COMM 8230: Seminar in Media & Technology Studies
Communication Infrastructures
Mondays, 4:00 p.m.-6:45 p.m. / Daniel Hall 301

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Office hours: Monday and Wednesday, 9-11 a.m. and by appointment

Course Description

From telegraph wires to underseas cables to data centers and computer software, a variety of material infrastructures and sociotechnical systems shape the conditions of possibility around all manner of communication and media. This course will train students in media and technology studies approaches to researching such infrastructures and systems, focusing in particular on what they enable and disable across different communities and daily practices, how they are connected to various political formations, and their material and environmental impacts. Students will learn relevant theories and research methods, assess a wide range of global case studies, and ultimately produce their own research studies that assess infrastructural systems from qualitative and/or critical perspectives. We will particularly value the relationship between this area of research and public policy, emphasizing the role of researchers in advocating for specific changes to how infrastructures are managed and governed.

Learning Outcomes

By the end of this course, students will:
1. Understand relevant theories and methods in the study of communication infrastructures
2. Apply understandings to discussion of existing academic research and case studies on communication infrastructure
3. Analyze and evaluate case studies of issues in communication infrastructures from a variety of perspectives
4. Create an original research paper based on course concepts.

Required Texts

All texts are distributed freely as .pdf files through our Canvas site or through Clemson Libraries as an e-book.

There are no additional costs you will incur in this course.

Course Policies

Environment: This is a graduate seminar. You should expect to work hard and to self-initiate. I will do my best to guide you along the way. Part of a seminar is to discuss and debate disagreements in the room. You are invited to disagree with me, or with your classmates, but you must always do so from a position of respect that listens to and processes their viewpoint before responding. Disrespect of anyone's beliefs—academic or otherwise—will not be tolerated at the seminar table.

Reading: This course requires a good deal of reading, so please do your best to keep up. My best advice for you is to not get lost in the weeds, but to look for overarching ideas, claims, and concepts that seem to be most appropriate or interesting to you, and try to work on understanding the larger picture. You are expected to have completed all the assigned readings before coming to class.

Office hours: I strongly encourage you to visit with me at some point during the semester to discuss your research interests/ideas, progress in the course, etc. One of the benefits of graduate seminars is to be able to work closely with faculty, and I encourage you to utilize me as needed throughout this course and your time at Clemson.

Academic integrity: I expect honesty in all the work you do for this course. Plagiarism, in particular, of any sort is never tolerated and will be dealt with through prescribed University protocol. Please review all expected Code of Conducts for Clemson University.

Late work: Late work will earn a reduced grade and may not receive written feedback.

Absences: You are expected to attend every meeting. However, should you need to miss class due to serious illness, a religious observance, or any other traditionally excusable reason, please let me know *in advance of our class meeting*. Simply choosing to not attend seminar meetings will adversely impact your grade and your ability to keep up with the material.

Clemson Policies and Student Services
(an incomplete list;
if you need help connecting with other services on campus, please let me know)

The Americans with Disabilities Act

Clemson University seeks to provide equal access to its programs, services, and activities for people with disabilities. Students with disabilities who need accommodations should make an appointment with Arlene Stewart, Director of Student Disability Services, to discuss specific needs within the first month of classes. Students should present a Faculty Accommodation Letter from Student Disabilities Services when they meet with instructors. Please be aware that

accommodations are not retroactive and new Faculty Accommodation Letters must be presented each semester. In order to comply with the Americans with Disabilities Act (ADA), faculty must follow instructions contained in letters issued by the office of Student Disability Services.

G-20 Redfern Health Center

http://www.clemson.edu/campus-life/campus-services/sds/

864-656-6848 sds-l@clemson.edu

Clemson Academic Integrity Policy

Students who violate the Clemson Academic Integrity Policy in any way will receive a failing grade (i.e., an "F") for this course. The policy:

As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a "high seminary of learning." Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form.

1. Any breach of the principles outlined in the Academic Integrity Statement is considered an act of academic dishonesty.
2. Academic dishonesty is further defined as:
    1. Giving, receiving, or using unauthorized aid on any academic work;
    2. Plagiarism, which includes the intentional or unintentional copying of language, structure, or ides of another and attributing the work to one's own efforts;
    3. Attempts to copy, edit, or delete computer files that belong to another person or use of Computer Center account numbers that belong to another person without the permission of the file owner, account owner, or file number owner.
3. All academic work submitted for grading contains an implicit pledge and may contain, at the request of an instructor, an explicit pledge by the student that no unauthorized aid has been received.
4. It is the responsibility of every member of the Clemson University community to enforce the Academic Integrity Policy.

Title IX (Sexual Harassment) Statement
Clemson University is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender, pregnancy, national origin, age, disability, veteran status, genetic information or protected activity in employment, educational programs and activities, admissions and financial aid. This includes a prohibition against sexual harassment and sexual violence as mandated by Title IX of the Education Amendments of 1972. This policy is located at http://www.clemson.edu/campus-life/campus-services/access/title-ix.

Academic Success Center
The Academic Success Center provides free services, including tutoring, academic coaching, and academic skills workshops, for all Clemson students. Visit <https://www.clemson.edu/asc> for more information.

Writing Center
Clemson University's Writing Center offers free one-on-one tutoring for all Clemson students. Visit <https://clemson.mywconline.com> for more information.

Cooper Library
Reference librarians are available in person and via text, phone, email, and chat to answer your research questions. Visit Ask a Librarian for more information at
<https://libraries.clemson.edu/ask>

Technical Support
If you are having hardware or software problems, CCIT's Service Desk may be able to help you. Contact them at ITHELP@clemson.edu with a detailed description of your problem.

Academic Advising
Academic advising (<https://www.clemson.edu/academics/advising/index.html>) is an ongoing educational process that connects the student to the University. Academic advising supports the University's mission of preparing students for learning beyond the confines of the academy. Academic advisors represent and interpret University policies and procedures to students and help students navigate the academic and organizational paths of the institution.

Academic Grievances
Students are advised to visit the Ombuds' Office
(<https://www.clemson.edu/administration/ombudsman/index.html>) prior to filing a grievance. After discussion with the undergraduate academic ombudsman, students should contact Undergraduate Studies (864-656-3022) for assistance filing official paperwork.

Registrar
The Registrar's office provides information about important deadlines, degree and program requirements, and other key information, including use of iROAR to add, drop, or withdraw from courses.

Counseling and Psychological Services (CAPS)
Stress, anxiety, depression, and sleep disorders are increasingly common among undergraduate students across the United States. The university provides students with counseling and psychological support services. If you are struggling with your mental health and well-being in any way, I encourage you to reach out to these services. You can find more information at http://www.clemson/edu/campus-life/campus-services/redfern/menta-health

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Assignments

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<u>A note on grading</u>: There is an expectation that you will be doing "A" level work in this class, and that you will put your best foot forward in everything you do. I am happy to meet with you at any point during the semester to discuss your performance in the course if you are feeling overwhelmed or uncertain about your work or standing in the class. I expect high quality work from you.

Weekly passages: 20%
Facilitation: 15%
Participation and attendance: 10%
Seminar paper proposal: 5%
Seminar research presentation: 15%
Seminar paper: 35%

Participation and Attendance (10%): Seminars are guided—and sustained—by the participation all of you bring to the table. You should come prepared to discuss the week's material in detail. You should have questions and ideas, and be respectful of others' questions and ideas. The best advice I can give about being at a graduate seminar table is this: understand, affirm, appropriate, and add; try not to diminish, dismiss, or destroy. Be, as Kathleen Fitzpatrick calls it, *generous thinkers.*

I discourage the following modes of engagement:

(1) "The torpedo": Please don't simply try to sink an author's argument. Although you're welcome to disagree, make a good faith effort at positively, constructively, and creatively engaging with the reading materials on their own terms.

(2) "The omission": Although criticizing a text on the basis of its blind spots can be worthwhile, I ask you *not* to develop an entire critique around what the author did not do. Begin by trying to appreciate what she/he/they did accomplish more or less successfully.

(3) "The ace-in-the-hole": Doubtless, the reading materials will provoke you to think about other texts you've encountered, either in your other graduate seminars or in your undergraduate or extracurricular readings. Avoid comments that start with, "If only you had read..." Although making connections to texts you've read outside of this class is a worthwhile exercise in longer research papers and presentations, in general it's best to keep your comments focused on the text(s) at hand. That way, hopefully, everyone can follow along and nobody will feel alienated.

Weekly Passages (20%): To help keep our seminar on track, you will need to type up **three** particularly provocative, perplexing, and/or poignant passages from across the assigned readings for that week. For each passage, you should **also include** 1-5 sentences explaining why you selected that passage, and any questions you have about it. These responses are "low-stakes writing," and are designed to help me see the places you are struggling with and connecting to in our readings. Please come prepared to discuss these passages and ask questions about them, and make sure to e-mail them to me **before the start of the seminar meeting**. Passages submitted after the seminar meeting will not be accepted and will not receive feedback.

Facilitation (15%): Once during the semester you will lead our group in a conversation about the week's main reading selection. You're welcome to structure the discussion however you see fit. At minimum, you should:

(a) Provide a *brief* overview of the article and its main contribution

(b) Push the class to engage in a thoughtful, critical dialogue about the text by highlighting specific passages, concepts, and/or issues you find to be important or challenging and asking discussion questions about them.

(c) Direct us to at least two passages from the reading and prepare a discussion question about each passage.

(d) Provide a concise, pointed handout that organizes your facilitation. E-mail it to the group before the start of the seminar

I will "steer" the discussion as needed throughout facilitation, but this assignment allows each of you the opportunity to work on developing an agenda and distilling complicated literature for a classroom discussion.

Seminar paper proposal (5%): By **March 7** you should submit a one-page proposal outlining what you intend your seminar paper to cover, and explaining how it either applies or extends material from our course. The purpose of this assignment is to commit to the direction of your seminar paper. You are welcome to submit your proposal earlier if you decide on a topic earlier.

Seminar Paper Presentation (15%): During our last class meeting of the semester, each of you will give a 10-12 minute presentations summarizing the work, arguments, and contributions of your seminar paper. You should consider this a rough pass at a potential conference presentation of this work. All arguments and findings are expected to be provisional, knowing that you will still likely be working on your seminar papers into exam week.

Seminar paper (35%): Your major output for this course is a 15-20 page (not including references) seminar paper that researches and analyzes some form of communication infrastructure. You should base your research on close analysis of your topic that moves across **at least two** of the following registers:

       Register 1: Public discourse. How are infrastructures represented and discussed? How are they discursively constructed? This could entail examining newspaper articles, company blogs, popular cultural representations, documentaries, or any other sort of public material such as social media conversation or images. It also includes media representation, such as documentaries or television programming.

       Register 2: Policy. How are infrastructures regulated and governed? Policy documents could include those the company produces (terms of use, privacy policies, etc.) or policies that governments have established to regulate platforms. You may choose to examine the policies crafted by the companies that produce and maintain infrastructures, or you may choose to examine political debates on local or national levels about infrastructural categories such as social media content moderation.

       Register 3: Technical operations. How does the infrastructure actually work? How is the software programmed, how is the content moderated, how does it channel energy? These sorts of questions entail researching and understanding how a thing operates (note: you're not scientists or engineers. I understand there are significant limitations to what you might be able to learn in a semester).

       The following three registers are *less likely* to be attainable for a seminar paper, just based on time available, but they are also options:

       Register 4: Fieldwork. Can you actually travel to, examine, or otherwise encounter an infrastructure under consideration? What can you learn from observing it first-hand? Embodied participant observation can become a way to assess and analyze infrastructures embedded within particular spaces.

       Register 5: Interviews. Is it possible to interview individuals who work with infrastructures or are otherwise impacted by them? How might human subjects research enable you to better understand how infrastructures are part of communicative and cultural processes?

Register 6: Archival work. What primary historical documents can you locate that helps you write a history of some sort of infrastructural development, especially as pertains communication, media, or information technological infrastructures?

A final note

My seminars are fast-paced, intensive, and conversation based. We are here to read, discuss, think, and learn together, as well as to develop relevant research and analysis. I am here to support you at every step of the way and try not to make assumptions about what you might already know, but the trade-off is that I expect you to also work hard, self-initiate, and contribute actively, respectfully, and thoughtfully to our space. Seminars are what we make of them. Let's make this one exemplary.

Course Calendar

Week One: January 17

No class, MLK Day of Service

Read: J. Macgregor Wise and Jennifer Daryl Slack, *Culture and technology: A primer*. New York: Peter Lang, 2015.
** This book is available to read online for free through Clemson Libraries. I also highly recommend investing in your own copy if you are able. Reading through this book will give you a solid foundation for some of the ideas we explore in this class and help introduce and define what we mean when we study technology from a critical, cultural perspective. Ideas from this book will be folded into lectures throughout the semester.

Week Two: January 24

Seminar topic: Infrastructure as material, metaphor, and theory

Main reading:
Blake Hallinan and James N. Gilmore, "Infrastructural politics amidst the coils of control," *Cultural Studies* 35, nos. 4-5 (2021): 617-640.

Supporting readings:
1. Lisa Parks and Nicole Starosielski, Introduction to *Signal traffic: Critical studies of media infrastructures*, pp. 1-30. University of Illinois Press.
2. Jean-Christophe Plantin, Carl Lagoze, Paul N Edwards, and Christian Sandvig, "Infrastructure studies meets platform studies in the age of Google and Facebook," *New Media & Society* 20, no. 1 (2018): 293-310
3. Brian Larkin, "The politics and poetics of infrastructure," *Annual Review of Anthropology* 42 (2013): 327-343.

<u>Week Three: January 31</u>

Seminar topic: Historiography

Main reading:
James W. Carey, "Technology and ideology: The case of the telegraph" in *Communication as Culture: Essays on Media and Society* (pp. 155-177). New York: Routledge, 1992.

Supporting readings:
1. John Durham Peters, "Calendar, Clock, Tower" in *Deus in machina: Religion, technology, and the things in between*, ed. Jeremy Stolow. Fordham University Press, 2013.
2. Judy Wajcman, "How Silicon Valley sets time," *New Media & Society* 21, no. 6 (2019): 1272-1289.
3. Harold Innis, "The Bias of Communication," *The Canadian Journal of Economics and Political Science* 15, no. 4 (1949): 457-476.
4. Lynn Spigel, "Installing the Television Set: Popular discourses on television and domestic space, 1948-1955," *Camera Obscura* 6, no. 1 (1988): 9-46.

<u>Week Four: February 7</u>

Seminar topic: Logistics and distributive infrastructure

Main reading:
Matthew Hockenberry, "Redirected entanglements in the digital supply chain," *Cultural Studies* 35, nos. 4-5 (2021): 641-662.

Supporting readings:
1. Nicole Starosielski, "'Warning: Do Not Dig': Negotiating the visibility of critical infrastructures," *Journal of Visual Culture* 11, no. 1 (2012): 38-57.
2. Steven J. Jackson, "Rethinking Repair," in *Media technologies: Essays on communication, materiality and society*, eds. T. Gillespie, PJ. Boczkowski, and K. Foot (pp. 221-240). The MIT Press, 2014.
3. Ned Rossiter, "Coded Vanilla: Logistical Media and the Determination of Action," *South Atlantic Quarterly* 114, no. 1 (2015): 135-152.
4. Alexander Klose, "Introduction" + "What is a container?" *The Container Principle: How a box changes the way we think*. The MIT Press, 2015.

<u>Week Five: February 14</u>

Seminar topic: Ethnography of infrastructure

Main reading:
D. Travers Scott, "'We don't even know who owns it': the infrastructural imaginary of Spruce Pine, NC," *Cultural Studies* 35, nos. 4-5 (2021): 900-919.

Supporting readings:
1. Susan Leigh Star, "The ethnography of infrastructure," *American Behavioral Scientist* 43, no. 3 (1999): 377-391.

Week Five readings, cont'd.

2. Nick Seaver, "Algorithms as culture: Some tactics for the ethnography of algorithmic systems," *Big Data & Society* (2017): 1-12.
3. Karen E.C. Levy, "The contexts of control: information, power, and truck-driving work," *The Information Society* 31, no. 2 (2015): 160-174.
4. Julia Aoki and Ayaka Yoshimizu, "Walking histories, un/making places: Walking tours as ethnography of place," *Space and Culture* 18, no. 3 (2015): 273-284.

Week Six: February 21

Seminar topic: Design

Main reading:
Heather Suzanne Woods, "Domestic futurity: The smart home as infrastructure," *Cultural Studies* 35, nos. 4-5 (2021): 876-899.

Supporting readings:
1. Langdon Winner, "Do artifacts have politics?" *Daedalus* 109, no. 1 (1980): 121-136.
2. Craig Robertson, "The Filing Cabinet," *Places Journal* (2021) available from: <https://placesjournal.org/article/the-filing-cabinet-and-20th-century-information-infrastructure/>
3. Ted Striphas, "Bringing bookland online," from *The Late Age of Print: Everyday Book Culture from Consumerism to Control* (pp. 81-110). New York: Columbia University Press, 2009
4. Greg Siegel, "The accident is uncontainable/the accident must be contained: High-speed cinematography and the development of scientific crash testing," *Discourse* 30, no. 3 (2008): 348-372.

Week Seven: February 28

Seminar topic: Studying sociotechnical systems

Main reading:
Jonathan Sterne and Elena Razlogova, "Tuning sound for infrastructures: artificial intelligence, automation, and the cultural politics of audio mastering," *Cultural Studies* 35, nos. 4-5 (2021): 750-770.

1. Nick Seaver, "Seeing like an infrastructure: avidity and difference in algorithmic recommendation," *Cultural Studies* 35, nos. 4-5 (2021): 771-791.
2. Blake Hallinan and Ted Striphas, "Recommended for you: The Netflix Prize and the algorithmic production of culture," *New Media & Society* 18, no. 1 (2016): 117-137.
3. Alex Gekker and Sam Hind, "Infrastructural surveillance," *New Media & Society* (2019): 1-19.
4. Carlos Barreneche and Rowan Wilken, "Platform specificity and the politics of location extraction," *European Journal of Cultural Studies* 18, nos. 4-5 (2015): 497-513.

Week Eight: March 7

*** Seminar paper proposals due*

Seminar topic: Software and social infrastructure

Main reading:
Blake Hallinan, "Civilizing infrastructure," *Cultural Studies* 35, nos. 4-5 (2021): 707-727.

1. Lev Manovich, Introduction to *Software Takes Command* (pp. 1-52). New York: Bloomsbury, 2013.
2. Luke Stark, "Algorithmic psychometrics and the scalable subject," *Social Studies of Science* 48, no. 2 (2018): 204-231.
3. Tarleton Gillespie, "The Human Labor of Moderation" and "Facebook, Breastfeeding, and Living in Suspension," from *Custodians of the Internet: Platforms, Content Moderation, and the Hidden Decisions That Shape Social Media* (pp. 111-172). New Haven: Yale University Press, 2018.
4. Safiya U. Noble, "Introduction" + "A Society, Searching" from *Algorithms of Oppression: How Search Engines Reinforce Racism.* New York University Press, 2018.

Week Nine: March 14

Seminar topic: Platformization

Main case study: Jeremy Wade Morris, "Infrastructures of discovery: examining podcast ratings and rankings," *Cultural Studies* 35, nos. 4-5 (2021): 728-749.

Supporting reading:
1. José van Dijck, Thomas Poell, and Martijn de Waal, "The Platform Society as a Contested Concept" and "Platform Mechanisms," from *The Platform Society: Public Values in a Connected World* (pp. 7-49). Oxford: Oxford University Press, 2018.
2. Anne Helmond, "The platformization of the web: Making web data platform ready," *Social Media + Society* 1, no. 2 (2015): 1-11.
3. David B. Nieborg and Thomas Poell, "The platformization of cultural production: Theorizing the contingent cultural commodity," *New Media & Society* 20, no. 11 (2018): 4275-4292.
4. James N. Gilmore, "To affinity and beyond: Clicking as communicative gesture on the experimentation platform," *Communication, Culture, and Critique* 13, no. 3 (2020): 333-348.

Week Ten: March 21

No class, Spring Break

<u>Week Eleven: March 28</u>

Seminar topic: Civic infrastructures and governance

Main case study: Constance Gordon and Kyle Byron, "Sweeping the city: infrastructure, informality, and the politics of maintenance," *Cultural Studies* 35, nos. 4-5 (2021): 854-875.

Supporting readings:
1. Shannon Mattern, "Maintenance and Care," *Places Journal* (2018) available from: https://placesjournal.org/article/maintenance-and-care/?cn-reloaded=1
2. Elizabeth Ellcessor, "Blue-light emergency phones on campus: Media infrastructures of feeling," *International Journal of Cultural Studies* 22, no. 4 (2018): 499-518.
3. Jessie Speer, "The right to infrastructure: A struggle for sanitation in Fresno, California homeless encampments," *Urban Geography* 37, no. 7 (2016): 1049-1069.
4. James N Gilmore and McKinley DuRant, "Emergency infrastructure and locational extraction: Problematizing Computer Assisted Dispatch Systems as public good," *Surveillance and Society* 19, no. 2 (2021): 187-198.

<u>Week Twelve: April 4</u>

Seminar topic: State surveillance and classification

Main case study: Nikki Stevens and Os Keyes, "Seeing infrastructure: race, facial recognition, and the politics of data," *Cultural Studies* 35, nos. 4-5 (2021): 833-853.

Supporting readings:
1. Geoffrey C. Bowker and Susan Leigh Star, Introduction to *Sorting Things Out: Classification and its Consequences* (pp. 1-32). Cambridge: The MIT Press, 2000.
2. Kelly Gates, "The cultural labor of surveillance: video forensics, computational objectivity, and the production of visual evidence," *Social Semiotics* 23, no. 2 (2013): 242-260.
3. Rachel Hall, "Opacity Effects" and "Transparency Effects" from *The Transparent Traveler: The Performance and Culture of Airport Security* (pp. 57-108). Durham: Duke University Press, 2015.
4. Allan Sekula, "The body and the archive," *October* 39 (1986): 3-64.

<u>Week Thirteen: April 11</u>

Seminar topic: Environmental articulations

Main case study: Julia Velkova, "Thermopolitics of data: cloud infrastructure and energy futures," *Cultural Studies* 35, nos. 4-5 (2021): 663-683.

Supporting readings:
1. James N Gilmore and Bailey Troutman, "Articulating infrastructure to water: Agri-culture and Google's South Carolina data center," *International Journal of Cultural Studies* 23, no. 6 (2020): 916-931.
2. Melissa Aronczyk, "Environment 1.0: Infoterra and the making of environmental information," *New Media & Society* 20, no. 5 (2018): 1832-1849.
3. Ayesha Omer, "Coal ground," *Cultural Studies* 35, nos. 4-5 (2021): 920-945.

4. Burç Köstem, "'The world is sinking': sand, urban infrastructure, and world-cities," *Cultural Studies* 35, nos. 4-5: 684-706.

Week Fourteen: April 18

Seminar topic: Public life

Main reading:
Lindsay Poirier, "Data(-)based ambivalence regarding NYC 311 data" *Cultural Studies* 35, nos. 4-5 (2021): 968-995.

Supporting readings:
1. Aaron Shapiro, "Street-Level: Google Street View's abstraction by datafication," *New Media & Society* 20, no. 3 (2018): 1201-1219.
2. Christopher Ali, "The politics of good enough: Rural broadband and policy failure in the United States," *International Journal of Communication* 14 (2020): 5982-6004.
3. Daniel Greene, "Discovering the Divide: Technology and Poverty in the New Economy," in *The Promise of Access: Technology, Inequality, and the Political Economy of Hope* (pp. 29-58).
4. CJ Reynolds, "Mischievous infrastructure: tactical secrecy through infrastructural friction in police video systems," *Cultural Studies* 35, nos. 4-5 (2021): 996-1019.

Week Fifteen: April 25

Seminar presentations

Week Sixteen: Exam week

Seminar papers due