

ANTH V3872: Social Studies of Energy

Columbia University, Fall 2014, Tuesday 2:10 pm - 4:00 pm, Union Theological Seminary A-36

Instructor:

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Office hours: Tuesday 4 - 5pm

Course Objectives:

How did whale oil become replaced by fossil fuels? What were the turning points in implementing electricity networks within urban centers? What is the role of markets and industries when producing such new energy infrastructures? This interdisciplinary course will trace ideas of energy in anthropology, science and technology studies, literary studies and environmental history, and investigate how energy production and consumption affects social life. Throughout the semester, we will read, watch films, talk, and write about understandings of energy, with the final goal of putting together a research paper at the end of the semester.

Before we analyze how energy is situated at the heart of social life today, we will take a historical approach, and turn to 19th century physics to learn how energy emerged as a scientific concept. We will then explore how conceptions of energy impacted literature and economics. How did energy become personified in literature? What kind of poetry did notable energy physicists produce? We will thus point to the ways in which energy as a concept has influenced social life, although in perhaps slightly unexpected ways.

Next, we will turn to early to mid-20th century ideas on the relationship between energy and society, studying energy as an evolutionary matter or a cultural tool. After familiarizing ourselves with the early understandings of energy as a social concern, we will study selections from monographs and documentaries on oil economies, nuclear cultures and renewable energies to understand the specificities of each energy system, and to closely explore the various networks that energy is situated within. In concluding the class, we will try to generate informed responses to contemporary energy questions, and in the light of texts on energy transitions, think more about how the switch from fossil fuels to renewable energies could take place.

Assignments:

Participation: Participants are expected to come to class on time and prepared to actively engage in discussion based on the readings and focal topics. Your thoughts, reflections and analyses are integral to the seminar format.

Weekly Reading Responses: Every week participants will write up reading/field trip responses, where they will formulate commentary or questions regarding the material or the experience. The responses should touch upon every reading, rather than merely focusing on one article/book chapter. Please understand the reading responses as facilitators for class discussions, and make sure to submit them by 10 am on Tuesday morning. There will be an online forum associated with the class, where participants will be able to paste their responses. The responses will not be graded, but you will receive a plus/minus for submitting them.

Presentation of Course Material: Every student will be responsible for presenting selected course material to the class. The presentations should be geared towards starting discussion based on the main points in our readings, and

should not take up more than 20 minutes of class time. The student who is presenting the reading material is not expected to submit a weekly response, but should benefit from the weekly responses in posing questions. Please consult your instructor if you have any questions regarding how to structure your presentations.

Research Paper: Participants to the seminar are expected to produce a 15-20 page research paper, focusing on social or political dynamics around energy. These research papers will be developed in stages. Students are expected to schedule meetings with the instructor the week before their research paper idea presentations. During our November 11th meeting, students will present these paper ideas in class, and receive feedback. Next, students will turn in a first draft essay, which will go through another round of peer review. The final draft of the essay will be submitted at the end of the semester. The final paper should be a combination of empirical research, as well as an analytical reflection. A bibliography in a standard citation format must be included.

Evaluation Guidelines:

- Participation 15%
- Weekly Reading Responses 15%
- Presentation of Course Material 15%
- Research Paper Proposal 5%
- First Draft of Research Paper 10%
- Final Paper 40%

Academic Integrity:

Academic integrity is the cornerstone of our intellectual community. All scholarship – teaching, research, and student learning – is the product of intellectual exchange. Whether this exchange takes place in books and journal articles, in laboratories, in the design of experiments and the analysis of data, in the classroom, or in students' written work, it is these joint undertakings that create Columbia's intellectual community.

The value of our collective inquiry relies upon trust and honesty – for our individual discoveries are dependent upon the discoveries of our peers and predecessors, here at Columbia and elsewhere. And all intellectual work must be evaluated – the work of students is evaluated by faculty; the work of faculty is evaluated through peer-review. We must, therefore, be able to trust that others are honest in their work and others must be able to trust that we are honest in ours.

Academic writing can be very challenging, for it requires us to create original work from our synthesis of the work done by others. Please consult your instructor for strategies for developing original work, ways to ensure that your work is trustworthy, the consequences for submitting work that is dishonest, and the resources available to assist you in achieving your best work.

Course Material:

Introduction:

Week 1: September 2nd

- Introduction
- In-Class Film Screening: Jim Al-Khalili, Order and Disorder, BBC 4: <https://www.youtube.com/watch?v=wGIBPOhfbok>

Energy as a Concept:

Week 2: September 9th

- Coopersmith, Jennifer. 2010. *Energy, the Subtle Concept: The Discovery of Feynman's Blocks from Leibniz to Einstein*. New York: Oxford University Press, chapter 19, p. 350-360
- Gold, Barri. 2010. *Thermopoetics: Energy in Victorian Literature and Science*. Cambridge: MIT Press, chapter 1, p. 1-33 and chapter 3, p. 114-149
- Smith, Crosbie. 1998. *The Science of Energy: A Cultural History of Energy Physics in Victorian Britain*. Chicago: The University of Chicago Press, chapter 1, p. 1-14 and chapter 12-13, p. 239-287

Week 3: September 16th

- Adams, Richard Newbold. 1978. *Man, Energy, and Anthropology: I Can Feel the Heat, But Where's the Light?*. *American Anthropologist*, 80: 297-309.
- Boyer, Dominic. 2014. "Energopolitics: An Introduction" *Anthropological Quarterly* 87(2): 309-333
- Illich, Ivan. 2009 [1983] "The Social Construction of Energy." *New Geographies* 3: 11-23
- Lotka, Alfred. 1922. "Contribution to the Energetics of Evolution." *Proceedings of the National Academy of Science* 8: 147-151
- Rappaport, Roy. 1971. "The flow of energy in an agricultural society." *Scientific American* 224: 116-132.
- White, Leslie. 1943. "Energy and the Evolution of Culture." *American Anthropologist* 45: 335-356

Energy Infrastructures:

Week 4: September 23rd

- Black, Brian. 2000. *Petrolia: The Landscape of America's First Oil Boom*. Baltimore: Johns Hopkins University Press, chapter 1, p. 13-37
- Henning, Anna. 2008. "Temporal landscapes of public good: Negotiating solar collectors among ancient remains." *Social and Cultural Geography* 9: 27-40.
- Krauss, Werner. 2010. "The 'Dingpolitik' of wind energy in Northern German landscapes: an ethnographic case study." *Landscape Research* 35: 195-208.
- Verdeil, Eric. 2014. "The Contested Energy Future of Amman, Jordan: Between Promises of Alternative and a Nuclear Venture." *Urban Studies* 51: 1520-1537

Week 5: September 30th

- Cross, Jamie. 2013. "The 100th Object: Solar Lighting Technology and Humanitarian Goods" *Journal of Material Culture* 18(4):367-387
- Schnitzler, Antina. 2013. "Traveling Technologies: Infrastructure, Ethical Regimes, and the Materiality of Politics in South Africa". *Cultural Anthropology*. 28 (4): 670-693.
- Slayton, Rebecca. 2013. "Efficient, Secure Green: Digital Utopianism and the Challenge of a 'Smart' Grid" *Information and Culture* 48(4): 448-478.

Week 6: October 7th

- Field Trip to Covanta Energy-from-Waste Facility in Rahway, NJ
- Alexander, Cathy and Joshua Reno. 2014. *From Biopower to Energopolitics in England's Modern Waste Technology*. *Anthropological Quarterly* 87(2): 335-358

Week 7: October 14th

- Mitchell, Timothy. 2011. *Carbon Democracy: Political Power in the Age of Oil*. London: Verso, Selections TBA
- Rosi, Francesco. 1972. *The Mattei Affair [Italy]*

Week 8: October 21st

- Hughes, Thomas. 1983. *Networks of Power: Electrification in Western Society, 1880-1930*. Baltimore: Johns Hopkins University Press, chapter 1, p. 1-17
- Nye, David. 2010. *When the Lights Went Out: A History of Blackouts in America*. Cambridge: MIT Press, chapter 1, p. 9-35
- Schivelbusch, Wolfgang. 1988. *Disenchanted Night: The Industrialization of Light in the Nineteenth Century*. Berkeley: The University of California Press, p. 58-78
- Sneath, David. 2009. "Reading the Signs by Lenin's Light: Development, Divination and Metonymic Fields in Mongolia," *Ethnos* 74(1):72-90.

Week 9: October 28th

- Barry, Andrew. 2013. *Material Politics: Disputes Along the Pipeline*. London: Wiley-Blackwell, Selections TBA

Week 10: November 4th

- University Holiday

Energy Imaginaries:

Week 11: November 11th

- Appel, Hannah. 2012. "Offshore work: Oil, modularity, and the how of capitalism in Equatorial Guinea." *American Ethnologist* 39(4): 692–709
- Bowker, Geoffrey. 1994. *Science on the Run: Information Management and Industrial Geophysics at Schlumberger, 1920-1940*. Cambridge: Cambridge University Press, chapter 1, p. 21-69
- Limbert, Mandana. 2010. *In the Time of Oil*. Stanford: Stanford University Press, chapter 7, p. 164-177

Week 12: November 18th

- Short Presentations for Research Paper Ideas

Week 13: November 25th (MESA)

- "Petrofictions" in Ghosh, Amitav. 2005. *Incendiary circumstances: a chronicle of the turmoil of our times*. Boston: Houghton Mifflin Co, p. 138-152
- "The Petrol Pump" in Calvino, Italo. 1995. *Numbers in the dark: and other stories*. New York: Pantheon Books, p. 170-175
- Selections from Munif, Abd al-Rahman. 1989. *Cities of salt*. New York: Vintage Books, TBA.
- Yaeger, Patricia, Ken Hiltner, Saree Makdisi, Vin Nardizzi, Laurie Shannon, Imre Szeman, and Michael Ziser. 2011. "Editor's Column: Literature in the Ages of Wood, Tallow, Coal, Whale Oil, Gasoline, Atomic Power, and Other Energy Sources". *PMLA*. 126 (2): 305-326.

First Draft of Research Paper Due: December 1st, 10 am

Week 14: December 2nd

- Peer-review Session for Research Papers

Final Draft of Research Paper Due: December 15th, 10 am

Filmography for Additional Viewing:

- Anderson, Paul Thomas. 2007. *There will be blood* [United States]
- Berlinger, Joe. 2009. *Crude: the Real Price of Oil* [United States]

- Bertolucci, Bernardo. 1967. *The Path of Oil / La Via Del Petrolio*. [Italy]
- Biemann, Ursula. 2005. *Black Sea Files*. [Switzerland].
- Fleischer, Richard. 1973. *Soylent Green*. [United States]
- Gaghan, Stephen. 2005. *Syriana*. [United States]
- Gelpke Basil and Ray McCormack. 2006. *Crude Awakening: the Oil Crash* [Switzerland]
- Greene, Gregory. 2004. *The end of suburbia: oil depletion and the collapse of the American dream*
- Herzog, Werner. 1992. *Lessons of Darkness*. [Germany].
- Kaneva, Milena. 2006. *Total denial*. [United States]
- Kirtadze, Nino. 2005. *The Pipeline Next Door* [Georgia/France]
- Madsen, Michael. 2011. *Into eternity*. [Denmark]
- Marezek, Martin. 2005. *Zdroj (Source)*. [Czech Republic]
- Mettler, Peter. 2010. *Petropolis: Aerial perspectives on the Alberta tar sands*. [Canada]
- Lee, Jamie A. and Dawn Mikkelson. 2006. *Green, green water*. [United States]
- Schmit, John. 2003. *Power from the people*. [United States]