

# INF 380E Perspectives on Information

## Course Information:

Unique: 27150

Location: UTA 1.208

Mondays, 3 - 6 PM

## Instructor Information

Dr. Craig Blaha

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office hours: Thursdays 10 AM – 11:30 AM and by appointment

## Course Description

This class is a multi-disciplinary and historical examination of information as a primary and foundational concept. The course examines key literature from information studies as well as literature and perspectives from other fields. Class assignments and activities are designed to introduce or reinforce the professional skills students will need to become leaders in a variety of rapidly changing information-centric careers.

## Course Objectives

- Provide a foundation for understanding the theories, assumptions and perspectives on the nature of information as it appears in a variety of fields.
- Identify the role of information studies, broadly construed, and its role in particular environments and contexts.
- Develop a vocabulary and expertise for thinking critically about the challenges inherent in defining, organizing, and accessing information.
- To introduce students to some important “classic” papers, thinkers, concepts, and research fronts in the field.
- Participate in discussions regarding current and evolving information forms, tools and technologies, institutions, and policies.
- Envision future directions for information studies and the information professions.
- Expose students to the professional practices and habits of mind they will need to become leaders in their field, from thinking critically and ethically about the role of technology and information in society, to giving a professional presentation, to building and maintaining a professional network.

## Required Texts

Blair, A. (2010). *Too much to know: Managing scholarly information before the modern age*. New Haven, CT: Yale University Press.

Floridi, L. (2010). *Information: A very short introduction*. Oxford, UK: Oxford University Press.

- Gleick, J. (2011). *The information: A history, a theory, a flood* (1st ed). New York: Pantheon Books.
- Tufekci, Z. (2017). *Twitter and tear gas: The power and fragility of networked protest*. New Haven, CT: Yale University Press.
- Wu, Tim. (2010). *The master switch: The rise and fall of information empires*. New York: Alfred A. Knopf.

*\*Other assigned articles will be readily available through UT Libraries, Canvas, and the open Web.*

## Assignments and Expectations

### Overview of Assignments

This class will employ a variety of different assignments and exercises to help you engage different perspectives on information. Each assignment will be submitted to Canvas unless otherwise noted in the syllabus or in class. Assignments include:

1. A semester-long examination of a topic related to your field of interest. Students will choose the topic and engage in a guided writing exercise that will result in a five- to ten-page paper and a 2-minute concise presentation at the end of the semester.
2. The Supermarket Shuffle. In this project students will consider information systems by analyzing how a common information system, the supermarket, both contributes to our perception of the information it manages and reflects the assumptions, culture, and biases of the context in which we use it. Students will accomplish this by analyzing the placement and context of a particular food group in three different types of supermarkets in a three- to five-page paper.
3. Exploring the definition of information. Students will conduct an inductive examination of information by reviewing the research activities and course offerings of the UT School of Information as well as conducting at least two information interviews with experts in the student's field of interest.
4. Professional skill-building exercises. In collaboration with the iSchool office of Career Services, students will participate in skill-building exercises that include resume writing, salary negotiation tactics, and informational interview processes, among others.

### Participation

Students are expected to meet the following expectations, common to graduate education:

- Attend each class
- Show up on time ready to actively engage with the in-class discussions and activities
- Having thoroughly read the assigned materials and thought not only about each reading
- But also how the readings relate to each other, topics we have previously discussed in class, and current events.

Your participation matters not only to demonstrate engagement with the materials and challenges posed by the class, but more importantly because your unique contribution is what makes this class great! If you aren't in class, or you show up but don't participate, you rob your fellow students and me of the opportunity to learn from your unique life experience and opinions.

You are allowed to miss one class throughout the semester, and ideally you should communicate with me before you miss a class. If you need to leave early for any reason, make sure you communicate with me beforehand or as soon as possible after you leave or you will be counted as missing for the entirety of the class. Missing more than one class will result in your grade being lowered by one letter grade level (from an A to a B, for example). More than two-missed class sessions will result in a failing grade for the course.

A grade of at least a B (not B-) is necessary for this class to count as fulfilling your MS in Information Studies core course requirement.

Do not schedule any activities during class time. Professional interviews, medical appointments, car repairs, and all other personal and professional obligations should be scheduled outside of class time.

It is important that you work hard to demonstrate respect for the opinions of others, both by listening first to understand, and by carefully and thoughtfully explaining your own ideas. One way we will work toward demonstrating respect for each other is by **keeping our laptops closed and devices put away unless the class activity calls for the use of your device**. If you need an exception to this rule for some reason, please see me to discuss the exception.

### Reading Responses

This class uses a variety of approaches to help you engage the assigned readings. You may be asked to write and submit discussion questions, I may give you a few important points or questions to keep in mind as you read, or I may select a few students to lead discussions in small groups and report back to the class, among other approaches. The expectations for each of these methods will be explained in class as the readings are assigned and discussed.

### Semester Paper and Presentation

Students will submit a 1,500 to 2,500-word (5–10 double-spaced page) essay on a topic of their choice related to the class. This assignment should achieve the following goals:

1. Act as an evaluative and comparative summary; a culminating project that synthesizes knowledge over the course of the semester. This is your opportunity to formally explore how different perspectives on information relate to your topic. You must use the readings and discussions from class as the foundation of your essay.
2. An opportunity to familiarize yourself with the literature in information studies; a substantial component of this essay should be a literature review of published, peer-reviewed journal articles that are relevant to your topic.

3. An opportunity to improve your writing.

The essay assignment has seven steps. Each of these steps will be discussed in more detail in class. These steps are designed to help improve your writing and to make the writing process more manageable. Each step will be graded, and **all of the steps are required to receive credit for the assignment**. The different steps are:

1. Topic selection
  - Choose a topic that is relevant to your concentration, personal interests, or future career.
2. Resources
  - a. Compile a list of ten or more articles or books that are relevant to your topic, formatted using APA.
  - b. At least five (5) of these resources should be peer-reviewed journal articles.
  - c. Summarize each resource in a short (3–4 sentence) paragraph.
  - d. Copy any quotations you believe will be useful in your paper, **including proper APA in-text citation format**.
  - e. You will add resources later in the semester, especially the readings we cover in class.
3. Outline
  - a. Decide how you will organize your ideas.
  - b. Your essay will include an introduction and conclusion paragraph, and your outline should include the key points you plan to discuss in the introduction and conclusion (not just “intro to the topic,” for example). A substantial portion of your paper should explore how different perspectives on information relate to your topic.
  - c. Include the quotations you plan to use in the proper location in your outline, including your properly formatted in-text APA citations.
4. Draft
  - a. Write your first draft by following your outline as closely as possible.
  - b. Include a cover page with a clear description of the topic you have chosen to write about.
  - c. Include a separate double-spaced page or pages with your resource list.
  - d. Your draft should be at least five pages long, not including the title page or resource list, and should be double spaced using a common font such as Calibri, 11-point font and 1-inch margins.
5. Peer Review
  - I will assign peer reviews to a group of at least three people to work together throughout the semester to review each other’s work and offer reactions, comments, and suggestions.
6. Revised Draft
  - Your revision will have to take into account the feedback from your peer group as well as any improvements you made on your own. Your revised draft should be submitted to Canvas under the “Revised Draft” assignment, and I will grade your submission based upon the criteria listed below.

## 7. Final Draft

If your revised draft grade falls short of your personal goal, you have the option to revise your essay and turn it in for a (possibly) higher grade, replacing the revised draft grade. If you submit a revised essay to Canvas before the deadline for the final draft listed on the syllabus, I will re-grade your essay. My evaluation of your revision will use both the criteria listed below and a comparison of your revision to your earlier assignment to see how thoroughly you have responded to the comments and suggestions from your reviewers and me. Your final draft grade will replace your revised draft grade when I calculate your grade for the semester.

If you are completely satisfied with the grade you earned for your revised draft, you do not need to submit a final draft, and your revised draft grade will count as your final draft grade.

The essay will be evaluated using the traditional letter grade scale A–F. Your essay will be graded using the following evaluative criteria:

1. Your use of course material and discussions as the foundation of your essay
2. The depth, quality, and rigor of your exploration of different perspectives on information and how they relate to your topic
3. The clarity of thought demonstrated in your essay
4. Your use of outside resources (including full APA citations)
5. The structure of the essay and how well you followed writing conventions
6. Grammar and spelling
7. The overall quality of the essay.

**If you plagiarize at any stage of the writing process, you will fail the class.** The expectations related to citation and how to avoid plagiarism will be explained in excruciating detail as we get closer to the submission deadline, but it is your responsibility as a graduate student to understand and follow APA citation guidelines and to clearly differentiate between your own work and that of others. In addition, you will have access to the Turnitin software to test your own paper for plagiarism before you submit it for my review.

Students will be required to give a two-minute presentation summarizing their essay for the class.

### Supermarket Shuffle\*:

\*This exercise was borrowed with permission from UNC-Chapel Hill Associate Professor Melanie Feinberg

In contemporary business environments, an information system is a “tool” that is used to manage the information a firm relies on to accomplish goals, support customers, execute procedures, and otherwise conduct business. These “tools” are often described as including two parts; software (the program that runs on the application to access the data), and

hardware (the physical or virtual machines that allow access to information and storage of data).

The “Supermarket Shuffle” is an exercise that will help you identify some of the problems with the above definition of “information system” by analyzing how a common information system, the supermarket, both contributes to our perception of the information it manages and reflects the assumptions, culture, and biases of the context in which we use it.

By comparing a number of different types of supermarkets and analyzing how one or two food types are displayed, organized, labelled, and arranged, we can start to ask why particular choices were made, and how these choices create information that both shapes and reflects cultural and social values.

For this exercise, you will need to start by choosing a broad category of food (e.g., rice, pasta, cheese). Then, visit three different types of supermarket and take pictures of “instances” of that food type. Pasta, for example, may be all on one set of shelves located in close proximity to each other. There may, however, be an “Asian Foods” section that includes “pasta,” and there may be some types of pasta that are in a refrigerated section. Choose three supermarkets, making sure that each one is of a different “type”:

1. A large, “chain” supermarket, such as HEB or Randalls.
2. A “fancy” or organic foods supermarket such as Whole Foods, Central Market, or Wheatsville.
3. A supermarket that attempts to appeal to a particular culture, such as the MT Supermarket or Hong Kong Supermarket (East Asian), MTM Foods or Shahi Foods (South Asian), or La Michoacana or Fiesta (Latino).
4. An online grocery-shopping portal, such as those for HEB, Central Market, Instacart, or Walmart.

For each of the three supermarkets you have selected, follow these steps:

1. Observe
  - a. Aspects of individual products; the packages’ sizes, types of packages, labelling (both on the products and on the shelf), graphics (both on the products and on the shelves), and any other details that seem important or interesting.
  - b. Groups of products in close proximity. How are products organized? By physical similarity, company, color, ingredients, price? Are boxes placed next to each other, or are some products in boxes and some in bags? Do products have a similar color scheme? Include other questions that you think might be relevant or revealing.
  - c. Similar products in different places throughout the store. If you are looking at pasta, for example, are all “noodle type products” in the same physical location in the store? If so, are they labelled in a similar fashion? If not, what distinction has been made in order to separate the different products? What other relevant questions or observations occur to you as you explore the space?

## 2. Describe

As a note taking exercise, describe what you see in detail. This description can be done in writing or by visually reviewing your photographs and noting your own reactions, as well as thinking about the questions listed above.

## 3. Analyze

Based on your observations and descriptions, what is important in the information system we call a supermarket? How would you describe the information system? What is information and how is it created in this context? Remember the earlier example of hardware and software; you should clearly see how such a description is inadequate at this point. Someone decided to group certain products together and keep other products separate. Why do you think they made that particular decision in that particular supermarket in Austin, TX? Do you think different choices would be made in New York City, Hong Kong, or New Delhi? What does that decision reveal about cultural assumptions, and how does the decision about grouping affect the information in this information system? Conduct a similar analysis of the products located together in the supermarket, and compare each of these analyses across the three different supermarket examples you have selected.

Keep in mind that this exercise is not about supermarkets; you are not conducting a usability study of the supermarket, and this is not a critical look at advertising or product placement. I am not interested in how easy it was to find different products, the challenges created for shoppers by the physical layouts of the supermarkets, or how these products are being marketed to consumers. **I am interested in your critical analysis of the information system we call the supermarket, and how that system turns its contents into information.** You can use the same process to analyze other information systems, whether it is a customer contact database, an archive, or even (here is a hint about our next project) a school of information!

### Deliverables

In three to five double-spaced pages, analyze the supermarket as an information system. How does the supermarket use cultural, social, physical, economic, and other “perspectives” to create categories, determine which products fit into those categories, and decide the relationships among those products and other categories in the store? What do these assumptions and decisions say about the social and cultural context of the particular supermarket and the assumptions that supermarket as an information system makes about its customers?

You should use your analysis to develop a coherent thesis about the supermarket as an information system and how it both contributes to and reflects our perception of information. Examples of successful papers will be made available through Canvas, and we will talk about this exercise in more detail in class.

A successful assignment will:

1. Include a focused, coherent thesis that analyzes how a supermarket participates in the perception of information by its treatment of the products in a particular food category.
2. Support this thesis using specific examples based on your own observations and perception of information at the supermarkets.
3. Use the course readings and materials to further address your thesis and support your observations.
4. Include three supermarkets, each from a different category listed above.
5. Demonstrate graduate level writing.

### Exploring the definition of information

We will take an inductive, “bottom up” approach to arrive at a socially constructed definition of what the word “information” means in the context of information studies at the University of Texas at Austin School of Information. Students will examine the courses taught at the iSchool, the faculty members hired and promoted by the iSchool, and the research published by those faculty members to determine a set of broad categories to describe information. Categories may include archives, usability, knowledge representation, information retrieval, social informatics, computer-supported cooperative work, or a variety of other different descriptions.

Students will then self-select into groups of 3-6 students based on their personal and professional interests. As members of these smaller groups, students will take a closer look at the research, classes, current events, and course materials that relate to these categories. Each student will also conduct two informational interviews with professionals in a field related to the category they are investigating and summarize the results of these interviews.

The smaller group will use this “closer look” to develop a briefing book of five or more pages in length describing the selected category by describing the research topics examined by the faculty, the prominent journals and journal articles in the field, as well as the methods of research that are employed. Included in this briefing book (but not part of the five-page length) will be a summary of the results of each group member’s informational interview and will be made available to all members of the class, and any faculty members who might be interested.

Each group will report back to the class in a five- to ten-minute group presentation summarizing what they learned about information through their examination. This group of briefing books will represent our socially constructed definition of information.

### Resume and professional skill-building exercises

We will spend some time in class working on skills that will be essential for your future success as an information professional. Kim Wood, our Director of Career Development, will help us with many of these exercises.

### Informational Interviews & Networking

Students will conduct two informational interviews as part of the “exploring the definition of information” assignment described above. We will prepare for these informational interviews in class by discussing:

- The benefits of informational interviews
- How to conduct an informational interview
- Importance of networking and keeping in contact.

### Career Applications & Correspondence

We will spend the better part of one class period discussing how to develop your resume and cover letter, as well as the process of applying to job opportunities. Topics will include:

- Resume and cover letter essentials
- How to tailor applications to job postings
- The importance of thank you notes and professional correspondence.

After this class activity, students will prepare a resume and cover letter for a specific job posting and bring that posting, resume, and cover letter to class. During class, we will review each other’s resumes and cover letters as an in-class peer review activity.

### Interviewing & Negotiating Offers

Over the course of your career you are likely to participate in a variety of different interviews, and will hopefully have the chance to negotiate a number of different offers for positions. As part of our in-class exercise, students will choose a position of interest, compare the listed skills/qualifications to their own, consider characteristics most important to them (i.e., flexibility of work hours, professional development, paid time-off, medical benefits, etc.), conduct a cost of living analysis/budget to determine your ‘bottom line’, research average market rates, then determine your “ideal salary” range.

In addition, we will conduct mock interviews in class as partners, interviewing each other and taking the opportunity to practice the answers and behavior we want to exhibit during an interview. In class, we will discuss:

- An overview of interview formats and common questions
- How to prepare for interviews and answer common questions
- Importance of researching and preparing for offer negotiations.

### Other Activities

In addition to the items listed above, students are required to attend at least one of the sponsored Career Development events. The tentative list of events is included below, but check the Career Development web site for more information. You may choose to set up a one-on-one counselling session in lieu of attending one of the sponsored events. Students will let Dr. Blaha know they have attended an event, and that attendance will be cross checked with the sign in sheet, so make sure you sign in!

## Fall Information Sessions

- Central Intelligence Agency (CIA): September 6<sup>th</sup>
- National Gallery of Art (NGA): September 18<sup>th</sup>
- HeritageWerks: September 27<sup>th</sup>
- ExxonMobil UX Team: October 11<sup>th</sup>
- NASA Life Sciences Data Archives: October 13<sup>th</sup>
- Indeed Data Science Team: October 18<sup>th</sup>
- Sabre UX Team: October 22<sup>nd</sup>
- Blackbaud UX Team: October 25<sup>th</sup>

## Fall Career Workshops/Events

- **Career Fair Prep** (Workshop): September 3<sup>rd</sup>
- **Resume Clinic**: September 6<sup>th</sup>
- **Portfolio Skillshare**: September 20<sup>th</sup>
- **International Students & Job Seeking Strategies** (workshop), September 24<sup>th</sup>
- **Hiring Manager: Ask Me Anything** (UX Career Panel): September 26<sup>th</sup>
- **International Students & Visas** (International Office): October 29<sup>th</sup>
- **Advice From the Real World** (Networking Event): November 6<sup>th</sup>
- **Negotiating Offers** (Workshop): November 12<sup>th</sup>

## Grading

Each of the assignments listed above will count toward your final grade as follows:

Participation	20%
Final paper	20%
Supermarket Shuffle	20%
Exploring the definition of information	20%
Resume and professional exercises	10%
Reading responses	10%

**Students must complete all assignments to receive a passing grade in the course.**

## Grading Scale

The standard grading scale will be used to evaluate students' work:

- A 94-100
- A- 90-93
- B+ 87-89
- B 83-86 = minimum for class to fulfill core requirement
- B- 80-82
- C+ 77-79
- C 73-76
- C- 70-72

D+ 67-69  
 D 63-66  
 D- 60-62  
 F 0-59

## Course Schedule

Supermarket Shuffle

Defining Information Project

Essay

Professional Development Activities

Topic	Assignments Due:
Week 1: Monday, 9/9	
Introduction Review syllabus	None
Week 2: Monday, 9/16	
Kim Wood: Informational Interviews Discuss Readings Supermarket Shuffle – in class exercise 1	Clifford (1991), Lakoff (1973), Marres (2018), Rosch (1975) Visit at least one supermarket and analyze one product (pasta, rice, etc.)
Week 3: 9/23	
Shannon to discuss the Igive campaign Discuss Floridi & Weaver Assign Floridi chapters for presentation Supermarket Shuffle – in class exercise 2 Discuss finding resources and citation, essay topic selection	Floridi (2010) chapters 1 & 2, Weaver (1949) Finish Supermarket visits
Week 4: 9/30	
Group Presentations: Mathematical, semantic, physical, biological, economic info presentations Supermarket Shuffle - complete peer review in class and submit to Canvas	Floridi chapters 3 – Epilogue, Students will analyze and present one chapter, assigned by Blaha, from Floridi Draft project due to Canvas before class Essay Topic Selection
Week 5: 10/7	
Discuss Readings Debrief Supermarket Shuffle Overview of essay outlines Begin defining information project	Tufekci (2017) Chapters 1 – 5 (pp. 1 – 132) Geertz (1973), Supermarket Shuffle due Essay resources due
Week 6: 10/14	
Discuss Readings Kim Wood: Career Applications and Correspondence	Tufekci (2017) Chapters 6 - Epilogue Submit categories to Canvas Essay outline due

Peer discussion of essay outline progress Compile defining info list	
Week 7: 10/21	
Discuss Readings Resume draft review exercise Essay draft peer progress discussion	Gleick Chapter 1 – 5 Nunberg (2011) Self-select into defining info groups list of four potential informational interviews
Week 8: 10/28	
Discuss Readings Work on defining information briefing book Essay draft peer workshop	Gleick Chapter 6 – Epilogue Bring resume, cover letter, job posting to class Submit names, contact information, and schedule for 2 informational interviews Essay draft due to peer group
Week 9: 11/4	
Kim Wood: Interviewing and Negotiating Offers	Essay peer review due
Week 10: 11/11	
Discuss Readings Work on defining information briefing book	Blair 1 – 117 Jansen et al. (2017) Informational interviews complete Essay Revision due
Week 11: 11/18	
Discuss Readings Peer discussion – final essay	Blair 117 – 265
Week 12: 11/25	
Writing workshop	
Week 13: 12/2	
Defining Information Presentations Discuss Readings	Wu, Bellinger et al. (2004), Braganza (2004), Buckland (1991), Frické (2009), Defining information briefing book due
Week 13: 12/9 – Last Class Day	
Final Essay Presentations Discuss Readings Class wrap- up	Wu, Bush (1945), Final Essay Due

## Resources

### Style Manuals

Students will need to cite all sources for their essays in APA format. Purdue University Online Writing Lab (OWL) offers a great overview on how to do so: <http://owl.english.purdue.edu/owl>  
Style manuals are located under Research and Citation.

## University Policies

### Academic Integrity

Please abide by the University's policy on academic integrity. All work you submit must be your own. "Scholastic dishonesty includes, but is not limited to, cheating and plagiarism... Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. University policies on scholastic dishonesty will be strictly enforced." From: The University of Texas: General Information, Appendix C.

If you submit ANY assignment that is plagiarized, in whole or in part, you will, at minimum, fail that assignment and be referred to the Office of Student Conduct and Academic. Depending on the severity of the plagiarism, you may immediately fail the class. It is the sole responsibility of the student to know and understand how to properly cite resources according to APA format as explained by the instructor and the Purdue Online Writing Lab. If you aren't sure, ask!

### Special Needs

The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. To determine if you qualify, please contact the Dean of Students at 471-6259; 471-4641 TTY. If they certify your needs, we will work with you to make appropriate arrangements.

### Religious or Holy Day Observance

"A student who misses classes or other required activities, including examinations, for the observance of a religious holy day should inform the instructor as far in advance of the absence as possible, so that arrangements can be made to complete an assignment within a reasonable time after the absence." (<http://www.utexas.edu/student/registrar/catalogs/gi04-05/ch4/ch4g.html>)

### Email

"Electronic mail (e-mail), like postal mail, is a mechanism for official University communication to students. The University will exercise the right to send e-mail communications to all students, and the University will expect that e-mail communications will be received and read in a timely manner." (<http://www.utexas.edu/student/registrar/catalogs/gi04-05/app/appn.html>). I will reply to student emails within 24 hours on weekdays and 48 hours on weekends barring a rare and extenuating circumstance.

I look forward to working with you all this semester. If you have any questions, comments, or concerns, do not hesitate to email me!

## Bibliography

Bellinger, G., Castro, D., & Mills, A. (2004). Data, information, knowledge, and wisdom, viewed 8/22/2018, [www.systems-thinking.org/dikw/dikw.htm](http://www.systems-thinking.org/dikw/dikw.htm).

- Blair, A. (2010). *Too much to know: Managing scholarly information before the modern age*. New Haven, CT: Yale University Press.
- Braganza, A. (2004). Rethinking the data-information-knowledge hierarchy: Towards a case-based model. *International Journal of Information Management*, 24(4), 347 – 356.
- Buckland, M. (1991). Information as thing. *Journal of the American Society of Information Science* 42(5), 351-360.
- Bush, V. (1945, July). As we may think. *Atlantic Monthly*, 176(1), 101-108. Available at: <https://www.theatlantic.com/magazine/archive/1945/07/as-we-may-think/303881/>
- Clifford, J. (1991). Four northwest coast museums: Travel reflections. In Ivan Karp & Steven D. Lavine (Eds.), *Exhibiting cultures: The poetics and politics of museum display* (pp. 212-254). Washington, DC: Smithsonian Institution Press.
- Floridi, L. (2010). *Information: A very short introduction*. Oxford, UK: Oxford University Press.
- Frické, Martin. (2009). The knowledge pyramid: A critique of the DIKW hierarchy. *Journal of Information Science*, 35(2), 131-142. Also available at <http://jis.sagepub.com.ezproxy.lib.utexas.edu/content/35/2.toc>
- Geertz, C. (1973). Thick description: Toward an interpretive theory of culture. In *The Interpretation of Cultures* (pp. 310-323). New York: Basic Books. Available on Canvas.
- Gleick, J. (2011). *The information: A history, a theory, a flood* (1st ed). New York: Pantheon Books.
- Jansen, R., Lakens, D., & IJsselsteijn W. (2017). An integrative review of the cognitive costs and benefits of note-taking. *Educational Research Review*, 22, pp. 223 – 233.
- Lakoff, G. (1973). Hedges: A study in meaning criteria and the logic of fuzzy concepts. *Journal of Philosophical Logic*, 2(4), 458 – 508. Available on Canvas.
- Marres, N. (2018). Why we can't have our facts back. *Engineering Science, Technology, and Society*, 4, 423- 443. Available on Canvas.
- Noble, S. (2018). *Algorithms of oppression*. New York: NYU Press.
- Nunberg, G. (2011, March 20). [Review of the book *The Information: A History, A Theory, A Flood*] *New York Times Book Review*, 1, 10-11. Also available at [http://www.nytimes.com/2011/03/20/books/review/book-review-the-information-by-james-gleick.html?\\_r=1&ref=bookreviews](http://www.nytimes.com/2011/03/20/books/review/book-review-the-information-by-james-gleick.html?_r=1&ref=bookreviews)
- Rosch, E. (1975). Family resemblances: Studies in the internal structure of categories. *Cognitive Psychology*, 7(4), 573 – 605. Available on Canvas.
- Shannon, C. (1948). A mathematical theory of communication. *Bell Systems Technical Journal*.
- Tufekci, Z. (2017). *Twitter and tear gas: The power and fragility of networked protest*. New Haven, CT: Yale University Press.
- Weaver, W. (1949). The mathematics of communication. *Scientific American*, 181(1), 11- 15. Available on Canvas.
- Wu, T. (2010). *The master switch*. New York: Random House.

#### Recommended reading:

- Zins, C. (2007). Conceptual approaches for defining data, information, and knowledge. *Journal of the American Society for Information Science & Technology*, 58(4), 479-493. Also available at <http://onlinelibrary.wiley.com/doi/10.1002/asi.v58:4/issuetoc>

Lessig, L. (2006). *Code: And Other Laws of Cyberspace, Version 2.0* (2nd Revised ed. edition). New York: Basic Books.

Losee, R. (1997). Discipline independent definition of information. *Journal of the American Society for Information and Society*, 48(3), 254-269. Also available at <http://onlinelibrary.wiley.com/doi/10.1002/%28SICI%291097-4571%28199703%2948:3%3C%3E1.0.CO;2-H/issuetoc>