202110-SOCI-247.10-Environmental Social Science I

Topic outline

- [Edit](#)

   [Course Materials](#)

   Grading Scheme:

   - [Participation](#) – 5%
   - [Nature Observation Assignment](#) (Due October 5)– 15%
   - [Reading Questions](#)

      Questions on the week's reading (12) – 30%

   - [News Story](#) – 6%
   - Essay or [Debate](#) – 20%

      Essay (Due October 19)

   - Final Exam (December, 2020) – 24%

   - [Syllabus 2020 File](#)

      [Edit](#)

      Description of the course requirements

   - [News Story Sign-up Choice](#)

Edit

Here is where you sign up to schedule your news story. You will present your news story in the "Environmental News" discussion forum. Your news should come from one of the three recommended sources.

- Environmental News Forum

Edit

Here is where you post your news story. Always comment on your news and relate it to themes or other readings that we have discussed in the course.

- Optional Debates Sign-Up Choice

Edit

Here is where you sign up for debate topics. Debates are optional. You can choose to write an essay instead.

- Weekly questions File

Edit

- Participation Grades File

Edit

- Essay File

Edit

- Essay format File

  Edit

- Citation Style (ASA) File

  Edit

- Avoiding Plagiarism File

  Edit

- Debate Guidelines File

  Edit

- News Story File

  Edit

Guidelines for your news story

- Announcements Forum

  Edit

- Nature Observation Assignment File

  Edit

Directions for your first assignment

[Add an activity or resource](#)

- Edit

1 - How Do We Know Nature - September 14

Required Reading:

- Popova, Maria. 2019. "The Lost Words: An Illustrated Dictionary of Poetic Spells Reclaiming the Language of Nature." BrainPickings. Retrieved: 2019-06-18 (https://www.brainpickings.org/2019/06/17/the-lost-words-macfarlane-morris/).
- Keim, Brandon. 2018. "As Biodiversity Declines, So Does Public Attention." Anthropocene. Retrieved: August 27, 2020 (https://www.anthropocenemagazine.org/2018/02/biodiversity-ignored-by-press/).
- Westervelt, Amy. 2016. "Reality Is Too Confining." Anthropocene. Retrieved: 27 August, 2020 (https://www.anthropocenemagazine.org/2014/10/reality-is-too-confining/).

Concepts: epistemology; mediated knowledge; language of nature; culture of nature; local knowledge; alienation from nature,

Questions:

- How do we know what we think we know about nature?

- What are the different kinds of mediation discussed in each of the three readings for this week?
- All three mediations are questionable -- why?
- Are urban, digitally-connected humans alienated from nature?

Recommended Reading:

- [Mediating Nature Quiz](#)

  [Edit](#)

[Add an activity or resource](#)

- [Edit](#)

2 - Indigenous Relationships to Nature -- September 21

Required Reading:

- Cronon, William. 1983. "[Seasons of Want and Plenty](#)." Pp. 34-53 in *Changes in the Land*. New York: Hill and Wang.

Concepts: nature; wilderness; natural 'man'; the balance of nature; providential nature; adapting to vs transforming natural cycles; carrying capacity; the local; environmental adaptation → social organization: division of labour, social equality, diversity /homogeneity, consumption vs accumulation, steady-state economy, population growth /stability; hunting and gathering societies

Questions:

- Is there a natural relationship between humans and the environment?
- How did Indigenous people know nature and what did they know?
- When humans alter nature, is it no longer nature?
- Should we try to get "back to nature"? If so, how close could we come to that ideal?

Recommended Reading:

- AMEC Environment & Infrastructure. 2013 *[A Mi'kmaq Traditional and Ecological Knowledge Review of three Wind Project Development Properties](#)*. Saltspring, NS.: Affinity Renewables Inc. (see the two appendices at the back).

- Boutsalis, Kelly. 2020. "The Art of Fire: Reviving the Indigenous Craft of Cultural Burning." The Narwhal. (https://thenarwhal.ca/indigenous-cultural-burning/).
- Fletcher, Robert. 2015. "Nature Is a Nice Place to Save but I Wouldn't Want to Live There: Environmental Education and the Ecotourist Gaze." *Environmental Education Research* 21(3):338-50. doi: 10.1080/13504622.2014.993930.
- Egerton, Frank N. 1973. "Changing Concepts of the Balance of Nature." The Quarterly Review of Biology 48:322-47.

- Cronon Quiz

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3 - The Beginning and End of Nature - September 28

Required Reading:

- Maris, Virginie. 2015. "Back to the Holocene - a Conceptual, and Possibly Practical, Return to a Nature Not Intended for Humans." in The Anthropocene and the Global Environmental Crisis : Rethinking Modernity in a New Epoch, edited by C. Hamilton, C. Bonneuil and F. Gemenne. New York: Routledge.
- Bagley, Mary. 2013. "Holocene Epoch: The Age of Man." Live Science. Retrieved: August 27, 2020 (https://www.livescience.com/28219-holocene-epoch.html).

Concepts: The holocene; end of nature; extinction; climate change; geoengineering; anthropocene

Questions:

- What made the holocene climate ideal for the development of agriculture (and with it, "civilization")?
- How were humans beginning to transform nature during the holocene?
- How completely have humans transformed nature into a human artefact in the 21st century?
- Is it our nature to transform our environments?
- Since we are a product of natural evolution, are our built environments "natural"?
- What exactly do we want to save of the nature that we transform, and why?

Recommended Reading:

- Brannen, Peter. 2020. "The Anthropocene Is a Joke." The Atlantic. Retrieved: August 28, 2020 (https://www.theatlantic.com/science/archive/2019/08/arrogance-anthropocene/595795/).
- Steffen, Will, Paul J. Crutzen and John R. McNeill. 2007. "The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?". Ambio 36(8):614-21.

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4 - Scarcity Paradigm: Population and Food - October 5

Required Reading:

- Harper, Charles L. 2004. "Population, Environment and Food." in *Environment and Society Human Perspectives on Environmental Issues*. Upper Saddle River, N.J: Pearson Prentice Hall.

Concepts: demographic transition, neo-Malthusianism, scarcity paradigm, agricultural resources, technological substitution, agricultural systems: green revolution, gene revolution, unintended consequences of technological solutions

Questions:

- Is there a global "carrying capacity" for humans in the way that there is for other animals?
- What, if any, resources place absolute limits on food production: soil, fresh water, fossil fuels?
- Will the population level off at around 9 billion by mid-century as many demographers predict?
- Can the world feed 9 billion people equitably and reliably by 2050?

Recommended Reading:

Brown, Lester Russell. 2009. "Population Pressure: Land and Water." in Plan B 4.0 Mobilizing to Save Civilization. New York: W. W. Norton.

Add an activity or resource

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5 - Extinction - October 12

Required Reading:

- NatGeo. 2019. "To Keep the Planet Flourishing, 30% of Earth Needs Protection by 2030." National Geographic. Retrieved: 2019-01-31 (https://www.nationalgeographic.com/environment/2019/01/conservation-groups-call-for-protecting-30-percent-earth-2030/).

Concepts: biodiversity loss, extinction, the balance of nature, mass extinction, habitat loss, monoculture, companion species, ecocentric: inter-species justice, anthropocentric: ecosystem services

Questions:

- Extinction is part of natural evolution: why should we care if we are causing other species to go extinct?
- Are other species means to human ends or are they ends-in-themselves?
- Are the goals of 30% protection by 2030 and 50% by 2050 compatible with a capitalist economy?
- Is Indigenous economic activity compatible with habitat protection? If so, why?
- To what extent are human systems reliant on biodiversity; how will they survive a mass extinction?

Recommended Reading:

- United Nations. 2019. "UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating'." UN Sustainable Development Goals. Retrieved: 28 August, 2020 (https://www.un.org/sustainabledevelopment/blog/2019/05/nature-decline-unprecedented-report).

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6 - Social-Structural Thinking: Risks of Modern Systems - October 19

Required Reading:

- Rosa, Eugene A., Ortwin Renn and Aaron M. McCright. 2014. "Reflexive Modernization Theory and Risk: The Work of Ulrich Beck and Anthony Giddens." in *The Risk Society Revisited: Social Theory and Governance*. Philadelphia: Temple University Press.

Concepts: risk society, modernization: market, rational state, science /technology, civil society, unintended consequences (negative side effects), reflexive modernization, ecological modernization, globalization of risks, incalculability of risks, unequal distribution of risks, globalization /cosmopolitanism, system-level complexity, organized irresponsibility

Questions:

- o Can we rationally and effectively respond to the risks of the 21st century within the modernization paradigm (i.e. does ecological modernization work)?
- o Is 21st century modernity still rational? Are we still in control of our systems and their effects?
- o Beck relies on civil society ("sub politics") to counter the irrationalities of science/ technology, the market and the administrative state. What happens when civil society responses to risk themselves become irrational -- as exemplified by contemporary right-wing populism and climate change denial?

Recommended Reading:

- o **Nuclear Power**: Funabashi, Harutoshi. 2012. "Why the Fukushima Nuclear Disaster Is a Man-Made Calamity." International Journal of Japanese Sociology 21(1):65-75. doi: 10.1111/j.1475-6781.2012.01161.x.
- o Social and political risks of **information technology**: Harari, Yuval Noah. 2018. "Why Technology Favors Tyranny." The Atlantic (October). Retrieved: 27 August, 2020 (https://www.theatlantic.com/magazine/archive/2018/10/yuval-noah-harari-technology-tyranny/568330/).
- o Risks of **biotechnology**: Garrett, Laurie. 2013. "Biology's Brave New World: The Promise and Perils of the Synbio Revolution." Foreign Affairs 92(6):28-46.
- o **Nanotechnolog**y: Dunphy Guzmán, Katherine A., Margaret R. Taylor and Jillian F. Banfield. 2006. "Environmental Risks of Nanotechnology: National Nanotechnology Initiative Funding, 2000−2004." Environmental Science & Technology 40(5):1401-07. doi: 10.1021/es0515708.

Add an activity or resource

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7 - Risk Response: Fossil Fuels - October 26

Required Reading:

- o Banerjee, Neela. 2017. "How Big Oil Lost Control of Its Climate Misinformation Machine." *Inside Climate News*. Retrieved: August 28, 2020 (https://insideclimatenews.org/news/22122017/big-oil-heartland-climate-science-misinformation-campaign-koch-api-trump-infographic).
- o Sceptical Science. 2020. "Arguments from Global Warming Skeptics and What the Science Really Says." *Sceptical Science*. Retrieved: August 28, 2020 (https://www.skepticalscience.com/argument.php).

Concepts: climate change; climate emergency; IPCC; neoliberalism; climate denial; denial machine; anti-reflexivity; epistemology

Questions:

- o Climate change science and the denial machine are two competing mediations of our perception of nature. What makes one reliable and the other not?
- o How does climate change fit Beck's model of risk society? In other words, what scarcities did fossil fuels overcome and what new risks did they create?
- o What were the social consequences of the fossil age in terms of shifts in social and economic power?
- o Has reflexive modernization failed? In other words are our economic, scientific and political systems no longer able to manage their own contradictions?

Recommended Reading:

- o USCUSA. 2018. "The Ipcc: Who Are They and Why Do Their Climate Reports Matter?" Union of Concerned Scientists. Retrieved: August 30, 2020 (https://www.ucsusa.org/resources/ipcc-who-are-they).
- o Dunlap, Riley E. /Aaron M. McCright. 2012. "Organized Climate Change Denial." in *The Oxford Handbook of Climate Change and Society*, edited by R. B. N. John S. Dryzek, and David Schlosberg. Oxford: Oxford University Press.
- o NASA. 2020. "Climate Change: Vital Signs of the Planet." @NASAClimate. Retrieved: August 28, 2020 (https://climate.nasa.gov/).
- o IPCC. 2014. "Ar5 Synthesis Report: Climate Change 2014." www.ipcc.ch. Retrieved: August 28, 2020 (https://www.ipcc.ch/report/ar5/syr/).

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8 - Risk response: Fossil Fuels - November 2

Required Reading:

- o McLaren, Duncan. 2020. "Guest Post: A Brief History of Climate Targets and Technological Promises." @carbonbrief. Retrieved: 28 August, 2020 (https://www.carbonbrief.org/guest-post-a-brief-history-of-climate-targets-and-technological-promises).
- o Biello, David. 2017. "How Far Can Technology Go to Stave Off Climate Change?" *Yale Environment*. Retrieved: August 29, 2020 (https://e360.yale.edu/features/how_far_can_technology_go_to_stave_off_climate_change).

Concepts: intergovernmental treaties; UNFCCC; neoliberalism; market solutions; externalities; carbon tax; the idea of progress; GHG emissions targets; carbon budget; carbon sinks; CCS (carbon capture and storage); geoengineering

Questions:

- o Why have world leaders been unable to limit GHG emissions?
- o Has excessive optimism about the market and new technologies delayed effective action?
- o Has fossil-fuel industry lobbying delayed effective action?

Recommended Reading:

- o Urevig, Andrew. 2020. "Should We Bank on Innovation to Hold Back Global Heating? History Says It's a Risky Bet | Ensia." @ensiamedia. Retrieved: September 3, 2020 (https://ensia.com/notable/climate-change-models-technology-innovation/).
- o Dimitrov, Radoslav S. 2010. "Inside Copenhagen: The State of Climate Governance." *Global Environmental Politics* 10(2):18-24.
- o Clemencon, Raymond. 2010. "Pushing Past Neoliberalism: Rethinking Gobal Climate Change Negotiations." Pp. xxx, 482 p. in *Routledge Handbook of Climate Change and Society*, edited by C. Lever-Tracy. New York: Routledge.
- o Reichman, Nancy and Penelope Canan. 2003. "Ozone Entrepreneurs and the Building of Global Coalitions." in Environment, Energy, and Society: Exemplary Works, Wadsworth Sociology Reader Series, edited by C. R. Humphrey, T. L. Lewis and F. H. Buttel. Belmont, CA: Wadsworth Thomson Learning.

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9 - Social-Structural Thinking: Technological Solutions - November 9

Required Reading:

- Harari, Yuval Noah. 2018. "Why Technology Favors Tyranny." *The Atlantic* (October). Retrieved: 27 August, 2020 (https://www.theatlantic.com/magazine/archive/2018/10/yuval-noah-harari-technology-tyranny/568330/).
- Cho, Renee. 2018. "Artificial Intelligence—a Game Changer for Climate Change and the Environment." *Earth Institute*. Retrieved: 27 August, 2020 (https://blogs.ei.columbia.edu/2018/06/05/artificial-intelligence-climate-environment/).

Concepts: Authoritarian vs democratic technologies; technological optimism; surveillance; big data; artificial intelligence; surveillance capitalism; energy efficiency; smart grid; the internet of things; smart cities; unintended consequences

Questions:

- o How are individual technologies embedded in technological and social *systems*?

- How do technological systems affect the social systems implicated within them: power relationships; inequalities and injustices; human agency; human self-fulfillment; human values?
- In what ways can technological "solutions" create social problems?

Recommended Reading:

- Winner, Langdon. 1980. "Do Artifacts Have Politics?". *Daedalus* 109:121-36.
- Szerszynski, Bronislaw, Matthew Kearnes, Phil Macnaghten, Richard Owen and Jack Stilgoe. 2013. "Why Solar Radiation Management Geoengineering and Democracy Won't Mix." Environment and Planning A 45(12):2809-16. doi: 10.1068/a45649.

Add an activity or resource

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10 - State Action: the Green New Deal - November 16

Required Reading:

- Mazzucato, Mariana. 2015. "[The Innovative State: Governments Should Make Markets, Not Just Fix Them](#)." *Foreign Affairs* 94(1):61-VI.
- Corkal, Vanessa, Philip Gass and Aaron Cosbey. 2020. "Green Strings: Principles and Conditions for a Green Recovery from Covid-19 in Canada." Winnipeg: International Institute for Sustainable Development. Retrieved August 30, 2020. (https://www.iisd.org/sites/default/files/2020-07/green-strings-covid-19-canada-en.pdf).

Concepts: social inequality; rise of the far-right; market failures; externalities; carbon tax; state policy; green tariffs;

Questions:

- How does reducing social inequality and economic insecurity for workers contribute to achieving climate goals?
- What is the role of the state in technological innovation?
- Is the Green New Deal enough to meet climate change mitigation targets?
- Will the Green New Deal address the problem of species extinction?

Recommended Reading:

- Editorial Board. 2019. "Opinion | Want a Green New Deal? Here's a Better One." The Washington Post. Retrieved: August 30, 2020 (https://www.washingtonpost.com/opinions/want-a-green-new-deal-heres-a-better-one/2019/02/24/2d7e491c-36d2-11e9-af5b-b51b7ff322e9_story.html).

Here is where you submit your essay.

11 - Capitalism and Consumption - November 23

Required Reading:

- Lintott, John. 2007. "[Sustainable Consumption and Sustainable Welfare](#)." in *Sustainable Consumption, Ecology and Fair Trade*, edited by E. Zaccaï. London: Routledge.

Concepts: human welfare satisfaction vs material consumption, commodified consumption, consumer sovereignty, positional goods, structural overconsumption, privatized consumer vs public citizen, compensatory consumption, free time

Questions:

- Do we consume too much for our own good? If so, then why do we consume too much?
- Do we consume too much for the good of the living world?
- Is it possible to reduce overconsumption within the framework of a capitalist economy? Is it possible to reduce overconsumption within the framework of neoliberal capitalism?
- What is the connection between free time, human welfare and decreased material consumption?

Recommended Reading:

- Kaplan, Jeffrey. 2008. "[The Gospel of Consumption](#)." *Orion* 27(3):38.
- Boulanger, Paul-Marie. 2007. "What's Wrong with Consumption for Sustainable Development: Overconsumption, Underconsumption, Misconsumption?" in *Sustainable Consumption, Ecology and Fair Trade*, edited by E. Zaccaï. London: Routledge.
- Assadourian, Erik. 2012. "The Path to Degrowth in Overdeveloped Countries." in *[State of the World 2012](#): Moving toward Sustainable Prosperity : A Worldwatch Institute Report on Progress toward a Sustainable Society*, edited by E. Assadourian, L. Starke, M. Renner and Worldwatch Institute. Washington, DC: Island Press.

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12 - Capitalism and Overproduction - November 30

Required Reading:

- Cooper, Tim. 2005. "Slower Consumption: Reflections on Product Life Spans and the "Throwaway Society"." *Journal of Industrial Ecology* 9(1-2):51-67. doi: 10.1162/1088198054084671.
- Wieser, Harald. 2016. "Beyond Planned Obsolescence: Product Lifespans and the Challenges to a Circular Economy." *Gaia* 25(3):156-60. doi: 10.14512/gaia.25.3.5.

Concepts: planned obsolescence, logic of capital: overproduction /market expansion /creation of "need", life-cycle analysis, externalities, industrial ecology: waste=food, cradle to cradle, extended producer liability, circular economy, internalizing externalities, full-cost accounting, ecological modernization: a reformed market, collaborative consumption

Questions:

- Can the circular economy harness the power of profit to reduce overproduction /overconsumption? Is there such a thing as a market solution to these problems?
- Is a growth-based system (capitalism) compatible with a finite planet?
- Is it possible to commodify and internalize all of the costs of a complete product life-cycle? In other words, is it possible to rely on the market to solve environmental problems?
- What additional (state) regulatory framework would be needed to make a circular economy work?

Recommended Reading:

- Hawken, Paul. 1993. "Parking Lots and Potato Heads." in *The Ecology of Commerce*. New York: Harper Collins.

- Study Guide File

Study guide for the final exam.