ST5974: What is STS for? What are STS scholars for?  
(Alternate Perspectives on Science, Technology, and Medicine)

Gary Downey
Meet Wednesdays at 3:00 PM

Course Purpose
The main purpose of this independent study is to explore practices STS scholars have used, are using, and could use to make a difference beyond the field, in both academic and non-academic arenas.

STS builds on critiques of the diffusion model of knowledge creation, diffusion and utilization. Yet most STS scholarship depends primarily upon the diffusion model for its influence and effectiveness.

STS is a small field. Its programs have spread across the planet and gained significant scholarly status. Yet at each institution, STS tends to be a small configuration of scholars and activities in relatively marginal physical and intellectual spaces. Furthermore, STS scholarship may be increasingly at risk from a combination of budget reductions and challenges to its jurisdictional claims from related fields.

Still, no other field takes as its explicit focus relationships between the so-called technical or knowledge dimensions of science and technology and the so-called nontechnical social, cultural, political, etc. dimensions. STS work to date has clearly demonstrated that all activities in and around science and technology span these distinctions. Our analytical tendency to invent and rely upon compound words (e.g., sociotechnical, technopolitical, socio-material, technoscience, etc.) is but one indicator. Yet STS scholarship has had uneven success in making a difference beyond the field, even though all STS scholars have developed practices to cross its boundaries (including through pedagogy).

This course calls attention to the problem of producing STS scholarship that can scale up. It asks if the issue of scale and practices of critical participation can and should become more routine concerns in STS venues. It challenges participants to reflect on how they think about and might seek to enact relationships between the academic and nonacademic dimensions of their work. To wit: Do I care about making a difference beyond the field? Should I? What sorts of difference do I seek? What sorts of scholarly practices have been successful? Which less so? Wherein lie barriers? Are there new opportunities? How do I think about this problem in the first place?

STS is far from an upper limit on the number of STS-trained scholars and STS-informed practitioners who can make a difference by addressing simultaneously the technical and nontechnical dimensions of issues involving science and technology. Why then stay small? What would it take to get bigger?

STS might be at a key moment in its short history. Perhaps it is a good time to reflect and act more collectively on the twin questions: What is STS for? What are STS scholars for?

Course Requirements
Assignments: The student must complete two 3-4 page reflections on the reading to date and a final research project of 10-15 pages. For the research project, the student must make two brief formative presentations (weeks 6 & 10) and one summative presentation (week 15).

One purpose of the reflections is to enable you to receive feedback at an early point on how you’re doing in the class.
The research assignment has three options (substitute C&I for STS if appropriate):

1. Examine the career of a prominent STS scholar, making visible and accounting for the relationship between her/his core academic STS writings and other STS and non-STS work. How does (s)he imagine and carry out the scaling up of the what (s)he considers key contributions?

2. Examine and discuss a practice of scaling up found in STS work.

3. Design and obtain instructor’s approval of a research project pertaining to the issue of scaling up in STS.

Grading will be relative to where you are when you begin the course. Successful progress toward the degree always requires both insight and effort, but the proportions vary from student to student. Following are rough proportions for each area of activity, to help you apportion your efforts:

- 40% Class participation, including leading class discussions
- 15% Reaction #1, due at 11:59pm Sunday, February 12.
- 15% Reaction #2, due at 11:59pm Sunday, March 18.
- 30% Final research project due at 11:59pm Wednesday, May 9.

Formative student evaluations: The professor will provide during weeks 6 and 11 a short, written assessment offering an “estimate of your final grade based on your performance to date.”

Readings

Required and recommended readings are available as pdfs at the course Scholar site or through the VT library. Please download SSS and ST&HV articles available through the library. STS journals need to show usage to justify continued subscriptions.
Schedule

Week 1: Big STS? January 20
Downey, Gary. "Are engineers losing control of technology?: From 'problem solving' to 'problem definition and solution' in engineering education." *Chemical Engineering Research and Design* 83.6 (2005): 583-595.

Related

Week 2: Being STS Now January 27

Week 3: Working (in) STS February 3
*The Core of STS: Where Are We? Where Are We Headed?* Perf. Yuko Fujigaki.
*Conference@STS.Next.20.* Harvard University, 9 Apr. 2011. Web.

Related
Week 4: Outlooks for STS in the late 1980s  

[Reaction essay #1 due February 12]


Sheila Jasanoff, Introduction i-iv

Stephen H. Cutcliffe, The STS Curriculum: What Have We Learned in Twenty Years? 67-79
Discussion Group I: The STS Curriculum 81-97
Discussion Group II: The STS Research Agenda 125-139
Report: Working Group II: STS Research Agenda 141-143

David Edge, STS: A View From Over the Pond 145-151
Marcel Chotkowski LaFollette, STS Journals: Facing the Future 153-163
Commentary 165-168
Susan Cozzens, Topic: STS Journals and Their Mission 169-174
Kenneth Keniston, What is the Outlook for STS? 175-180
Epilogue 181
Workshop Proceedings [workshop]:
  Excerpt 1: STS & the Disciplines 183-190
  Excerpt 2: The Relevance of STS 191-203
  Excerpt 3: Is STS Anti-Science? 205-214
  Edward Woodhouse, A Strategy for STS? 215-220

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Week 5: Intervention February 17

Related


**Week 6 Expertise February 24**

[Check-in replaced by 2-minute formative introductions of research projects]


Related


Collins, H. M. and Robert Evans. "King Canute Meets the Beach Boys: Responses to "the Third Wave"." *Social Studies of Science* 33.3 (2003): 435-452.


**Week 7 Engagement  Skype interlocutor: David Hess (Vanderbilt) March 3**


**Related**


Comment [KAK2]: This appears to be the correct citation, although it lists a different title for the source: Woodhouse, Edward J., and Dean A. Nieusma. "Democratic expertise: integrating knowledge, power, and participation in environmental policy analysis. New Brunswick: Transaction Publishers (2001): 73-95.


**Week 8  Midstream Modulation & Embedded Humanists  March 17**


Results of the initial "laboratory engagement study"; written in narrative form and focused on a key developments in laboratory research decision making that coincided with the integrative work. Includes an account of science policies that call for integration.


An account of the interactions between the initial “embedded humanist” and the laboratory director who hosted the scholar. Considers the development and outcomes of their interactions in relation to the “trading zones” and “interactional expertise” frameworks.


An account of the STIR project’s first two “laboratory engagement studies” and their outcomes; includes descriptions of both “first order” and “second order” reflective learning outcomes.


http://www.youtube.com/watch?v=fcOOT2I1I6o

**Related**


Week 9  STS as Co-Production?  Skype interlocutor: Sheila Jasanoff (Harvard)  March 24
(2002)

Related

Week 10  Hegemony/Ontological Politics 1  March 31
[Check-in replaced by 4-6 minute formative presentations on research projects, with handout of abstract and bibliography]

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**Week 11 Feminist STS Participation April 7**


**Related**


**Week 12 Pedagogy April 14**


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**Week 13 Scaling up through history and philosophy**

**Skype interlocutor: Jim Collier (Virginia Tech)**

April 21


**Week 14 Public Proof/Reassembling/Performation**

April 28


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**Week 15 Research Presentations May 5**

[Final Research Projects due Wednesday, May 7]

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**Week 21 Overflows and Uncertainty**


**Week 22 Mode 2/Contextualized Science**


**Week 23 Brokering**


Week 24 Entrepreneurial Science


