

Science, Technology, and Society: Core Seminar

HTS6743/LMC6743/PUBP6743

Preliminary Fall 2016 Syllabus - as of August 23 2016

Course Meets: Wednesdays 5:05-7:55

Location: Skiles 343

Convener: Anne Pollock, apollock@gatech.edu

Office Hours: Skiles 360, Tuesdays/Thursdays 1:30-2:30 or by appointment

Course Description

Science, Technology and Society (STS) - also called Science and Technology Studies - is an interdisciplinary field of study that seeks to understand how science and technology shape society and culture and how society and culture, in turn, shape the development of science and technology. This course explores key topics, debates, and theoretical perspectives in STS. Featuring guest lectures by faculty from across the Ivan Allen College of Liberal Arts, the seminar introduces students both to a wide range of STS topics and approaches and to faculty who do research in this area. This course is also the core course required for the Graduate Certificate in Science, Technology & Society.

Objectives

- ❖ To deepen awareness of social, cultural, and epistemic dynamics of science and technology
- ❖ To communicate in sophisticated ways about these issues, especially orally and in writing
- ❖ To become familiar with select foundational texts in the field of STS
- ❖ To explore key themes in STS from diverse disciplinary and interdisciplinary perspectives
- ❖ To be exposed to faculty from across the Ivan Allen College who do STS-related work

Assessment

3 components, equally weighted (each worth 1/3rd of final grade)

1. Class Participation

This course is designed as a seminar in which active participation from all students is necessary. Students are expected to come to class prepared to discuss the readings in depth, and to devote engaged attention to guest lecturers and to classmates' contributions.

2. Weekly Reading Responses

Before each class, each student writes an entry responding to the readings for that day on the blog section of T-Square. The weekly responses should be ~500 words each and should be posted 24 hours before class (by Tuesday at 5pm). They must: (1) demonstrate having done the reading, (2) reflect on how the reading relates to material earlier in the course and/or broader issues, and (3) note comments and questions that you would like to raise in class.

3. Take Away Examination

Two Questions: one overview, obligatory; one specialized, chosen from many. 1500 words each.

Notes on Format and Readings:

- ❖ Readings listed are preliminary and subject to change as per the direction of the guest lecturers. Be sure to check T-Square to get any updated reading assignments. All readings will be available as PDFs or links on T-Square at least one week in advance of the class for which they are assigned.
- ❖ Guest lecturers lead the first two hours of class, which generally focus on the readings for that day. After a short break, the convener leads the remaining discussion, generally highlighting connections across weeks.

Attendance Policy: Attendance is required.

ADAPTS accommodation is available for students with disabilities: <http://www.adapts.gatech.edu/>

Honor Code: Students must do their own work on blogs and exams. Late work will not be accepted.

Week 1: 8/24**Introduction to the Course**

In-class film, "Island of Flowers," directed by Jorge Furtado (1989)

Week 2: 8/31 [professor at 4S]**The Social Construction of Truth - The Social Construction of Technology****Guest Lecturers: John Krige and Jenny Smith**

Bruno Latour, *Science in Action. How to Follow Scientists and Engineers Through Society* (Harvard), pp. 1-100.

Steven Shapin, *A Social Construction of Truth. Civility and Science in Seventeenth Century England* (Chicago), Epilogue.

Steven Shapin, "Rarely Pure and Never Simple: Talking About Truth," *Configurations* 7:1 (1999), 1-14.

Ruth Schwartz Cowan, "Consumption Junction" in Bijker, Wiebe, Thomas P. Hughes and Trevor Pinch *The Social Construction of Technological Systems*.

Bruno Latour: "Where are the missing masses? The sociology of a few mundane artifacts", in Bijker, Wiebe E.; Law, John, *Shaping technology/building society: studies in sociotechnical change*.

Traweek, Sharon. "Pilgrim's Progress: Male Tales Told During a Life in Physics," Chapter 3 of *Beamtimes and Lifetimes: The World of High Energy Physicists*, Harvard University Press, 1988, pp. 74-105.

Week 3: 9/7**Artifacts and Politics****Guest Lecturer: Nassim JafariNaimi**

Winner, Langdon, "Do Artifacts Have Politics," in *The Whale and the Reactor* (Chicago: University of Chicago Press, 1986), pp. 19-39.

Bowker, Geoffrey C., and Susan Leigh Star, *Sorting Things Out: Classification and its Consequences*, Cambridge, MA: MIT Press, 1999, Intro and Chapt 1 (pp. 1-50).

Jain, Sarah S Lochlann, "Dangerous Instrumentality: The Bystander as Subject in Automobility," *Cultural Anthropology* 19.1(2004): 61-94.

JafariNaimi, Nassim, "Exposing the Myth of Algorithmic Morality, or Why Self-Driving Cars Must *Not* Be Programmed to Kill," in draft.

Week 4: 9/14**Paradigms and Thought Styles****Guest Lecturer: Jen Singh**

Fleck, Ludwick. *Genesis and the Development of a Scientific Fact*. First published by Benno Schwabe, Basel, 1935; English translation by Bardley F. and Trenn T.J., University of Chicago Press, 1979. (Read: Forward by Kuhn and pp. 1-145).

Kuhn, Thomas S. "Scientific Paradigms." In *Sociology of Science* edited by Barry Barnes, 80-104. Middlesex: Penguin Books, 1972.

Singh, Jennifer. "No Single Gene for Autism: The Emergence of Genomic Styles of Thought." In *Multiple Autisms: Spectrums of Advocacy and Genomic Science*, 83-122. University of Minnesota Press: Minneapolis and London, 2016.

Week 5: 9/21

Gender and Science

Guest Lecturer: Carol Colatrella

Haraway, Donna. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies* 14.3(1988): 575-599.

Longino, Helen, and Evelyn Hammonds, "Conflicts and Tensions in the Feminist Study of Gender and Science," in *Conflicts in Feminism*. Eds. Marianne Hirsch & Evelyn Fox Keller. Routledge, 1990: 164-183.

Balsamo, Anne. "Teaching in the Belly of the Beast: Feminism in the Best of All Places," *Wild Science: Reading Feminism, Medicine, and the Media*. Eds. J. Marchessault, K. Sawchuk. Taylor & Francis, 2000: 185-214.

W. Faulkner and E. A. Kerr, "On Seeing Brokenspectres: Sex and Gender in Twentieth-Century Science." *Companion to Science in the Twentieth Century*. Eds. Dominique Pestre and John Krige. London: Routledge. 2003 Description: eBook at GT Library.

Jahren, Hope, *Lab Girl*, selections

Colatrella, Carol, "Feminism Meets Fiction: Seven Novels Featuring Women Scientists," in draft.

Week 6: 9/28

Biomedicine

Guest Lecturer: Matt Ventresca

Foucault, M. (1973). Excerpts from *The birth of the clinic: An archaeology of medical perception*.

Foucault, M. (1978). Excerpts from *The history of sexuality, Vol 1: An introduction*.

Rose, N. (2007). *The politics of life itself*. Princeton, NJ: Princeton University Press (Introduction and Chapter 1: pp. 1-40).

Clarke, A.E., Shim, J.K., Mamo, L., Fosket, J.R., & Fishman, J.R. (2003). "Biomedicalization: Technoscientific transformations of health, illness and U.S. biomedicine." *American Sociological Review*, 68(2), 161-194.

Lupton, D. (2014). Critical perspectives on digital health technologies. *Sociology Compass*, 8(12), 1344-1359.

Rose, N. & Abi-Rached, J. (2010). The birth of the neuromolecular gaze. *History of the Human Sciences*, 23(1), 11-36.

Jordan-Young, R. & Rumiati, R.I. (2012). Hardwired for Sexism? Approaches to sex/gender in neuroscience. *Neuroethics*, 5, 305-315.

Beaulieu, A. (2000). The brain at the end of the rainbow: The promises of brain scans in the research field and in the media. In Marchessault, J. & Sawchuk, K. (eds.) (2000). *Wild science: Reading feminism, medicine and the media* (pp. 39-52).

Week 7: 10/5 – Racism and Health in the South Event Replaces Class

3pm-5pm, Clary Theater, Student Success Center

Fausto-Sterling, Anne. "The Bare Bones of Race," *Social Studies of Science* 38.5(2008): 657-694.

Jones, Camara. "Levels of Racism: A Theoretic Framework and a Gardener's Tale," *American Journal of Public Health* 90.8(Aug 2000): 1212-1215.

Metzl, Jonathan, and Helena Hansen. "Structural Competency: Theorizing a new medical engagement with stigma and inequality," *Social Science & Medicine* 103 (2014): 126-133.

Pollock, Anne. *Medicating Race: Heart Disease and Durable Preoccupations with Difference*, Durham, NC: Duke University Press, 2012. Introduction, pp. 1-27.

Week 8: 10/12

Philosophy of Technology: Postphenomenology

Guest Lecturer: Robert Rosenberger

Rosenberger, R., & P.-P. Verbeek. (2015). "A Field Guide to Postphenomenology." In: *Postphenomenological Investigations: Essays on Human-Technology Relations*, R. Rosenberger & P.-P. Verbeek (Eds.). Lexington Books, pp. 9-41.

Ihde, D. (1999). "Technology and Prognostic Predicaments." *AI & Society*. 13: 44-51.

Forss, A. (2012). "Cells and the (Imaginary) Patient: The Multistable Practitioner-Technology-Cell Interface in the Cytology Laboratory." *Medicine, Health Care, & Philosophy*. 15: 295-308.

Vallor, S. (2015). "Beyond Ordinary Givenness? Postphenomenology, Digital Imaging, and Evidentiary Responsibility." In: *Technoscience and Postphenomenology: The Manhattan Papers*, J. K. B. O. Friis & R. P. Crease (Eds.). Lexington Books, pp. 19-37.

Rosenberger, R. (2014). "Multistability and the Agency of Mundane Artifacts: from Speed Bumps to Subway Benches." *Human Studies*. 37: 369-392.

Rosenberger, R. (2014). "How Cities Use Design to Drive the Homeless Away." *The Atlantic* online. 6.19.2014.

<http://www.theatlantic.com/business/archive/2014/06/how-cities-use-design-to-drive-homeless-people-away/373067/>

Week 9: 10/19

Inequality

Guest Lecturer: Susan Cozzens

Readings TBD

Week 10: 10/26

Economics

Guest Lecturers: Steve Usselman and Juan Moreno-Cruz

Readings TBD

Week 11: 11/2

Design

Guest Lecturers: Carl DiSalvo and Yann Loukissas

Readings TBD

Week 12: 11/9

Information Technologies and International Development

Guest Lecturer: Neha Kumar

Readings TBD

Week 13: 11/16

Science Fiction as STS

Guest Lecturer: Lisa Yaszek

Darko Suvin, "Introduction," *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre*.

Istvan Csicsery-Ronay, Jr. "Imaginary Science." *The Seven Beauties of Science Fiction*.

Donna Haraway, "Cyborg Manifesto."

Sheriann Lewitt, "A Real Girl"

William Gibson, "Johnny Mnemonic"

CL Moore, "No Woman Born"

Week 14: 11/23 – Thanksgiving – No class

Week 15: 11/30: Wrap-up class

Take-home Exam due Friday, December 2, 11:59pm