Seminar in Science and Technology Studies  
STS-UY 3004W [17518], Spring 2016  
12:30 to 2:20 pm, Tuesdays and Thursdays, Room RH 604  
Department of Technology, Culture and Society  
New York University Polytechnic School of Engineering

Instructor  
Dr. Christopher Leslie  
chris.leslie@nyu.edu, (646) 997-3130  
5 MetroTech Center (Dibner Building), LC 131

Office Hours  
Generally, I’ll be available on from 12–2 pm on Mondays when classes are in session. If this time is not convenient, contact me to make an appointment.

Prerequisite  
Students must have completed EXPOS-UA 1 and 2 (or the equivalents) and a 2000-level STS course.

Course Description  
The purpose of the seminar is to demonstrate how STS can be applied to a specific topic. This semester, we shall explore how Science and Technology Studies can improve our understanding of invention, innovation, and diffusion of science and technology. Interestingly, the desire to help entrepreneurs succeed was one of the motivations behind a group of STS scholars, and STS can provide a useful framework to study the management of innovation, complicating notions of an implied linear path. We shall consider how history, philosophy, sociology, and other fields can help us answer important questions related to the entrepreneurship. How do science and technology move from the laboratory to the market, or from the university research lab to the private company? What challenges are involved in transferring technologies between different industries or countries? What ethical and policy challenges are involved with successful innovation?

Objectives  
This semester you will learn about:  
• Issues raised by modern science and technology, and the conditions under which innovation blossoms  
• Key concepts from STS, as well as the work of foundational thinkers in the field  
• Producing academic writing that demonstrates an understanding of how science and technology shape society in historical, philosophical, sociological, cultural, and/or technical ways; uses specific examples or evidence; and draws well-founded conclusions  
• Defining a research project, conducting library searches to find relevant sources, and developing a thesis about your findings  
• The difference between primary and secondary sources, how to use both in a paper  
• How to conduct archival research and use archival sources in writing  
• Revision techniques that can help improve your formal writing

Structure  
Most class time is devoted to lectures about course topics and discussion of the reading material. This course is designated as writing intensive, which means that there will be a number of informal writing assignments, some class time will be devoted to writing instruction, revision of your writing based on comments from the instructor and your classmates is required, and writing will count for a significant
portion of your grade. There will be a portion of the class devoted to archival research, and you will be required to visit the archive outside of class time.

Readings
You must purchase these books:
• *How Users Matter* by Nelly Oudshoorn and Trevor Pinch eds. Abbreviated as [HUM].
• *The Innovators* by Walter Isaacson.
• *Hawking Incorporated* by Hélène Mialet.
• *Genomic Messages* by George Annas and Sherman Elias.

Other assignments will be found online and in NYU Classes (http://newclasses.nyu.edu). Please let me know well in advance of class if you have any trouble locating a required reading.

Grading
Class components are weighted as follows: Letter grade equivalents are:
• Quizzes 20% A: 90–100 (90–94 = A-)
• Writing exercises 20% B: 80–89 (87–89 = B+; 80–82 = B-)
• Exams (10% and 20%) 30% C: 70–79 (77–79 = C+; 70–73 = C-)
• Final paper portfolio 30% D: 60–69 (67–69 = D+); F: <63

Requirements
**Accommodations:** If you are student with a disability who is requesting accommodations, please contact NYU’s Moses Center for Students with Disabilities at (212) 998-4980 or mosescsd@nyu.edu. You must be registered with CSD to receive accommodations. Information about the Moses Center can be found at http://www.nyu.edu/csd/. The Moses Center is located at 726 Broadway on the 2nd floor.

**Attendance:** On-time attendance for the entire class period is mandatory. Students who miss four or more classes automatically fail the course. For the purposes of attendance, missing fewer than twenty minutes counts as one-third of an absence (arriving late, departing early, leaving the room). Missing more than twenty minutes counts as an absence. Doctor’s notes or other documents are not necessary, but if you must miss class, it is your responsibility to find out from a classmate what you missed.

**Attentiveness:** Please pay attention during class and avoid behaviors that distract others. Do not eat, drink, or sleep during class. You should not use electronic devices, such as cell phones or laptops, at all. Do not hold side conversations; if someone tries to talk to you during class, tell him or her to speak to you after class. Do not bring visitors without advance permission.

**Examinations:** There are two exams during our regular class meetings. They consist of short answer and essay questions. Each is cumulative and closed-book.

**Honesty:** Please be advised that I take the University policy about academic dishonesty seriously and will punish cheating or plagiarism (passing off other people’s ideas as your own) by awarding a grade of “F” for the course and referring cases to Student Affairs for further action.

**Participation:** There is no grade for participation. I encourage you to participate, so that the course discussions reflect your interests. If you are the kind of person who likes to participate, I encourage you to make a space for others who might be shyer.

**Preparation:** According to New York State guidelines, a student should spend at least two hours to prepare for each hour in class. Thus, for this course, you can expect to spend at least eight hours per week outside of class getting ready for class. Please plan accordingly so that you can read thoroughly, write carefully, and reflect thoughtfully.

**Quizzes:** There will be unannounced quizzes on the reading assignments and course lessons. You may consult your own handwritten notes, but not books or printouts, for these quizzes. If you miss a quiz due to lateness or absence, you shall receive a zero.
Papers: You will write two papers of at least 2,500 words (eight full pages) each for this class in successive stages. You must document your sources in MLA or Chicago author-date style, both in the text of the paper and at the end in your works cited section. You will have opportunities to receive feedback on this paper from your classmates and me and hand in the final paper as part of a portfolio that includes a cover letter, résumé, your personal list of grammatical and mechanical issues, and your earlier drafts. Each part must be uploaded to NYU Classes and scanned by Turnitin on time; no late papers will be accepted. Note that, according to NYU policy, I cannot accept papers emailed to me; if you are having trouble uploading your paper to Turnitin, you must contact the Help Desk at (212) 998-3333 for assistance. For this reason, please make sure that you attempt to upload your paper in plenty of time before the deadline.

How to Do Well

1. Be on time. At the start of class, you will notice that I provide a preview of what is coming up and also answer questions. If you regularly miss these first minutes, you will start to feel the uncomfortable sensation that you do not know what is going on. Keep in mind that trains, subways and busses usually take much longer than they “should,” so plan accordingly. Being late once is ok; it happens to everyone. If you are always late, then you are doing something wrong.

2. Ask questions. Please raise your hand at the beginning of class or during a presentation. It does little good to whisper to the person next to you; instead, feel free to ask me for clarification. Also, use office hours or write an e-mail message for additional information.

3. Take notes, even if I am not writing on the board. Taking notes helps you stay focused on the material we are studying. Note taking also serves another purpose: it helps you to get used to writing about the course materials in your own words. Because the evaluation in this course is written, taking notes is valuable practice (and good exercise for your writing muscles!). There is no need to write down everything I say, but make sure you take down interesting ideas and connections to the course themes. Go over your notes after class to fill in the gaps.

4. Read actively. Prepare by reading the assignment for the day carefully before class. Mark key phrases and passages that have to do with the ideas in the course. Take notes like you are preparing a laboratory notebook – write down what you think is important, with examples, and prepare questions you want to ask.

5. Work proactively. Start an assignment when it is assigned, not when the deadline is looming. It sometimes takes a little bit of time wondering about an assignment before you make progress, and there are often times that you need guidance. If you wait until the last moment to get started, you cannot negotiate these hurdles adequately.

6. Prepare for emergencies. Things often go wrong during the semester; there are always computer problems and unfortunately there are family emergencies as well. It is important to plan for the unexpected by making backup copies and to be ready to hand in a paper or assignment well in advance of the deadline in case there is an unexpected calamity that will prevent you from using the last days before a deadline.

Bibliography

I shall refer to these standard reference books during the semester. Because you may find them useful, I have placed them on reserve in the Bern Dibner Library where possible.


Galison, Peter and Bruce Hevly, eds. (1992). *Big Science: The Growth of Large-Scale Research*. Sanford UP.


### Tentative Assignment Schedule

**Tuesday, Jan. 26**

**Introduction**

**Thursday, Jan. 28**

**Social Construction**


**Tuesday, Feb. 2**

**Patents**


Bart Verspagen, “Mapping Technological Trajectories as Patent Citation Networks: A Study on the History of Fuel Cell Research.”

Response paper 1.

**Thursday, Feb. 4**

**Diversity in STEM**

Schiebinger, L. and M. Schraudner. “Interdisciplinary Approaches to Achieving Gendered Innovations in Science, Medicine, and Engineering.”


*Monday, Feb. 8 is the last day to drop without receiving a grade of W.*

**Tuesday, Feb. 9**

**Imagining the User**

Ellen van Oost, “Materialized Gender.“ [HUM]

Johan Schot and Adri Bruheze, “The Mediated Design of Products” [HUM].

Response paper 2.

**Thursday, Feb. 11**

**Creating the User**


Ronald Kline, “Resisting Consumer Technology in Rural America: The Telephone and Electrification” [HUM].

**Tuesday, Feb. 16**

**Introduction to Archives**

Writing checklist due.

**Thursday, Feb. 18**

**Innovation and Technology**

<table>
<thead>
<tr>
<th>Date</th>
<th>Assignment</th>
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<tbody>
<tr>
<td>Thursday, Feb. 25</td>
<td>Archival paper due.</td>
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<tr>
<td>Tuesday, Mar. 1</td>
<td>Isaacson, <em>The Innovators</em>, Chapter 5 to 7.</td>
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<td>Tuesday, Mar. 8</td>
<td>Bibilography due.</td>
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<td>Thursday, Mar. 3</td>
<td>Isaacson, <em>The Innovators</em>, Chapter 11 to end.</td>
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<td>Tuesday, Mar. 10</td>
<td><em>Alternative Angles</em></td>
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<td>Tuesday, Mar. 22</td>
<td>Sally Wyatt, “Non-Users Also Matter” [HUM].</td>
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<td>Thursday, Mar. 24</td>
<td>Workshop draft papers in class</td>
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<td>Tuesday, Mar. 29</td>
<td>Midterm Exam</td>
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<td>Thursday, Mar. 31</td>
<td>Actor-Network Theory</td>
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<tr>
<td>Tuesday, Apr. 5</td>
<td>Bruno Latour, excerpt from <em>Laboratory Life</em>.</td>
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<tr>
<td>Thursday, Apr. 7</td>
<td>Paper 1 due.</td>
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<td>Tuesday, Apr. 12</td>
<td>Diffusion of Scientific Knowledge</td>
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<td>Tuesday, Apr. 19</td>
<td>Mialet, Chapter 2 to Chapter 4.</td>
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<td>Thursday, Apr. 21</td>
<td>Response paper 3 due.</td>
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<td>Tuesday, Apr. 26</td>
<td>Mialet, Chapter 5 and 6.</td>
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<td>Thursday, Apr. 28</td>
<td>Mialet, Chapter 7 to end.</td>
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<tr>
<td>Tuesday, May 3</td>
<td>Résumé and revised checklist due.</td>
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<td>Thursday, May 5</td>
<td>Genetic Innovation</td>
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<td>Tuesday, May 10</td>
<td>George Annas and Sherman Elias, <em>Genomic Messages</em>, Intro to Chapter 2.</td>
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<td>Thursday, May 24</td>
<td>Paper 2 proposal due with bibliography.</td>
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<td>Tuesday, May 31</td>
<td>Annas and Elias, Chapter 6 to 8.</td>
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<td>Thursday, May 5</td>
<td>Annas and Elias, Chapter 9 to end.</td>
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<td>Tuesday, June 10</td>
<td>Workshop paper 2 in class.</td>
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<td>Thursday, June 22</td>
<td>Biomedical Knowledge</td>
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<td>Tuesday, June 26</td>
<td>Nelly Oudshoorn, “Clinical Trials as Cultural Niche” [HUM].</td>
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<tr>
<td>Thursday, June 28</td>
<td>Steven Epstein, “Inclusion, Diversity, and Biomedical Knowledge-Making” [HUM].</td>
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<td>Tuesday, July 3</td>
<td>Policy and Innovation</td>
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<td>Thursday, July 5</td>
<td>Bengt-Åke Lundvall and Susana Borrás, “Science, Technology, and Innovation Policy.”</td>
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<td>Tuesday, July 10</td>
<td>Paper 2 due.</td>
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<td>Thursday, July 22</td>
<td>Science and Citizenship</td>
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<td>Tuesday, July 26</td>
<td>Dale Rose and Stuart Blume, “Citizens as Users of Technology” [HUM].</td>
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<td>Thursday, July 28</td>
<td>Shobita Parthasarathy, “Knowledge is Power” [HUM].</td>
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<td>Tuesday, Aug 3</td>
<td>Public Health</td>
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<td>Thursday, Aug 5</td>
<td>Jessika van Kammen, “Who Represents the Users?” [HUM].</td>
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<td>Tuesday, Aug 10</td>
<td>Portfolio due.</td>
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<td>Thursday, Aug 22</td>
<td>Final Exam</td>
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