

Seminar in Cultural Anthropology: Anthropology of Science

Anthropology 256
University of California, Riverside
Fall 2011
Watkins 1347
Wednesday 10:10 AM-1 PM

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Office hours: Weds. 2-3 PM
or by appointment

Course Overview

In recent decades, sociocultural anthropologists have taken the ethnographic methods they developed for studying exotic peoples in exotic locales and applied them to scientific communities and practice. Anthropology has become one of many disciplines contributing to and drawing from the interdisciplinary field of science and technology studies (STS). This course provides an introduction to STS, and focuses on two questions germane to the relation between STS and anthropology. First, how do recent developments in biotechnology upset boundaries between nature and culture, systems of classification, and notions of kinship? Second, how can STS engage with postcolonial conditions and both hybrid and radically other forms of knowledge?

Requirements

This class will be run as a graduate-level reading-intensive research seminar. Preparation for class discussion by careful reading of the week's readings is required. This seminar relies upon the participants' capacity to participate in a fruitful discussion in the seminar meeting. This means that each student should be familiar with the central arguments of the required readings, and be able to develop thoughts on the connections/disconnections in the larger body of readings for the week and across the term.

Additionally, each student will be expected to:

- 1) Prepare a one page critical commentary on the week's readings to be circulated electronically via iLearn by 1 PM on the Tuesday before each class. In iLearn, click on Weekly Commentaries > Week # > Create Blog Entry . These are meant to jump-start discussion, to flag critical issues and concerns, and to highlight any crosscutting themes or connections that you may want to bring in. They should be intelligible but need not be formal or incredibly polished.
- 2) Co-lead/co-chair at least one class discussion. (The exact number will depend on the number of students in the class). This involves three things: 1) a short (<15 minute) presentation of the key arguments made in the readings pertaining to that week; 2) using other materials to locate them in one or more debates or to show something of their intellectual genealogy; 3) leading the class discussion on the readings. Again, the presentation should be no more than fifteen minutes.
- 3) Write. There are two options for the writing component of this course. I have no preference for either choice; I expect you to choose the option that is more useful to you at the current stage of your graduate career.

Option one: Two papers of 7 to 10 pages, in which you develop your thoughts and/or reading commentaries into well-crafted and concise analyses that relate readings to each

other within a given week or across sessions. You may submit the papers at any point during the term; however, you should submit the first one by week seven, and the second by Friday of the last week of classes.

Option two: submit a paper or research proposal of 15-25 pages, by 10 AM Wednesday December 7. Papers or proposals should use readings from the class (probably in theoretical, contextual or comparative sections) to engage with your dissertation topic or a closely-related area.

Auditors

Auditors are welcome in this class on two conditions: they need to come to most (preferably all) of the classes and they should be prepared to do all the readings and fulfill qualification (i) above, i.e. prepare a weekly commentary. Auditors can add a great deal to the discussion in the class but only if they prepare in the same way as students taking the class for credit.

Grading

Participation (including commentaries and discussion leading): 50%

Paper(s) : 50%

Required Texts

Sergio Sismondo, *An Introduction to Science and Technology Studies*

Bruno Latour, *Science in Action: How to Follow Scientists and Engineers through Society*

Robert Kohler, *Landscapes and Labs: Exploring the Lab-Field Border in Biology*

Stefan Helmreich, *Alien Ocean: Anthropological Voyages in Microbial Seas*

Sarah Franklin, *Dolly Mixtures: the Remaking of Genealogy*

Sheila Jasanoff, *Designs on Nature: Science and Democracy in Europe and the United States*

Marilyn Strathern, *Kinship, Law and the Unexpected: Relatives Are Always a Surprise*

David Turnbull, *Masons, Tricksters, and Cartographers: Comparative Studies in the Sociology of Scientific and Indigenous Knowledge*

Helen Verran, *Science and an African Logic*

Gyan Prakash, *Another Reason: Science and the Imagination of Modern India*

Besides these books, there will be several articles and/or book chapters assigned most weeks, distributed via iLearn.

Class Schedule

Week One - 9/28 - An Introduction to Science and Technology Studies

Required Readings

Sismondo chapters 1-3, 5, 6, 10

Latour, B. and Woolgar, S.

1986 "From Order to Disorder". Chapter one of *Laboratory Life: The Construction of Scientific Facts*. Princeton, NJ: Princeton University Press.

Latour, *Science in Action* — Introduction and Part One.

Optional Readings

Early STS

Merton, R. K.

1979 *The sociology of science: Theoretical and empirical investigations*. Chicago: University of Chicago Press.

Bloor, D.

1991 *Knowledge and social imagery*. Chicago: University of Chicago Press.

Kuhn, T. S.

1962 *The Structure of Scientific Revolutions*. Chicago: Univ. of Chicago Press.

S. Turner

2008 The Social Study of Science before Kuhn, in Hackett, E., Amsterdamska, O., Lynch, M., and Wajcman, J., eds. *Handbook of Science and Technology Studies*. Cambridge, MA: MIT Press.

Shapin, S., Schaffer, S., and others

1989 *Leviathan and the air-pump: Hobbes, Boyle, and the experimental life*. Princeton University Press Princeton, NJ.

Latour, B.

1990 Postmodern? No, simply amodern! Steps towards an anthropology of science. *Studies In History and Philosophy of Science Part A* 21(1):145 - 171.

See also the literature reviews in Latour and Woolgar 1986 above and Bourdieu 2004 below.

Anthropological Precedents

Bloor, D.

1978 Polyhedra and the Abominations of Leviticus. *The British journal for the history of science* 11(3):245--272.

Evans-Pritchard, E. E.

1937 *Witchcraft, oracles and magic among the Azande*. Oxford: Clarendon Press Oxford.

Horton, R.

1967 African Traditional Thought and Western Science. Part I. From Tradition to Science. *Africa: Journal of the International African Institute* 37(1):50--71.

Horton, R.

1967 African traditional thought and Western science, part two: the 'closed and 'open' predicaments. *Africa: Journal of the International African Institute* 37(2):155--187.

Malinowski, B.

1992 *Magic, Science and Religion and Other Essays*. Prospect Heights: Waveland Press.

Some Philosophical Underpinnings

Popper, K. R.

1963. "Science as Falsification" in *Conjectures and Refutations*. London: Routledge.

Wittgenstein, L.

1963 *Philosophical Investigations/Philosophische Untersuchungen*. Trans. GE M. Anscombe.
Oxford: Basil Blackwell.

Berger, P. and Luckmann, T.

1966 *The Social Construction of Reality*. New York: Anchor Books.

Hacking, I.

1999 *The social construction of what?*. Cambridge, MA: Harvard Univ Pr.

A Critical Reading of the History of STS

Bourdieu, P.

2004 *Science of science and reflexivity*. Cambridge, UK: Polity Press.

Week Two - 10/5 - Actor-Network Theory, and Some Critiques

Required Readings

Callon, M.

1986 Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay. In *Power, Action, and Belief: A New Sociology of Knowledge?* pp. 196-223. London: Routledge.

Latour, *Science in Action* — remainder

Singleton, V. and Michael, M.

1993 Actor-Networks and Ambivalence: General Practitioners in the UK Cervical Screening Programme. *Social Studies of Science* 23(2):227-264.

Sismondo, ch. 8 and 7

Haraway, D. J. and Randolph, L. M.

1997 *Modest_Witness@_Second_Millennium. FemaleMan©_Meets_OncoMouse™: feminism and technoscience*. London: Routledge. pp. 23-39.

Optional Readings

Latour, B. and Hermant, E., *Paris: Invisible City*. <http://www.bruno-latour.fr/virtual/index.html>

The literature on Actor-Network Theory is vast. John Law's web page at

<http://www.lancs.ac.uk/fass/centres/css/ant/antres.htm>

contains a useful guide to and annotated bibliography of the literature through 2004.

A useful recent critical review can be found in

Braun, B.

2008 Environmental issues: inventive life. *Progress in Human Geography* 32(5):667-679.

Gender and Science

Lederman, M. and Bartsch, I.

2001 *The gender and science reader*. London: Routledge.

Carolyn Merchant

- 1990 *The Death of Nature*. San Francisco: Harper and Row.
- Schiebinger, L.
1991 *The mind has no sex?: women in the origins of modern science*. Cambridge: Harvard Univ Pr.
- Harding, S. G.
1998 *Is science multicultural?: Postcolonialisms, feminisms, and epistemologies*. Bloomington: Indiana Univ Pr.
- Haraway, D. J.
1989 *Primate visions: Gender, race, and nature in the world of modern science*. London: Routledge.
- Haraway, D. J.
1991 *Simians, cyborgs, and women: The reinvention of nature*. London: Routledge.

In addition, work on gender and reproductive technologies was (and remains) particularly prominent in early anthropological work on science. See the review in Franklin, S. 1995. Science as Culture, Cultures of Science. *Annual Review of Anthropology* 24(1):163-184.

Week Three - 10/12 - Moving outside the Laboratory

Required Readings

- Henke, C. R.
2000 Making a place for science: The field trial. *Social Studies of Science* 30(4):483--511.
- Sismondo chs. 14
- Robert Kohler, *Landscapes and Labscapes: Exploring the Lab-Field Border in Biology*
- Lorimer, J.
2008 Counting Corncrakes: The Affective Science of the UK Corncrake Census. *Social Studies of Science* 38(3):377-405.

Optional Readings

- Latour, B.
1999 Circulating reference: Sampling the soil in the Amazon forest. In *Pandora's hope: Essays on the reality of science studies* pp. 24-79. Cambridge: Harvard University Press.
- Scott, J.
1998 *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven: Yale University Press. Chapter Eight.
- Cori Hayden
2003 *When Nature Goes Public: the Making and Unmaking of Bioprospecting in Mexico*. Princeton University Press.
- Jacobs, N. J.
2006 The intimate politics of ornithology in colonial Africa. *Comparative Studies in Society and History* 48(03):564--603.
- Doing, P.
2008 Give Me a Laboratory and I Will Raise a Discipline: The Past, Present, and Future Politics of Laboratory Studies in STS. *Handbook of Science and Technology Studies* 279--295.
- Schumaker, L.
2001 *Africanizing Anthropology: Fieldwork, Networks, and the Making of Cultural Knowledge in Central Africa*. Durham, NC: Duke University Press.

Bank, L.

2002 Home-made ethnography: Revisiting the Xhosa in Town trilogy. *Kronos* :146-171.

Bank, A.

2008 The 'Intimate Politics' of Fieldwork: Monica Hunter and her African Assistants, Pondoland and the Eastern Cape, 1931--1932. *Journal of Southern African Studies* 34(3): 557--574.

Week Four - 10/19 - Life Itself, and Professional Lives

Required Readings

Sismondo ch. 4

Van Reybrouck, D. and Jacobs, D.

2006 The mutual constitution of natural and social identities during archaeological fieldwork. In *Ethnographies of archaeological practice: cultural encounters, material transformations*. Edgeworth, M., eds. Pp. 33--44. Lanham, MD: AltaMira Press.

Stefan Helmreich, *Alien Ocean: Anthropological Voyages in Microbial Seas*

Hercock, M.

2003 Masters and Servants: the Contrasting Roles of Scientists in Island Management. *Social Studies of Science* 33(1):117-136.

Optional Readings

Latour, B.

1993 *The Pasteurization of France*. Cambridge: Harvard Univ Pr.

Foucault, M.

1980 *The History of Sexuality, Volume I: An Introduction*. New York: Vintage Books.

Foucault, M., Senellart, M., and Davidson, A. I.

2007 *Security, Territory, Population: Lectures at the Collège de France, 1977-1978*. New York, NY: Palgrave Macmillan.

Foucault, M.

2008 *The Birth of Biopolitics: Lectures at the College de France, 1978-1979*. New York, NY: Palgrave Macmillan.

Agamben, G. and Raiola, M.

1998 *Homo Sacer: Sovereign Power and Bare Life*. Palo Alto: Stanford University Press.

Week Five - 10/26 - Biotechnology and Multispecies Ethnography

Required Readings

Sarah Franklin, *Dolly Mixtures: the Remaking of Genealogy*

Kirksey, S. and Helmreich, S.

2010 The emergence of multispecies ethnography. *Cultural Anthropology* 25(4): 545--576. Kosek, J.

2010 Ecologies of Empire: On the New Uses of the Honeybee. *Cultural Anthropology* 25(4):650--678.

Optional Readings

There is a burgeoning literature in animal studies and multispecies ethnography; for a useful sampling see Laura Ogden's syllabus at [http://gss.fiu.edu/uploads/file/SYA%204011%20Ogden\(1\).pdf](http://gss.fiu.edu/uploads/file/SYA%204011%20Ogden(1).pdf)

Week Six - 11/2 - Political Culture and Co-Production

Required Readings

Sheila Jasanoff, *Designs on Nature: Science and Democracy in Europe and the United States*

Sismondo ch. 15-17

Satterfield, T. and Roberts, M.

2008 Incommensurate risks and the regulator's dilemma: considering culture in the governance of genetically modified organisms. *New Genetics & Society* 27(3):201--216.

Optional Readings

Thompson, C.

2004 Co-producing CITES and the African elephant. In *States of knowledge: The co-production of science and social order*. Jasanoff, S., eds. Pp. 67-86. London: Routledge (and the remainder of the volume).

Week Seven - 11/9 - Biotechnology, Kinship and Relation

Required Readings

Marilyn Strathern, *Kinship, Law and the Unexpected: Relatives Are Always a Surprise*

Optional Readings

Exploring the thought and impact of Marilyn Strathern could be the subject of a graduate seminar in itself. For an example with many related readings see the syllabus from Cory Hayden's UC Berkeley graduate seminar "Ethnographies of Relation," on the course iLearn site. And if you haven't seen it, watch *Ongka's Big Moka*.

Week Eight - Science and the (Post)colony

DATE AND TIME TO BE DETERMINED

Required Readings

Gyan Prakash, *Another Reason: Science and the Imagination of Modern India*

Lowe, C.

2004 Making the Monkey: How the Togeian Macaque Went from "New Form" to "Endemic Species" in Indonesians' Conservation Biology. *Cultural Anthropology* 19(4):491-516.

Beinart, W., Brown, K., and Gilfoyle, D.

2009 Experts and expertise in colonial Africa reconsidered: science and the interpenetration of knowledge. *African Affairs* 108(432):413.

Optional Readings

Works reviewed in Beinart et al. 2009.

Fujimura, Joan. 2000. "Transnational Genomics: Transgressing the Boundary between the 'Modern/West' and the 'Premodern/East'" in Roddy Reid and Sharon Traweek, eds, *Doing Science + Culture*, pp. 71-92. New York and London: Routledge.

Visvanathan, Shiv

1988. "On the Annals of the Laboratory State," in *Science, Hegemony, and Violence: A Requiem for Modernity*, ed. Ashis Nandy, pp.257- 287. Tokyo and Delhi: The United Nations University and Oxford University Press.

Abraham, Itty

2000 "Postcolonial Science, Big Science, and Landscape" in Roddy Reid and Sharon Traweek, eds, *Doing Science + Culture*, pp. 49-70. New York and London: Routledge.

Anderson, W.

2002 *Introduction: postcolonial technoscience*. *Social Studies of Science* 32(5/6): 643--658 (and other articles in this special issue).

Week Nine - 11/23 - Science and Technology

Required Readings

David Turnbull, *Masons, Tricksters, and Cartographers: Comparative Studies in the Sociology of Scientific and Indigenous Knowledge*

De Laet, M. and Mol, A.

2000 The Zimbabwe bush pump: Mechanics of a fluid technology. *Social Studies of Science* 30(2):225--263.

Sismondo, ch. 9

Optional Readings

Latour, B.

1996 *Aramis, or, The love of technology*. Cambridge, Mass: Harvard University Press.

Lemonnier P.

1992 *Elements for an anthropology of technology*. Ann Arbor: University of Michigan Museum of Anthropology.

Horst H. and Miller D., 2006

The cell phone. An anthropology of communication. Oxford: Berg.

Pfaffenberger B.

1992 Social anthropology of technology, *Annual Review of Anthropology* 21.

Week Ten - 11/30 - Mathematics, Language and Relativism

Required Readings

Whorf, B.

1940 Science and Linguistics. *Technol. Rev.* (6):42:229-231, 247-248.

Nadasdy, P.

2003 *Hunters and Bureaucrats: Power, Knowledge, and Aboriginal-State Relations in the Southwest Yukon*. Vancouver: Univ of British Columbia Press, chapter two.

Helen Verran, *Science and an African Logic*