

Theme: Humans & the Environment

Issue: Carbon, Landscapes, & Politics (hereafter CLP)

Suggested Length: Three Weeks

Central Historical Question: How have industrial carbon-based energy systems transformed natural landscapes and mass political movements over the last 200 years?

Rationale: This issue draws on the work of historian Timothy Mitchell (*Carbon Democracy: Political Power in the Age of Oil*, Verso, 2013) to argue that the discovery, extraction, and harnessing of fossil fuels have not only initiated dramatic environmental changes at both local and global levels, changes that often involved new transportation and communication apparatuses connecting otherwise isolated places, but were also critical to the rise of mass democratic politics on the one hand and imperial expansion and repression on the other.

Polling in previous offerings of Roots reveal that most students at WSU “believe” the science of climate change and think something should be done to address it. While many understand that burning carbon is harmful to the Earth’s atmosphere, few are able to connect this bigger climatic change to other smaller yet more visible ones ushered in during the industrial age. But the primary concern of this issue is to help students understand that the environmental history of carbon is inextricably connected to deeper political and economic struggles during the industrial period. This issue seeks to unpack those histories and to demonstrate to students that “environmental issues” are fundamentally related to political struggles, economic inequalities, and social movements. In this sense, CLP will prepare students to address other issues in Roots, including inequality, ways of thinking, and conflicts.

This issue addresses a deeper history of energy use, including a cursory examination of energy, landscapes, and politics before carbon, a look at the industrial revolution’s role in extending European imperial reach during the long nineteenth century (primarily a coal-based enterprise) and the revolutions and counterrevolutions within the energy system that ultimately gave rise to the primacy of oil. The lessons conclude with a study of the politics of energy in the late-20th and early 21st centuries, as global warming has driven debates about the fate of the planet and the centrality of carbon to a modern industrial existence.

UCORE Learning Goal Alignment and Outcomes:

Critical and Creative Thinking: CLP emphasizes critical analysis of arguably one of the most contentious and important forces of the modern period: carbon energy. Students will be expected to move beyond the unconscious realizations about carbon’s centrality to global industrial society to explore how individuals have made conscious choices

that have shaped the politics of carbon and the landscapes where it is extracted, transported, refined, and consumed (lessons 1, 2, 3, 5, 6, 7, 8, 9).

Information Literacy: Students will explore the contemporary landscape of carbon energy by locating news articles about the issue (lesson 1), discuss and debate historical arguments (through secondary sources) about energy and its relationship to politics and the environment (lessons 2, 3, 5, 7, 9), analyze primary sources related to the history of carbon (lesson 8), and continue work on their independent research projects, including the construction of a secondary source bibliography (optional replacement or addition to entire issue).

Communication: Students will practice oral and written communication skills by responding to discussion and essay questions and draw examples from primary and secondary sources (lessons 1, 2, 3, 5, 6, 7, 8, 9).

Diversity: Students will learn that we do not all engage in the energy system as equal actors (i.e. consumers, producers, owners, workers) and that in particular, class and race form important parts of carbon energy regimes, which have historically relied on a politics of empire. These issues of inequality are explicitly addressed in lessons 1, 2, 3, 4, 5, 6, 7, 8, 9).

Depth, Breadth, and Integration of Learning: Students will explore the deep history of energy before carbon through a case study in China (lesson 2), understand the contingency of the industrial revolution in 18th-century Britain (lessons 3, 4), and explore the 200+ year history (depth) of industrialization using a wide geographic frame (breadth), connecting people, environments, and economies South America, North America, Europe, Asia, and Africa. Additionally, students will understand how history informs other disciplines (integration of learning), especially political science, environmental science & engineering, and energy policy.

Lesson One: Energy and Protest in the Era of Climate Change

Readings to be completed before class: Student-selected news articles (2).

1. Navigate: wsulibs.wsu.edu > advanced search > Databases (top right) > ProQuest Newsstand > advanced search > "Paddle in Seattle" > Date: Last 12 months. Select one of the articles returned.

2. Navigate: wsulibs.wsu.edu > advanced search > Databases (top right) > ProQuest Newsstand > advanced search > "coal train" AND "Washington State" > Date: Last 3 years. Select one of the articles returned.

Assignments to be completed before class: Students use developing library research skills to locate newspaper or magazine articles that report on Seattle's protests against

Arctic drilling and the politics of “coal trains” in Washington State. Students write and print out a 500-word combined summary of both articles that includes an identification of the journalist’s main points. Print out articles and bring both articles and summaries to class to facilitate discussion.

In Class:

20 minute small group and full class discussion on the politics of carbon in Washington State in the last 3 years. Students should first work in small groups to discuss the main carbon issues in the state, carbon connections to other states/nations/regions, emerging protest movements against carbon extraction projects, and any state responses to those projects and/or protests.

5-10 minute introductory lecture that offers some opening remarks, drawn from student examples:

- Humans have always sought to harness or control natural resources for varieties of reasons, including survival, social stability, and profit.
- The industrial age (c. 1800) marks a radical departure in terms of the scale and global nature of environmental and political transformations.
- Not all carbon forms are equal in terms of those changes. As we will see, coal produced different kinds of political movements and outcomes than oil.
- The harnessing of carbon energy for production (industrial and agricultural) and transportation is closely tied to the history of Western imperialism. Energy use and the appropriation of associated resources (raw materials, food surpluses) are closely correlated.
- Those impacted negatively by the expansion of fossil fuel use, whether in terms of environmental destruction, political repression, and economic inequality have never gone quietly. Instead, fossil fuels have been at the center of intense political struggles for power-sharing, social equity, and environmental protection.

20 minute video clip(s) illustrating the contemporary relevance of the environmental politics of carbon. After the clip, ask students to articulate, either in a short writing assignment or in discussion, how carbon is political in these examples and how carbon impacts the natural environment. Possibilities include:

“Shell No: From Sea to Land, Seattle Residents Fight Oil Giant’s Plans for Arctic Drilling,” 7:00, Democracy Now!

http://www.democracynow.org/2015/5/20/shell_no_from_sea_to_land (accessed June 3, 2015).

“How To Stop An Oil and Gas Pipeline: The Unist’ot’en Camp Resistance,” 9:43, YouTube, <https://www.youtube.com/watch?v=aiVxyLb1hJA> (accessed March 16, 2015).

Selections from “USW Striking Oil Workers and Supporters Speak Out For Health and Safety at Tesoro Refinery,” 35:07, YouTube, <https://www.youtube.com/watch?v=kEcoHjGJ-LQ> (accessed March 17, 2015).

Lesson Two: Energy Before Carbon: Harnessing Sun, Wind, and Water

Readings to be completed before class: Steven Solomon, “The Grand Canal and the Flourishing of Chinese Civilization,” in *Water: The Epic Struggle for Wealth Power and Civilization* (New York: HarperCollins, 2010), 96-125.

Assignments to be completed before class: Optional reading response questions assignment. Students prepare typed responses to one or more of the possible discussion questions planned for the day (see questions below).

In Class:

15 minute lecture on energy before fossil fuels. For an overview, see J.R. McNeill, *Something New Under the Sun: An Environmental History of the Twentieth Century* (New York: Norton, 2000), 10-17.

25 minute small group and/or class discussion on pre-modern Chinese political control and harnessing of freshwater.

Discussion questions:

- Why was water so important to centralized state authority in pre-modern China?
- How did successive Chinese dynasties harness control of water as a political tool?
- How did water shape trade along the Silk Road?
- How was the Grand Canal central to the reunification of China in the 7th century and to its continued development through the 12th century?

10 minute concluding lecture or discussion: Had the Ming dynasty not pursued the completion of the New Grand Canal (completed in 1411), how and why might world history have been radically different, according to some historians? What does this tell us about the control of energy flows - in this case water?

Lesson Three: Putting Coal to Work: The Industrial Revolution

Readings to be completed before class: “Our Heritage, The Luddite Rebellion, 1811-1813,” <http://luddites200.org.uk/theLuddites.html> (point out to students the lack of citations, perhaps discuss in class why a website, for example, might not have citations, while other kinds of sources do).

Assignments to be completed before class: Optional reading response questions assignment. Students prepare typed responses to one or more of the possible discussion questions planned for the day (see questions below).

In Class:

25 minute lecture on the Industrial Revolution. For an overview, see Peter N. Stearns, *The Industrial Revolution in World History* (Boulder, CO: Westview Press, 2013), 21-52. Central questions: Why did the Industrial Revolution happen and why did it happen in eighteenth-century Britain?

25 minute Carbon Revolutionaries, part I - small group and/or class discussion on radical reactions to the Industrial Revolution.

- Who were the Luddites? What became their political cause and why?
- What was the context in which the Luddites emerged as a political force?
- Why did the Luddites take the actions that they did?
- Can you think of any contemporary parallels to this kind of politics?

Lesson Four: Carbon Revolutionaries, part II

Readings to be completed before class: "Draft of a Banthsuthist Confession of Faith" (1847).

Assignments to be completed before class: Optional reading response questions listed below as discussion questions.

In Class: "A Draft of a Banthusist Confession of Faith" is in fact a set of selections from the *Communist Manifesto* with the names disguised (credit Robert Franklin for the idea). Disguising the identities of the authors (especially Marx) and the terms "bourgeoisie" and "proletariat" may allow for a more frank and open discussion of the merits, drawbacks, and above all historical context in which Marx and Engels articulated these ideas, developed an understanding of historical change, and outlined visions for a revolution. If you're more comfortable simply assigning the real *Communist Manifesto*, then an online version is available here: <http://www.gutenberg.org/ebooks/61> (Project Gutenberg).

The terminological changes are as follows:

Garcia = Karl Marx

Smith = Friedrich Engels

faviat = proletariat

waltrouese = bourgeoisie

30 minutes: small group/class discussion about Banthusism. Potential discussion questions include:

What was the historical context (the authors use the term “epoch”) in which Smith and Garcia articulated a Banthusist confession of faith?

What does carbon energy (in this case coal), have to do with any of these ideas?

According to Smith and Garcia, how is a faviat different from a serf or a slave?

According to Smith and Garcia, what drives or produces historical change?

How do Smith and Garcia view economic globalization (world markets)?

What would a Banthusist government look like?

Would you join/support a Banthusist-style government? Why or why not?

20 minute class discussion about the true identities of the authors.

Why did you (the instructor) disguise the authors’ names and other terminology?

How is socialism/communism (mis-) understood in the United States?

How has the past contributed to those misunderstandings or open hostilities of/to communism?

Does knowing the true identities of the authors make you feel any different about the ideas we just discussed?

5 minute preview of Lesson Five. Remind students how critical a close reading of Timothy Mitchell’s chapter is to understanding the relationship between carbon energy and politics. Marx and Engels wrote in the age of coal (as well as slavery and colonialism), and Mitchell will examine how workers in the coal sector began to put *some* of Marx and Engel’s ideas into action. The result, Mitchell argues, was not world communist domination, but the rise of mass democratic politics in much of the industrializing world.

Optional Lesson Four: Research Workshop #2

***Carving out specific class periods for students to work on and receive one-on-one assistance on their research projects has yielded positive results. You could replace Lesson 4 with the workshop, or interject it between Lessons 4 or 5 and extend the entire issue by a 50 minute period. Or, you could exclude, condense, or combine any of the other case studies described in the lesson plan. I would cut anything from Lesson 5 though, as the Mitchell reading is at the core of the main arguments presented in this issue. Above all, instructors should feel free to move this workshop to a different date depending on the schedule of LRAs they have developed for their particular course.

Readings to be completed before class: None.

Assignments to be completed before class / In Class: This will depend on how instructors intend to utilize the workshop. This workshop roughly corresponds with

Library Research Assignment #2, which asks students to create a secondary source bibliography. Options include:

Meet in regular classroom and require students to bring at least two monographs and two journal articles on their selected topic. This would require them to conduct this search ahead of time (you'd have to carve out class time to go over SearchIt). But it would allow you and your teaching assistant (if applicable) to have a look at many of the books that students are using. You could ask students to work in groups to identify the chronological limits of each source, the geographic focus, and the main argument.

Alternatively (and I highly recommend this option), you could schedule class to meet in Holland-Terrell 20E (preferably schedule with Corey Johnson before the semester begins). The room has enough seating for 75 students and 38 computers. If students bring laptops, everyone will have access to a computer. I've asked Corey Johnson to begin this class period with a 15-20 minute introduction to SearchIt, including the use of limiters to return more useful sources. Students have found this very helpful in finding *historical* secondary sources (one of the biggest challenges). Students then use the rest of the class period to perform their own searches, with assistance from you, your TA, and Corey, and even have the option of browsing the stacks once they've found at least one potential book.

There are other ways to structure this day, but given that successful completion of a research paper very often hinges on students' ability to find useful secondary sources that are focused on historical dimensions of their topics, the two options outlined above tend to be much more active and useful for students than simply given them an overview of the assignment instructions in hopes they will be able to execute.

Lesson Five: Democracy and Empire: The Politics of Coal and the Shift to Oil

Readings to be completed before class: Timothy Mitchell, *Carbon Democracy: Political Power in the Age of Oil* (London: Verso, 2013), 12-42.

Assignments to be completed before class: Reading response questions assignment. Students prepare typed responses to one or more of the possible discussion questions planned for the day (see questions below).

In Class:

50 minute discussion, including a combination of small group and whole class discussion. This chapter from *Carbon Democracy* is complex, but constitutes the central thesis of this entire set of lessons. It is best addressed by providing students with questions targeted at Mitchell's key arguments and the historical transformations he describes in regards to harnessing coal for political and economic purposes.

Discussion questions include:

- Why did an increased demand for coal as an energy source yield democratic claims in some places and colonial domination in others?
- Using historical examples, describe in detail the methods employed by coal workers (miners, transporters, etc) to make democratic claims.
- How did states and industrial owners respond to these claims in the late nineteenth and early twentieth centuries?
- Using historical examples, describe the key differences between coal and oil in forging (or not forging) democratic possibilities.

Lesson Six: Killing For Coal in Ludlow, Colorado

Readings to be completed before class: Caleb Crain, "There Was Blood: The Ludlow Massacre Revisited," *The New Yorker*, January 19, 2009, accessed March 15, 2015, <http://www.newyorker.com/magazine/2009/01/19/there-was-blood>.

Assignments to be completed before class: Optional reading response questions assignment. Students prepare typed responses to one or more of the possible discussion questions planned for the day (see closing discussion question below).

In Class:

10 minute opening discussion. Listen to Woody Guthrie's "Ludlow Massacre," 1944, <https://www.youtube.com/watch?v=XDd64suDz1A>. Provide students with lyric sheet (http://woodyguthrie.org/Lyrics/Ludlow_Massacre.htm) to facilitate discussion: How does Woody Guthrie understand the relationship between coal miners, coal companies, and the state?

25 minute interactive lecture on the Ludlow Massacre, with emphasis on the relationship between coal companies and state power on the one hand and the vulnerability of the energy system and the autonomy of miners on the other hand. Students will have read the Crain *New Yorker* article, so feel free to have them reconstruct the Ludlow story with some guidance. Also see Thomas Andrews, *Killing For Coal: America's Deadliest Coal War* (Cambridge, MA: Harvard University Press, 2008).

15 minute small-group and class closing discussion: Given the events that unfolded before, during, and after the Ludlow massacre, does the example of Ludlow fit Timothy Mitchell's argument that coal energy systems were productive of mass democratic claims in the early 20th century? Why or why not?

Lesson Seven: Oil, Empire, & Revolution in Mexico

Readings to be completed before class: Myrna Santiago, sections from “The Anatomy of Progress,” in *The Ecology of Oil: Environment, Labor, and the Mexican Revolution, 1900-1938* (New York: Cambridge University Press, 2006), 101-122.

Assignments to be completed before class: Optional reading response questions assignment. Students prepare typed responses to one or more of the possible discussion questions planned for the day (see questions below).

In Class:

15 minute small group and class discussion on the environmental impacts of oil in the Huasteca rainforest of Veracruz, Mexico.

- How large, as Myrna Santiago asks, was the transformation of the Huasteca once oil companies began developing extraction projects?
- Discuss the typical development of an oil site, including its connections beyond the well.
- How did oil development change land use patterns in the Huasteca?

25 minute lecture on the political transformations wrought by oil within the context of the Mexican Revolution and U.S. commercial imperialism (backed by use or threat of military intervention). Be sure that the lecture includes clear examples of company actions, workers’ revolutionary ideologies and actions, assertion of authority over mineral resources by the revolutionary government, and the nationalization of Huasteca Petroleum and other foreign oil companies in 1938. See Myrna Santiago, *The Ecology of Oil*; Jonathan C. Brown, *Oil and Revolution in Mexico* (Berkeley: University of California Press, 1993), full text available at:

<http://publishing.cdlib.org/ucpressebooks/view?docId=ft3q2nb28s&brand=ucpress>

10 minute closing large group discussion (pose question at beginning of lecture as a central question): Does the case of oil in the Huasteca support Timothy Mitchell’s claim that oil is unproductive of democracy? Why or why not?

Lesson Eight: The Saudi Connection: ARAMCO and the United States

“Reading” to be completed before class: Watch Standard Oil of California, “Oil For Dollars – Saudi Arabia,” 1948, 27:47, YouTube, <https://www.youtube.com/watch?v=VLWrdXEI7rk> (accessed March, 2015).

Assignments to be completed before class: Optional film response assignment. Students prepare typed responses to one or more of the possible discussion questions planned for the day (see questions below).

In Class:

15 minute lecture on the origins of the Arabian-American Oil Company (ARAMCO), with particular attention to the desire of ARAMCO to control, not develop in full, the oil fields of Saudi Arabia. Ask students to recall the reasons that American oil companies are in the Middle East in the first place (Mitchell, *Carbon Democracy*, 12-42). For lecture material, see Mitchell, *Carbon Democracy*, 114-199.

15 minute discussion of the Standard Oil film “Oil for Dollars” (1948), including large group but also small group discussion of one or more of the following questions:

Why did Standard Oil produce this film?

What is its intended audience?

How does Standard Oil depict ordinary Saudi Arabs in this film?

How does it depict the Saudi ruling elite?

How might this film have shaped Americans’ perceptions of Saudi Arabia and the Middle East more broadly?

20 minute lecture on the creation of OPEC (1960), Saudi nationalization of ARAMCO (1972), and the “energy crisis” of 1973-74, with particular attention to the relationship between American oil companies and the Nixon administration in manifesting the “crisis.” Emphasize the shift in perception from an American partnership with the Saudis as depicted in “Oil for Dollars” to an antagonistic relationship that labels Arab governments as interruptions in the global economy because of their assertion of state authority over the oil industry. See Mitchell, *Carbon Democracy*, 114-199.

Lesson Nine: Pipelines and Violence in Post-Soviet Georgia

Readings to be completed before class: “We Live in a Corridor of Violence,” in James Marriott and Mika Minio-Paluello, *The Oil Road: Journeys from the Caspian Sea to the City of London* (London: Verso, 2013), 159-166.

Assignments to be completed before class: Optional reading response questions assignment. Students prepare typed responses to one or more of the possible discussion questions planned for the day (see questions below).

In Class:

10 minute large group discussion of “We Live in a Corridor of Violence”

- How is the plight of Gusein Melanashvili connected to oil pipelines?
- How does Pikria Pangani understand the role of oil pipelines in her life?

15 minute short lecture on the political context of Georgian pipelines and the violence that attends them, including that visited on the families of Gusein Melanashvili and Pikria Pangani. See Marriott and Minio-Paluello, *The Oil Road*, 135-157.

25 minute concluding discussion that addresses the major impacts of coal and oil both on the environment and on politics. Ask students to work in small groups for five minutes to consider at least one major shift wrought by carbon energy and at least one historical detail that illustrates that shift. Bring the entire class back together to lay out each of these, tracking student responses on the white board.

Final Assignment (make due 3-7 days after lesson nine): Four-to-five-page integrative essay that draws on assigned readings, class discussions, and lecture notes and that addresses the issue's central question: How have industrial carbon-based energy systems transformed natural landscapes and mass political movements over the last 200 years?

Complete List of Student Readings/Visuals:

Student-selected newspaper or magazine article for Lesson One.

Steven Solomon, "The Grand Canal and the Flourishing of Chinese Civilization," in *Water: The Epic Struggle for Wealth Power and Civilization* (New York: HarperCollins, 2010), 96-125.

"Our Heritage, The Luddite Rebellion, 1811-1813,"

<http://luddites200.org.uk/theLuddites.html>

Timothy Mitchell, *Carbon Democracy: Political Power in the Age of Oil* (London: Verso, 2013), 12-42.

Caleb Crain, "There Was Blood: The Ludlow Massacre Revisited," *The New Yorker*, January 19, 2009, accessed March 15, 2015,

<http://www.newyorker.com/magazine/2009/01/19/there-was-blood>.

Myrna Santiago, sections from "The Anatomy of Progress," in *The Ecology of Oil: Environment, Labor, and the Mexican Revolution, 1900-1938* (New York: Cambridge University Press, 2006), 101-122.

Standard Oil of California, "Oil For Dollars - Saudi Arabia," 1948, 27:47, YouTube, <https://www.youtube.com/watch?v=VLWrdXEI7rk> (accessed March, 2015).

James Marriott and Mika Minio-Paluello, *The Oil Road: Journeys from the Caspian Sea to the City of London* (London: Verso, 2013), 159-166.

Complete List of Assignments:

- Lesson One news articles summary.
- Reading/film response questions (options for lessons 2, 3, 4, 5, 6, 7, 8, 9). Highly recommended for Lesson 5 (Mitchell, *Carbon Democracy*, 12-42).
- Four-to-five-page integrative essay: How have industrial carbon-based energy systems transformed natural landscapes and mass political movements over the last 200 years?