

Philosophy & Climate Change

Philosophy 453

MWF 12:30–1:30pm

Miller 206

Fall 2023

My Information

Here is my information:

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Zoom: <https://zoom.us/j/6081570530>

Introduction

This course is an examination of climate science and ethics using the tools of the philosophy of science, moral theory, and political philosophy. First, we focus on epistemological issues: how does climate science provide us with reliable predictions and explanations about the past, present, and most importantly the future climate and its impacts?

Second, we will consider ethical and political issues raised by climate science, with an eye on policy-makers and the public. Roughly speaking, we'll move from the science to questions of "what should we do?" Here are some of the specific questions we will consider:

- How do we know that the planet is warming due to human greenhouse gas emissions, and should we trust idealized atmospheric models which contain so much uncertainty?
- What is the importance of scientific consensus? Isn't science founded on disagreement?
- Should scientists enter the political fray as advocates? Does advocating for renewable energy, nuclear power, or a carbon tax threaten a climate scientist's objectivity?
- Does the fact that one receives funding from the oil and gas industry undercut one's global warming skepticism?
- What obligations do we have as a nation and as individuals to reduce our greenhouse emissions? For example, do developed

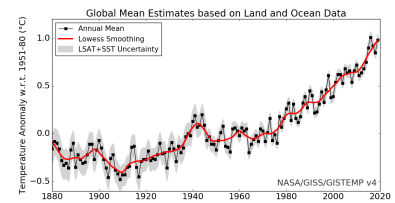


Figure 1: Land-ocean temperature index, 1880 to present, with base period 1951-1980. The solid black line is the global annual mean and the solid red line is the five-year lowest smooth.

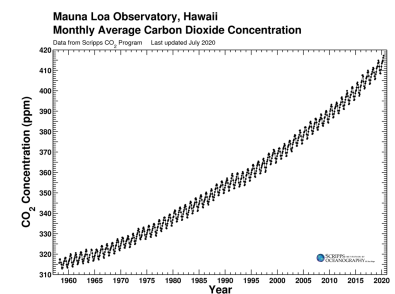


Figure 2: Measurement of CO₂ at Mauna Loa Observatory by Scripps Institution of Oceanography from 1960 - 2020.

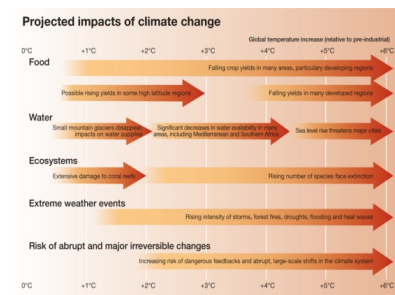


Figure 3: Projected impacts of anthropogenic climate change

countries like the U.S. have greater obligations to reduce their emissions compared to developing nations?

- What political principles should we use in reducing our greenhouse gas emissions?
- Should we focus more on adaptation (preparing for the effects of warming) or mitigation (reducing our emissions)? Should we try to geo-engineer our way out of the problem?
- What moral responsibilities do we have as individuals to combat climate change? Should we avoid driving and flying for example? Or, are the effects of our individual emissions so negligible that we have no such obligations?
- Should be hopeful regarding our future? Is there something wrong with despair?

Course Materials

All readings will be made available to you electronically.

Class Structure

Generally speaking, we will have two readings per week. Readings for each class will be between 10 – 20 pages. Our daily class will involve lecture and discussion and sometimes small group activities. I will generally also add a short news piece to make our conversations timely and concrete.

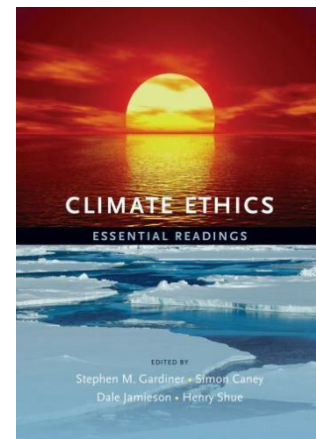
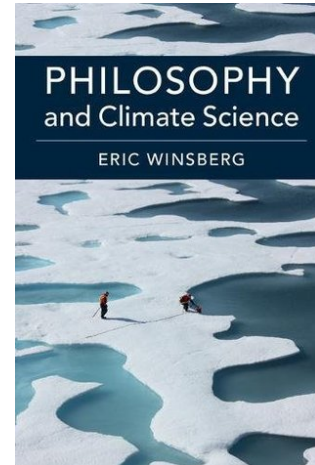
Course Requirements

In this course, your grade will consist in three exams homework, and participation. Your final grade is determined as follows:

- Three exams ($3 \times 20\% = 60\%$)
- Homework (30%)
- Participation (10%)

Exams

You will write three exams for this course. On each exam, you will answer three questions. Your answers should be no more one page per question. Before our first exam, I will explain what I am looking for along with my grading rubric.



Homework

Each week I will give you two questions (one per reading). You will answer these questions by the assigned date. Late answers receive no credit.

Participation

Unless you have a COVID-19 or otherwise excused absence, you should be in class. You are allowed four absences without an excuse with no penalty. If you have COVID-19 symptoms, send me an email before class, and your absence will be excused. For participation, I expect you to be prepared each day, which includes doing the reading, completing the homework, and contributing to class discussions.

Grade Scale

The course grading scale is as follows:

A = 93 – 100, A- = 90 – 92, B+ = 86 – 89, B = 83 – 85, B- = 80 – 82, C+ = 76 – 79, C = 73 – 75, C- = 70 – 72, D+ = 66 – 69, D = 60 – 65, F = 0 – 59

Late Work

All assignments are due on the scheduled dates. However, if you are unable to complete an assignment and you let me know at least one fully day in advance, you may have an extension. Otherwise, for each day an assignment is late, it is reduced one letter grade. Your Google Classroom questions are excluded from this policy.

ChatGPT

We all use technology for writing which includes autocorrect, spell and grammar checks, tutors, proofreaders, etc. ChatGPT is another such technologies. However, current versions of ChatGPT have limitations.

Errors AI generators make mistakes. Assume the output is incorrect unless you doublecheck them with reliable sources.

Bias Their output may reflect bias because the data they are trained on may reflect bias or be unrepresentative.

Citation These tools use existing sources without citation. They also make up citations.

Environmental impact Each ChatGPT search uses non-trivial amounts of electricity and water. According to estimates, ChatGPT emits 8.4 tons of carbon dioxide per year, more than twice the amount that is emitted by an individual, which is 4 tons per year.

If you decide to use ChatGPT on an assignment, you must cite how it was used. For example, citations may include you used it to generate ideas, turns of phrase, elements of text, long stretches of text, lines of argument, pieces of evidence, maps of the conceptual territory, illustrations of key concepts, etc. If you use chatGPT without citation, then I will treat it as an uncited source, which could be plagiarism.

Academic Integrity

I expect you to understand and abide by the College's Academic Integrity Policy and Procedures. If you have any questions about the policy, I encourage you to come and talk with me. Failure to cite sources on written assignments is plagiarism, for which students have been dismissed from LC. If you have doubts about how to make proper citations, ask me or consult the writing center.

Learning Differences

If you have been diagnosed with a learning difference and are seeking an accommodation, please provide me, as soon as possible, with a "Notice of Disability and Statement of Accommodation" from Student Support Services.

Schedule

Here is our schedule which is of course revisable (and probably will be revised). I have also added optional readings, which you might use when you write your papers or if you want to explore more.

Optional additional readings

Week 1 9/6–9/8

- 9/6 Syllabus discussion
- 9/8 Oreskes, "The Scientific Consensus on Climate Change: How Do We Know We're Not Wrong?"

Oreskes, "The Scientific Consensus on Climate Change"; Odenbaugh, "On the Contrary: How to Think about Climate Communication"; Washington & Cook, *Climate Change Denial: Heads in the Sand*

Week 2 Data (9/11–9/15)

- Winsberg, chs. 1 "Introduction" 2, "Data"

Mann, "Reconciling Climate Model/Data Discrepancies: The Case of the 'Trees That Didn't Bark'"; Frigg et. al. "Philosophy of Climate Science Part I: Observing Climate Change"; Parker, "Reanalyses and Observations: What's the Difference?"

- 9/15 Lloyd, "The Role of "Complex" Empiricism in the Debates About Satellite Data and Climate Models"

Week 3 Models & Simulations (9/18–9/22)

- Winsberg, ch. 3, "Models"
- Odenbaugh, "Building Trust, Removing Doubt? Robustness Analysis and Climate Modeling"

Weisberg, *Simulation and Similarity*; Frigg et. al., "Philosophy of Climate Science Part II: Modelling Climate Change" Odenbaugh, "Models, Models, Models: A Deflationary View"; Winsberg, "Communicating Uncertainty to Policy Makers"

Week 4 Simulations (9/25–9/29)

- Winsberg, ch. 4, "Simulation"
- Parker, "Confirmation and Adequacy-for-Purpose in Climate Modelling"

Lenhard and Winsberg, "Holism, entrenchment, and the future of climate model pluralism"

Week 5 Decisions (10/2–10/6)

- Winsberg, ch. 8, "Decisions"
- Frisch, "Modeling Climate Policies: A Critical Look at Integrated Assessment Models"

Bradley and Steele, "Making Climate Decisions"; Broome *Climate Matters*; Parker, "Whose Probabilities? Predicting Climate Change with Ensembles of Models"

FIRST EXAM

Week 6 Values (10/9–10/13)

- Winsberg, ch. 9, "Values";
- FALL BREAK

Frank, "Ethics of the scientist qua policy advisor"; Winsberg, Lloyd & Oreskes, "Severe Weather Event Attribution"; Parker & Lusk, "Incorporating User Values into Climate Services"

Week 7 Social Epistemology (10/16–10/20)

- Steele, "The Scientist qua Policy Advisor Makes Value Judgments"
- Intemann, "Who Needs Consensus Anyway?"

Biddle & Leushner, "Climate Skepticism and the Manufacture of Doubt"; Odenbaugh, "Climate, Consensus, and Contrarians"; Ranalli, "Climate Science, Character and the 'Hard Won' Consensus"; Schroeder, "Democratic Values"; Betz, "In Defense of the Value-Free Ideal"

Week 8 Ethics (10/23–10/27)

- Jamieson, "Adaptation, Mitigation, and Justice"
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- Shue, "Global Environmental and International Inequality"

Gardiner, "A Perfect Moral Storm: Climate Change, Intergenerational Ethics and the Problem of Moral Corruption"; Baer et. al. "Greenhouse Development Rights"; Vanderheiden, "Distinguishing Mitigation and Adaptation"

Week 9 Ethics (10/30–11/3)

- Cuomo, "Climate Change, Vulnerability, and Responsibility"
- Baer et. al., "Greenhouse Development Rights" Paul Baer et. al.

Caney, "Cosmopolitan Justice, Responsibility and Global Climate Change"; Caney, "Climate Change, Human Rights, and Moral Thresholds"; Moellendorf, "A Right to Sustainable Development"; Dunkelman, "Climate Change, Human Security and Gender."

Week 10 Ethics (11/6–11/10)

- Gardiner, “Is ‘Arming the Future’ with Geoengineering Really the Lesser Evil?”;
- SECOND EXAM

Keith, “Engineering the Planet”; Robock, “Will Geoengineering with Solar Radiation Management Ever Be Used?”; Preston, “Re-Thinking the Unthinkable: Environmental Ethics and the Presumptive Argument Against Geoengineering”

Week 11 Ethics (11/13–11/17)

- Sinnott Armstrong, “It’s Not My Fault: Global Warming and Individual Moral Obligations”
- Hiller, “Climate Change and Individual Responsibility”

Nolt, “How Harmful Are the Average American’s Greenhouse Gas Emissions”; Attfield, “Nolt, Future Harm and Future Quality of Life”; Hartzell, “Responsibility for Emissions”; Kawall, “Future Harms and Current Offspring”

Week 12 Ethics (11/20–11/26)

- Huber, “Ecological Politics for the Working Class”
- THANKSGIVING BREAK

Schinkel, “Causal and Moral Responsibility of Individuals for (the Harmful Consequences of) Climate Change”; Seager et. al., “Determining Moral Responsibility for CO₂ Emissions”

Week 13 Ethics (11/27–12/1)

- Nolt, “Nonanthropocentric Climate Ethics”
- Palmer, ““Does Nature Matter? The Place of the Nonhuman in the Ethics of Climate Change”

McShane, “Anthropocentrism in Climate Ethics and Policy”; Palmer, “Climate Change, Ethics, and the Wildness of Wild Animals”

Week 14 Ethics (12/4–12/8)

- White, “Now This! Indigenous Sovereignty, Political Obliviousness and Governance Models for SRM Research”

Gilson et. al. *Food, Environment, and Climate Change: Justice at the Intersections*

Week 15 Future (12/11)

- Hall, “Beyond ‘Gloom and Doom’ or ‘Hope and Possibility’: Making Room for Both Sacrifice and Reward in Visions of a Low-Carbon Future”
- THIRD EXAM

Brei, *Ecology, Ethics and Hope*