

**SCIENTIFIC AND TECHNOLOGICAL CONTROVERSIES  
THE POLITICS OF SECRECY AND OPENESS  
BASC 201**

Department of Art History and Communication Studies  
McGill University  
Professor Gabriella Coleman  
Tues and Thursday 1:05 PM - 2:25 PM  
Arts W-215  
Fall 2013

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### **OVERVIEW**

This course introduces students to a range of issues concerning openness and secrecy in science and technology through the angle of controversies. The class takes a broad view of the meaning of openness, secrecy and controversies and includes, among other topics: the resolution and constitution of scientific claims, the rise of the ethic of openness, debates over the process of scientific discovery and technological invention, the moral dimensions of science and technology, the social conduits for establishing truth and debunking bad science, the role of non-experts, from patient activists to journalists, in the critique of and participation in science and technology, and the role of new technologies in expanding the scope and breath of state surveillance as well as allowing citizens new possibilities in their critique of state secrecy.

This class will introduce students to various approaches to the social scientific and humanistic study of science and technology. The class draws on classic academic works in diverse fields, such as the history and philosophy of science, medical anthropology, and bio-ethics, while also integrating a broad base of engaging and accessible material (editorials, conversations from patient forums, national policies on science, legal regulations, and scientific controversies to name just a number examples) that educate as well as evoke critique and transformation of the complex contemporary practices, methods, and politics of science and technology.

### **READINGS**

Readings are available on our course website.

Jennifer Garland, the librarian for Communication Studies, is available for support and research assistance and has office hours: Wednesdays, 1-3pm in Blackader-Lauterman.

The following books are required and available for purchase at Paragraph Books (2220 Av McGill College) and are also on reserve at the McGill library:

Stuart Firestein, "Ignorance." *Oxford University Press*, 2012.

## REQUIREMENTS, METHOD OF EVALUATION, AND ASSIGNMENTS

1. Mid-term exam 25% (multiple choice and short in class essay)
2. Five pop quizzes 20% (the lowest of of the four will be dropped)
3. Reading Summary + ? 15% (separate instructions provided)
4. Op-Ed final 20% (separate instructions provided)
5. Public Service campaign 15% (group project, separate instructions provided)
6. Participation 5% (assessed during break out sessions and class participation)

Attendance at lectures is mandatory. If you have to miss the lecture, please arrange to get notes and any videos shown in class from a classmate. All cellphones, electronic devices, and wireless connections **must be turned off for the duration of class.**

*The midterm exam* will be an in-class multiple choice and essay exam held on October 23, 2013.

During the course of the semester, students have to turn in one short reading response. You will be assigned a date/set of readings based on your last name and a separate handout will be provided with detailed instructions. Since the reading responses will be integrated into my lecture, they must be e-mailed to me the morning of class by 10 a.m. Do not send the reading responses as an attachment but in the body of the email and please use the following e-mail subject: *Sci-Tech Response*. Students must also turn in a paper copy of the reading response the day of class. The paper must be double-spaced, proof read, numbered, and stapled.

To ensure students keep up with the readings, we will have five pop quizzes during the course of the semester. They will be short, ten minute exams covering basic concepts and facts from the reading. The lowest of the five will be dropped.

*Grade Breakdown:*

Grade	Grade point	Percentages
A	4.0	85 -100
A-	3.7	80 – 84
B+	3.3	75 – 79
B	3.0	70 – 74
B-	2.7	65 – 69
C+	2.3	60 – 64
C	2.0	55 – 59
D (Conditional Pass)	1.0	50 – 54
F (Fail)	0	0 - 49

## GRADING

**Grade Appeals**

I am always happy to meet to discuss in further detail the criteria used for grading. Please come see me in office hours or make an appointment, if you would like to meet with me to clarify my standards and procedures. It is rare for me to change grades unless it was based on a calculation of error, which has happened on occasion. Academics place serious weight on the process of *peer* review, which is based on the ideas that qualified outsiders are the best judge of the quality and strength of work. If you would like to discuss or appeal your grade please follow the process detailed below.

1. I will correct calculation errors, at any time with apologies.
2. Please set up an appointment or come to my office hours to seek explanation for a grade. The most likely course of action will be to discuss improvement for subsequent assignments.
3. If a student wishes to dispute a grade, you may choose to follow the university's standard appeals process (note: if an appeal is heard at the university level, it is considered *sui generis*, meaning that the grade could stay the same, be raised or lowered and will be graded by another professor in the University).

### EMAIL POLICY

During the academic year, I receive a considerable amount of email. In order for me to respond to my e-mail efficiently, please follow the following guidelines:

1. If you cannot see me during my office hours, e-mail me to set up an appointment; I will try to respond as soon as possible but I usually cannot accommodate a meeting in 24 or even 48 hours.
2. I read and reply to e-mail once a day and usually do not read or reply to e-mail after 5 PM or weekends.
3. Follow instructions for turning in assignments. For this class you are expected to turn in the reading responses via e-mail by 10 a.m. *and* in class. No other assignments submitted by e-mail will be accepted.
4. Grade inquiries and disputes will not be considered or discussed via e-mail. For all grade inquiries and questions about assignments, please set up an appointment with me (see above).
5. I will not reply to e-mail inquiries regarding course matters (assignment requirements, due dates, exam structure, readings, etc.) that arise from missing class or inattention to the course syllabus. Inquiries requesting clarification will receive replies, though I would strongly prefer these inquiries to be made in class or during office hours.

### OTHER INFORMATION AND MCGILL POLICIES

*Language:* In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded

*Accommodations:* Students requiring special testing accommodations or other classroom modifications should notify Prof. Coleman and the Office for Students with Disabilities as soon as possible. The OSD is located in Suite 3100, Brown Student Services Building, ph: 398-6009 (voice), 398-8198 (TDD), [www.mcgill.ca/osd/](http://www.mcgill.ca/osd/).

*Academic Integrity:* McGill University values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism, and other academic offences under the Code of Student Conduct and Disciplinary Procedures. (for more information, see [www.mcgill.ca/students/srr/honest/](http://www.mcgill.ca/students/srr/honest/)). L'université McGill attaché une haute importance à l'honnêteté

académique. Il incombe par conséquent à tous les étudiants de comprendre ce que l'on entend par tricherie, plagiat et autres infractions académiques, ainsi que les conséquences que peuvent avoir de telles actions, selon le Code de conduite de l'étudiant et des procédures disciplinaires (pour les plus amples renseignements, veuillez consulter le site [www.mcgill.ca/students/srr/honest/](http://www.mcgill.ca/students/srr/honest/)).

*Academic resources:* Students looking for additional assistance with academic reading, study, research and writing skills should consult the McGill academic resources website at: [www.mcgill.ca/students/academicresources/](http://www.mcgill.ca/students/academicresources/).

*Counseling:* McGill's Counseling Service provides extensive personal, academic, and career counseling to undergraduate and graduate students, including workshops on study skills, multiple choice exams, text anxiety/stress management. They are located in Brown Student Services Bldg, 398-3601 [www.mcgill.ca/counselling/](http://www.mcgill.ca/counselling/). A list of groups and workshops can be found at: [www.mcgill.ca/counselling/groups/](http://www.mcgill.ca/counselling/groups/)

*Illness:* Students are responsible for material covered in all classes, including anything missed due to illness. Examinations will not be re-scheduled and assignment due date extensions will not be provided, for any reason other than documented illness. Students unable to attend examinations or complete assignments due to illness are expected to contact me prior to the examination or due date by email and by phone. Appropriate documentation will be required to support requests for special consideration due to illness (see <http://www.mcgill.ca/students/advising/faq#a14>).

## SCHEDULE

The following is a “working schedule.” **Class materials are subject to change** based on the interests, understanding, and general pace of the class. It is your responsibility to keep on top of any schedule changes, whether you are in class or not. If you have a concern about any of the materials, please speak to me or the teaching assistant.

<b>Week 1</b>
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### **September 3: Introduction**

Course overview, expectations, and requirements.

### **September 5: Introduction, Why Openness and Surveillance?**

Take interactive quiz before class and jot down results:

<http://www.cjfe.org/resources/features/privacy-free-expression-you-interactive-quiz>

Hugh Gusterson, “Not all Secrets are Alike.” *Bulletin of the Atomic Scientists*, 2013.

<http://thebulletin.org/not-all-secrets-are-alike>

Bob Carty, “Let Science Speak.” *Review of Free Expression in Canada*, 2013.

[http://www.huffingtonpost.ca/2013/05/02/muzzling-science-harper-scientists\\_n\\_3201831.html?utm\\_hp\\_ref=canada-politics](http://www.huffingtonpost.ca/2013/05/02/muzzling-science-harper-scientists_n_3201831.html?utm_hp_ref=canada-politics)

## Week 2

### September 10: Framing Technology

Langdon Winner, "Do Artifacts Have Politics?" *The Whale and the Reactor*, 1986.

David Brin, "If you can't hide from Big Brother, adapt." *New York Times*, 2013.

<http://www.nytimes.com/2013/07/25/opinion/global/if-you-cant-hide-from-big-brother-adapt.html?pagewanted=all>

## Block One: The EnLIGHTment, Truthiness, Visibility and Invisibility

### September 12: From Whence Came the Idea of Openness?

William Eamon, "From the secrets of nature to public knowledge: The origins of the concept of openness in science." *Minvera*, 1985.

## Week 3

### September 17: Truth's Hegemony and Shades of Reality

Fredrick Nietzsche, "On Truth and Lies." Unpublished manuscript, 1873.

[http://oregonstate.edu/instruct/phl201/modules/Philosophers/Nietzsche/Truth\\_and\\_Lie\\_in\\_an\\_Extra-Moral\\_Sense.h](http://oregonstate.edu/instruct/phl201/modules/Philosophers/Nietzsche/Truth_and_Lie_in_an_Extra-Moral_Sense.h)

### September 19: Secrecy

**In class movie:** Peter Galison and Rob Moss, "Secrecy." *Docurama*, 2008.

## Week 4

### September 24: Establishing Truth (is not so easy . . .)

Nancy Tomes, "The Gospel Emergent." *The Gospel of Germs*, 1998.

Science Satire Serpent, "Heroes of Science-Barry J. Marshall.", 2012.

<http://sciencedevil.wordpress.com/2012/12/21/hero-of-science-barry-j-marshall/>

### September 26: Rendering Bodies Invisible, Eugenics

Corey G. Johnson, "Female inmates sterilized in California prisons without approval." *Center For Investigative Reporting*, 2013.

<http://cironline.org/reports/female-inmates-sterilized-california-prisons-without-approval-4917>

**In class movie:** Glynis Whiting, "The Sterilization of Leilani Muir." 1996.

## Week 5

### October 1: Disability Rights vs Reproductive Rights

Please take quiz and jot down results before class:

How much do you know about disability?

[http://www.disabilitycanhappen.org/chances\\_disability/quiz.asp](http://www.disabilitycanhappen.org/chances_disability/quiz.asp)

Adrienne Asch, "Disability Equality and Prenatal Testing: Contradictory or Compatible?" *Florida State University Law Review*, 2003.

Ruth Cowan, "Medical Genetics is not Eugenics." *Chronicle for Higher Education*, 2008.

<http://chronicle.com/article/Medical-Genetics-Is-Not/25463>

[The last half hour of class will be dedicated to debating this issue.]

### October 3: Gender, invisibility, and malleability

Jennifer Light, "When Computers Were Women." *Technology and Culture*, 1999.

Rosalind Williams, "Snubbed." *The Reconstructionists*, 2013.

<http://goo.gl/hO1p5n>

#### Listen to before class:

Mary O'Connell, "The Gender Trap, Part II." *CBC*, 2012.

<http://www.cbc.ca/ideas/episodes/2012/04/26/the-gender-trap-part-2/>

## Week 6

### Block Two: The Politics of Access and Property

### October 8: What is Intellectual Property?

Carla Hesse, "The rise of intellectual property, 700 B.C. - A.D. 2000: an idea in the balance." *Daedalus*, 2002.

### October 10: How Open should Technology be?

Gabriella Coleman, "Code is Speech." *Cultural Anthropology*, 2010.

#### Listen to before class:

Ira Glass, "When Patents Attack." *This American Life*, 2011.

<http://www.thisamericanlife.org/radio-archives/episode/441/when-patents-attack/>

## Week 7

## **October 15: How Open Should Science Be?**

Alessandro Delfanti, "Forbidden, Public, Enclosed, Open Science." *Biohackers*, 2013.

Dr. Deflanti will be visiting class for the second half for a short 20 minute lecture and for a Q and A session.

### **Block Three: The Scientific Vocation, Reality vs Fiction, Ignorance vs. Truth**

## **October 17: Ignorance**

Stuart Firestein, "Ignorance." *Oxford University Press*, 2012.  
(chapter 1 & 2)

20 minute review of the midterm

<b>Week 8</b>
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## **October 22: Ignorance**

Stuart Firestein, "Ignorance." *Oxford University Press*, 2012.  
(Chapter 3, 4 & 7)

## **October 24: In class mid-term**

Multiple choice and an essay based on *Ignorance*.

<b>Week 9</b>
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## **October 29: Scientific Openness and Credit**

Mario Biagioli, "From ciphers to confidentiality: secrecy, openness and priority in science." *British Journal for the History of Science*, 2012.

## **October 31: Medical Training, learning to see and unsee**

Byron Good, "How Medicine Constructs its Objects." *Medicine, Rationality, and Experience: An Anthropological Perspective*, 1999.

<b>Week 10</b>
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### **Block Four: The Politics of Surveillance, Transparency, and Privacy**

## **November 5: Privacy and Surveillance**

Julie Cohen, "What Privacy is For." *Harvard Law Review*, 2013.

James Bamford, "They Know Much More Than You Think." *The New York Review of Books*, 2013.  
[http://www.nybooks.com/articles/archives/2013/aug/15/nsa-they-know-much-more-you-think/?  
pagination=false](http://www.nybooks.com/articles/archives/2013/aug/15/nsa-they-know-much-more-you-think/?pagination=false)

Eric Lichtblau and Scott Shane, "Vast F.D.A Efforts Tracked E-mails of its Scientists." *New York Times*, 2012.  
[http://www.nytimes.com/2012/07/15/us/fda-surveillance-of-scientists-spread-to-outside-critics.html?  
pagewanted=all](http://www.nytimes.com/2012/07/15/us/fda-surveillance-of-scientists-spread-to-outside-critics.html?pagewanted=all)

### **November 7: Surveillance and Secrecy**

Peter Holquist, "Information Is the Alpha and Omega of Our Work: Bolshevik Surveillance in Its Pan-European Context." *The Journal of Modern History*, 1997.

## **Week 11**

### **November 12: Privacy in Canada**

Guest lecture by Christopher Prince, Strategic Policy Analyst Office of the Privacy Commissioner of Canada.

### **November 14: Privacy in the United States**

Guest lecture by Chris Soghoian, the Principal Technologist and a Senior Policy Analyst with the ACLU Speech, Privacy and Technology Project.

Chris Soghoian, "A failed market for privacy?" *The Spies We Trust: Third Party Service Providers and Law Enforcement Surveillance*, Phd Dissertation, Department of Computer Science, Indiana University. [pp. 67-77]

## **Week 12**

### **November 19: Wikileaks and Leaking**

Patrick McCurdy, "From the Pentagon Papers to Cablegate: How the Network Society Has Changed Leaking." *Beyond Wikileaks*, 2013.

Christian Christensen, "Wikileaks and Anonymous respond to status quo journalism." *Aljazeera*, 2013  
<http://www.aljazeera.com/indepth/opinion/2013/07/201372891029632277.html>

### **November 21: Student Presentations**

Public Service Presentations on Surveillance.



<b>Week 13</b>
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**November 28: Anonymity and Publicity**

Matt Buchanan, "Why Twitter Parody Accounts Should Stay Anonymous." *New Yorker*, 2013.  
<http://www.newyorker.com/online/blogs/elements/2013/07/why-twitter-parody-accounts-should-stay-anonymous.html>

Robert McCarthy and Dilip Parameshwar Goankar, "Panopticism and Publicity: Bentham's Quest for Transparency." *Public Culture*, 1994.

**December 3: Anonymous**

Jill Lepore, "THE PRISM: Privacy in an age of publicity." *New Yorker*, 2013.

Gabriella Coleman, "Anonymous in Context: The Power and Politics behind the Mask." *Center for International Governance Policy Series Report*, 2013.

\* Final Op-EDs due

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