on class. Please silence, disable, or turn off any device that makes noise. During most classes, you should *not use* laptops, tablets, phones, or other electronic devices. If you believe there should be an exception to this policy, you may contact the Professor.

Academic Honesty –

“If I have seen further, it is by standing on the shoulders of giants.”

– (Isaac Newton, 1676)

In this class, you both are encouraged and will need to draw on the work and ideas of others. However, you must do so with appropriate acknowledgement. For scholarly writing, news media, books, or other publications, this usually means citation. In other cases, a footnote and/or an acknowledgement section may be more appropriate (for instance, see the above footnote about our disconnection assignment). Written assignments will be screened using TurnItIn. Plagiarism will not be tolerated. If in doubt, ask the Professor or TA, or see Lehigh’s plagiarism policies (available from http://library.lehigh.edu/content/plagiarism_policies).

Accommodations for Students with Disabilities – If you have a disability for which you are or may be requesting accommodations, please contact both the Professor and the Office of Academic Support Services, Williams Hall, Suite 301 (610-758-4152) as early as possible in the semester. You must have documentation from the Academic Support Services office before accommodations can be granted.

Team Work – A significant portion of the work in this class will be completed in groups or teams. At the end of the semester, you will be asked to evaluate the other members of the teams in which you have worked. Individuals who receive a negative evaluation from one team member will receive a notification that a complaint was made (though not by whom). Individuals who receive a negative evaluation from two team members will receive a 10% deduction in their grade on the project. Individuals who receive a negative evaluation from more than two team members will receive a 50% reduction in their grade on the project. Complex cases may involve external dispute resolution if necessary.

DISSENT

This class deals with complex, contentious topics. As such, you may disagree with the other students, the TA, the graders, or the Professor. This disagreement is both allowed and encouraged. However, disagreement must be voiced and conducted in a civil manner. From the

Lehigh Principles of our Equitable Community:

We recognize each person's right to think and speak as dictated by personal belief and to respectfully disagree with or counter another's point of view.

Lehigh University endorses The Principles of Our Equitable Community. We expect each member of this class to acknowledge and practice these Principles. Respect for each other and for differing viewpoints is a vital component of the learning environment inside and outside the classroom. See http://www.lehigh.edu/~inprv/initiatives/PrinciplesEquity_Sheet_v2_032212.pdf

SCHEDULE

All readings with URLs are available through Lehigh. You **do not need to pay** for any of the readings. You can access them from on campus, or you can use the Lehigh VPN. For detailed directions, see:

- Linux: <https://its.lehigh.edu/services/stepwise-instructions/installing-cisco-anyconnect-vpn-client-software-linux>
- Mac: <https://its.lehigh.edu/services/stepwise-instructions/connect-vpn-mac>
- Windows: <https://its.lehigh.edu/services/stepwise-instructions/install-and-connect-vpn-windows>

Any readings that are not freely available online will be posted on CourseSite.

DATE	TOPIC & READINGS	ASSIGNMENTS ETC.
WEEK 1	WELCOME	
1/23	Preliminaries	
1/25	Clay Shirky. 2008. It Takes a Village to Find a Phone. Chapter 1, in <i>Here Comes Everybody</i> . Penguin Books: London.	
WEEK 2	LIVE LONG AND PROSPER	

DATE	TOPIC & READINGS	ASSIGNMENTS ETC.
1/30	<p>BJ Fogg. 1998. Persuasive computers: perspectives and research directions. In <i>Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI)</i>: 225-232. http://dl.acm.org/citation.cfm?id=274677</p> <p>Sunny Consolvo, David W. McDonald, Tammy Toscos, Mike Y. Chen, Jon Froehlich, Beverly Harrison, Predrag Klasnja, Anthony LaMarca, Louis LeGrand, Ryan Libby, Ian Smith, and James A. Landay. 2008. Activity sensing in the wild: a field trial of ubifit garden. In <i>Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI)</i>: 1797-1806. http://dl.acm.org/citation.cfm?id=1357335</p>	<p>Debate Teams Assigned (M 1/29)</p>
2/1	<p>Daniel Berdichevsky and Erik Neuenschwander. 1999. Toward an ethics of persuasive technology. <i>Communications of the ACM</i>, 42(5): 51-58. http://dl.acm.org/citation.cfm?id=301410</p> <p>ACM Code of Ethics. https://www.acm.org/about-acm/acm-code-of-ethics-and-professional-conduct</p>	
WEEK 3	IT'S (NOT) EASY BEING GREEN	
2/6	<p>Jon Froehlich, Tawanna Dillahunt, Predrag Klasnja, Jennifer Mankoff, Sunny Consolvo, Beverly Harrison, and James A. Landay. 2009. UbiGreen: Investigating a Mobile Tool for Tracking and Supporting Green Transportation Habits. In <i>Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI)</i>, 1043–1052. https://doi.org/10.1145/1518701.1518861</p> <p>Stacey Kuznetsov and Eric Paulos. 2010. UpStream: Motivating Water Conservation with Low-cost Water Flow Sensing and Persuasive Displays. In <i>Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI)</i>, 1851–1860. https://doi.org/10.1145/1753326.1753604</p>	
2/8	<p>Kentaro Toyama. 2010. Can Technology End Poverty? Boston Review, December 2010. http://bostonreview.net/forum/can-technology-end-poverty</p>	
WEEK 4	DEBATE!	
2/13	Debate Round 1: Persuasion	<p>Due: Disconnection Assignment</p>

DATE	TOPIC & READINGS	ASSIGNMENTS ETC.
2/15	Critique Round 1: Persuasion	Due: Draft of Position Paper 1
WEEK 5	SOCIAL MEDIA: OTHERS	
2/20	<p>Howard Rheingold. 2000. The Heart of the WELL. from <i>The Virtual Community</i>. MIT Press: Cambridge, MA. http://www.rheingold.com/vc/book/1.html</p> <p>danah M. boyd and Nicole B. Ellison. 2007. Social Network Sites: Definition, History, and Scholarship. <i>Journal of Computer-Mediated Communication</i> 13, 1 (October 2007), 210–230. https://doi.org/10.1111/j.1083-6101.2007.00393.x [pp. 210-219, stop at heading Previous Scholarship]</p>	Due: Video Team Rosters Due: Final Version of Position Paper 1
2/22	<p>Ricardo Gomez, Kirsten Foot, Meg Young, Rose Paquet-Kinsley, and Stacey Morrison. 2015. Pulling the plug visually: Images of resistance to ICTs and connectivity. <i>First Monday</i>, 20(11). http://journals.uic.edu/ojs/index.php/fm/article/view/6286</p> <p>Ronald Kline. 2003. Resisting Consumer Technology in Rural America: The Telephone and Electrification. In <i>How Users Matter: The Co-Construction of Users and Technology</i>, (eds. Nelly Oudshoorn and Trevor Pinch): 51–66. MIT Press: Cambridge, MA.</p>	
WEEK 6	SOCIAL MEDIA: OURSELVES	
2/27	<p>Matt Richtel. 2010. Attached to Technology and Paying the Price. <i>New York Times</i>. http://www.nytimes.com/2010/06/07/technology/07brain.html</p> <p>Nicholas Carr. 2008. Is Google Making Us Stupid? <i>The Atlantic</i>. http://www.theatlantic.com/magazine/archive/2008/07/is-google-making-us-stupid/306868/</p>	
3/1	<p>Cass Sunstein. 2001. The Daily Me. In <i>Republic.com</i>, 1-22. Princeton University Press: Princeton, NJ. http://press.princeton.edu/chapters/s7014.pdf</p>	
WEEK 7	DEBATE!	
3/6	Debate Round 2: Who's Responsible?	

DATE	TOPIC & READINGS	ASSIGNMENTS ETC.
3/8	Critique Round 2: Who's Responsible?	Due: Draft of Position Paper 2 Due: Outline of Video
WEEK 8	SPRING BREAK	
3/13	no class meeting	
3/15	no class meeting	
WEEK 9	THE END OF PRIVACY?	
3/20	Leysia Palen and Paul Dourish. 2003. Unpacking "privacy" for a networked world. In <i>Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI)</i> : 129-136. http://dl.acm.org/citation.cfm?id=642635 Helen Nissenbaum. 2001. A Contextual Approach to Privacy Online. <i>Daedalus</i> , 140(4) 32-48. http://www.mitpressjournals.org/doi/abs/10.1162/DAED_a_00113	Due: Final Version of Position Paper 2
3/22	Irina Shklovksi, Janet Vertesi, Emily Troshynski, and Paul Dourish. 2009. The commodification of location: dynamics of power in location-based systems. In <i>Proceedings of the International Conference on Ubiquitous Computing (UbiComp)</i> : 11-20. http://dl.acm.org/citation.cfm?id=1620548	
WEEK 10	NOTHING TO HIDE	
3/27	Daniel J. Solove. 2011. Why Privacy Matters Even if You Have "Nothing to Hide." <i>The Chronicle of Higher Education</i> . https://www.chronicle.com/article/Why-Privacy-Matters-Even-if/127461 Stuart Armstrong. Life in the Fishbowl: The strange benefits of living in a total surveillance state. Aeon. https://aeon.co/essays/the-strange-benefits-of-living-in-a-total-surveillance-state	
3/29	Debate Round 3: Privacy and Surveillance	
WEEK 11	DEBATE! #SURV252	

DATE	TOPIC & READINGS	ASSIGNMENTS ETC.
4/3	Critique Round 3: Privacy and Surveillance	Due: Draft of Position Paper 3
4/5	Cynthia Rudin. 2015. New models to predict recidivism could provide better way to deter repeat crime. <i>The Conversation</i> . http://theconversation.com/new-models-to-predict-recidivism-could-provide-better-way-to-deter-repeat-crime-44165 Julia Angwin, Jeff Larson, Surya Mattu and Lauren Kirchner. 2016. Machine Bias. <i>Pro Publica</i> . https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing	
WEEK 12	"I SEE YOUR DATA IS AS BIG AS MINE..."	
4/10	No class (Prof. Baumer away)	Due: Final Version of Position Paper 3
4/12	danah boyd and Kate Crawford. 2012. Critical Questions for Big Data: Provocations for a cultural, technological, and scholarly phenomenon. <i>Information, Communication & Society</i> , 15(5): 662-679 http://www.tandfonline.com/doi/abs/10.1080/1369118X.2012.678878 Latanya Sweeney. 2013. Discrimination in Online Ad Delivery. <i>Communications of the ACM</i> , 56(5): 44-54. http://dx.doi.org/10.1145/2460276.2460278 .	
WEEK 13	IT'S NOT THE SIZE OF YOUR DATA...	
4/17	<i>Do this before reading!</i> Use Apply Magic Sauce on your own Facebook profile and/or writing: https://applymagicsauce.com/ Wu Youyou, Michal Kosinski, and David Stillwell. 2015. Computer-based personality judgments are more accurate than those made by humans. <i>Proceedings of the National Academy of Sciences</i> , 112(4): 1036-1040. http://www.pnas.org/content/112/4/1036.abstract Tarleton Gillespie. 2014. Can an Algorithm be Wrong? <i>limn</i> 2. http://limn.it/can-an-algorithm-be-wrong/?doing_wp_cron=1488263403.9042460918426513671875	
4/19	Debate Round 4: Algorithms	

DATE	TOPIC & READINGS	ASSIGNMENTS ETC.
WEEK 14	DEBATE! (PROF. BAUMER AWAY)	
4/24	Critique Round 4: Algorithms (Prof. Baumer away)	Due: Draft of Position Paper 4
4/26	No class (Prof. Baumer away)	Due: Final Video Project
WEEK 15	VISIONS AND FUTURES	
5/1	Julian Bleecker. 2009. Design Fiction: A Short Essay on Design, Science, Fact and Fiction. <i>Near Future Laboratory</i> . http://drbfw5wflxon.cloudfront.net/writing/DesignFiction_WebEdition.pdf [sections 01 and 02, pp. 1-23] Bruce Sterling. 2011. Maneki Neko. <i>Lightspeed</i> . http://www.lightspeedmagazine.com/fiction/maneki-neko/	Due: Final Revision of Position Paper 4
5/3	No reading assignment	Due: Video Team Assessment (F 5/5) Due: Debate Team Assessment (F 5/5)