

QUESTIONS OF EVIDENCE

Science, and Technology in American Culture
Summer 2006 | CS 367.02

T/R 9:30 – 11:18, HH 050
Instructor: Alana Kumbier, GTA

Office Hours: Tues./Thurs., 12:00 – 1:00, and by appointment
I will check & respond to email messages during office hours
Email: kumbier.l@osu.edu

Course Description

In this course, we will explore how various forms of scientific evidence are developed and put to use in American culture. The major premise of the course is that, in order to understand how people and institutions make use of scientific evidence, we need to examine how facts, data, and other forms of information come to function as evidence. In conducting this investigation, we will consider how scientific knowledge is produced in specific historic, cultural, national and political contexts. Course lectures, readings, discussions, and writing assignments will examine the uses of evidence in the following areas of practice: environmental justice struggles, genetic ancestry research, surveillance, criminal justice (biometrics and fingerprinting), and activism around illness and treatment.

To engage each student's strengths and preferences, this class will employ a combination of teaching and learning practices: mini-lecture, small-group activities, large-group discussion, and writing assignments (informal, in class exercises and formal analytic essays). This course operates from the belief that knowledge is developed collaboratively; the class emphasizes learning through dialogue, deliberation, and the sharing of perspectives.

Course Objectives

Upon successful completion of this course, students will be able to:

- Write clear, insightful, well-organized analytical papers of different lengths
- Articulate productive thesis statements
- Select and incorporate supporting evidence in essays
- Synthesize arguments from a variety of sources in analytic essays
- Find and evaluate research resources
- Read, discuss, and critique (popular) representations of scientific evidence in American culture

Course Policies and Guidelines

What I expect of class members:

- Engaged participation (speaking & listening) in class discussion
- Employment of critical thinking skills and a willingness to interrogate familiar ideas, terms, and practices. We will develop these skills in reading, writing, and discussion.
- Thoughtful reading and consideration of course texts and authors' arguments
- Collegial attitude
- Engaged presence in class (with cellphones, personal videogame & mp3 players turned off, newspapers and homework for other classes set aside). Please keep your cellphone turned off unless you are a parent, guardian, or have similar caretaking responsibilities.
- Assignments turned in on time, on paper (not via email), in the appropriate location.

What I do not expect of class members:

- Certainty before speaking
- Mastery of texts
- Competitive attitude
- Passive consumption of others' contributions
- Agreement with ideas or positions represented in course texts and discussions

Course Requirements

Participation: 15%

Your participation in this course depends upon three things: 1) doing the reading carefully & critically in order to make relevant contributions to class discussions; 2) participating productively and respectfully in large- and small-group discussion; 3) active listening and questioning. Your participation grade includes attendance, arriving in class on time, and staying for the entire class session. **A note on absences:** Each student is allowed two (2) unexcused absences over the course of the quarter, no questions asked, no explanation necessary. Every unexcused absence over two will result in the lowering of your final grade by a third of a grade. Excused absences, such as those for documented illness, family tragedy, religious observance, or inter-collegiate athletics, will not affect your grade. **Five unexcused absences (including the two 'freebies') will automatically result in failure for the course.**

Critical response papers (3; 2 pages each): 15%

Over the course of the quarter, I will ask you to write three short (350 – 400 word) papers in which I will ask you to respond to a specific issue raised in a reading.

Group Facilitation of Class Discussion (30-40 minutes): 10%

Once per quarter, you will lead class discussion as part of a facilitation group comprised of four class members. Your group will provide a brief synthesis of the day's reading(s), and will lead the class in activities to analyze the text(s) under consideration. Prior to your facilitation, your group will provide me with an outline of your plans for the class, and a copy of any visual support you plan to use in the facilitation (e.g., PowerPoint presentation, handouts). You are encouraged to be creative in finding ways to get your classmates involved in a lively, productive discussion.

Paper 1, Analytical Summary (3 pages): 15%

For this assignment, you will write an analytical summary of one of the course readings. In this paper, you will demonstrate your ability to understand and articulate the key points and arguments of a reading, and your understanding of the author's argumentative strategies.

Paper 2, Developing an Argument (4 pages): 15%

For this assignment, you will develop (and perhaps reevaluate) ideas you first articulated in a response paper. This formal essay will require that you propose a thesis and engage with more than one text.

Proposal for final research paper (abstract + annotated bibliography with 5 sources): 10%

In order to prepare for the final research paper, you will write a proposal in which you develop an abstract for your proposed paper and locate and annotate five scholarly sources that will support your analysis.

Final research paper (8-9 pages): 20%

In your final research paper you will use the analytic and technical skills and strategies you have developed in this course to analyze a topic related to the course theme in greater detail.

Accommodations

If you need accommodations based on the impact of an impairment or disability, please contact me privately as soon as possible. I will be happy to work with the Office of Disability Services to coordinate accommodations for students with documented disabilities. If you want to contact the Office of Disability Services, you can visit 150 Pomerene Hall or call 292-3307.

Academic Misconduct

Plagiarism is the representation of another person's works or ideas as one's own, and/or the undocumented, unacknowledged use of quoted or paraphrased work by another person. In accordance with University policy, all cases of suspected plagiarism will be reported to the Committee on Academic Misconduct.

Books & Course Readings

All course texts are required, and all are available at SBX (The Student Book Exchange). Books by O'Harrow and Steingraber should also be available via OSU Libraries, OhioLINK, and the Columbus Metropolitan Library system.

O'Harrow, Robert. *No Place to Hide*. New York: Simon & Schuster, Inc., 2005.
Rosenwasser, David and Jill Stephen. *Writing Analytically*. Fourth Ed. Boston: Thomson, 2006.
Steingraber, Sandra. *Living Downstream: A Scientist's Personal Investigation of Cancer and the Environment*.
Reprint edition. New York: Vintage, 1998.

In the schedule below:

Ⓜ denotes that the reading is available via OSU Libraries' E-Reserve system, or the Research Databases, or the OhioLINK Electronic Journal Center (EJC). I've provided the location of each reading so you know where to go to find it. Instructions for accessing these resources (e-reserve, databases, EJC) are included with the syllabus.

✍ denotes a chapter from *Writing Analytically*

Daily Schedule

★ Readings must be completed before each class meeting ★

6.20 T Introductions

Studying scientific knowledge production

How can we analyze the sites, practices, and processes by which scientific knowledge is produced and mobilized? // Key concepts: science in the making, translation

2.22 R No class meeting. Alana is out of town for a conference. // READ: ✍ Chapters 1: pages 1-32 & 2: pages 41-61

6.27 T Ⓜ Latour, "Opening Pandora's Black Box" (E-Reserve) // ✍ Chapter 3

6.29 R Ⓜ Dumit, "Is It Me or My Brain? Depression and Neuroscientific Facts" (Available via Academic Search Premier)
Response paper due

7.4 T Fourth of July – no class!

Evidence and Environment

How do Price and Steingraber complicate distinctions between "nature" and "culture"? How – and why – have environmental justice activists struggled to establish links between cancer and environmental contamination, and how have they pushed to publicize this information?

7.6 R Price, "Thirteen Ways of Seeing Nature in L.A." from *The Believer* magazine. Access online:
Part one: http://www.believermag.com/issues/200604/?read=article_price
Part two: http://www.believermag.com/issues/200605/?read=article_price
✍ Chapter 4

7.11 T *Living Downstream*, chapters 1 – 5
Response paper due
Group 1 facilitates

7.13 R *Living Downstream*, chapters 7 – 9 // ✍ Chapter 5: 137 - 154
Group 2 facilitates

7.18 T Draft of Paper 1 due // View *Fenceline* in class

Evidence and Criminal Identification

What problems are the uses fingerprinting and biometrics intended to solve? What problems do these identification techniques, themselves, pose?

7.20 R Ⓜ Mnookin, Jennifer, "Fingerprints: Not a Gold Standard." *Issues in Science and Technology*,

2003: 47-54. (available via Academic Search Premier)

 Chapter 6

Group 3 facilitates

7.25 T Final draft of Paper 1 due

No Place to Hide, chapter 6

 Chapter 7

Group 4 facilitates

Gathering Evidence: Surveillance Technologies & National Security

After September 11, 2001, how has the American government justified its use of surveillance and data collection technologies? Do the benefits of the government's expanded use of surveillance technologies outweigh the costs (to privacy, autonomy, and civil liberties)? Key terms: surveillance, security-industrial complex, privacy, autonomy, civil liberties, national security

7.27 R *No Place to Hide*, chapters 1, 3-4

Response paper due

Group 5 facilitates

8.1 T *No Place to Hide*, chapters 7-10

Group 6 facilitates

8.3 R Draft of Paper 2 due

Research instruction in class

Evidence, activism, and struggles to establish scientific credibility

How is scientific evidence employed in the activist movements covered in the readings (around illness and treatment)? What arguments do these forms of evidence support? // Key concepts: symbolic domination, contested illnesses, cultural and scientific competence, credibility, interpretive strategies

8.8 T Proposal for final paper due

® Dumit, Joseph. "Illnesses you have to fight to get: Facts as forces in uncertain, emergent illnesses." *Social Science & Medicine*. 62 (issue 3) (2006) 577-590. (Available via OhioLINK EJC)

8.10 R ® Kamen, selections from *All in My Head* (E-Reserve)

 Chapter 8

Evidence of the past: Genetic ancestry testing & its implications

How do genetic tests yield information about individual and collective ancestry? What are the implications of this knowledge for individuals and groups? What are some potential effects of genetic ancestry testing for members of tribal and indigenous groups? // Key concepts: genetic genealogy; tribal sovereignty; racialization

8.15 T Final draft of Paper 2 due // View an episode of the *African American Lives* series in class

® TallBear, Kimberly. "DNA, Blood, and Racializing the Tribe." *Wicazo Sa Review*. 18(1) (2003) 81-107. (OhioLINK EJC)

8.17 R Workshop final paper in class – bring 2 copies of your draft to class with you

8.22 T Final paper due in Alana's mailbox, Hagerty 451, by 4 p.m.

HOW TO ACCESS ACADEMIC SEARCH PREMIER

Here are the steps you can follow to find articles using Academic Search Premier

1. Begin by accessing the OSU Libraries Homepage: <http://library.osu.edu/>
2. Locate the list of "Quicklinks" on the left-hand side of the page. Click on the link to "Research Databases"
3. Once you're on the page titled "Find Articles: Research Databases," type the name of the database – Academic Search Premier – in the search box, and click the "Find" button
4. You should now be at a page that gives you information about the database. If you're on campus, proceed to the next step. If you're off campus, click on the link for "Off campus sign in" (look for this link in the "Public Note" section of the description). Sign in using your OSU ID and password. This step should take you directly to the database.
5. On-campus users: Click on the link that reads "Academic Search Premier [Selected Articles in Full Text]." This step should take you to the database.
6. Type the title of the article in the search box at the top of the page. Make sure you enclose the title in quotation marks (e.g., "fingerprints: not a gold standard"). From the dropdown menu to the right of the search box, select the "TI Title" option, then click on the "Search" button.
7. The search should yield a citation for the article. You can decide how you want to access it – via PDF (download to disk and print) or HTML (web version that you can't save to the computer, but still can print). If you click the link that says "HTML Full Text" you'll get the HTML version; if you click the link that says "PDF Full Text," you'll get the PDF version to download. Print the article & read.

IF YOU GET LOST OR CONFUSED: Open a new window in your browser. Go to the OSU Libraries' Help page: <http://library.osu.edu/help/>. From this page, you can start a chat session with a librarian, send in your question via email, or call the reference desk for assistance.

HOW TO ACCESS ELECTRONIC JOURNALS & THE OHIOLINK EJC

1. Begin by accessing the OSU Libraries Homepage: <http://library.osu.edu/>
2. Locate the list of "Quicklinks" on the left-hand side of the page. Click on the link for "E-journals"
3. If you are off campus, sign in (there's a link at the top of the Electronic Journals page)
4. Type the title of the journal in the search box (e.g., social science & medicine), and click the "Search" button
5. This should take you to a page with a link to the online version of the journal, available through the OhioLINK Electronic Journal Center (EJC). Click that link (the one that says OhioLINK Electronic Journal Center).
6. You should now be on a page that lists issues of the journal, by volume. Click on the link for the appropriate issue, and then locate the article in the table of contents for that issue.
7. As with Academic Search Premier, you have the option of reading the article online as an HTML page, or downloading a copy as a PDF file. Use the links under the title to select one of the two options (Article Full Text HTML, Article Full Text PDF), and then print out the article to read.

IF YOU GET LOST OR CONFUSED: Open a new window in your browser. Go to the OSU Libraries' Help page: <http://library.osu.edu/help/>. From this page, you can start a chat session with a librarian, send in your question via email, or call the reference desk for assistance.