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Captive Futures

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor
of Philosophy in Sociology

by

Zachary Thomas King

Committee in Charge:

Professor John Foran, Chair

Professor Simonetta Falasca-Zamponi

Professor David Pellow

Professor Kenneth Hiltner

December 2021

The dissertation of Zachary Thomas King is approved.

Simonetta Falasca-Zamponi

David Pellow

Kenneth Hiltner

John Foran, Committee Chair

December 2021

CURRICULUM VITAE

Zachary Thomas King

RESEARCH AREAS

Climate Change, Social Movements, Ecology, Power, Futures Studies

The social construction and contemporary landscape of imagined futures; The mutually-structuring ecological entanglement of systems of power, culture, material reality, and the more-than-human world.

EDUCATION **2021. Ph.D., Sociology, GPA: 3.97/4.00**

Dept. of Sociology, University of California, Santa Barbara, CA

Additionally fulfilled Interdepartmental Ph.D. Emphasis in Environment and Society

IPEES, Environmental Science Dept., University of California, Santa Barbara, CA

2016. Master of Arts, Sociology, GPA: 3.97/4.00

University of California, Santa Barbara, CA

2012. Bachelor of Arts, Sociology, GPA: 3.94/4.00

University of California, Santa Barbara, CA.

PROFESSIONAL EXPERIENCE

As Instructor of Record - Responsible for full original course design, lectures, and TA management for courses ranging in enrollment from 50 to 120 students per quarter.

Summer 2020 • Instructor of Record, “Social Movements”, Dept. of Sociology, UCSB

Summer 2019 • Instructor of Record, “Social Movements”, Dept. of Sociology, UCSB

Winter 2019 • Instructor of Record, “Theories of Global Dev.”, Dept. of Sociology, UCSB

Summer 2018 • Instructor of Record, “Sociology of Globalization”, Dept. of Sociology, UCSB

Summer 2018 • Instructor of Record, “Social Movements”, Dept. of Sociology, UCSB

Fall 2011 • Instructor of Record, “Social Movements”, Dept. of Sociology, UCSB

Summer 2017 • Instructor of Record, “Soc. of Globalization”, Dept. of Soc., UCSB

As Teaching Assistant - Responsible for section lectures, technical assistance, and evaluation of assigned work for courses ranging in enrollment from 50 to 250 students per quarter.

- Summer 2021* • Teaching Assistant, “Introduction to Sociology”, Dept. of Soc., UCSB
- Spring 2021* • Teaching Assistant, “The World in 2050”, Dept. of Sociology, UCSB
- Winter 2020* • Teaching Assistant, “Qualitative Research Methods”, Dept. of Sociology, UCSB
- Fall 2020* • Teaching Assistant, “Qualitative Research Methods”, Dept. of Soc., UCSB
- Spring 2020* • Teaching Assistant, “The World in 2050”, Dept. of Sociology, UCSB
- Fall 2019* • Teaching Assistant, “Earth in Crisis”, Dept. of Sociology, UCSB
- Spring 2019* • Teaching Assistant, “The World in 2050”, Dept. of Sociology, UCSB
- Fall 2018* • Teaching Assistant, “Environmental Sociology”, Dept. of Soc., UCSB
- Spring 2018* • Teaching Assistant, “Globalization and Development”, Dept. of Soc., UCSB
- Winter 2018* • Teaching Assistant, “Radical Social Change”, Dept. of Soc., UCSB
- Summer 2017* • Teaching Assistant, “What’s Wrong with the World and How to Fix It”, Dept. of Sociology, UCSB
- Spring 2017* • Teaching Assistant, “Introduction to Sociology”, Dept. of Soc., UCSB
- Winter 2017* • Teaching Assistant, “Consumption, Waste and the Environment”, Dept. of Sociology, UCSB
- Fall 2016* • Teaching Assistant, “Introduction to Sociology”, Dept. of Soc., UCSB
- Summer 2016* • Teaching Assistant, “Introduction to Sociology”, Dept. of Soc., UCSB
- Summer 2015* • Teaching Assistant, “Social Movements”, Dept. of Sociology, UCSB
- Spring 2014* • Teaching Assistant, “Climate Justice”, Dept. of Sociology, UCSB
- Fall 2014* • Teaching Assistant, “Earth in Crisis”, Dept. of Env. Studies, UCSB

OTHER PROFESSIONAL EXPERIENCE

- Fall 2017* • Development of Test Question Bank for 16 Chapters of *Sociology Now*.
2019. Kimmel, Aronson and Bridges. *Sociology Now*. Pearson. London, UK.

PUBLISHED RESEARCH and REVIEWS

McCumber, Andrew and Zachary King. 2020. “The Wild in Fire: Human Aid to Animals in the Disasters of the Anthropocene.” *Environmental Values*, Volume 29, Number 1, pp. 47-66(20)

Content-analysis study of journalist, expert, and social media reactions to human attempts to aid

wildlife directly during the Thomas Fire in California, 2017.

King, Zachary T. 2020. "Unsettling Carbon-Colonialism, Renewing Resistance: Under Review: Climate Justice and Community Renewal: Resistance and Grassroots Solutions, edited by Tamra Gilbertson and Brian Tokar". *Radical Philosophy Review*, 23(2), 427-430.

King, Zachary T. Forthcoming. "Review: Research, Political Engagement, and Dispossession: Indigenous, Peasant, and Urban Poor Activisms in Americas and Asia, Dip Kapoor and Steven Jordan (eds.)". *Socialism and Democracy*.

OTHER RESEARCH

Completed Master's Thesis

King, Zachary T. 2016. "Between the Sea and the State: An Ethnographic Study of Post-Typhoon Disaster Governance in Leyte, Philippines Through the Eyes of Typhoon Survivors". Master's Thesis submitted for MA, Dept. of Sociology at UCSB.

Interview-based ethnographic study of how typhoon survivors navigated and contested housing and housing policy in the wake of Typhoon Haiyan.

RESEARCH IN PROGRESS

The Coming Climate Revolutions: Lessons from the Sociology of Revolution for an Era of Ecological Destabilization.

Application of sociological literature on revolutions to predicted environmental futures and prospects for ecological re-stabilization and democratic possibility.

The Joyful Apocalypse? Imagined Futures at 'Wasteland Weekend'.

Quantitative and ethnographic study of the imagined futures of participants in a large-scale apocalypse-themed cultural festival in 2019, with focus on climate change.

PROFESSIONAL DEVELOPMENT

Fall 2017 • The Critical Classroom: Resisting Limiting Ideologies about Teaching, Dept. of Soc. TA Training Committee Workshop (*Hosted and attended*)

Spring 2017 • Conscientious Pedagogy Post-Election TA Workshop, Dept. of Sociology TA Training Committee Workshop (*Hosted and attended*)

Fall 2016 • Graduate Students of Color Navigating Race in the Classroom, Dept. of Sociology TA Training Committee Workshop (*Hosted and attended*)

Summer 2016 • University-Wide Lead Teaching Assistant Training, Office of Instructional Development, UCSB (*Attended as Dept. Lead TA/Training Committee Member*)

Spring 2015 • Pedagogy Workshop, "Helping Students Process Their Thoughts,

Feelings and Reactions to Course Materials”, Dept. of Sociology, UCSB

SELECTED APPOINTMENTS and SERVICE

Summer 2016 - Spring 2017 Teaching Assistant Training Committee, Dept. of Soc., UCSB
Fall 2016 - Summer 2017 Soc. Graduate Student Association (SGSA), Dept. of Soc., UCSB
Fall 2016 Report from the Front Lines: Standing with Standing Rock
(Co-organized with the UCSB Center for Black Studies Research)

SELECTED ACADEMIC AWARDS and HONORS

- Summa Cum Laude, Sociology. University of California, Santa Barbara. 2012.
- Dean’s Honors. University of California, Santa Barbara. 2010 - 2012.
- President’s Honor Roll. Santa Barbara City College. 2007 - 2010.

SELECTED FELLOWSHIPS and GRANTS

- Graduate Division Dissertation Fellowship. UCSB, Santa Barbara. 2019.
- Humanities and Social Science Research Grant. UCSB, Santa Barbara. 2018.
- Crossroads Fellowship: Climate Justice Futures. UCSB, Santa Barbara. 2014.
- Regent’s Fellowship. University of California, Santa Barbara. 2013.

SELECTED PRESENTATIONS and APPEARANCES

- “Climate Futures in the American Imagination: Contested Visions and the Scope of the Possible”, IPEES Symposium, UCSB, Santa Barbara, California. 2018.
- “The Wild in Fire: Human-Wildlife Interactions in the Thomas Fire”, Animals and Society Conference, University of Windsor, Canada. 2018.
- “Marx vs. Musk: Can Capitalism Save the Climate?”, INSS Conference, UNC Charlotte, North Carolina. 2018.
- Anti-Racist Community Organizing: Invited to Facilitate Discussion. Following “*White Right: Meeting the Enemy*” Film Showing at UCSB MultiCultural Center. Fall 2018.
- “Between the Sea and the State: Post-Yolanda Disaster Governance Through the Eyes of Typhoon Survivors”, IPEES Symposium, UCSB. 2016.
- “Scorched Earth Manifesto: A Fossil Fuel Industry Vision of our Climate Future”, Climate Futures Conference, Interdisciplinary Humanities Center. 2015.

ABSTRACT

Captive Futures

by

Zachary Thomas King

Today, a “High-carbon Energy compleX” (HEX) of fossil-fuel enterprises and their allies hold the future captive, attempting to indefinitely preserve global reliance on carbon-emitting energy. Emergent social forces offer alternative futures, from ‘climate capitalism’ to energy democracy and more. Public collective action in the United States of America represents a potential pivotal force in this world-historical crisis, capable of helping initiate a break from catastrophic futures and opening up more democratic and humane alternatives. Studies of public opinion in the United States, framed by a critical analysis of social power that foregrounds the contours of domination and possibilities of resistance, may therefore be essential. This study attempts this through a 2-phase method: Qualitative research on the beliefs of climate-focused scholars across the country (n=22) and quantitative research using a national survey of public perception (n=1065). I demonstrate that the US public is already highly concerned about climate change and supportive of strategically necessary democratizing and redistributive policy solutions. However, both the public and experts show only weak support for social movement action and repertoires of contention¹ capable of delivering these solutions. I argue that the most pressing need for intervention by social scientists and activists today is not the production of concern or action divorced from power

¹Tarrow, S. G. 2011. Power in movement: Social movements and contentious politics. *American Political Science Review* 90.4 (1996): 874-883.

analysis, but instead the cultivation of power analysis, building public capacities for power-literate strategy to guide collective action toward democratic and ecologically vibrant futures.

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Introduction: A Captive Future

The mainstream of American opinion research focused on climate change^{2 3 4 5} has been extensive and nuanced, regularly delivering a trove of useful knowledge about the way that American belief about the present and evolving crisis has been changing over time. However, this work is also consistently marked by the apparent assumption of an unproblematic relationship between public opinion and policy. Researchers often implicitly and sometimes overtly promulgate an uncritical belief in the presence of a functioning democracy in the United States that represents the public will.

This is often evident by omission. No questions in the surveys themselves appear to situate climate change as a problem of organized political combat with powerful industries and their allies, no mention is made in the questions or the written analysis of corporate lobbying or election spending, and climate policy is not contextualized alongside other progressive policies that have been sidelined by elected politicians despite majority support^{6 7}. Sometimes the researcher's assumptions are more overtly articulated, with concluding analyses that seem to speak to political hopefuls about the

² Leiserowitz, A., Maibach, E., Rosenthal, S., Kotcher, J., Carman, J., Wang, X., Marlon, J., Lacroix, K., & Goldberg, M. 2021. "Climate Change in the American Mind, March 2021". Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication.

³Pew Research Center. 2019. "U.S. Public Views on Climate and Energy". Pewsocialtrends.org.

⁴Pew Research Center. 2020. "As Economic Concerns Recede, Environmental Protection Rises on the Public's Policy Agenda". Pewsocialtrends.org.

⁵Saad, Lydia. 2019. "Americans as Concerned as Ever About Global Warming". Gallup, Inc. <http://www.news.gallup.com>.

⁶Liesman, Steve. 2019. Majority of Americans support progressive policies such as higher minimum wage, free college. CNBC: All-America Economic Survey. Cnbc.com.

⁷Levitz, Eric. 2019. Here Are 7 'Left Wing' Ideas (Almost) All Americans Can Get Behind. Intelligencer. New York Magazine.

wisdom of supporting policy because it has strong public support - without any mention of the many ways this public support has historically been co-opted, undermined, or ignored.

Any faith in a truly publicly-representative democracy in the United States must unfortunately break on the rocks of a well-documented history of structurally-ingrained democratic obstruction, codified oppression, and minority rule dating from the founding of the country to the present. Today, command of the economy and the State in this global superpower, and consequently the course of our collective future, is disproportionately influenced by economic elites (and their much larger networks of allied social forces) just as it was held captive by an even more exclusively demarcated club of white propertied men three and a half centuries ago. Despite the tremendous efforts made for freedom and justice in this country, and progressive gains including multiple expansions of suffrage and the abolition of chattel slavery, the fundamental dynamic of exclusion and power concentration has remained strong over the course of U.S. history as the settler-colonial seed has grown into the tangled brambles of global empire.

Understanding the dynamics of popular policy obstruction is a key aspect of understanding the operation of power in US democracy as it relates to climate change and all other issues. Ignoring this captivity, failing to help understand and map its reality, and failing to construct research and analysis informed by this reality, sabotages the full practical potential of the research effort. While there is undeniable value in providing the empirical data to say that “yes, Americans still want something to be done about climate change” year after year, doing so without speaking to the reasons why this desire fails to

realize itself in policy is an omission that runs the risk of reifying elite hegemony by mystifying its operation.

As both the title and the invocation of hegemony suggest, the central conceit at the foundation of this work is that our future, the future of humanity, is held captive - locked into a climate crisis that most of us wish we could escape. This is in no way meant to suggest that all people are equally excluded from political influence and social power - however, as I will argue in Chapters 1 and 2, disproportionate exclusion and hierarchies of inclusion perform key functions in the maintenance of elite minority rule and the captivity of the broad majority. Captivity implies that the majority of persons are caught in a situation that we (myself included) do not desire and did not intend - an assertion supported by the recorded and present disconnect between public opinion and climate policy. The largest study of global public opinion on climate change to date, the People's Climate Vote conducted by the United Nations Development Project, found that in a survey with national samples numbering a total of 1.2 million people and representative of over half of the world's population, 64% believe climate change is a "global emergency"⁸. This trend repeats at the national levels, with majorities characterizing climate change as a 'global emergency' in every country except Moldova, where that number was still 50%. The United States, consistent with climate concern polling for decades, reported 64% characterizing climate change as a global emergency, consistent with international numbers. Small island developing nations naturally are the most concerned, with 74% recognizing this emergency.

⁸UNDP. 2021. World's largest survey of public opinion on climate change: a majority of people call for wide-ranging action. News Centre: [Undp.org](https://www.undp.org).

This global alarm is strongly reinforced by the presence of near-monolithic scientific consensus that climate change is occurring and is caused by human activity. Measures of scientific opinion give a figure of between 91%⁹ and 100%¹⁰ consensus, with most reports putting the consensus figure at 97%^{11 12 13}. The United Nations Intergovernmental Panel on Climate Change (IPCC) report, arguably the largest project of global scientific synthesis ever organized, comes to the same conclusion¹⁴. No legitimate organized scientific body rejects these conclusions¹⁵. The consequences of inaction are no less certain. Summaries of the current and anticipated effects of climate change read like the signs of the end of days: Fire, flood, storms, drought, war, famine, pestilence, the Gospel of Luke but with no final redemption in sight. Extreme weather events of all kinds are increasing in both frequency and strength across the world^{16,17}. Even the spectacular images of disaster that punctuate our social media feeds and daily

⁹Verheggen, Bart, Bart Strengers, John Cook, Rob van Dorland, Kees Vringer, Jeroen Peters, Hans Visser, and Leo Meyer. 2014. Scientists' Views about Attribution of Global Warming. *Environmental Science & Technology* 48, no. 16: 8963–71, <https://doi.org/10.1021/es501998e>.

¹⁰Oreskes, Naomi. 2004. The Scientific Consensus on Climate Change. *Science* 306, no. 5702: 1686, <https://doi.org/10.1126/science.1103618>.

¹¹Doran, Peter and Maggie Kendall Zimmerman. 2009. Examining the Scientific Consensus on Climate Change. *Eos, Transactions American Geophysical Union* 90, no. 3: 22–23, <https://doi.org/10.1029/2009EO030002>.

¹²Anderegg, William, James W. Prall, Jacob Harold, and Stephen H. Schneider. 2010. Expert Credibility in Climate Change. *Proceedings of the National Academy of Sciences of the United States of America* 107: 12107–9, <https://doi.org/10.1073/pnas.1003187107>.

¹³John Cook et al. 2013. Quantifying the Consensus on Anthropogenic Global Warming in the Scientific Literature. *Environmental Research Letters* 8, no. 2: 024024, <https://doi.org/10.1088/1748-9326/8/2/024024>.

¹⁴IPCC. 2014. Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (Eds.)]. Geneva, Switzerland: IPCC.

¹⁵Oreskes, Naomi. 2007. The Scientific Consensus on Climate Change: How Do We Know We're Not Wrong?. In *DiMento, Joseph F. C.; Doughman, Pamela M. Climate Change: What It Means for Us, Our Children, and Our Grandchildren* (MIT Press, 2007), 65–66.

¹⁶Leaning, J. and D. Guha-Sapir. 2013. Natural Disasters, Armed Conflict, and Public Health. *New England Journal of Medicine* 19: 1836–42.

¹⁷Pascaline Wallermaq and Rowena House, "Economic Losses, Poverty & Disasters: 1998-2017," *United Nations Office for Disaster Risk Reduction & Center for Research on the Epidemiology of Disasters*, 2018.

news headlines do not capture the total danger, reflected also in the less immediately visible effects like the mass extinction of species and the global increase in the acidification of our ocean waters absorbing the burdens of the carbon-heavy atmosphere.

In a continuous affront to both scientific opinion and popular support for action, over three decades of United Nations conferences have by their own admission failed to meet the scale of the crisis. In the wake of the 2015 Paris climate agreement, the only international climate agreement that has emerged since the Kyoto protocols of 1992, world leaders expressed a great deal of self-congratulation. French president Hollande called the agreement “a major leap for mankind,” and British Prime Minister David Cameron boasted that “we've secured our planet for many, many generations to come.”¹⁸ Six years later their heady proclamations ring hollow. The UN secretariat’s 2021 evaluation of nationally-determined contributions (NDCs - the pledges each nation made to reduce emissions in the Paris treaty) found that while avoiding a 1.5 degree global temperature increase would require greenhouse gas emissions reductions of 45% by 2030, the emissions reductions reflected in the Paris agreement’s NDCs account for only a miniscule 1% total reduction¹⁹.

Even if the national pledges determined through the Paris Agreement were followed fully and unequivocally, this would leave humanity on a path toward a 3°C temperature increase above pre-industrial levels by the year 2100²⁰. While any temperature increase cannot be considered safe because all will have lethal impacts for innumerable human

¹⁸Vidal, John, Adam Vaughan, Suzanne Goldenberg, Lenore Taylor and Daniel Boffey. 2015. World leaders hail Paris climate deal as ‘major leap for mankind’. The Guardian. [Theguardian.com](https://www.theguardian.com).

¹⁹UNFCCC. 2021. Nationally determined contributions under the Paris Agreement Synthesis report by the secretariat. Glasgow Climate Change Conference.

²⁰Climate Action Tracker. 2021. Warming Projections Global Update. Climate Analytics and New Climate Institute. [Climateactiontracker.org](https://climateactiontracker.org).

beings and devastating destabilizing effects on Earth’s ecosystems, 3°C is well beyond the 1.5° limit that many experts and international bodies have argued is necessary to protect us from the most catastrophic impacts - and this doesn’t even account for the impact of warming-generated social instability on the efforts to sustain organized climate solutions²¹.

The international situation mirrors national politics in the United States, where majorities report being at least “somewhat worried” about climate change and two-thirds report feeling a sense of personal responsibility to do something about it²². American public opinion that climate change is real and is caused by human activity has remained steady for a decade. Suffering declines after 2008, the numbers of Americans who believe climate change is real and is caused by human activity have returned to record-breaking levels as of April 2020²³. Even at the lowest point of the decadal decline, the number of Americans who believe climate change is happening never went below a solid majority of 57%²⁴ - and has now returned to the previous record level of 73%. Recent publications conclude that even amongst Republicans, a majority believe that climate change is occurring and is driven by human activity²⁵. The latest reports indicate that belief remains steady even amidst the new economic turmoil created by the Covid-19

²¹Parenti, C. 2011. Reading the world In a loaf of bread -- soaring food prices, wild weather, upheaval, and a planetful of trouble. Retrieved from <http://www.tomdispatch.com/archive/175419>

²²Leiserowitz, A., Maibach, E., Rosenthal, S., Kotcher, J., Carman, J., Wang, X., Marlon, J., Lacroix, K., & Goldberg, M. 2021. Climate Change in the American Mind, March 2021. Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication.

²³Leiserowitz, A., Maibach, E., Rosenthal, S., Kotcher, J., Bergquist, P., Ballew, M., Goldberg, M., Gustafson, A., & Wang, X. 2020. Climate Change in the American Mind: April 2020. Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication.

²⁴Mildenberger, M. and Leiserowitz, A. 2017. Public opinion on climate change: Is there an economy-environment trade-off? *Environmental Politics*, Vol. 26, no. 5, 801-824.

²⁵Leaf Van Boven, Phillip J. Ehret, and David K. Sherman. 2018. Psychological Barriers to Bipartisan Public Support for Climate Policy,” *Perspectives on Psychological Science* 13, no. 4: 492–507, <https://doi.org/10.1177/1745691617748966>.

pandemic and shutdown. Meanwhile, actual climate policy has ranged from completely inadequate under Obama to criminally destructive under Trump. Total GHG emissions have, over the past 8 years, dropped by about 1.5% from peak historical emissions levels - offering a projected reduction of only about 3% of peak level by 2030 barring a major structural turnaround²⁶. While newly elected president Biden has made pledges of action that could begin to approach the scale necessary, nearly a year into his presidency these efforts have not yet materialized.²⁷

This disjuncture between majority concerns and desires and political realities shaping the world in which those majorities live, along with rising emissions levels and temperatures year after year, is the primal fact from which the case for the characterization of our predicament as “captivity” begins. These facts may be the clearest observable indicator that the present social order is deeply, fundamentally and systemically inadequate to the historical task at hand. It is an important touchstone for the argument that climate change flows not from some inalterable foundational human nature, but from a global system (and component national and local systems) characterized by publics who have been disempowered and often forcibly bound within projects of ecological destruction that further their own dispossession, disenfranchisement, and alienation.

A recognition of the systemic roots of the climate crisis is essential to useful research and effective collective action. However, I must be clear - this is not an argument that the existing system - further diagnosed in my first, second, and third chapters - must be

²⁶World Bank. 2021. Total greenhouse gas emissions (kt of CO2 equivalent). World Bank Development Indicators.

²⁷Greenpeace. 2021. President Biden’s 100 Day Climate Progress Report. [Greenpeace.org](https://www.greenpeace.org).

completely overturned in order to act at all. Neither is this an argument that deep and long term transformation must be set aside in favor of limited and practical short-term action. Large-scale deep systemic change is unlikely to come to full fruition within the timeframe required to avert the worst of this crisis. We are on a short deadline, one which requires major reductions in greenhouse gas emissions within less than ten years from this writing. Serious transformation must begin under a U.S. government headed by the administration of president Biden, despite this government's clear loyalty to many of the systems and institutions driving the climate crisis, not least among these the military-industrial complex and the regime of private corporate economic control.

Nevertheless, in the election of Biden, evidence of division has emerged in the highest rungs of U.S. power between different elite factions. In a period where election spending has more than doubled any other previous election period in U.S. history²⁸, oil and gas industry donations have likewise increased - but as they've increased, they've also polarized on partisan lines, with greater and greater numbers going to Republicans²⁹, from an average of 27.7% going to Democrats between 1990-2002, to an average of 13.7% going to Democrats over the past 5 years. It seems that the industries are recognizing that - especially in light of a much more ambitious proposed climate agenda than any under Obama³⁰ - the Democratic party is less and less amenable to oil industry interests. While Democratic Party plans are still inadequate to the scale of the crisis and as this study emphasizes, inadequate to the task of reorganizing power relations to prevent retrenchment and recapture of regulatory power by fossil fuel interests, the

²⁸Open Secrets. 2020. Total Cost of Election (1998-2020). [Opensecrets.org](https://www.opensecrets.org).

²⁹Open Secrets. 2021. Oil & Gas: Long-Term Contribution Trends. [Opensecrets.org](https://www.opensecrets.org).

³⁰Colman, Zack and Ben Lefebvre. 2021. Biden pitching a much vaster climate plan than Obama ever attempted. Politico. [Politico.com](https://www.politico.com).

divisions evident in these events can be leveraged effectively by collective social movement action, especially if they are understood. Arguably these divisions themselves have likely emerged from the efforts of social movement actors already, in joint-effect with electoral efforts.

The time to strike is now. The iron is hot and, along with the planet, getting hotter. However, this is not a position of a shallow, instrumental pragmatism - normatively empty and oriented toward the maintenance of the status quo. Instead I call for a “rooted” pragmatism informed by the context of history and power necessary to discern a realistic path toward better futures. The immediate necessity of practical short-term efforts does not preclude the application of longer term considerations informed by historical and systemic context. Given the interdependent feedback of culture, political opportunity, public opinion and movement action reflected in movement and academic literature, immediate practical efforts must also be structured in a way that builds long-term power through organizational capacity, nourishing movement culture and collective consciousness. A systemic, context-informed strategy can help climate activists to act strategically in the short term - for instance by avoiding actions that study of the situation suggests are seductive but useless or even counterproductive. A systemic analysis is also helpful in charting how these changes can be accomplished in a way that reduces the power of the current obstructionist bloc to re-assert dominance over the medium and long term, and in a way that limits the ability of a newly empowered climate-capitalist class to consolidate its own domination. At the same time, all of this can be organized in a manner that helps create robust mechanisms of democratic organization, making new

space for deeper, revolutionary transformation that can move us toward both human liberation and ecological symbiosis.

Why the United States?

Climate change affects the entire planet and nearly all human activity contributes to it in some way, so it is fair to ask why a study like this would focus on one country. The primary reasons are two: the vast asymmetry in the degree to which different national populations generate greenhouse gas emissions, and the vast asymmetry in the degree to which different nation-states act to reinforce global carbon-industrial hegemony. I focus on the United States due to the position of the United States as the world's largest cumulative historical emitter of greenhouse gases, and producer of the second highest total yearly emissions and tenth highest annual per-capita emissions on the planet. In addition, it is the home of several of the world's largest fossil fuel corporations, the most stubborn national opponent of binding international climate policy, and a country in which corporate domination of political life is deeply entrenched. One report on global pro-fossil-fuel lobbying efforts showed that "7 out of the 10 most negative and influential business associations globally based in Washington DC," with the two most powerful being the U.S. Chamber of Commerce and the National Association of Manufacturers³¹. Further, the United States possesses the world's most powerful and expensive military - outspending the next 10 highest military spenders put together - and has historically used this power to secure strategic objectives that have consistently served to further US-based

³¹InfluenceMap. 2019. Industry Groups and their Carbon Footprints. [Influencemap.org](https://www.influencemap.org).

corporate interests. In particular, these efforts have served to disproportionately benefit the global fossil fuel industry, while the US military continues to be the most voraciously gas-guzzling single consumer of fossil fuels on Earth.

The positions of the USA as a world-class carbon emitter, a center of global opposition to carbon reduction measures, and a global military superpower are intimately bound in the theory of hegemony in which this research is grounded. This fact also makes US politics a potential point of leverage - a valuable strategic ground on which to stage political efforts. If corporate power can be dislodged in the United States, the global organization of carbon-industrial hegemony (and along with it, global capitalist hegemony) would be critically destabilized. This is not to suggest that internal domestic politics in the United States is the only arena in which meaningful intervention can be made. It is conceivable that, should a counter-hegemonic force for climate justice take power in other national settings, external pressures could be brought to bear to force action in the United States even if domestic efforts fail. This may even be a more likely course. However, given my cultural and political familiarity with the United States, I feel that my effort to understand and develop a strategic analysis of this national setting is more likely to be effective here, and this effort serves to complement strategies originating in other national settings regardless of our immediate success or failure in this one.

Overview of this Study

The structure of this study parallels the chronological execution of the research project itself, which took a roughly linear path as follows: theorization of the power dynamics of climate change based on existing critical empirical literature, development of qualitative research to explore key issues identified through this theorization, development of quantitative research informed by this qualitative research, and finally analysis and assessment of the data's implications for the accuracy of the theoretical model and for possibilities for political action to address the crisis.

Chapter one provides the empirical and theoretical foundation for the characterization of the climate crisis as a situation of captivity - of restraint of public will and suppression of public power. This chapter proceeds by way of considering the “epoch debates” of recent decades, inaugurated by the Anthropocene, which collectively grapple with increasingly widely-recognized questions of the most accurate and just framings of the role of human beings in the transformation of global ecologies.

Through a synthesis of the strengths of several of the positions in the epoch debates (and an overall rejection of the Anthropocene epoch frame in general), I attempt to introduce a new framing of the social forces producing anti-democratic and ecologically destructive captivity. This is the work of chapter 2. This synthesis takes into account the present literature indicating the diversity of actors entangled with the fossil fuel industry, the broad coalition of actors beyond this industry but acting in tandem with it that comprise the climate change countermovement³², and the passive forces exerted by the activities and structures of these interdependent projects on public consciousness and public power. These can be understood together as a High-carbon Energy complex - or

³²Brulle, R. J. 2021. Networks of opposition: A structural analysis of US climate change countermovement coalitions 1989–2015. *Sociological Inquiry*, 91(3), 603-624.

HEX - generating pressure for the defense and expansion of fossil fuel production into the indefinite future.

I build on the work of Antonio Gramsci to describe the 3 main mutually reinforcing facets of hegemony (HEX and beyond) illustrated using the myth of the heads of the Heracleian Cerberus. These main pillars of hegemony are the forces of War (the power of violent coercion), Arrangement (economic and infrastructural control), and Knowledge (power over how people understand themselves and their world). I examine the operation of each in the project of HEX hegemony and consider how they might be effectively contested by a counter-hegemonic resistance. Finally, I situate HEX hegemony historically as a product not merely of one industry, or even of capitalism, but of an older and more fundamental power dynamic I call “carcinarchy”, underlying the deadly, anti-ecological growth imperatives of dominant global systems today.

The contextual foundation having been laid, I can now consider the power and meaning of public opinion on climate change in the United States within this context. Chapter 3 takes up these questions, building on the critical evaluation of U.S. democracy in sociological and political science literature. While the question of the influence of public opinion on policy direction in the United States is by no means settled, the substantial weight of recent studies supports the contention of captivity argued in chapter one. The literature supports positions ranging from elite-dominant to biased-pluralist, with virtually no support for the existence of a strong democratic majoritarian process in the United States. Though explanatory models for this process vary, economic elites appear to dominate policy direction in the United States. This is in accordance with my model of the political economy of the climate crisis and with the history of climate

change policy failure - as well as with recent apparent progress on climate change reforms as some elite factions have shifted position.

The strategic implication of the limited policy influence of public opinion, the disproportionate influence of economic elites on policy, and the likely inadequacy of elite-driven climate-capitalist policy solutions, is that the implementation of effective climate policy will require powerful extra-institutional social movement action. Given the productive relations of the public to elites, organized labor action and economically-targeted protest action seem particularly promising. However, reviewing previous climate change public opinion research in this light reveals that critical evaluation of public opinion and elite power is rarely addressed - and neither are the kinds of extra-institutional social movement tactics capable of challenging elite power. The vast majority of the literature, by focusing on public concern, demographic information, scientific knowledge, and limited behavioral measures, is limited in its application to efforts beyond those that rely on the existence of a truly majoritarian-pluralist American democracy - a situation not supported by existing evidence.

Without attention to elite power and extra-institutional tactics, research cannot offer measures of critical consciousness in the public mind, much less offer a picture of what sort of strategic pedagogical interventions might be necessary to build public capacity to act. Just as crucially, the inclusion of critical power analysis in the discussion and presentation of public opinion research is an invaluable pedagogical opportunity in itself. Public opinion research should join in a critical research tradition aimed at helping share with others a realistic picture of our own entanglement in the functioning of power - in the tradition of Machiavelli, Marx, Gramsci, Freire and others. Otherwise, our failure to

provide critical context - along with online paywalls, inaccessible language, and exorbitant tuition costs - will serve to help reproduce both public passivity and consequently our own dominated state.

With these problematics in mind, I embark on chapter 4, introducing the methodology of this study. This takes the form of a 2-phase qualitative-quantitative study, using empirical data to establish a theoretical context guiding the development of interviews with scholars across disciplines working on climate change issues, and then using analysis of these interviews to generate a larger-scale quantitative study that can be used to draw general conclusions about beliefs in the United States. This chapter reflects on the significance of using this mixed-methods approach and the theoretical basis for the samples chosen. It also introduces the central questions in both the survey and interview set of greatest concern to this study, focusing on the ways people imagine the relationship of climate change to corporate and economic elite power and to their own power to change society through a variety of means.

In chapter 5, I lay out the broad findings related to these central questions. I demonstrate that among both scholars and the public, there is only a weak connection between concern about corporate influence in government and climate change. While climate change scholars were universally well-informed and heavily engaged in climate change advocacy work, as expected, many climate change scholars did not present climate change primarily as a problem of hegemony or democracy, and most did not emphasize any need for extra-institutional social movement action. Most suggested ambitious policy solutions, but this was rarely accompanied by a problematization of the obstacles to these solutions or the possible strategic paths to overcome them. These findings were paralleled

in the public survey, which demonstrates strong public concern about climate change using some novel measures focused on public imagination of the future. It also demonstrates public support for a variety of ambitious and progressive policies - some of which have the potential for generating path-dependency toward greater effects by reducing elite power and amplifying public power - but little public support for extra-institutional tactics that might be necessary to generate sufficient pressure for these policies.

In chapter 6, I discuss these findings. Social movement literature supports a joint-effect model through which non-elite publics can influence policy. In the most broadly supported model, social movement action is most effective when accompanied by friendly public opinion and by elite allies in positions of power. My model of HEX hegemony supports the relevance of these joint phenomena, demonstrating that it is through just such a strategically diverse - yet coordinated - range of action that HEX hegemony is maintained. My data shows a significant gap between the kinds of policies people desire, and conscious support of this sort of broad-ranging coordinated strategy. Especially unpopular are extra-institutional actions like protest and labor action, while there is tremendous public support for consumer activism and voting - activities which, in the systemic model established, are unlikely to be effective if isolated from a broader strategy. In conclusion I articulate the possible strategic interventions that could be made on this basis to build consciousness and movement power - already embodied in the work of groups like the Sunrise Movement, the Indigenous Environmental Network, Justice Democrats, and the broader alliance for a Green New Deal - and address some of the fundamental limitations of this study and directions for future research.

Of course, this linear outline hides the messy process of my own thought and practice: My theoretical model constantly evolved throughout the process as it has been evolving throughout my life, informed not only by ongoing additional research but by all sorts of other influences from activist involvement to books to useful illustrations that occurred to me in the middle of restaurant shifts to be jotted in the margins of my server notebook. For the sake of my readers I have attempted to ensure that the written study here proves to be less messy than the reality.

Chapter 1. Ecology, Power, and the Anthropocene

Over the past decade, climate change has more and more come to be recognized as not just a physical problem, but a social one, generating a rising tide of discourse aimed at understanding its origins and the possibilities of its resolution. The root causes identified across the literature range from cultural patterns^{33 34} to psychological barriers³⁵, policy missteps³⁶ to religious cosmologies³⁷, structural economic imperatives³⁸ and more. Unsurprisingly, the most common framing of the social reality of climate change is light on the social - framing it as a technical issue and giving the impression that while dire, it is an unfortunate aberration from an otherwise unproblematic status quo. I call this the technical-functionalist frame. Beyond this approach, the most influential frames have been those constituting what scholars call the ‘epoch debates’, beginning with the notion of the Anthropocene, and proceeding through critical responses and new theories.

The epoch debates are concerned with how to name and understand the unprecedented impact of human activity on Earth systems as this impact is observable in the geological record. While the debates were spurred by the industrially-generated atmospheric changes producing our warming climate, the theorists of the epoch debates recognize these changes as one element of a larger global ecological crisis that also

³³Plumwood, V. 2005. *Environmental culture: The ecological crisis of reason*. Routledge.

³⁴Pendergraft, C. A. 1998. Human dimensions of climate change: Cultural theory and collective action. *Climatic Change*, 39(4), 643-666.

³⁵Hulme, M. 2009. *Why we disagree about climate change: Understanding controversy, inaction and opportunity*. Cambridge University Press.

³⁶Giddens, A. 2009. *Politics of climate change*. Polity.

³⁷Jenkins, W., Berry, E., & Kreider, L. B. 2018. Religion and climate change. *Annual review of environment and resources*, 43, 85-108.

³⁸Klein, N. 2015. *This changes everything: Capitalism vs. the climate*. Simon and Schuster.

involves the sixth mass extinction of species in Earth's history³⁹, global depletion of freshwater⁴⁰, habitat loss⁴¹, deforestation⁴², soil degradation⁴³, and the growing presence of synthetic toxins throughout the global ecosystem⁴⁴. Not typically included in this list, but nonetheless of critical importance to the crisis, is the tremendous loss of ecological knowledge as a consequence of the effects of colonization, ecological disruption, and genocide on Indigenous societies.

It is necessary at this point to offer a brief definition of what I mean by ecology and ecological crisis. Ecology is the study of the holistic system of interrelation between living and nonliving things: In other words, it is quite literally the study of everything, in interrelation with everything else. Even in its origins, and along with other 19th century developments in Western science, ecology began to break down dominant Western distinctions between humans and nature through attention to the inescapable reality of human impacts on wider systems of relations and those systems' impacts on humanity. Recognizing the insights of Indigenous cultures and scholars, contemporary Earth systems theorists, actor-network theorists and queer ecologies theorists, I seek to continue to challenge the notion of a separate nature, instead considering humans to be

³⁹Ceballos, G., Ehrlich, P. R., Barnosky, A. D., García, A., Pringle, R. M., & Palmer, T. M. 2015. Accelerated modern human-induced species losses: Entering the sixth mass extinction. *Science advances*, 1(5), e1400253.

⁴⁰Hanjra, M. A., & Qureshi, M. E. 2010. Global water crisis and future food security in an era of climate change. *Food policy*, 35(5), 365-377.

⁴¹Brooks, T. M., Mittermeier, R. A., Mittermeier, C. G., Da Fonseca, G. A., Rylands, A. B., Konstant, W. R., & Hilton-Taylor, C. 2002. Habitat loss and extinction in the hotspots of biodiversity. *Conservation biology*, 16(4), 909-923.

⁴²Woodwell, G. M., Hobbie, J. E., Houghton, R. A., Melillo, J. M., Moore, B., Peterson, B. J., & Shaver, G. R. 1983. Global deforestation: contribution to atmospheric carbon dioxide. *Science*, 222(4628), 1081-1086.

⁴³Oldeman, L. R. 1992. Global extent of soil degradation. In *Bi-Annual Report 1991-1992/ISRIC* (pp. 19-36). ISRIC.

⁴⁴Akimoto, H. 2003. Global air quality and pollution. *Science*, 302(5651), 1716-1719; Meybeck, M., & Helmer, R. 1989. The quality of rivers: from pristine stage to global pollution. *Global and Planetary Change*, 1(4), 283-309.

inseparably, intimately, and interdependently entangled in the full scope of relations, from our complex internal flora to the Sun that is our primary font of life-sustaining energy. Consequently there is no fixed 'nature' or fixed 'natural' ecology separate from humans. There are different ecologies - different possible ecosystems, different levels and spaces of analysis, different possible ways of relating - but none is more *natural* than another. In this sense, while climate change is caused by human activity, it is important to remember that this is no less 'natural' than the drastic recompositions of our atmosphere by the activity of previous lifeforms that produced the atmospheric mix in which our species drew first breath. Certainly the human gift of imagination and long-term planning renders a qualitative difference in the type of consciousness through which we mediate these changes - a difference that some actor-network theorists seem to downplay in an ontological flattening unnecessary to the larger project of recognizing the totally-networked and beyond-human reality of power and agency - but differences in quality or intensity of agency are not enough to separate human activity from that of other species, given that agency is not a fixed binary but a variable capability (as evidenced, for example, by my more limited capacity to make decisions prior to ingesting a daily cup of *coffea arabica* or some variation). Due to the longstanding reliance of the Western epistemic tradition on a strict distinction between humanity and nature, these observations threaten to destabilize any foundation on which claims of environmental benefit, damage, degradation, or sustainability can be made. This need not be so: the recognition of human interrelation with nonhuman systems and the fundamental naturalness of humans does not destabilize other normative concerns - our desires for full, free, and healthy lives and the consequent obligations these carry. These conditions, as

many Indigenous traditions have long recognized, require not just material plenty for humans, but ethical obligations - conscious ecological relations that are necessary to *sustain* the basis of material plenty for humans and all the species we are interdependent with for mental/physical well-being. This provides a normative basis for making empirically-informed distinctions between ecologically sustaining and sustainable systems - capable of reproducing well-being for us and all other beings that we are mutually interdependent with for the longest possible term - and degraded systems - incapable of reproducing this plenty. Ecologies of one kind or another will always exist - with or without humans - but there are empirically-supported distinctions to be made between practices that generate and sustain ecosystems that support complex life like us - what we might call “sapien-friendly” ecosystems, and those incapable of supporting complex organisms. It is on this basis that we can coherently discuss ecological sustainability, degradation, and crisis.

Equipped with these definitions, we can usefully embark on the task of exploring the dimensions and meaning of present-day global ecological crisis as addressed through the epoch debates. The differences among epoch theory positions have revolved around the political implications of how we name this time period in our geological history - as well as how we delineate when exactly this epoch begins, who is responsible for it, and whether it is indeed a novel epoch at all. These are essentially questions of what has been termed political ecology - a transdisciplinary field focused on the relationship between human society and everything relationally bound with it⁴⁵, especially with regard to, in the words of two scholars, “how social affiliations, differences, and inequalities are also

⁴⁵Robbins, P. 2011. *Political ecology: A critical introduction* (Vol. 16). John Wiley & Sons.

produced and reconstituted”⁴⁶. I use these epoch debates as a convenient conceptual nexus-point where broader cross-disciplinary debates about the political ecology of the climate crisis converge, in order to develop the political-ecological underpinning of my own arguments. In this chapter, I will examine the technical-functionalist frame, and following that, the Anthropocene, the Marxist “Capitalocene”, decolonial reframings from Indigenous Climate Change Studies and the Black Geographies, and theoretical traditions like social ecology and anarchism that problematize social hierarchy itself, tracing the emergence, strengths, internal logics, and potential limitations of each.

Identifying promising insights (and a few limitations) within several of these ecological crisis origin stories, I try to consolidate the strongest elements into a coherent new theory of the crisis, seeking to avoid some of the faulty historical assumptions and empirical issues of past attempts. This theory does not posit a ‘moment’ or progression of determinate historical stages, and tries to avoid reproducing the West and Western modernity as the only place where ecological crisis - or ecological agency of any kind - can or has emerged. I also attempt to avoid any overly deterministic formulation that offers no hope for escape other than mechanistic historical deliverance - nor any overly idealistic formula that, in harmony with the dominant ideologies of our time, tells us that changes of heart and mind without economic and political transformation will be enough to emerge from the rolling thunder of ongoing catastrophe.

Instead, I try to make the case that the common thread uniting the strongest theories of the ecological crisis is the ever-intensifying resource consumption that emerges from attempts to concentrate social power. Each of the 3 critical alternatives to the

⁴⁶Bauer, A. M., & Ellis, E. C. 2018. The Anthropocene divide: Obscuring understanding of social-environmental change. *Current Anthropology*, 59(2), 209-227.

Anthropocene model identify projects of social domination and resource concentration: Capitalism, settler-colonialism, and hierarchy itself. The environmental records of authoritarian socialist revolutionary projects, the tendency in capitalist societies of corporations to capture of state regulatory systems meant to restrain them, and the dynamics of settler-colonialism suggest that growing concentration of power in the hands of elites tends to generate social conflict that threatens the security of elites, spurring an ever-greater need for control, requiring intensified resource use and increased control over territory from which resources can be extracted. Fundamental to this understanding are observations from Latour and Foucault that power is not an abstract object to be possessed in one's hands, but something that only exists relationally and therefore relies on an interminable project of maintaining the compliance of those others through whose actions and decisions social power exists. As concentration of control over social power and resources extends, it simultaneously generates scarcity beyond itself in the spaces from which resources are drawn, at the same time deploying a range of new technologies of control. These processes encourage parallel projects of control to form, to reproduce, to come into conflict, and often to merge into power-project networks, some of which attain a dominant, or hegemonic, position over the societies in which they operate. This is a theory of symbiosis⁴⁷ - a biological process used carefully here as a metaphor for how political projects tend to come into mutually-beneficial relation with parallel projects

⁴⁷Frank, A.B. 1877. "Über die biologischen Verhältnisse des Thallus einiger Krustflechten" [On the biological relationships of the thallus of some crustose lichens]. *Beiträge zur Biologie der Pflanzen* (in German). **2**: 123–200;

Margulis, L., & Fester, R. (Eds.). 1991. *Symbiosis as a source of evolutionary innovation: speciation and morphogenesis*. MIT Press.

(while engaging in conflict with antagonistic ones), generating new hybrid social organisms in their pursuit of the means to fulfill desired objectives.

By looking at tendencies, incentives, desire, and the systems they generate, rather than one particular form of power or structure of domination, I seek to privilege the possibility for human agency in both perpetuating or overcoming these systems. Drawing on Marxist models of transformative and generative power struggle, Gramsci's dynamics of hegemony, Foucauldian conceptions of our integration in an omnipresent 'mesh' of power relations, Latour's actor-network theory, Robinson's explorations of the mythology of political order and the emergence of racialization and racial capitalism, Forbes' *wetiko* theory, and a range of anthropological and historical research, this model seeks to illustrate the interplay of 1) cultural, 2) military, and 3) economic power as they are realized through embodied human action and constructive of political and ecological relations. These three forms of power - which I reframe, in order to destabilize common assumptions as to their content, as the powers of 1) knowledge, 2) war, and 3) arrangement - constitute the three heads of a "hegemonic cerberus" explained and illustrated further on.

Mutually-amplifying symbiotic projects of social domination can and have arisen independently across variant human societies⁴⁸, each time constituting systems - often empires - characterized by strong internal pressures toward growth, racialization, patriarchy, warfare, slavery, and conquest. This recognition is not at all to deny the *specific* role of Europe's murderous and tyrannical incursions in African and Indigenous worlds and lives in the molding of the structures of the dominant world-system today, but

⁴⁸Currie, T. E., Turchin, P., & Gavrilets, S. 2019. History of agriculture and intensity of warfare shaped the evolution of large-scale human societies in Afro-Eurasia.

to examine a pattern in the power dynamic formative of, and extant beyond, Europe. This dynamic - what I call *carcinarchy*⁴⁹, for its tendency toward unstoppable growth and consequent destabilization of the biological systems that sustain complex life - threatens to perpetuate itself indefinitely in oscillation between deepening contradictions and self-aggrandizing internal remedies if it cannot be recognized in its fundamental form and destroyed.

Examining the system through the lens of the carcinarchal model suggests a possible antidote: a symbiotic merger of projects aimed at the restraint and redistribution of power - in a word, democracy, though one more fully realized than most contemporary examples - offering hope of futures beyond domination and growth. Looking through this lens allows us to make more sense of the dynamic complexity of our present moment, characterized as it is by the hegemonic contest between a still-dominant carcinarchal alliance - the High-carbon Energy complex (HEX) - and an emergent new carcinarchal power-network in the form of “climate capitalism” that is nevertheless entangled bodily (through common interests, institutions, and agents) with the HEX itself. Beyond this struggle of conjoined giants lies the ever-present possibility to confront both on more radical terms, with insurgent power in the form of an anti-carcinarchal, decolonial ecological democracy. But in order to justify the deployment of the theoretical model that would ground such an effort, we must first consider alternatives.

I. The Dominant Technical-Functionalist Frame: A theory without theory

⁴⁹“Carcin”, at once referencing the Greek “karkinos” and the Latin “carcer”, is meant to evoke carcinogenic substances, cancerous growths, and incarceration/enclosure, while “-archy” denotes a situation of rule by forces embodying these characteristics - ecological harms coterminous with uncontrollable growth, and enclosure of land and living beings.

In contrast to the theoretical framework of carcinararchy, focused on the open examination of the dynamics of contested power, is the presently dominant theoretical articulation of the climate crisis: The position that maintains a discursive separation of the climate crisis from other aspects of the ecological crisis and from deeper social patterns beyond the immediate cause and effect of greenhouse gas emissions and warming. We might call this theoretical framework technical-functionalism, the framing of climate change as a problem of managerial or scientific technique, devoid of organized political combat, history, or social roots. This includes scientific writing about the crisis that fails to situate the crisis within an asymmetric power struggle, government texts such as the Paris Agreement that pledge action without addressing the larger crisis or its institutional foundations, and the great many writings that position climate change as a problem of psychology, of motivation, or of consumer practice without specifying the structural forces generating immense pressures around what is possible within all of these fields.

While all writing aimed at helping resolve the crisis of climate change by necessity rests upon some kind of social-historical worldview, in the technical-functionalist body of writing these foundational assumptions are disguised within a purely instrumentalist research framework. An *open* articulation of the author's theoretical understanding of climate change as a social issue would be preferable to this framework for at least two reasons: First, because it aids the reader in their effort to understand the larger social projects within which the author is operating and that help to determine the consequences of their proscriptions, and second, because it provides a crucial reflexive exercise for the

author to understand themselves - helping to shake us as writers from complacent repetition of unexamined assumptions that might otherwise draw us, sleepwalking, into the technical maintenance of hegemonic social projects that themselves may be fueling the crisis at hand⁵⁰.

The consequences of these dynamics are evident enough in an examination of the IPCC report, perhaps the most widely-read scientific document on the subject of climate change and certainly the most highly-publicized. The latest complete synthesis report available⁵¹ (2014) is a towering feat in terms of the scope and detail of information presented. Claims are given a rating indicating the level of agreement between scientists with the claim and levels of confidence in the claim, and originate from diverse scientific institutions around the world. If we are to have any faith at all that this massive project of scientific synthesis is reliable in delivering on its stated intent (and evidence of its transparency and the rarity of scandal gives the impression that it is) the conclusions are damning: climate change is occurring, it's anthropogenic, and severe action must be taken to halt and reverse the flow of greenhouse gas emissions in order to avert catastrophe. However, the informationally dense 167 pages of the report reveal a stark absence of the *political*, of power.

The report presents information in the realms typically delimited to the physical sciences and the most anemic sectors of political science: Here are the physical dangers, here are their physical causes, here are the (unequivocally moderate) policy changes that

⁵⁰Habermas, J. 1984. *The theory of communicative action: Reason and the rationalization of society* (Vol. 1). Beacon press.

⁵¹IPCC. 2014. Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (Eds.)]. Geneva, Switzerland: IPCC.

must be made to avert them. There is virtually no mention of interests or inequalities - of who has power, of who has incentives to support or oppose solutions, of what tactics may be necessary to overcome their inevitable opposition. The single place that includes the lightest brush of the political is the section on exposure and vulnerability to the consequences of climate change (IPCC 2014 pg. 54). This is the exception that proves the rule. Here, and only here, is it acknowledged that human society today is characterized by inequality - by differentially organized access to power. Even then, this inequality appears to exist for no reason, free-floating in a void without history and itself not open to challenge or change.

No hint is made throughout the report that the same inequalities that differentiate human vulnerability may also be at play in generation of the crisis and in the struggle over its resolution, despite the obvious difference of interests implied by the acknowledged differential vulnerabilities. No mention is made in the entire report that a great juggernaut of for-profit corporations and state-owned enterprises, some of the wealthiest organizations on planet Earth, are existentially bound to the expansion of fossil fuel consumption. No mention is made of their electoral lobbying, of their influence and connections with politico-military power, of their propaganda apparatus and disinformation campaigns. No mention is made of corporations at all, or capitalism - or systemic racism, or democracy, or elections.

A long list of policy solutions is developed and explained, but it all seems to amount to so much fiddling on the margins of power while power lights the world aflame: None of the solutions proposed poses an immediate threat to the economic might and political influence of carbon-industrial hegemony. It is hard to imagine that the enormous carbon-

industrial enterprises and their allies operating across the planet will sit idly by and allow their unprecedented fortunes to be whittled away by little policy tweaks without bringing all their force to bear against these attempts. As the evidence suggests, they have done, and continue to do, just that.

The absence of power analysis is in an important sense unscientific, considering the importance of context in the establishment of any kind of truth. If we make the observation that “pigs can fly” without the essential qualification that they only “fly” when transported by cargo plane, we are making an unscientific claim not because the statement is incorrect, but because it omits directly consequential context. These omissions also detract from the scientific project if we consider scientific efforts to have any normative responsibility toward society to produce information that can be used to better the conditions of people’s lives. It is as absurd as a cancer diagnosis consisting of a vast explication of symptoms without ever once mentioning the disease. It’s as if it were written for another world entirely, some technocratic socialist utopia in which differences of power don’t exist at all, and in which describing physical processes and their dangers to human beings is enough to generate substantive and effective action because no one has any incentive to contest them.

Examples of the technical-functionalist frame abound in many areas of American society. Following the election of Joe Biden, the National Association of Manufacturers (NAM) released a report of their concern about climate change titled “the Promise Ahead”⁵², stating that “manufacturers embrace our role in helping to protect our planet and to build a sustainable and strong economy. The industry is already leading the way

⁵²National Association of Manufacturers. 2021. “The Promise Ahead”. Nam.org.

forward,” making no mention of their spending over \$150 million dollars over decades of lobbying against carbon emissions regulations⁵³. The landmark international Paris Agreement of 2015 makes no mention of specific policy, corporate power, or a larger ecological crisis or even the word ‘crisis’ - instead recognizing that historically countries have ‘contributed’ to climate change without any mention of why or in what context⁵⁴. In a study of the presentation of climate change in the news, Boykoff and Boykoff (2007) find that the journalistic norms operating within the culture of mainstream television and paper news media are themselves responsible for a misleading, overly “neutral” presentation of the issues. The vast majority of social scientific research on public opinion, investigated further in the next chapter, does not contextualize climate change within a broader ecological crisis or as resulting from systems and power structures that may themselves require transformation.

Considering the likely anticipated consequences of conforming with or breaking from technical-functionalist framing at individual and institutional levels, it is unsurprising that this frame is the most widespread. It is obvious that the representatives of nation-States or corporate bodies dominated by the influence of organizations bearing great responsibility for the global ecological crisis would have no incentive to incriminate themselves by publicly exercising any degree of critical systemic analysis. For the scientist, the professional norms of neutrality and disciplinary siloing within the academic world insulate the academic from controversy and threats to their career advancement while at

⁵³InfluenceMap. 2021. Big Tech and Climate Policy. [Influencemap.org](https://www.influencemap.org).

⁵⁴UNFCCC. 2015. Paris Agreement. In Report of the Conference of the Parties to the United Nations Framework Convention on Climate Change (21st Session, 2015: Paris).

the same time protecting the larger systemic interests of the governmental and philanthropic sources on which their financial security more or less depends.

None of this is to say that *the scientific evidence of the climate crisis itself* should be doubted on the basis of science's constant political imbrication. The opposite is true. A structural analysis of the powerful interests at work in global and national politics indicates that there is every reason to assume that the reality of the crisis is being understated rather than exaggerated. The well-documented history of the suppression of climate science from the 1970's to the Trump administration demonstrates this, as does the fact that with every new IPCC report released, it is admitted that the previous predictions of rate of change and scope of damage proved to be significantly more conservative than the emergent reality. As the climate crisis advances it forces a severe contradiction that can no longer be hidden. The glaring reality means that for the sake of maintaining the legitimacy of any of the dominant power structures today, something must be said. However, the fact of the crisis' systemic nature also means that without wresting social hegemony from the clutches of the network of institutions whose interest is to perpetuate the systems that generate the crisis, critical analysis of the crisis is not likely to be advanced within mainstream academic and political bodies.

II. Anthropocene Who? (and When?)

The Anthropocene - a neologism denoting a period in which humans ("anthropos") have permanently marked Earth's geologic history - has inarguably been an academically and culturally productive concept in terms of the sheer generation of creative work. It has

fueled the production of “several academic journals, conferences, dozens of books, and hundreds of articles, in newspapers, magazines, websites and blogs, as well as art exhibitions, novels,” and even a “heavy metal album”⁵⁵. As of this writing, a search on Google Scholar for articles containing the term, which only emerged within the discussion of climate change a bit over two decades ago, garners nearly the same amount of results as searching for articles containing the term “Abraham Lincoln”. Though the term was popularized by and continues to be widely attributed to an article in 2000 by earth-systems scientists Crutzen and Stoermer⁵⁶, other scholars have attributed an early coinage of the term and concept to Soviet geologist Aleksei Pavlov in 1928⁵⁷. The common attribution to Crutzen - mistakenly privileging an Anglo-European voice in the framing of an inherently planetary phenomenon - foreshadows some of the most pressing problems with the Anthropocene as a cultural project. Crutzen and Stoermer do acknowledge that the concept - if not the term - has precedents, notably in 1864 work by G.P. Marsh⁵⁸ and in the pioneering book “The Biosphere” by another Russian and Soviet geologist, Vladimir Vernadskii⁵⁹.

The essential argument, as Crutzen and Stoermer put it, is that in consideration of agricultural effects, chemical pollution, greenhouse gas emissions and “many other major and still growing impacts of human activities on earth and atmosphere,” it is “more than appropriate to emphasise the central role of mankind in geology and ecology by using the

⁵⁵ Sklair, L. 2017. Sleepwalking through the Anthropocene. *British Journal of Sociology* 68(4): 775–784.

⁵⁶ Crutzen, P. J., & Stoermer, E. F. 2000. The Anthropocene, *Global change newsletter*. 41, 17-18. International Geosphere–Biosphere Programme (IGBP).

⁵⁷ Brookes, A., & Fratto, E. 2020. Towards a Russian Literature of the Anthropocene. Introduction. *Russian Literature*, 114, 1-22.

⁵⁸ Marsh G. P. 1965. *The earth as modified by human action*. Belknap Press/Harvard University Press, Cambridge.

⁵⁹ Vernadsky V.I. 1998. *The biosphere*. Translated and annotated version from the original of 1926. Copernicus/Springer, New York.

term “Anthropocene” for the current geological epoch”⁶⁰. Geologists Lewis and Maslin concur with the reasonableness of adopting the Anthropocene Epoch as a new marker in the record, arguing that while in the past geological-scale time has been divided by global-scale changes such as meteor strikes and continental shifts, “human activity is now global and is the dominant cause of most contemporary environmental change. The impacts of human activity will probably be observable in the geological stratigraphic record for millions of years into the future”⁶¹. But if we are to demarcate a new section of time in the geologic record defined by “human activity” and the “central role of mankind”, the critical questions that emerge are: Who exactly played this role, and what role are we referring to - when?

In geology the problem of ‘when’ is posed in reference to the “golden spike” - a colloquial name for the Global Boundary Stratotype Section and Point (GSSP), a physical boundary marker placed between distinct geological stratum to mark stages on the geologic timescale⁶². Much has been written in an attempt to answer the question of where to place the Anthropocene’s golden spike. Lewis and Maslin commendably recognize the political implications of placement of the golden spike, writing that an early placement risks “normalizing” human-caused ecological changes, while a late placement puts blame on particular still-existing countries and groups that have disproportionately contributed to the present crises⁶³. Nevertheless they affirm their faith that ultimately geological evidence will decide the matter, and proceed to consider nine possible start dates for the Anthropocene Epoch, evaluating the evidence for each. These include the

⁶⁰ Crutzen & Stoermer pg. 16.

⁶¹ Lewis, S. L., & Maslin, M. A. 2015. Defining the anthropocene. *Nature*, 519(7542), 171-180.

⁶² Holland, C. H. 1986. Does the golden spike still glitter?. *Journal of the Geological Society*, 143(1), 3-21.

⁶³ Lewis and Maslin pg. 171.

great megafauna extinctions of 50,000 years ago, several distinct points in the origin and spread of agriculture, the “collision” of “new world” and “old world” societies, the industrial revolution, nuclear weapons detonations, and the spread of persistent industrial chemicals.

Each of these, crucially, is in fact human activity with global geological effects - but only a few of them produce a special type of evidence that meets the pre-established criteria identified by the authors. In their words, “our review highlights that only those environmental changes associated with well-mixed atmospheric gases provide clearly global synchronous geological markers on an annual or decadal scale, as is required to define a GSSP for the Anthropocene”⁶⁴. The authors set out to answer a question that they know is politically charged, but seem not to consider the political in the constitution of the prior criteria for evidence, the baggage with which they’ve departed on this endeavor. In doing so, they decide that only two points are viable. One is the deceptively-neutral sounding “Orbis” spike in 1610 marking a drop in global CO₂ emissions as forests throughout Turtle Island (North America) and South America overtook grasslands that had been previously managed by the activity of approximately 50 million people, killed by European colonization, disease, war, and enslavement. The other is the “bomb spike” of 1964 - the end-marker of a period of radioactive atmospheric contamination through an intensive period of nuclear testing primarily in the United States and the Soviet Union. This “bomb spike” marks what the authors tell us is widely recognized as a “great acceleration” in which the wastes of rapidly-expanded industrial production and chemical synthesis become ubiquitous.

⁶⁴ Lewis and Maslin pg. 177.

While the authors recognize the political symbolic power that both of these points deploy - a recognition beyond the usual foray of natural science writing - their effort nevertheless unintentionally highlights critical problems with the Anthropocene project itself. Some of these problems descend from the empiricist norms of the author's discipline: The need to choose just one point to define just one Anthropocene, specifically defined by changes within a narrow conception of synchronicity, rather than allowing for recognition of multiples, processes, and degrees, is a socially-constructed and politically fraught requirement aimed at efficiency but risking grave oversimplification. Lewis and Maslin in fact identify *nine* forms of what could broadly constitute Anthropocenes - but they have already decided, in accordance with disciplinary requirements, that there can only be one. This is reminiscent of arbitrarily discrete (and gravely consequential) distinctions between, for example, sexes⁶⁵, races⁶⁶, or species, the latter of which even Darwin himself pointed out is a term "arbitrarily given for the sake of convenience to a set of individuals closely resembling each other ... It does not essentially differ from the word variety, which is given to less distinct and more fluctuating forms. The term variety, again, in comparison with mere individual differences, is also applied arbitrarily, and for convenience sake"⁶⁷. While it is in the nature of language and thought that categories

⁶⁵Dunham, Y., & Olson, K. R. 2016. Beyond discrete categories: Studying multiracial, intersex, and transgender children will strengthen basic developmental science. *Journal of Cognition and Development*, 17(4), 642-665;

Kitzinger, C. 1999. Intersexuality: Deconstructing the sex/gender binary. *Feminism & Psychology*, 9(4), 493-498.

⁶⁶Somerville, S. 1994. Scientific racism and the emergence of the homosexual body. *Journal of the History of Sexuality*, 5(2), 243-266.

⁶⁷Menand, Louis. 2001. *The Metaphysical Club: A Story of Ideas in America*. Farrar, Straus and Giroux. pp. 123-124.

must be used⁶⁸, the establishment, permeability, and flexibility of categories has historically been shaped to the benefit of dominant cultural groups⁶⁹.

In its movement toward defining a singular new epoch based either in European colonial expansion, the European industrial revolution, or the nuclear tests of the United States, the Anthropocene also defines a singular agent of ecological history - Europe, the West - while naturalizing that agent's historical actions by proclaiming them the actions of humanity broadly. While Lewis and Maslin discuss the power relations and historical conflicts of various actors that are emphasized or downplayed by different points of departure, the points that they choose are defined by actions of the EuroWest while at the same time the basic concept of the Anthropocene in its very name already proposes that it is anthropos, humans, that are collectively responsible for the cascade of interlocking crises.

Siba Grovogui identifies “a double movement in Western moral thought involving presence (when European authorship matters to the legitimacy and purpose of discourse) and erasure (when European identity is necessarily concealed)”⁷⁰. Grovogui, writing about the way human rights are framed in EuroWestern discourse, argues that human rights are held up as a Western ideal while the mass murders and atrocities committed by Western regimes are not discussed in this context, contributing to a “celebration of Western modernity and liberalism [that] suppresses Western violence as a matter of

⁶⁸ Podd'iakov, N. 2012. Initial Forms of Categorical Thinking Processes in Preschool-Age Children. *Journal of Russian & East European Psychology*, 50(2), 75-79.

⁶⁹ Tucker, W. H. 2002. *The funding of scientific racism: Wickliffe Draper and the Pioneer Fund*. University of Illinois Press.

⁷⁰ Grovogui, S. 2006. Postcolonialism. In T. Dunne, M. Kurki, & S. Smith (Eds.), *International relations theories: Discipline and diversity* (pp. 229–246). Oxford University Press. Pg. 251.

political expedience⁷¹. Bikrum Gill convincingly argues that the Anthropocene performs this same double movement of simultaneous concealment and revelation⁷². This process might be what allows advocates of the idea to recognize global crises while shielding their faith in the Western nations, institutions, and industrial-technical regimes dominant in the contemporary social order from deeper critique.

Perhaps this is why advocates of the concept like Crutzen can at once describe this global crisis and, immediately, go on to express unqualified optimism about human potential to geoengineer a solution rather than to describe challenges to dominant institutions and distributions. These same conceptual features of a framing that sees the crisis, but fails to engage with the power dynamics of its historicity, allow lauded writers like Anthony Giddens to write broad surveys of climate change politics that nonetheless frame crises as a matter of psychological distance or apathy while paying scant attention to power and structure⁷³. See, for example, Giddens's brief dismissal of the ambiguously-defined "green movement's" concerns about "orthodox politics" and (to Giddens) off-topic fixations on participatory democracy - followed by many chapters of policy proposal that, rather than criticize corporate influence in politics, suggest stronger state-corporate partnership and a 'confluence' of state-corporate interests on climate change⁷⁴.

The Anthropocene project is to some degree preferable to the technical-functionalist (non)framing, because it offers an initial recognition of the climate crisis as one more symptom of a larger civilizational crisis. It marks one path toward systemic

⁷¹Grovogui pg. 252.

⁷²Gill, B. 2021. Beyond the premise of conquest: Indigenous and Black earth-worlds in the Anthropocene debates. *Globalizations*, 1-17.

⁷³Giddens, A. 2009. Politics of climate change. Polity.

⁷⁴Giddens 2009.

consideration. However, as an apparently empty vessel (though as Gill demonstrates, one that is deceptively pre-filled), the Anthropocene has made itself useful for a great many causes hoping to mobilize their own version of the how, why, when, and what to do that the Anthropocene must imply. The combination of a seemingly ‘open’ concept with its more subtle ideological loading makes it both popular and risky. Reviewing recent trends in the literature, Sklair describes those who advance a “good Anthropocene” focused on the promise of greater and greater human intervention into Earth systems. In other work, she argues that proponents of this “good Anthropocene” have transformed - through combination with advocates of sustainable development - into a Gramscian ‘historical bloc’ aimed at defending the status quo⁷⁵. The “good Anthropocene” seems particularly useful in the advance of this “climate capitalist” social force. Sklair and others are themselves representative of an alternative theoretical analysis proposing a “bad Anthropocene” interpretation, in which an Anthropocene is recognized, but its founding theorists are criticized for the absence of political-economy in their historical formulation of the Anthropocene and inattention to differences of power in its construction. It is to this tendency that we now turn.

III. The Capitalocene: Political-Economy and the “Metabolic Rift”

The most prominent critical strain of epoch theory to challenge the Anthropocene model has been the Marxist interpretation proposing the alternative “Capitalocene”.

While proponents of this theory agree with the premise that we have entered a distinct

⁷⁵Sklair, L. 2019. The corporate capture of sustainable development and its transformation into a ‘good Anthropocene’ historical bloc. *Civitas-Revista de Ciências Sociais*, 19, 296-314.

new geological epoch marked primarily by human activity, in stark contrast to the major currents of the Anthropocene, Marxist scholars challenge the universal nature of the Anthropocene's 'anthropos', arguing instead that today's global ecological crises are driven not by humanity as some undifferentiated whole, but by the capitalist system and its ruling class, the owners and directors of capital largely in cooperation with the capitalist-dominated State⁷⁶. Most people on Earth did not choose these crises and most people were drawn into them without their knowledge or consent - more or less coerced into cooperation with elite-driven economic projects that by their very nature are destructive of sustainably human-supporting ecologies.

Capitalism has, since its early history, been identified as a source of environmental problems by its critics. The Romantic tradition, itself the birthplace of the modern Western environmental movement, emerged in part as a response to the destruction witnessed during the beginnings of capitalist industrialization⁷⁷ and was also significant to the emergence of socialist ideas⁷⁸. Rachel Carson's *Silent Spring*, a momentous book in the formation of the contemporary environmental movement, called public attention to the dangers of synthetic pesticides and other chemicals, and met with fierce opposition from chemical companies that sought to discredit and ridicule Carson⁷⁹. Carson's book, emerging in the shadow of the McCarthy Red Scare, did not call for the overthrow of capitalism, but it was sharp in its directed attack on for-profit industry. Carson blamed

⁷⁶Malm, A., & Hornborg, A. 2014. The geology of mankind? A critique of the Anthropocene narrative. *The Anthropocene Review*, 1(1), 62–69.

⁷⁷Hiltner, K. 2019. *Writing a New Environmental Era: Moving Forward to Nature*. Routledge.

⁷⁸Foster, J. B. 2020. *The Return of Nature: Socialism and Ecology*. NYU Press.

⁷⁹Krupke, C.H.; Prasad, R.P.; Anelli, C.M. 2007. Professional entomology and the 44 noisy years since *Silent Spring*. Part 2: Response to *Silent Spring*. *American Entomologist*. **53** (1): 16–25.

“the gods of profit and production” in “an era dominated by industry” and “blinded by the dollar sign”⁸⁰.

Capitalocene theory has taken capitalism more directly to task, continuing the Marxist project of critical analysis of political economy and finding explanations for the ecological crises of the present in Marx’s account of the origin and fate of the capitalist system. Marx challenged the economic orthodoxy of his day, which held capitalism to be a natural outgrowth of human nature⁸¹, explanations that (like the dominant versions of the Anthropocene) both de-politicized and de-historicized the dominant system’s origins and justified its continued expansion. Marx rejected these explanations on the grounds that capitalist industry by necessity must employ a dispossessed class, proletarians, who have no means of survival except to sell their labor to capitalists, and therefore historically would not have originated voluntarily or naturally from the self-sufficient peasants that had previously composed the mass of the population⁸². He mobilized evidence for the transformation of the peasantry into the proletariat in records of the 15th-17th century expropriation of peasant lands and criminalization of the dispossessed peasantry by violent State force allied with commercially-interested elites. These elites sought the enclosure of the emptied “commons” land as private property for pastoral and agricultural commercial production - in the process generating a dispossessed proletariat that was to be the major source of labor for ever-expanding capitalist enterprise, while simultaneously transforming themselves into a class whose survival and reproduction depends upon capital accumulation in competition with other enterprises. This “primitive

⁸⁰Carson, R. 2002. *Silent spring*. Houghton Mifflin Harcourt.

⁸¹Smith, A. 1937. *The wealth of nations [1776]* (Vol. 11937). na.

⁸²Marx, K. 2007. *Capital: A critique of political economy*. Part VIII: Primitive Accumulation. Duke University Press.

accumulation” marked the beginning of the long history of violent processes of capitalist accumulation by which capital is unceasingly driven to extend control over land and people not yet absorbed into its systemic dynamics - dynamics which fundamentally require the transformation of ecological systems into raw materials, structures, machines, and agricultural operations.

Scholars of the Capitalocene recognize in this and many other elements of Marx’s work support for their contention that ecological crisis stemmed not from voluntary choices of the great mass of humanity, but from rank violence perpetrated by elites in the dispossession and forcible incorporation of the masses into the growth imperatives of private capital. An early leading figure in this effort as it applies to the epoch debates has been sociologist John Bellamy Foster, who looks to Marx’s original writings as well as those of later Marxist scholars for evidence of an ecological critique present in Marxian thought, contrary to the widespread depiction of Marx as an uncritically “promethean” advocate of industrialization. Foster argues that Marx’s concept of a ‘metabolic rift’ - a separation of humanity and [non-human] nature produced by capitalism, disrupting the cyclical flow of resources that sustainable ecologies depend on - lays the groundwork for ecological thought in the earliest writings of classical sociology⁸³. He also traces the influences of many Marxist scientists in the formation of modern ecological thought⁸⁴.

Jason Moore, directly advocating for the replacement of the Anthropocene framework with the Capitalocene, applies Marxian theories of the relations of value to describe how the shifts and appropriation of value in capitalist economics and the Cartesian mind/body,

⁸³Foster, J. B. 1999. Marx's theory of metabolic rift: Classical foundations for environmental sociology. *American journal of sociology*, 105(2), 366-405.

⁸⁴Foster, J. B. 2020. *The Return of Nature: Socialism and Ecology*. NYU Press.

society/nature divides help turn ecologies into “cheap nature” to be extracted and processed by capitalist industry into commodities for generalized consumption⁸⁵. He challenges the Anthropocene’s common attribution of a “start date” for ecological crises in the industrial revolution, arguing that evidence of a radical transformation of nature appears earlier, with the origination of capitalist relations rather than the take-off of industrialism⁸⁶.

Andreas Malm also raises questions about the attribution of the crisis to an industrial revolution without attention to power dynamics and class struggle, arguing that the rise of coal-fired steam power (setting the infrastructural stage for the rise of ‘fossil capital’, the fossil-fuel centric elements of the capitalist system) resulted not simply from a neutral pursuit of industrial efficiency, but because these systems provided greater managerial power over labor⁸⁷.

In addition to theoretical and historical work, there is a great deal of contemporary analysis of the climate crisis and the larger ecological crisis that lends support to the diagnosis of capitalism as the root systemic cause. The roots of the crisis in capitalist power are glaringly evident in the centralization of responsibility for emissions within the wealthiest upper strata of society and within a few dozen extremely powerful transnational corporate entities. Of the top ten largest corporations by revenue on the planet, seven are private or state owned fossil fuel corporations⁸⁸. Two are automobile

⁸⁵Moore, J. W. 2015. *Capitalism in the Web of Life: Ecology and the Accumulation of Capital*. Verso Books.

⁸⁶Moore, J. W. 2017. The Capitalocene, Part I: on the nature and origins of our ecological crisis. *The Journal of peasant studies*, 44(3), 594-630.

⁸⁷Malm, A. 2016. *Fossil capital: The rise of steam power and the roots of global warming*. Verso.

⁸⁸Fortune. 2019. “Global 500.” *Fortune Media Limited*. Fortune.com. Retrieved May 20, 2020 (<https://fortune.com/global500/2019/>).

manufacturers. According to the International Monetary Fund, all ten of these corporations had revenue in 2019 greater than the GDP of 143 national economies. Analysis of greenhouse gas emissions sources has shown that over 70% of emissions worldwide can be attributed to the economic activity of just 100 private and state owned fossil fuel corporations.⁸⁹ Researchers have even quantified the direct and outsized impact of these few corporations on worldwide temperature increases and sea level rise, providing evidence of the direct and catastrophic climate impacts of each organization's project of economic expansion.⁹⁰ Naomi Klein framed her book "This Changes Everything" around the premise that capitalism, at least in its neoliberal form, is at the root of obstruction of climate policy worldwide⁹¹ - and that great hope is to be found with the direct-action encampments attempting to halt fossil fuel extraction at its sources (what she terms, collectively, Blockadia). Naomi Oreskes and Erik Conway document the long history of fossil fuel industry funded efforts to hide science, mislead the public, and sow doubt about the science of climate change⁹². Corrie Grosse has documented community resistance to extreme energy extraction in the United States, describing the driving force of this extraction as the fundamental drive of capitalism to expand in pursuit of profit⁹³.

⁸⁹Griffin, P. 2017. The Carbon Majors Database CDP: Carbon Majors Report 2017. Climate Accountability Institute. Climateaccountability.org.

⁹⁰Ekwuzel, B., J. Boneham, M. W. Dalton, R. Heede, R. J. Mera, M. R. Allen, and P. C. Frumhoff. 2017. The Rise in Global Atmospheric CO₂, Surface Temperature, and Sea Level from Emissions Traced to Major Carbon Producers. *Climatic Change* 144(4):579–90.

⁹¹ Klein, N. 2015. *This changes everything: Capitalism vs. the climate*. Simon and Schuster.

⁹²Oreskes, Naomi and Erik M. Conway. 2010. *Merchants of Doubt*. New York, NY: Bloomsbury Press.

⁹³Grosse, C. J. 2017. *Working Across Lines: Resisting Extreme Energy Extraction in Idaho and California*. University of California, Santa Barbara.

Carrol⁹⁴, Ladd⁹⁵, and LeQuesne⁹⁶ have all developed analyses based around the Gramscian concept of hegemony - by which the fossil fuel industry builds and expands power over society through mechanisms of coercion and consent (and, LeQuesne's addition, compliance).

There can be no question as to the nature of capitalism as a system to exert tremendous pressure toward ecological destruction - and for capitalist institutions to wield State power, ideological power, and economic power to challenge environmentalist opponents and secure their extractive projects. Nevertheless, the Capitalocene explanation is not without its own contradictions. Some of these correspond to longstanding issues within Marxist theory - particularly the failure of highly developed industrial capitalist societies to proceed along the path toward revolution, the failure to account for the fundamental racial and gendered character of capitalism and what this means for the role of forces beyond economics, the mixed environmental record of actually-existing socialist societies, and the continued re-emergence of nationalism and fascism as major world-historical forces. These issues raise questions about how exactly capitalism relates to other movements within society and what the prospects and dangers are that present themselves to any contemporary movement seeking to undo this system.

The question of the environmental activities of actually-existing socialist societies is troubling for its *near total absence* from the Capitalocene literature. In the entirety of

⁹⁴Carroll, W. K. 2020. Fossil capitalism, climate capitalism, energy democracy: the struggle for hegemony in an era of climate crisis. *Socialist Studies/Etudes Socialistes*, 14(1).

⁹⁵Ladd, A. E. 2017. Meet the new boss, same as the old boss: The continuing hegemony of fossil fuels and hydraulic fracking in the third carbon era. *Humanity & Society*, 41(1), 13-36.

⁹⁶LeQuesne, T. 2019. Petro-hegemony and the matrix of resistance: What can Standing Rock's Water Protectors teach us about organizing for climate justice in the United States?. *Environmental Sociology*, 5(2), 188-206.;

LeQuesne, T. 2019. From Carbon Democracy to Carbon Rebellion: Countering Petro-Hegemony on the Frontlines of Climate Justice. *Journal of World-Systems Research*, 25(1), 15-27.

“Anthropocene or Capitalocene?” edited by Jason Moore, there is scarcely one mention of actually-existing socialism⁹⁷. His 318 page book *Capitalism in the Web of Life* makes no mention of socialism, communism, or ecological conditions in societies that have attempted to move beyond capitalist economics. Perhaps most telling, Foster’s 687 page masterwork “The Return of Nature”, subtitled “Socialism and Ecology”, deals extensively with the Soviet Union concerning the scientific relationship between British and Soviet Marxist scientists, but makes no mention of environmental realities in the USSR or any other socialist nation.

It could be argued, as it has been by previous generations of Marxists, that these societies are not ‘really’ socialist, and are actually, in some sense, still capitalist. Such a stance wouldn’t be without precedent or justification, given the prominent economic role afforded to private markets to some degree in every actually existing socialist society, and the organizational parallels between state-owned enterprises and privately-owned corporations. Even if this is the case for denying these societies as representatives of a ‘true’ socialism, it would behoove these authors to address this question directly, and to explain, given these extremely important historical anti-capitalist projects, on what terms they are defining capitalism and on what terms they envision a new alternative system if it is to differ from the major examples thus far. In my attempt to answer these questions I came across another article by Foster specifically focused on the ecological contributions of the Soviet Union as an example of socialist environmentalism⁹⁸. In this case, Foster does discuss the Soviet Union as a positive example - citing the presence of early

⁹⁷ Moore, J. W. 2016. *Anthropocene or capitalocene? Nature, history, and the crisis of capitalism.*

⁹⁸ Foster. 2015. *Late Soviet Ecology and the Planetary Crisis.* Monthly Review. [Monthlyreview.org](https://monthlyreview.org). <https://monthlyreview.org/2015/06/01/late-soviet-ecology-and-the-planetary-crisis/>.

environmentalists and conservation projects enacted in the heady early days of the revolution - but goes on to describe the destruction of these projects and the persecution, imprisonment, and murder of many of their chief advocates on behalf of Soviet head-scientist Lysenko. Foster does not address the theoretical implications of these events.

For substantial treatment of the state of the environment in socialist societies, I have turned to historians. “An Environmental History of Russia” by Josephson et. al. (2013) tells a radically different story of the relationship between socialism, capitalism and the environment than the one we would infer from the Capitalocene author’s writings. The communist project in the Soviet Union transformed Russia from an agricultural society run by incompetent royals into an industrial and military superpower to rival the United States - raising standards of living for millions along the way. However, this development came at tremendous environmental cost. Quite notably, this was not because environmentalism and ecological critiques of capitalism had not emerged yet when socialist revolutions took hold. On the contrary, environmental goals and particularly conservation were at the forefront of revolutionary agendas:

“Paradoxically, the socialist nations promised to use and protect those resources in the name of the people to limit those costs of industrialization. Indeed, the environmental problems in socialist nations such as China, the former Soviet Union, and the allies of Soviet power in Eastern Europe were, overall, much more significant than in capitalist nations where the motivation to develop them came largely in the pursuit of profit motive. One reason may be that the people under socialism were largely silenced by their leaders from speaking openly and

actively about environmentalism, whereas those in capitalist nations were able to engage in visible public campaigns to protect the environment owing to the expansion of civic culture throughout the twentieth century.”⁹⁹

Environmental sustainability in Communist Party-led China has fared no better. In “An Environmental History of China”¹⁰⁰, author Robert Marks gives a deep historical account of China’s ecological dynamics, observing that the Communist revolution came to power in a country already environmentally ravaged by centuries of extractive agriculture and land management practices, leaving a legacy of depleted soils and devastated biodiversity - but socialist-led developmental planning did much to exacerbate the problems. From land-use expansion to deforestation, dam-building, species eradication, and pollution, Communist Party-led socialism has proven to be as ambitiously environmentally destructive as its capitalist opposition. Contemporary fertilizers and fossil-fueled industry have allowed China to not only feed its people but to raise billions from poverty while building the nation into an economic rival of its former capitalist exploiters in the West. Unlike in Russia, China today sees an emergence of environmentally-focused activist groups, a vigorous environmentalist intellectual culture, and statements from the Party calling for progress toward an ecological civilization. However, so far, there is no clear indication that socialism with

⁹⁹Josephson, P., Dronin, N., Mnatsakanian, R., Cherp, A., Efremenko, D., & Larin, V. 2013. An environmental history of Russia. Cambridge University Press. Pg. 13.

¹⁰⁰Marks, R. B. 2017. China: An environmental history. Rowman & Littlefield.

Chinese characteristics is inherently an environmentally superior system in actual practice.

Socialist state treatment of Indigenous peoples has followed similar patterns of growth-driven displacement and resource extraction in socialist territories. Yakut, Nenets, Saami, and Komi people had historically lived within the larger claimed territory of the Russian Empire, but had experienced relatively infrequent and short-term contact with Russian and other explorers until “efforts to colonize the north commenced with vigor in the 1930s”. Indigenous peoples in China have also been displaced by massive industrial projects - notably the construction of large hydroelectric dams and the consequent flooding of previously settled river-valleys¹⁰¹.

The end of Communist Party rule and transition to quasi-liberal capitalism in Russia fared no better: Josephson et. al. find that in Russia “there have been new threats to sustainability, including the fire sale of resources, the restructuring of the economy that drastically reduced resources available for environmental protection, and President Putin’s decision ultimately to disband the Russian Federation’s Environmental Protection Agency. As for the panacea of public participation in environmental movements leading to improvements in the situation, citizens have lost interest in the environment since they have been distracted by political and economic problems. Nationalist movements based on environmental leanings contributed to the breakup of the Soviet Union, but “eco nationalism” has faded.” China has maintained Communist Party rule to this day,

¹⁰¹Fam, S. D. 2017. China Came, China Built, China Left?: The Sarawakian Experience with Chinese Dam Building. *Journal of Current Chinese Affairs*, 46(3), 119-158.

but has increasingly allowed for massive private corporations to operate - apparently at the Party's pleasure. This transition to privatized industry has not brought with it any clear movement to greater, or lesser, environmental destruction.

We see in these historical accounts a more complicated picture of environmental destruction and defense than that promoted by the authors of the Capitalocene: Not a monolithic fight between an environmentally destructive capitalism and an environmentally conscious socialism, but something more complex, involving the interplay of state power, industry, public concern and scientific research. These economic forms appear perfectly capable of following parallel tendencies toward expansion and ecological destruction. In the West, this destruction is driven primarily by capitalist industry, and capitalist control of state power presents significant obstacles for the progress of environmental scientists and activists. In Russia and China under socialist regimes, comparable destruction was driven by industry organized and operated under government control - and public action to address environmental damage has been hampered by State repression of political mobilization - especially in the Soviet Union, where scientific evidence of ecological issues couldn't even be communicated when prominent scientists were imprisoned or killed. These observations reveal a common thread across these societies: the suppression of environmental action by undemocratic forces focused on the consolidation of power - whether they be private corporate tyrannies - as Noam Chomsky describes modern capitalist enterprise - wielding outsized power over the State, or Communist Party

bureaucracies themselves wielding strict political control. Granted, there are other societies that have involved a strong element of socialism in their formation - notably the Nordic social democracies - and these have indeed some of the strongest environmental records carried by a nation-state society - but if this is what the authors of the Capitalocene mean by socialism, that should be spelled out more completely.

Critique and debate about the relationship between Marxism and ecology have also been active among Chinese scholars, as described in recent works by Wang Zhihe, Fan Mejun, and colleagues. Wang et. al. describe widespread enthusiasm particularly for Foster's work, which has experienced widespread response in the Chinese intellectual community and a well-received lecture series conducted by Foster in China - arriving in a context of recent government statements advocating for the collective goal of building an "ecological civilization". Some of Foster's reception has been critical - mostly on various grounds concerning its relation to Marx's original work and intent - however, Wang et. al. ask what I agree with them is the much more critical question: "If capitalism is the cause of ecological crisis, as Foster claims, why is the ecological crisis in socialist China more severe than in many capitalist foreign countries?" Wang and colleagues find an answer in what they call the "constructive postmodernist" tradition, which views ecological crises as stemming from the "poisonous modern worldview" common to "both capitalism and Marxism" that views human beings as radically separate from nature, prioritizes economic growth, and sets social development goals within a linear predetermined conception of historical development. The authors advocate

combining the strengths of ecological Marxism and constructive postmodernism by doing away with this worldview while holding on to Marxism's concern for uplifting the poor and critiquing capitalist exploitation.

While questions raised by these authors are critical and timely, the utility of their answer rests on its practical and theoretical specifics. If Marxism is too modern, which parts of it do we retain? What does constructive postmodern Marxism look like in practice? The emphasis on capitalism seems a bit too Marxist while the emphasis on worldview seems not Marxist enough. By situating the problem as one of worldview, we lose sight of the enormous pressure generated by political-economic context on the development of worldview. Marx was not incorrect in identifying the power of the ruling class to influence the dominant culture of the day. Cultures that are characterized by worldviews that view humans as participants in a network of all beings - many Indigenous cultures - have been developed in political-economic contexts defined by reliance on and intimate relationship with ecological surroundings¹⁰². Meanwhile, if we recognize Marxism's developmentalist and economistic roots, discounting the importance of culture and worldview, what exactly do we retain of it? If capitalism is not the only problem, is it merely a matter of combining socialism with a postmodern worldview? If so, and if we are to retain the importance of political-economy and its powerful co-constitutive (if not finally definitive) effects on culture, what exactly would the new required political economy look like? I would argue that a perspective that places enough emphasis on the important, interdependent powers

¹⁰²Grim, J. A. 2019. Indigenous lifeways and ecology. Available online. Accessed, 14.

of politics, economy, and culture must necessarily call into question the dictatorial political form of both capitalist enterprise and many forms of actually-existing socialist government.

The contradiction Marxism presents in its entanglement with Enlightenment-based Western philosophical traditions and its unclear position on the role of culture (vs. politics and economics) in the development of societies has also been apparent in the Marxist relationship with nationalism. Marxists, Marx and Engels among them, had an ambiguous relationship to nationalism, and to what degree it was part of the “rational” development of the class struggle. As Cedric Robinson observes in *Black Marxism*, in Marx’s *German Ideology* and the *Communist Manifesto*, Marx “stressed proletarian internationalism over nationalism, observing... that it was in the nature of the bourgeoisie to have national interests and retain them, and in the interests of capitalism to dissolve national interests both politically (through the formation of an international class: the proletariat) and economically (through the creation of a world system)” but later Marx identified some national liberation movements (Ireland) as predicate to the construction of an international socialist movement, while others (India, Mexico, and Italy) were not seen in this light¹⁰³. Over the course of the 20th century, as Robinson notes, Marxists appeared on pro-and-anti-nationalist sides of World War I and national liberation movements in the third world.

Robinson ties these contradictions to the Marxist failure to understand the process of racialization that preceded capitalism in Europe (through the differential incorporation and exploitation of various intra-European groups enabled by racializing mythologies

¹⁰³Robinson, C. J. 2020. *Black Marxism*, Revised and Updated Third Edition: The Making of the Black Radical Tradition. UNC Press Books.

originating with the bloodline myths of ancient ruling classes). Robinson finds that, contrary to the Marxist analysis of capitalism as a rationalizing force that would lead people to fundamentally rational-economic worldviews, or to the analysis that racism was an instrument by which capitalists justified their pre-existing economic projects, capitalism was born in processes of racialization and is, inherently, ‘racial-capitalism’ in its continued reproduction of and reproduction through the construction of racial mythologies. Though Omi and Winant (1994) also commit the error of ascribing the birth of contemporary racism to a post-facto *result* of the “policies and practices”¹⁰⁴ of European colonization and slavery beginning in the 15th century, the mechanics they describe in the theory of racial formation (if displaced in time and allowed a dialectic relationship with structure) resonate with Robinson’s description of a combined and evolving cultural, political, and economic project that itself structures material reality - as opposed to simply a product of material class relations.

Robinson also sees in the Black tradition of pre-colonial social life, post-contact resistance to enslavement, and 20th century national liberation movements ways of understanding the world that went beyond the Marxian stage-theories of history and that challenged the most fundamental assumptions about the relationship of people to culture to economics and ecology. These questions are critical to understand the ongoing entanglement of the forces defending fossil fuel economy with forces of white nationalism, evangelical Christianity, so-called ‘traditional’ masculinity, and settler colonialism in the present day. Capitalism appears no closer to the abolition of nationalisms or the ‘rationalization’ (economization?) of politics, as resurgent right-wing

¹⁰⁴Omi, M., & Winant, H. 2014. Racial formation in the United States. Routledge. Pg. 107.

nationalist and fundamentalist religious forces globally and white-nationalist movements domestically in the United States attest - and given the visible entangling of white nationalist politics as well as fossil fuel enterprises with the Republican party, the consequences of these movements for the fate of climate change are dire. We cannot afford, in this context, to “relegate consciousness to... a reflex of the relations of production” and underestimate the material force of cultural movements as, in Robinson’s observation, past Marxists have done. Capitalist domination is not the only form of social domination, nor the singularly foundational one.

Antonio Gramsci, one-time leader of the Italian Communist Party, contributed a great deal of writing to understand the role of culture in socialist struggle while himself imprisoned by Mussolini’s fascist regime. Gramsci expanded on a theory of social hegemony, already in circulation in the wider socialist movement, to explain the failure of socialist revolution to succeed in the advanced industrial societies. He offered the argument that while Russia in 1917 had offered conditions in which a dictatorial state, attempting to monopolize social power, had rendered a situation in which the “frontal attack” of a military war-of-maneuver had greater chances of success against an isolated and brittle autocracy, the advanced capitalist republics of Europe and the United States presented an entirely different situation. In these societies, where civil society had more space to operate freely, ruling-class power was spread through a network of social institutions, rendering itself both less visible and more stable. It was the task of revolutionary socialists in these societies to fight a “war of position”, securing cultural

influence and the allegiance of a network of dispossessed social classes in order to isolate and destabilize ruling class power¹⁰⁵.

It is important to note that Gramsci's prison writings were published in English during the 'cultural turn'¹⁰⁶ toward identity and discourse-centered theories of social change, and away from theories grounded fundamentally in economic relations. Much of the original writing that considered his work was used to argue for a fuller departure from the mechanistic Marxian emphasis on economic power. For example, Laclau and Mouffe use Gramsci's work as the point of departure to argue that the dialectic between identity and structure indicates the possibility for structures (relations of production and political structures) to be culturally transformed, rather than only the other way around¹⁰⁷. Later scholars of Gramsci's work have argued that he was consistent in the position that material economic power was critical in shaping mass culture¹⁰⁸ - and that therefore the central position of the working class as the revolutionary subject, and the centrality of working class control over the means of production, could not be abandoned. Still, both Gramsci's original work and Cedric Robinson's critiques raise questions about the

¹⁰⁵ "In Russia the State was everything, civil society was primordial and gelatinous ; in the West, there was a proper relation between State and civil society, and when the State trembled a sturdy structure of civil society was at once revealed. The State was only an outer ditch, behind which there stood a powerful system of fortresses and earthworks: more or less numerous from one State to the next, it goes without saying - but this precisely necessitated an accurate reconnaissance of each individual country." Antonio Gramsci in the Prison Notebooks, pg. 238, from Hoare, Q., & Nowell-Smith, G. 2005. Selections from prison notebooks. Lawrence & Wishart.

¹⁰⁶Green, Marcus. 2002. Concordance Table of Gramsci's Prison Notebooks. International Gramsci Society. http://www.internationalgramscisociety.org/resources/concordance_table/index.html
Rojek, C., & Turner, B. 2000. Decorative sociology: Towards a critique of the cultural turn. *The Sociological Review*, 48(4), 629-648.

¹⁰⁷Laclau, E., & Mouffe, C. 2014. Hegemony and socialist strategy: Towards a radical democratic politics. Verso Trade.

¹⁰⁸ Maisano, C. 2017. Politics Without Politics: A new book offers a flawed road map for rebuilding the Left. Jacobin Magazine. Retrieved from: <https://jacobinmag.com/2017/11/hegemony-how-to-gramsci-organizing>

fundamental conception of human relations with the material basis of production and reproduction and what these mean for our interpretation of our history and our future.

Robinson, in taking seriously what he identifies as the Black Radical Tradition of African-originating thought and social movement, emphasizes the ways that these forms of revolutionary praxis depart from (and are rendered invisible by) Marxist theory. For instance, the traditional confines of Marxist theory do not provide room for a satisfactory explanation of why African people who had been enslaved by Europeans held onto visions of the traditional worlds they came from and desired to return to - and in rebellion did not seek to *seize* the plantations, but to destroy them, or sometimes simply escape from them, and to reconstruct the traditional worlds they desired wherever they could, as in the “maroon” societies formed by escaped slaves in the bayou of the deep South or the slave societies formed throughout South America and the islands of the Caribbean¹⁰⁹. Rather than being mere “conjunctural” formations, to use Gramsci’s term for social projects that are incidental to rather than causal of historical social transformation, Robinson sees a continuity in the theory and practice of these movements and the ongoing world-historical forces of Black freedom struggles.

These experiences - if not disregarded because of theoretical inapplicability - fundamentally challenge the stages of historical development and economically-determined subjectivity found in many versions of Marxist theory. They call for a profound re-thinking of how people come to their own sense of themselves and what the relation of this subjective construction is to the relations of production. Robinson sees the failure of Marxist theory to acknowledge and account for these experiences - and to see

¹⁰⁹Price, R. (Ed.). 1996. *Maroon societies: Rebel slave communities in the Americas*. JHU Press.

the centrality of the Black experience in the generation of capitalism and its negation - as having deep roots in the philosophical traditions from which Marx springs and which do not depart from the racialist character of their societies. Critically, he traces these back even as far as the philosophers of Greek and Roman antiquity from whom European philosophy springs - in their denial of agency or humanity to women and slaves, and in the common regard of civilizational 'others' as uncivilized, undifferentiated barbarians. European philosopher's self-rootedness in the Athenian and Roman traditions, Robinson argues, has carried with it in both conservative and radical traditions this long legacy of forms of social thought that disregard the complex and dignified reality of others in order to uphold myths of ruling-class exceptionalism. The scar runs deep.

These critiques do not, however, render economic and political power, and emancipation in these realms, unimportant or conjunctural: People were still enslaved, suffered, and had to fight for freedom in conditions imposed through economic and military power. They still fought material fights - to escape their material confines, to seek a political-economic-ecological material basis to construct, protect, and reproduce their rebel societies. The departure is located in the meaning of these conditions for their own sense of self and the trajectory of their struggle: Rather than being motivated primarily by *economic* self interest, or following a teleological plan according to stages of development, people held, nourished, and deployed their own visions based on an entirely different cosmology. In doing so, their actions trouble the notion that history is driven by the struggle of predetermined economic subjects toward a predetermined end *primarily* defined by its economic form.

Like Robinson, I do not wish to deny the fundamentally tyrannical and destructive nature of capitalism. Nonetheless, the dominant realizations of the Marxist tradition have historically been limited in their theorization of humanity in its whole self with respect to the critical importance of culture and human agency, and in the conceptualization of everything beyond humanity as so much dead stuff - instead prioritizing narrowly conceived economic relations as the primary determinant field of social power. This limitation is linked to the de-prioritization of race and racialization, Black and Indigenous experiences, and the failure of Marxism traditionally to challenge the systems driving settler-colonialism and ecological destruction. In practice, many regimes dedicated to Marxist projects and the abolition of capitalism have deepened this destruction. The ecological crisis, rather than reinforcing Marxism, calls its essential skeletal structure more deeply into question, revealing tendencies in theory that are entwined with tendencies in real-world practice toward autocratic political control and consequent destruction of outside human groups and ecologies with the same brutality exhibited by capitalist societies. These tendencies do not appear to have yet been sufficiently explored by advocates of the Capitalocene epoch-frame - leaving unexamined paths to a theorization of ecocide that both sufficiently problematizes capitalism and reaches for understandings of the crisis that go beyond capitalism.

IV. Decolonizing Epochs: Indigenous Worldings and the Plantationocene

In the influential 1996 essay “The Trouble with Wilderness”, William Cronon challenged popular understandings of “wild” nature - calling attention to the fact that

what many viewed as “virgin” wilderness was in fact land that had been tended and managed by Indigenous inhabitants for many thousands of years¹¹⁰. Through this observation, Cronon critiques the very notion of the wild and wilderness as places untouched by human hands, arguing that these are largely fictitious. Instead, humans have always been part of nature, and we should discard our inherited myth of separateness and as an inherently corrupting influence in favor of embracing our responsibility and interdependence with the natural world. Scholar of literature Kenneth Hiltner makes a similar argument in his book *Writing a New Environmental Era: Moving Forward to Nature*. In this book Hiltner argues that “back to nature” sentiments are not only ahistorical - because there has never been an untouched nature to go back to - but also harmful, leading people to uncritically re-inhabit rural areas in the form of suburban development, producing car-dependence and sprawl¹¹¹.

These ideas raise truthful and important challenges to dominant Western modes of thinking about humans and the rest of nature. But they also risk perpetuating some of the same myths of the Anthropocene writ large. Through what is said, and what is not, they risk performing the same “double movement” that Grovogui identifies as common to Western moral thought and that Gill applies specifically to the Anthropocene: By destabilizing the human/nature dichotomy, human re-making of the world is recognized and naturalized, but critical differences within the collective category ‘human’ and human power relations are erased. Because EuroWestern forces (and white, elite, capitalist forces) are globally dominant, flattening distinctions between forms of human

¹¹⁰Cronon, W. 1996. The trouble with wilderness: or, getting back to the wrong nature. *Environmental history*, 1(1), 7-28.

¹¹¹Hiltner, K. 2019. *Writing a New Environmental Era: Moving Forward to Nature*. Routledge.

re-making without emphasizing difference, history, and problematizing power may privilege the forms of world-making that have given rise to crisis in the first place.

Are the world-making projects of these dominant forces, the different ‘natures’ that the world’s current elites produce, not meaningfully distinct from, for instance, those of Indigenous peoples? Hiltner rightly argues against a romanticization of Indigenous societies as inherently more ecologically sustainable by pointing to the mass extinctions in Late Pleistocene North America due to over-hunting, Indigenous grassland-maintenance and controlled burning practices in the American Northeast, and early Eurasian deforestation featured in the *Epic of Gilgamesh*.

Hiltner’s warnings against a romanticization of Indigenous people, and a projection of Western anxieties onto them, are important. However, the consolidation of these disparate practices which vary tremendously across time, place, and forms of political-economic organization, risks committing a similar but reversed mistake. The evidence suggests - as Hiltner says - that we cannot paint all Indigenous societies around the world with a broad brush, or categorize all societies dichotomously as either sustainable or not. At the same time, it would be inaccurate not to recognize the tremendous success of many Indigenous societies in maintaining thriving ecosystems over millennia while other civilizations (particularly expansion-driven agriculturalist societies and the industrial civilizations following in their footsteps) did much more significant damage to their material subsistence base in a short time. Indeed, by comparison with the societies that colonized them, most Indigenous societies have far superior ecological records. One recent study, combining global maps of human population with land-use data over 12,000 years, along with contemporary maps of biodiversity data, demonstrated that while three

quarters of the terrestrial Earth have indeed been shaped by human habitation, current biodiversity losses “are caused not by human conversion or degradation of untouched ecosystems, but rather by the appropriation, colonization, and intensification of use in lands inhabited and used by prior societies”¹¹². Studies of pre-Columbian land use in the Amazon Basin show patterns of human use that seem to have enhanced, rather than damaged, total biodiversity¹¹³.

None of this can come as a surprise to Indigenous scholars, who have long argued that Traditional Ecological Knowledge (TEK) is of paramount importance for understanding how humans can relate sustainably with their nonhuman counterparts. Winona LaDuke, scholar, activist, and member of the Ojibwe nation, argues that the spirituality-and-evidence-based TEK represent “the clearest empirically based system for resource management and ecosystem protection in North America”, and that Indigenous knowledge “surpasses the scientific and social knowledge of the dominant society in its ability to provide information and a management style for environmental planning”¹¹⁴. While some might object to LaDuke’s combination of spirituality and evidence into one system, it is important to remember that many spiritual tenets of Indigenous societies - such as the recognition of all beings as relatives - have also come to be supported by the dominant theories of Western empirical science, despite pre-dating those theories by some millennia.

¹¹²Ellis, E. C., Gauthier, N., Goldewijk, K. K., Bird, R. B., Boivin, N., Díaz, S., ... & Watson, J. E. 2021. People have shaped most of terrestrial nature for at least 12,000 years. *Proceedings of the National Academy of Sciences*, 118(17).

¹¹³McKey, D., Rostain, S., Iriarte, J., Glaser, B., Birk, J. J., Holst, I., & Renard, D. 2010. Pre-Columbian agricultural landscapes, ecosystem engineers, and self-organized patchiness in Amazonia. *Proceedings of the National Academy of Sciences*, 107(17), 7823-7828.

¹¹⁴LaDuke, W. 1994. Traditional ecological knowledge and environmental futures. *Colo. J. Int'l Env'tl. L. & Pol'y*, 5, 127.

It is easy to imagine possible explanations for the superiority of ecological knowledge originating from land-based cultures compared to knowledge systems based in expansionist settler-colonial agricultural societies. Observation and experiment are recognized in many societies around the world as effective techniques for knowledge gathering. If a society spends thousands of years directly depending upon a biodiverse ecosystem, learning about its ecological relationships, it stands to reason that they would develop sustainable systems. For societies based on expansion and colonization - on the spread of a system of sustenance based on a small, homogeneous set of species and technologies that must replace whatever they come into contact with - there is little incentive to 'learn' complex ecosystems except to the extent that they can be subjugated to the expansionist project. In this sense contemporary biological and ecological sciences aimed at sustainability can indeed be seen as a look "back" to what were previously the dominant motivations of ecological knowledge systems: long-term sustainability.

Robin Wall Kimmerer, biologist and member of the Citizen Potawatomi nation, argues just this - that Traditional Ecological Knowledge extends and supplements these scientific practices, while also providing a critical model that differs in essential ways¹¹⁵. In recognizing the enormous value and deep histories of indigenous ecological knowledge systems, TEK is strongly resonant with the notion that human relations with and transformation of non-human systems are not new. This calls into question the basis of the Anthropocene: If humans have always been reshaping the world, and have often been conscious of their relationship with their surrounding ecological systems, how can we put any start-date to a point when human reshaping of the environment began? At the

¹¹⁵Kimmerer, R. W. 2002. Weaving traditional ecological knowledge into biological education: a call to action. *BioScience*, 52(5), 432-438.

same time, how can we not recognize that there are profound differences between the ways that different human groups have transformed their environments and themselves across time and place - and that there are vast differences in how different forms of ecological relation have contributed to the contemporary ecological crisis?

It is on the basis of these questions that the decolonial interventions into the epoch debates are made. One crucial area of intervention has been Indigenous Climate Change Studies (ICCS), led by indigenous and allied scholar-activists inside and outside of the formal academic community. Potawatomi scholar-activist Kyle Whyte summarizes three major projects of the greater ICCS movement as follows: Advancing the argument that climate change is an intensification of a particular kind of environmental change rooted in settler-colonialism, renewing indigenous knowledge systems like TEK as a critical element of indigenous responses to climate change, and the Indigenous imagining of climate change futures “(a) as societies with deep collective histories of having to be well-organized to adapt environmental change and (b) as societies who must reckon with the disruptions of historic and ongoing practices of colonialism, capitalism, and industrialization”¹¹⁶. Geographer Andrew Sluyter has documented how the project of European settlement and colonization in the Americas required the dispossession of Indigenous peoples and the transformation of landscapes to accommodate settler forms of territorial control, agriculture, and resource extraction¹¹⁷ crucial to the contemporary regime of fossil-fuel intensive industrialization. Whyte emphasizes that the dispossession

¹¹⁶Whyte, K. 2017. Indigenous climate change studies: Indigenizing futures, decolonizing the Anthropocene. *English Language Notes*, 55(1), 153-162.

¹¹⁷Sluyter, A. 2001. Colonialism and landscape in the Americas: Material/conceptual transformations and continuing consequences. *Annals of the Association of American Geographers*, 91(2), 410–429. <https://doi.org/10.1111/0004-5608.00251>

of Indigenous peoples and the destructive transformation of established ecosystems are not separate projects: The destruction of ecological systems that had sustained Indigenous people was critical to starving, isolating, and dispossessing those people who had thousands of years of established presence in the colonized lands¹¹⁸.

This is obvious in the history of the Chumash territory where I was born, in the Spanish imperial projects of damming the socially, politically, and economically vital creeks, and conversion of grasslands and oak forests to cattle pasture, as first steps in the colonization of the land and the subjugation of the Chumash¹¹⁹. Dakota scholar Kim Tallbear calls attention to the link between the destruction of humans and nonhumans together through colonization, recognizing that the genocide of Indigenous peoples was part and parcel of the genocide of the nonhumans that are the kin humans depend on to survive¹²⁰. This is strongly evident in the infamous genocide of the American buffalo committed by U.S. armies in order to “cut the heart from the plains Indians economy”¹²¹. I’m struck by the way that these analyses resonate with core ideas of Marxism if it is divorced from vulgar, mechanistic, or progressive stage-theory interpretations: Where Marx saw that societies cannot be divorced from their material-economic basis - because these are mutually-constitutive - Indigenous scholars and historians expand this beyond a narrow materialist scope to recognize that societies are interdependent with an ecological mesh of relations with other living and nonliving beings, rather than a lifeless “economic

¹¹⁸ Whyte 2017, pg. 154.

¹¹⁹ Dartt-Newton, D., & Erlandson, J. 2006. Little choice for the Chumash: colonialism, cattle, and coercion in Mission Period California. *The American Indian Quarterly*, 30(3), 416-430.

¹²⁰ TallBear, K. 2016. Making love and relations beyond settler sexualities. *YouTube. Social Justice Institute, University of British Columbia*, 55, 39.

¹²¹ Smits, D. D. 1994. The frontier army and the destruction of the buffalo: 1865-1883. *Western Historical Quarterly*, 25(3), 312-338.

base”. This suggests that the roots of ecological crisis must be sought not in a shift in ideas which will produce material changes, or a shift in material-economic relations which change ideas, but in the transformation of *a holistic system of ecological relations* which are cultural and physical entanglements with other living and nonliving beings: an ecological paradigm shift, observable in settler-colonial projects, that is at once epistemological and physical, political and cultural, human and beyond-human.

Geographers Heather Davis and Zoe Todd argue directly for the conceptual relocation of the Anthropocene’s start date to the colonization of the Americas, rooted not only in the physical ecological transformations that were integral to the colonial project, but also in the erasure of difference and imposition of sameness in thought, ecology, and technology through “genocide and forced integration”¹²². In this they draw on the work of Jamaican philosopher Sylvia Wynter, who wrote of the ways that the categorical conception of “Man” was crafted through projects of exclusion that considered ways of thinking and being outside of the dominant emerging European cosmology to be inferior and excluded from humanity¹²³. They also proceed from the work of indigenous theorists such as Anishinaabe and Haudenosaunee scholar Vanessa Watts, who explains how what she calls the “Indigenous place-thought” of not only her own nations but “a majority of Indigenous nations” represents a radically different, land-based and locationally-specific form of knowing, in which our thought and bodies are mutually composed of and with the land that sustains us. Watts argues that place-thought has been repressed, not only

¹²²Davis, H., & Todd, Z. 2017. On the importance of a date, or decolonizing the Anthropocene. *ACME*, 16(4), 761–780.

¹²³Wynter, S. 2003. Unsettling the coloniality of being/power/truth/freedom: Towards the human, after man, its overrepresentation—an argument. *CR: The New Centennial Review*, 3(3), 257–337. <https://doi.org/10.1353/ncr.2004.0015>

through intellectual settler-colonial movements but by the destruction of the land relationships themselves¹²⁴. In this she also sees the colonial impositions of gender, calling attention to the ways the exploitation of the Earth and the exploitation of Indigenous women are one and the same, as the people and land are co-constructed, and the forces of gendered violence are the same as those of ecological violence. These cultural/physical dispossessions and displacements are seen by ICCS scholars as fundamental to the emergence and world-dominance of the social systems generating ecological crises today. Davis and Todd also reference the pedagogical work of Cutcha Risling Baldy, a Hupa, Yurok and Karuk scholar who uses the zombie-apocalypse franchise *The Walking Dead* to help students understand that, in contravention of the assumptions of other epoch framings, an ecological and social “end of the world” has already occurred for Indigenous peoples who, today, live in the aftermath of the destruction of their many worlds¹²⁵.

A parallel and symbiotic decolonial intervention into the epoch debates has been articulated in the framework of the “plantationocene” and critiques from the Black Geographies more generally. Although previous scholars in the tradition of the Black Geographies had focused on the plantation as a foundation for the dominant power structures today¹²⁶ the term plantationocene originated in a 2014 interdisciplinary

¹²⁴Watts, V. 2013. Indigenous place-thought and agency amongst humans and non-humans (first Woman and Sky woman go on a European world tour!). *Decolonization: Indigeneity, Education and Society*, 2(1), 20–34.

¹²⁵Risling Baldy, Cutcha. 2014. On telling native people to just get over it, or why I teach about the *Walking Dead* in my Native Studies classes. Accessed January 2016: <http://www.cutcharislingbaldy.com/blog/on-telling-native-people-to-justget-over-it-or-why-i-teach-about-the-walking-dead-in-my-native-studiesclasses-spoiler-alert>

¹²⁶McKittrick, K. 2011. On plantations, prisons, and a black sense of place. *Social & Cultural Geography*, 12(8), 947–963. <https://doi.org/10.1080/14649365.2011.624280>, and

Wynter, S. 1971. Novel and history, plot and plantation. *Savacou*, 5, 95–102.

conference discussion¹²⁷, and the concept of the plantation as the base model of today's dominant ecocidal social forms was dealt with extensively in Anna Tsing's *Mushroom at the End of the World*¹²⁸. Tsing explains how the logic of the plantation - the scalability of a relatively simple, homogenous, and controlled ecosystem designed for narrow purposes, combined with the interchangeability of the component parts and geographic locations - is the root model of the dominant form of capitalism today. In doing so Tsing also uses rich ethnographic investigation to support her contention that we must not understand capitalism as a single homogeneous system, but one differentiated into many capitalisms offering different possibilities. Tsing offers the forests which sustain the matsutake mushroom industry as an alternative - a form of 'salvage capitalism' whose logic runs against that of the plantation because it relies on the maintenance of healthy and diverse forest ecosystems. Donna Haraway shares many of Tsing's diagnoses in her characterization of the plantationocene, and also, following in the footsteps of the Actor-Network Theory advanced by Latour, Akrich, Callon, Law and others¹²⁹ Haraway emphasizes the "sympoetic" co-making of the plantation through networks of "sugar, precious metals, plantations, indigenous genocides, and slavery, with their labor innovations and relocations and recompositions of critters and things sweeping up both human and nonhuman workers of all kinds"¹³⁰.

¹²⁷Haraway, D. 2015. Anthropocene, capitalocene, plantationocene, chthulucene: Making kin. *Environmental humanities*, 6(1), 159-165.

¹²⁸Tsing, A. L. 2015. *The mushroom at the end of the world: On the possibility of life in capitalist ruins*. Princeton: Princeton University Press.

¹²⁹Muniesa, F., 2015. "Actor-Network Theory", in James D. Wright (Ed.), *The International Encyclopedia of Social and Behavioral Sciences*, 2nd Edition, Oxford, Elsevier: vol. 1, 80-84.

¹³⁰Haraway, Donna. 2016. *Staying with the Trouble: Making Kin in the Chthulucene*. Durham: Duke University Press. p. 48

Other scholars have taken up the plantationocene epoch framework, but have challenged its initial formulations as over-focused on the plantation as a site of human/nonhuman interaction rather than as a site of racialization and power struggle. In the words of Davis et. al., “[Haraway and Tsing’s] multispecies framing minimizes the role of racial politics and leads to a flattened notion of “making kin” that is inadequate for the creation of more just ecologies in the plantation present”¹³¹. A more adequate writing, they contend, “demands an attention to Black ecologies as innovative practices of resistance and kinship. Plotting within and against the plantation is a practice of cultivating life and kin that challenges the intertwined death-dealing logics of racism and ecocide.” Gill argues that “the plantationocene, in its initial articulation, becomes complicit in concealing how racialized power, forged first as a mechanism of control over enslaved Africans, constitutes an irreducible condition of possibility for the specific colonial- capitalist human/nonhuman distinction underpinning planetary ecological crises”¹³². Kathryn Yusoff addresses this inadequacy by providing her own ‘plantationocene’ framing that explicitly centers processes of racialization. Her “Billion Black Anthropocenes (or None)” calls us to remember the former and ongoing man-made apocalyptic epochs inflicted on Indigenous and Black people in the course of the colonial and extractive projects through which the industrial mechanisms of the climate crisis were created¹³³. Yusoff sees in the Anthropocene an erasure of the origins of the atmospheric transformation in slavery - and the dispossession of people from the land and

¹³¹Davis, J., Moulton, A. A., Van Sant, L., & Williams, B. 2019. Anthropocene, capitalocene,... plantationocene?: A manifesto for ecological justice in an age of global crises. *Geography Compass*, 13(5), e12438.

¹³²Gill, B. 2021. Beyond the premise of conquest: Indigenous and Black earth-worlds in the Anthropocene debates. *Globalizations*, 1-17.

¹³³Yusoff, K. 2018. *A billion black Anthropocenes or none*. U of Minnesota Press.

from their subjective existence as human beings central to the project of slavery. Yussuff ties this to the ongoing refugee crisis, expanding as climate change progresses. Yussuff identifies in this a continuation of the “billion anthropocenes” built through the labor of and inflicted upon the bodies of Black and Indigenous people. Murphy and Schroering also promote the practice of ‘thinking with the Plantationocene’, recognizing in it the confluence of the interdependent projects of colonialism, racialism, and capitalism in the global ecological shifts proceeding from colonial contact¹³⁴.

In “Beyond the Premise of Conquest”, professor of political science Bikrum Gill uses a collection of critiques from these decolonial schools to demonstrate the shortcomings of both the Anthropocene framing and its Capitalocene alternative. He shows how the theories emergent from the Black Geographies and ICCS call into question the essential “Eurocentric basis of both theoretical propositions,” challenging the way each of these frames reproduce “an all-consuming European agency in different ways, ignoring and marginalizing the central role of Indigenous and Black people in both their relation to the ecological world-system and the emergent settler-colonial world order”¹³⁵. The Capitalocene, though commended for its critical attention to power and difference, nonetheless replicates the Anthropocene’s narrow focus on Europe as the only place in which human re-shaping of the more-than-human world occurs, by exceptionalizing the same historical period (the European industrial revolution) as the first instance of human alteration of our planetary systems. Capitalocene perspectives also downplay the relations between dominant systems and Black and Indigenous people in the formation of the rise

¹³⁴ Murphy, M. W., & Schroering, C. 2020. Refiguring the Plantationocene. *Journal of World-Systems Research*, 26(2), 400-415.

¹³⁵ Gill, B. 2021. Beyond the premise of conquest: Indigenous and Black earth-worlds in the Anthropocene debates. *Globalizations*, 1-17.

of capitalism, and the central role of racialization in the production and maintenance of the dominant systems. Echoing Robinsons's critiques above, this is consistent with Marxism's traditional relegation of Black and Indigenous experiences to the historical margins, side-shows to the supposed real drama enacted by the leading actors: Capital and Proletariat.

Undoing this unceremonious and ahistorical erasure by bringing recognition to Black and Indigenous people's place in the human experience is Bikrum Gill's project in "Beyond the Premise of Conquest". Gill builds on the Black Geographies and ICCS traditions by exploring how the social structures defining the global systems implicated in ecological crisis were formed not simply by European subjects acting upon passive Black and Indigenous objects, but through the agential thought, activity, and lifeways of all these groups prior to and then within the colonial encounter. Gill pushes our attention to the "prior", moving backwards in time past conquest, to emphasize the profound import of what he calls Black and Indigenous "earth-worlding" - the "social-geological co-constitution of earth systems" that colonized people practiced extensively in their own societies to build sustaining life-worlds for thousands of years before any colonial encounter. These life-worlds, to echo Yusoff, represent yet billions more Anthropocenes whose combined weight can topple the myth of the unitary original.

Gill employs the subjective frame of Wilderson that sees the settler figure and slave-master figure as a co-constituted master/settler¹³⁶ (in recognition of the interdependence of these projects and concomitant subjectivities) - and proceeds with Tiffany Lethabo

¹³⁶Wilderson, F. 2010. Red, white & Black: Cinema and the structure of U.S. antagonisms. Duke University Press.

King's emphasis on the formation of these figures as the settler/master-to-be¹³⁷. This attention to the originary processes of these subjectivities is complemented by Mary Louise Pratt's focus on the 'contact zone' as a place of formative encounter¹³⁸. This emphasis on contact, in place of conquest, "reverses the norm of European agency as the principal generative force by instead foregrounding how contact, in its originary moment, expresses the dependence of the settler-to-be/master-to-be on the earth-worlding capacity of Indigenous and Black peoples"¹³⁹. Prior to encounter with the settler/master-to-be, Black and Indigenous peoples had cultivated countless sustaining life-worlds through their own practices of earth-worlding

In the colonial encounter, these life-worlds presented a situation of dependency for the settler/master-to-be. The settler/master-to-be could not survive in new ecologies without these richly cultivated relations, the humans and non-humans who composed them and thrived with them, and the knowledge necessary to enjoy and gain nourishment from them. Fanon tells us that man is always "in motion", toward the world and to other human beings, and that these motions can take the form of aggression or the gift of supportive love¹⁴⁰. Gill argues that, placed into a position of dependency in the contact-zone of initial colonial encounter, the settler/master-to-be chose aggression as an escape from this position of dependency, initiating conquest. He could have chosen love and reciprocity. The procession through colonization, slavery, industrialization, and the ecologically devastating extraction and pollution defining the globally-dominant present

¹³⁷King, T. L. 2015. Interview with Dr. Tiffany Lethabo King. *Feral Feminisms*, 4, 64–68.

¹³⁸Pratt, M. L. 1991. Arts of the contact zone. *Profession*, 33–40.

<https://www.yumpu.com/en/document/view/48757941/arts-of-the-contact-zone-authors-mary-louise-pratt-source-#>

¹³⁹Gill, pg. 914

¹⁴⁰Fanon, F. 1986. *Black skin, white masks*. Pluto classics.

order has proceeded from this basis, dependent from its inception on the richly-sustaining life-worlds of Black and Indigenous societies that European colonial projects and their descendents have depended on and have sought to exhaust.

The decolonial frameworks presented by both ICCS scholars and the scholars of the Black Geographies are deeply compelling, throwing the epoch debates into a new light by revealing the crucial role of not only European imperialism, but the rich histories and practices of the peoples facing the ongoing assault of settler-colonialism, in the formation of the present moment and its ecological crises. These histories and practices include thousands of years of Indigenous 'earth-worlding', the creation of ecological relations that have proven to be much more sustainable to humans and non-humans than the relations imposed by settler-colonial societies. Against the evidence these scholars levy, there can be no doubt that the Anthropocene is an untenable concept that erases the role of conquest and prior earth-worlding in the formation of the world-system. These traditions call us to see beyond the economistic scope of the Capitalocene, recognizing that ecological crisis has proceeded not only from an emergent economic relation but from mutually entangled projects of ideological, spiritual, and physical warfare that, together, compose settler-colonial ecological transformations. In doing so, they help us to see the components of earth-worlding beyond crisis: The powerful role of indigenous cultural/material/spiritual practices in the maintenance of ecologically sustaining life-worlds. This helps us to understand why socialism, in itself, is an unlikely answer to ecological crisis - presenting as it does a form of economic ownership that contains nothing in it to address the vast world of social dynamics beyond economics that have historically been at play in ecological transformations.

But of course even the decolonial interventions leave us with questions. While the Marxist tradition places too much emphasis on economy as foundational to other forms of social power, ignoring cosmologies, collective identities, myths and other aspects of cultural power or ecological relation, many of the writers of the decolonial tradition risk downplaying the profound power of political-economic relations. Gill, for instance, in giving a central role to the psychology of the settler/master-to-be in the moment of encounter, seems to give the entire procession of crisis a psychological rather than political-economic basis. While I am convinced of his account of the psychosocial dynamics of the contact zone and the profound role of Black and Indigenous earth-worlding in the sculpting and weaving of the world, emphasis on the contact zone leaves out the power structures and motivations driving settler-colonial contact in the first place and without this context, we miss important elements shaping the course of that encounter. Surely for any one settler/master-to-be who chose to act with love toward Indigenous societies (and there were some, evident in accounts of the many would-be settlers who escaped their colonial lives and joined Indigenous societies¹⁴¹), the dynamics of European society and its dominant powers at that historical juncture were such that many thousands more settlers were sent, with ever-greater projects of racializing ideology, legal sanction, and brutal compulsion to guarantee that ‘love’ would not win the day.

The concept of earth-worlding as the crafting of a holistic ecological-social system of relations implies that every society is a product and producer of earth-worlds, generated in conflict or cooperation with other societies and between different elements within its

¹⁴¹Axtell, J. 1975. The white Indians of colonial America. *The William and Mary Quarterly: A Magazine of Early American History*, 55-88.

own society. Just as Black and Indigenous societies crafted (and were crafted by) their ecological lifeworlds, European society had its own ecological/political/economic systems, its own lifeworlds, that it produced and which it was produced by - systems that at that point in history were being steered toward a globally-unprecedented project of brutality and conquest. The emphasis on the point of contact, and the psychology of the subjects in contact, does not help us understand the forces steering that nascent anti-ecological project of global conquest which was at that moment growing within the heart of Europe itself. These forces must be understood if we are to have any chance of grasping even an outline of not only what it takes to construct thriving and sustaining life-worlds, but of what must be done to combat the life-worlds that birth, nurture, feed, and sustain *Empire*.

If the forces driving and shaping European society from within are not incorporated into the analysis of the contact zone, and emphasis is placed on the encounter with an already-settler-colonial social formation devoid of its own social history and internal rifts, decolonial interventions risk replicating the very Eurocentrism that must be rejected. Europe (and its favorite myth, Whiteness) is reified as an essentialized and historically coherent social formation, and European colonialism of the 15th century is privileged as an uniquely agential force - in exclusion of all other colonialisms, all other conquests, all the dynamics of social transformation generative of Empire, including those which were essential in the birth of the European nationalist projects, their racializing myths, and their drives toward imperial expansion. In many of the writings composing the decolonial interventions, which explicitly situate the origins of the ecological crisis in the moments of European incursion into African and Indigenous societies, other projects of conquest,

racialization, and empire - including those formative of Europe - are obscured and mystified, with only a monolithic and exceptional White Europe emerging from the historical fog exactly as its architects intended it.

The historical arguments presented in Cedric Robinson's *Black Marxism* help to dispel this fog and reveal the secret histories propping up the formation of White Europe. Robinson notes that the conventional understandings of the emergence of racism in Western societies today begin from "the incorporation of African, Asian, and peoples of the New World into the world system emerging from late feudalism and merchant capitalism". This seems resonant with many of the decolonial theories described above. However, Robinson disagrees with this point of origin. Instead, he identifies "at least four distinct moments" in the development of European racialism: 1. "The racial ordering of European society from its formative period, which extends into the medieval and feudal ages as "blood" and racial beliefs and legends", 2. "The Islamic (i.e., Arab, Persian, Turkish, and African) domination of Mediterranean civilization... the Dark Ages", 3. The African and New World incursions discussed above, and 4. "The dialectic of colonialism, plantocratic slavery, and resistance from the sixteenth century forward."

He describes the "bizarre" result of ignoring all but the third moment, observing that as a consequence of this "some students of racism have happily reiterated the premise of a sort of mass psychology of chromatic trauma in which European reactions to darker-skinned peoples are seen as natural; others, including Marxists, have argued for a simplistic "empiricism" where the inevitable consequence of slavery and domination are the rationalizations of racial superiority and inferiority." The ironic result, he says, of ignoring the historical development of European racialism is "the presumption that the

social and historical processes that matter, which are determinative, are European. All else, it seems, is derivative.” To pay no mind to the historical processes through which racialization and the colonial projects emerged, to treat Europe as a cause rather than simply another human society or set of societies with its own complex origins, is to reproduce a Europe that is uniquely independent of history: the same sort of exceptionalist myth that was used to uphold colonial projects in the first place.

In tracing the roots of European racialism, Robinson severs the mythical support for such an exceptionalism. He presents a European racialism that is not a “natural” result of differently-appearing peoples coming into contact, nor a post-facto irrational justification for a rationally-proceeding, purely material economic exploitation. Rather, racialism is a practice born through a long history of social change, collective identity formation, and power struggle. Those who would become Europeans first cultivated racialism in the form of feudal blood-myths meant to differentiate the ruled from their hereditary rulers. These early Europeans were already culturally marked by their long classification by Greek and Roman authorities with the proto-racialist concept of “barbarians”, people considered beyond the influence of civilization and the rights that civilized existence would bestow.

These blood-myths and their co-constitutive power relations gave rise to intra-European racialism through which European peoples repeatedly did to one another what the Romans had done to them: enslavement, mass killing, and conquest driven and mutually reshaped by myths of blood superiority and Otherness. Robinson sees in this process evidence of the deep rooted “perverse assumptions and contradictions” that were essential to the rise of capitalism and to social developments on the European continent

pre-and-post Europe, and which are still alive in the core of contemporary Western civilization. In this view, racialism existed long before the 15th century conquest, and earlier intra-European racialist-conquest is a key precursor in the latter conquest's development. In this light, notions of "plantationocene" become as difficult to pin to a single historical point of origin in place or time as any more conventional Anthropocene. Racialism, colonization, and ecological destruction appear to be part of deeper and more complex and entangled historical processes, arising in many times and places, composed of co-constituting elements that are the flesh and blood of Empire itself - the social imperative to growth, concentration of power, and control over territory. Rather than absolve the nations of Europe of their colonial crimes, this perspective de-essentializes and de-centers Europe, opening us to the understanding that the core elements driving empire, enslavement, and ecological destruction can emerge, and have emerged, outside of Europe, and bringing us closer to comprehending how these tendencies can be opposed and undone. Jack D. Forbes, professor of philosophy and anthropology of Powhatan-Renapé and Lenape descent and one of the founders of Native American studies in the United States, comes to similar conclusions in his book "Columbus and Other Cannibals". In this work Forbes seeks his own diagnosis of the driving forces of settler-colonial societies and their ecocidal, murderous, and exploitative pursuits. All of these tendencies, in Forbes' view, stem from what he characterizes as a sort of psycho-social disease, a contagious insanity that he calls the *wétiko* syndrome.

"*Wétiko*," Forbes tells us, "is a Cree term (*windigo* in Ojibway, *wintiko* in Powhatan) which refers to a cannibal or, more specifically, to an evil person or spirit who terrorizes other creatures by means of terrible evil acts, including cannibalism. *Wétikowatisewin*,

an abstract noun, refers to “diabolical wickedness or cannibalism”¹⁴². In contrast with the traditional ritualistic cannibalism practiced in some cultures as a symbolic and spiritual aspect of warfare, the wétiko cannibalism of imperialist and exploitative societies is characterized by “consuming of another’s life for one’s own private purpose or profit.”¹⁴³ This consumption of other’s lives is not performed literally through the eating of flesh, but through slavery, captivity, alienation, and subjugation - often through the control and consumption of the land, living things, and water that others depend on. The wétiko being from which the concept derives its name has since been conceptually mobilized by other scholars to understand settler-colonial systems and their ecologically destructive drives, as in Winona LaDuke’s description of contemporary extractive “wéndigo economies”, what she called in a recent interview “the scorched Earth economy,” “the economy of a cannibal, one which destroys its mother. One which destroys every source of wealth upon which it would live”¹⁴⁴ LaDuke contrasts this with the long term community-and-sustainability-oriented land based economies of her people. Dr. Robin Wall Kimmerer also calls on the concept of the wéndigo as a way of understanding the “uncontrollable hunger” that seems to drive the ecological harms perpetrated by growth-oriented industrial societies¹⁴⁵.

Dr. Simón V. Trujillo, in elaborating a broader “Indigenous materialism” that he sees present throughout Forbes’ work, writes that although Forbes does refer to *wétiko*

¹⁴²Forbes, J. D. 2011. *Columbus and other cannibals: The Wetiko disease of exploitation, imperialism, and terrorism*. Seven Stories Press.

¹⁴³Forbes, pg. 24.

¹⁴⁴LaDuke, Winona. 2020. Winona LaDuke on earth-based economics in ‘the time of the seventh fire’. Nonviolence Radio. Metta Center for Nonviolence.

¹⁴⁵Kimmerer, R. W. 2013. *Braiding sweetgrass: Indigenous wisdom, scientific knowledge and the teachings of plants*. Milkweed Editions.

syndrome as a sickness, we must resist the Western traditional tendency to categorize this sickness as either a physical or a mental malady - much less one confined to an individual body. Instead, “rather than mobilizing sickness in a Euroamerican clinical framework as either a physical or psychological disorder, Forbes elaborates a notion of health and illness aligned with what Dhyanni Ywahoo, Priestcraft Holder of the Ani Gadoah Clan of the Tsalagi (Cherokee Nation), calls a “thought form.” The use of “thought” here is not a reinscription of a mind/body dualism. Nor is it a representation of illness as immaterial. It is rather an understanding that “thoughts and action are very closely interwoven with the physical world around, and that one’s thoughts bring about a tangible reality in ease and harmony, or dis-ease and discord”¹⁴⁶. A common thread of ecological interconnection emerges: in Forbes *wétiko* theory, the drivers of conquest and ecological destruction are not primarily cultural or material, but both in mutual interdependence. They are ways of thinking - characterized by Forbes as mental illness, for the harm generated by these mental processes - *and* the actions flowing from these ways of thinking, which generate the trauma, dispossession, and de-stabilization that subsequently serve to encourage the formation of the harmful ways of thinking in others. In this sense *wétiko* syndrome is contagious - through cultural propagation and a mutually-constitutive political economy. This understanding moves us beyond problematizing the psychology of individual masters/settlers-to-be as the locus of historical change, and into a more holistic view that includes the institutions, power relations, and material-ecological contexts that are themselves exerting great pressures on individual choices and psychologies.

¹⁴⁶Trujillo, S. V. 2020. The Indigenous Materialism of Jack D. Forbes: Notes Toward a Speculative Historiography for a Future without Europe. *Theory & Event*, 23(4), 1106-1129.

As in the work of Cedric Robinson, Forbes' *wétiko* theory seeks not to reinscribe Europe's status as a self-moving historical cause, even an evil one, but in contrast to diagnose the causes of Europe itself. In doing this, he absolutely does not relieve Europe of responsibility. European history, he writes, "is replete with almost continuous examples of human depravity—epoch after epoch of imperialistic wars, frequent examples of the systematic murdering of followers of different religions or members of different ethnic groups, almost continuous campaigns to liquidate or forcibly assimilate this or that nationality, rigid systems of class exploitation, the brutal subjection of peasants, slaves and workers and, finally, literally thousands of examples of lying, deceit, poisoning, duplicity, torture, and sadism." However, Forbes is also careful to provide reminders that there is nothing essentially European about the *wétiko* syndrome. Like Robinson's genealogy of racialism, Forbes finds the *wétiko* sickness to pre-date Europe - arising as product and producer of Empire. He writes that "the Egyptians, Babylonians, Assyrians, and so on spread the *wétiko* disease throughout the Middle East. The Persian tribes caught it and lost their freedom while gaining an empire. The Greeks caught it and became corrupted. The Macedonians and Greeks under Alexander spread it even further. The Carthaginians caught it and spread it. But it remained for the Roman Empire to really expand the *wétiko* infection"¹⁴⁷. In the empire of Rome, Forbes sees the real flowering of the illness - transforming, in his words, Germans, English, French, Spaniards, Arabs, Turks, and later Virginian colonists into Romans. The history of the past 2,000 years, he writes, is "in great part, the story of the epidemiology of the *wétiko* disease"¹⁴⁸. This is a story in which conquest, empire, and the exploitation of Indigenous earth-worlds are

¹⁴⁷Forbes, pg. 44.

¹⁴⁸Forbes, pg. 46.

central, but occur at many points in history prior to and beyond 15th century conquest. The Europeans, like the Romans, are identified as especially virulent carriers, but Forbes does see *wétiko* syndrome being spread by Chinese, Japanese, and Mongol projects of empire-building as well. And while capitalism is certainly identified as a *wétiko* system, Marxist-Leninist projects are not spared the diagnosis - taking account, as Forbes does, of the ways these regimes have repeatedly plundered people, ecologies, and Indigenous societies with the same evident ferocious hunger.

While the decolonial interventions have exploded the Eurocentric and epistemologically reductionist foundations of the Anthropocene and the Marxist Capitalocene, brought forth the realities and centrality of slavery and colonization buried by those narrative frames, and helped open us to the deeper history of Indigenous earth-worlding, application of Robinson and Forbes' genealogies of racialism and the *wétiko* disease of Empire are important to ensuring that the lessons of decolonial scholars can have a full flowering. There is a danger that, without the critical shift of focus provided by their labor, readers might be tempted to embrace a simplistic story in which Europe and European slavery and settler-colonialism is essentialized as the root of ecological destruction. There are similar dangers here to those posed by the Capitalocene: Just as the identification of capitalism as *the* root source of the global ecological crisis risks cloaking the critical realities of racialism, slavery, and colonization and the ecological problematics of various socialist regimes, the identification of European conquest as *the* root source of the crisis risks cloaking the power dynamics that exist beyond Europe and were critical in its formation as a vector of Empire - inadvertently creating safe harbor for the generation of these power dynamics in any context that is sufficiently non-European

enough to ward off critical evaluation. As discussed, this reductive reading also reifies Europe as a uniquely agential historical force, and hides the formative history of intra-European conquest that gave rise to Europe and Whiteness. Robinson and Forbes break these myths apart, offering instead accounts of the histories of power dynamics and processes which can then be more easily problematized wherever they are identified in the past, or wherever they might emerge in the future.

However, the precise nature of the power dynamics that constitute the *wétiko* syndrome identified by Forbes are not elaborated, nor are the types of societies that ought to be organized in their stead. Like the very similar concept of Babylon in the Rastafarian tradition, or simply “the system” or “the man” as articulated by the New Left, hippy, and punk countercultures, the social phenomena that support or oppose the oppressive system are identified intuitively and experientially rather than in terms of coherent political and cultural systems with definite structures¹⁴⁹. He identifies many actors, many actions, and many beliefs constitutive of the syndrome, and suggests that many Indigenous ways of life are not characterized by this syndrome, but he does not specifically address the types of social organization, culture, and political-economy that together are likely to give rise to this imperialist contagion and its ecologically destructive effects. In doing this, the impression is made that we can simply divide Indigenous societies from Empires, study their differences, and proceed from there. This may be a starting point, but if so, it is only that. It isn’t entirely clear how we are to make these distinctions, and the question of what tendencies within Indigenous societies might give rise to *wétiko* dominated systems remains open. Forbes does, like Robinson, look to history and processes rather than

¹⁴⁹Kebede, A., Shriver, T. E., & Knottnerus, J. D. 2000. Social movement endurance: Collective identity and the Rastafari. *Sociological Inquiry*, 70(3), 313-337.

situating humanity's problems within any singular civilization or encounter of civilizations, but the originary forces of the process - the tendencies that give rise to it - are not identified, leaving the reader to wonder how they might be adequately deconstructed in the present or prevented from emerging in the first place. Other scholars have attempted to more precisely identify the social-structural forms that give rise to exploitation and ecological destruction - and many have, in particular, identified social hierarchy itself as the root cause. As we will see, this approach is not without its own limitations, and it is to these theories that we now turn.

Chapter 2. Hierarchy, Hegemony, and the Ecologies of Power Struggle

I. Hierarchy - The Ecological Consequences of Domination-In-Itself?

A family of theoretical positions which could be broadly characterized as anti-hierarchical sees institutionalized, fixed positions of social domination as themselves constituting the fundamental driving force of unsustainable ecological relations - and therefore of the climate and ecological crises humanity faces today. In this perspective, social hierarchies, through technological, ideological, or materialist dynamics, encourage the devaluation and destruction of non-human beings and ecologically sustaining systems of relations. Though many of these theories are not clearly formulated in terms of the epoch debates, they tread the same ground in the search for an explanation of the social origins of ecological crisis. While not all of the authors of these theories call themselves anarchists, I will use the term ‘anarchist’ as shorthand for these positions, because the rejection of hierarchy is the most fundamental trait of contemporary and historical anarchist theory, and it is the characteristic feature of the positions described here. This rejection of hierarchy has become a popular and influential element of environmental and global justice movements in past decades, and remains a strong tendency in movements to address climate change today.

As an introductory note, it is important to be mindful of the varying streams of thought constitutive of contemporary anarchism. As in the traditions already explored - decolonial theories, Marxism, etc. - variety and hybridity occurs across any body of work that could be usefully distinguished as anarchist. I will be dealing with what appear to me to be the dominant tendencies of the movement, through reading and through my own many years of experience as an engaged member of the activist and intellectual anarchist

community. What has come to be termed “classical” anarchism - the form originating through, and for a good time dominant within, the broader socialist movement in Europe of the 19th century - was primarily a class-based movement focused on the workers and peasants in emergent capitalist societies as revolutionary subjects, envisioning a world in which these oppressed classes would overthrow hierarchically-organized institutions and replace them with directly-democratic ones¹⁵⁰. Even in this stage of the movement, in which Capital and the State were the most commonly identified opponents of a free society, anarchists still problematized other forms of repression and inequality more broadly, being among the first to, for example, advocate access to birth control¹⁵¹, to problematize traditional marriage¹⁵², and to create racially-integrated labor unions (through the largely anarchist-oriented Industrial Workers of the World¹⁵³).

Throughout the history of the movement, anarchists have been active participants and often leading figures in other emergent movements (such as feminism, anti-racism, Indigenous rights movements and environmentalism) and have incorporated these movements' critiques into anarchist culture and theory more explicitly. Today's anarchism, far from focusing only on Capital and the State, very often defines itself in opposition to all forms of hierarchy (sometimes narrowed to focus only on coercive or non-consensual hierarchies), which are understood to be synonymous with ‘forms of oppression’.

¹⁵⁰ Proudhon, P. J. 1876. *What is property?: An inquiry into the principle of right and of government* (Vol. 1)., BR Tucker., Kropotkin, P. 2015. *The conquest of bread*. Penguin UK., Malatesta, E., & Malatesta, E. 1985. *The anarchist revolution*. SRAfprint Co-op., Bakunin, M. A. 1970. *God and the State*. Courier Corporation., Goldman, E. 1969. *Anarchism: and other essays*. Courier Corporation., De Cleyre, V. 1908. Why I am an Anarchist. *Mother Earth*, 3(1), 16.

¹⁵¹ Goldman, E. 1916. The social aspects of birth control. *Mother Earth*, 11(2), 468-475.

¹⁵² De Cleyre, V. 1908. They who marry do ill. *Mother Earth*, 2, 500-11.

¹⁵³ Foner, P. S. 1970. The IWW and the Black Worker. *The Journal of Negro History*, 55(1), 45-64.

A recent book meant to serve as an introduction to anarchism - *Anarchism and its Aspirations* by Cindy Milstein - states that the most contemporaneous and accurate definition of anarchism is that it is a movement which “stands for the absence of both domination (mastery or control over another) and hierarchy (ranked power relations of dominance and subordination)”¹⁵⁴. In an introductory text provided by the Federación Anarquista Rosa Negra / the Black Rose (BRRN) Anarchist Federation, one of the largest contemporary North American anarchist networks, Thomas Giovanni states that anarchists “believe that hierarchical power relations are not only unjust, but corrupt those who have power and dehumanize those who don’t”¹⁵⁵. This text explains many of the most fundamental anarchist positions: that a social order characterized by social hierarchies is the root cause of oppression, economic inequality, and ecological destruction, and that these problems will only be solved with the creation of a society without hierarchies - instead organized through multiple levels of directly-democratic assembly with immediately recallable delegates with a strictly delimited mandate of action. Giovanni also specifies that anarchists refuse to seek State power in any direct way, writing that while anarchists “don’t try to get elected to public office (or take control of the state by other means), [don’t try to] prioritize legal challenges in the courts to change laws, [and don’t try to] gain management positions within businesses to change how things are run,” they instead try to exert “power from below” through the implementation of demands directly through extralegal public activity, without permission from established authorities. Anarchist’s interests in the relationship between

¹⁵⁴Milstein, C. 2010. *Anarchism and its aspirations*. AK Press.

¹⁵⁵Giovanni, Thomas. 2017. Who are the Anarchists and what is Anarchism? Federación Anarquista Rosa Negra / Black Rose Anarchist Federation. <https://blackrosefed.org/who-are-the-anarchists-and-what-is-anarchism/>

hierarchy and ecological well-being have been present since the earliest days of the movement, when anarchists sought to embody what were thought by some to be more “natural” ways of being through practices such as nudism, spending time in natural settings, and vegetarianism¹⁵⁶. Anarchism, like socialism more broadly, also has roots in the proto-environmentalist Romantic movement¹⁵⁷, and is associated prominently with the ecologically-oriented transcendentalist figure Henry David Thoreau, who famously stated that he believed “that government is best which governs not at all”¹⁵⁸. In the last decades of the 20th century, anarchist-ecological thought manifested in several major, sometimes opposed and sometimes interrelated theoretical and practical approaches. Among these are the direct-action movements in defense of wilderness and the ecological health of living beings (humans included), exemplified by groups like Earth First!, the Earth Liberation Front (ELF), the Animal Liberation Front (ALF) and others. Other prominent schools of thought have been the “social ecologist” position building upon the writings of Murray Bookchin, and the small but influential “anarcho-primitivist” tendency most active in the mid-1980’s through the mid-1990’s.

While direct-action environmentalist activists are not formally associated with any particularly academic theoretical tradition - unlike Marxist cadre members, for instance, who of course situate their actions as informed by the academic work of Marx - they provide an excellent example of the presence of theoretical work beyond and outside the formal academy. Social movement scholar Robert Benford, one of the popularizers of the

¹⁵⁶Ortega, Carlos. 2013. "Anarchism, Nudism, Naturism". Archived from the original on 13 December 2013. Retrieved 10 December 2013: <http://interactivist.autonomeia.org/node/4694>.

¹⁵⁷Jun, N. 2017. Kropotkin, Read, and the Intellectual History of British Anarchism: Between Reason and Romanticism. *Anarchist Studies*, 25(2), 96-98.

¹⁵⁸Gross, David, ed. 2007. *The Price of Freedom: Political Philosophy from Thoreau's Journals*. p. 8. CreateSpace Independent Publishing Platform; 1st edition. ISBN 978-1-4348-0552-2.

concept of the “framing work” that social movements engage in, writes that in the decades prior to the 1980’s, little attention was given to the work that movements do to engage with and contest the meaning of their actions in the eyes of themselves and others, though in recent years more attention has been paid to this critical facet of movement activity¹⁵⁹. David Naguib Pellow, in an analysis of hundreds of interviews with activists involved with what he terms the “radical Earth movements” and “animal liberation movements”, gives an account of the “meaning work” performed by members of these movements, providing a powerful example of the deeply sophisticated theoretical work done by people who aren’t necessarily involved with academic institutions or formal study. Pellow interviewed activists from a wide range of groups including “Earth First!, Earth Liberation Front (ELF), Sea Shepherd Conservation Society, Animal Liberation Front (ALF), Stop Huntingdon Animal Cruelty (SHAC), and People for the Ethical Treatment of Animals (PETA)” as well as “smaller local or regionally based groups and informal collectives that are less well known”, joined in activist gatherings and conferences, and performed content analyses of activist-produced media in order to build an understanding of the political, philosophical, and ethical frameworks guiding radical environmental and animal liberation activists¹⁶⁰.

Unsurprisingly given Pellow’s defining criteria of “radical movements” as ones which reject reform and “attempt to disrupt and transform the system more directly” (though he includes movements that engage in both forms), the dominant politico-ethical framework he identifies in these movements is decidedly anarchist. While noting the

¹⁵⁹Benford, R. D. 1997. An insider's critique of the social movement framing perspective. *Sociological inquiry*, 67(4), 409-430.

¹⁶⁰Pellow, D. N. 2014. Total liberation: The power and promise of animal rights and the radical earth movement. U of Minnesota Press. Pg. xxi-xiv.

diversity of views within the movements, Pellow identifies a “prime convergence” in what he calls a tradition of “total liberation” of humans, nonhumans, and the ecosystemic relations between us all. This “total liberation” framework is composed of four key pillars: “(1) an ethic of justice and anti-oppression inclusive of humans, nonhuman animals, and ecosystems; (2) anarchism; (3) anti- capitalism; and (4) an embrace of direct action tactics”¹⁶¹. Noting that this framework is informed by many other schools of thought including Bookchin’s social ecology, ecofeminism, as well as anarcho-primitivism, Pellow sees a synthesis of diverse tendencies exceeding the bounds of these theories in the actual thought and practice of activists. The central foundation of the emergent ‘total liberation’ framework is a conviction that “the exploitation of ecosystems and nonhuman animals as necessarily linked to the inequalities within human society, and that recognizes there can be no liberation of one without the other¹⁶² - a concept that is both compatible with contemporary anarchisms’ opposition to hierarchy, and excessive of that concept, extending the ethical obligation beyond the human species. Pellow develops this into what he calls the framework of “socioecological inequality”, a theory that rejects the idea that there is a *singular type* of hierarchy at the root of environmental crisis (patriarchy, racism, speciesism), instead problematizing all types. Hierarchies between humans, between humans and ecosystems, and between humans and nonhuman animals are a mutually-reinforcing web driving environmental destruction. In this view, ecological crisis flows from oppression itself - essentially from the symbolic and material disempowerment of some and hyper-empowerment of others. This view appears to be highly resonant with several of the decolonial theories explored above - especially the

¹⁶¹Pellow, pg. 5-6.

¹⁶²Pellow, pg. 19.

wétiko framing with its emphasis on a self-replicating civilizational process resembling disease.

Another anarchist position with an ecological focus is “anarcho-primitivism”, sometimes called green anarchism or green anarchy. This school of thought - which Pellow notes has a steady presence within the direct-action oriented ecological defense movements, and some degree of overlap with the total liberation framework - problematizes ‘civilization’ itself, often defined by the shifts in social organization and technology that accompanied the Neolithic agricultural revolutions. Civilization is placed in opposition to “primitive” society, in an attempted reversal of the social-evolutionary stage theory perspectives that see hunter-gatherer societies as the least advanced (and, ostensibly, least desirable) form of human life. To these authors, settled agriculture and complex technology are inseparable from the proliferation of hierarchy and the disconnection of humanity from nature.

In their historical overview of this theoretical tendency, social movement scholars Ojeili and Taylor explain that although there are early critiques of industrial civilization, hierarchy, and complex technology in the writings of some Marxists (William Morris, for example¹⁶³, or Friedrich Engels’ location of the emergence of class society in the transition from ‘primitive communism’ to settled agriculture¹⁶⁴), true Marxist opposition to industrial society is uncommon given the Marxist preoccupation with the ‘advance’ of society along historical stages through the engine of class struggle, toward a high-technological utopian end. Western-originating critiques of industrial civilization have

¹⁶³Morris, W. 2002. *News from nowhere*. Broadview Press.

¹⁶⁴Engels, F. 2021. *The origin of the family, private property and the state*. Verso Books.

appeared much more often in the anarchist tradition, even in its earliest days¹⁶⁵. Anti-civilization and anti-technology critiques began to find new ground in the counter-cultural ferment of the New Left and the long 1960's, partly in response to the new anthropological arguments for the relative affluence of hunter-gatherer societies in comparison with the agriculturalist societies that replaced them¹⁶⁶. These critiques were popularized by influential scholars including Lewis Mumford¹⁶⁷, Jacques Camatte¹⁶⁸, and to some degree Herbert Marcuse, who was critical of the pacifying and domesticating effects of technology¹⁶⁹.

El-Ojeili and Taylor describe the largest flowering of anti-civilization positions as occurring in the anarcho-primitivist movements of the mid-1980's through mid-1990's (later absorbed into the global justice movements), though in my own experience as an active anarchist in central California in the mid-2000s, anarcho-primitivism remained a popular position amongst anarchists, where it was widely promoted through zines (photocopied 'mini-magazines'), punk and hardcore music, art, books, and speaking events. According to the 2010 Anarchist Survey Report, a rare internal movement survey in the anarchist community, primitivism was by the 2010's a very small tendency within the movement (approximately 2% in a survey of N=2,504) though the survey's authors suspect this is an undercount¹⁷⁰. In my experience, this is a likely assessment, as many

¹⁶⁵el-Ojeili, C., & Taylor, D. 2020. "The Future in the Past": Anarcho-primitivism and the Critique of Civilization Today. *Rethinking Marxism*, 32(2), 168-186.

¹⁶⁶Sahlins, M. 1998. The original affluent society. *Limited wants, unlimited means: A reader on hunter-gatherer economics and the environment*, 5, 41.

¹⁶⁷Mumford, L. 1967. *The Myth of the Machine: Technics and Human Development*. New York: Harcourt, Brace and World.

¹⁶⁸Camatte, J. 1995. *This World We Must Leave and Other Essays*. New York: Autonomedia.

¹⁶⁹Marcuse, H. 2013. *One-dimensional man: Studies in the ideology of advanced industrial society*. Routledge.

¹⁷⁰Knoll, Stefanie and Aragorn Eloff. 2010. 2010 Anarchist Survey Report. Retrieved from: <https://web.archive.org/web/20110911203728/http://www.anarchistsurvey.com/results/>

anarchists who subscribe to primitivism's core ideas would not necessarily identify with the label itself.

Numerous authors and journals have promoted a diverse range of opinion within the anti-industrial bounds of green anarchist thought. While the majority of anarchists are not primitivists, and many reject the primitivist premise, the primitivist form retains many of anarchism's core emphases, such as an embrace of localism (in opposition to the spatially vast and socially complex networks required for large-scale technological systems), opposition to hierarchy, and an embrace of direct action on romantic and theoretical grounds as a form of action that is thought to refuse both mediation and hierarchy. Green anarchist authors disagree over notions of what point in human technological development represents the 'wrong turn' toward hierarchy and ecological destruction, and what methods to use to bring about a "future primitive" return to pre-agricultural social forms. El-Ojeili and Taylor explain that some, like John Zerzan, go as far as proposing the rejection of all "symbolic thought" including language and numbers as inextricable from hierarchy and human/nature separation, though these authors note that Zerzan's perspective reflects a radical conceptual division between human culture and nature that is counter to the much more prominent recent movement to destabilize these divisions. Nevertheless, as a possible ecological theory applicable to the 'epoch debates', anarcho-primitivism could be understood as positioning humanity's "fall" from sustainable ecological relations within the beginnings of the Neolithic agriculture revolution around the world and what they argue is the divide of humanity from nature and the consequent rise of hierarchical structures.

There is some empirical support for central elements of the anarcho-primitivist thesis. Some of this is evident in the studies discussed in the context of decolonial theory above: Indigenous societies have long practiced conscious ecological relation, and in many cases appear to have been successful in cultivating biodiverse ecosystems in the course of generating robust human sustenance - while it is places where Indigenous peoples have been displaced that have experienced the most severe degradation. Solway writes that four decades on, Marshall Sahlins' "Original Affluent Society" claims - that foraging societies that do not practice agriculture experience a sense of affluence due to trust in the abundance around them, combined with low levels of necessary work and a wealth of leisure time - remain influential in contemporary anthropology¹⁷¹. Kaplan has presented the major challenge to these ideas with the contention that the actual experience of hunter-gatherer life is much less desirable than Sahlins claims, Solway notes that these objections are likely overstated, especially when forager societies are compared with rural agricultural societies rather than urban industrial centers. Bird-David has amended Sahlins' claims - proposing that the basis of affluence is in a cosmological, cultural and spiritual outlook rather than an economic-rationalist assumption of abundance - but offers this as support rather than challenge to the overall conclusions¹⁷².

However, critics have noted that anarcho-primitivists have a decidedly more deterministic view of practices like agriculture than the evidence calls for. The anthropological basis of this view is challenged by the work of scholars such as Frederic

¹⁷¹Solway, J. 2006. The original affluent society': four decades on. *The politics of egalitarianism: theory and practice*. New York: Berghahn Books, 65-77.

¹⁷²Bird-David, N., Abramson, A., Altman, J., Bicchieri, M. G., Burch Jr, E. S., Ember, C. R., & Wenzel, G. W. 1992. Beyond" The Original Affluent Society": A Culturalist Reformulation [and Comments and Reply]. *Current anthropology*, 33(1), 25-47.

Pryor, who finds that the transition to agriculture was likely more gradual than has been previously hypothesized, and that it did not always and everywhere lead to the same outcomes. Agriculture appears to have been consistent with and extant alongside nomadic hunter-gatherer systems - prompting the author to conclude that the question of large-scale transitions to settled agriculture must be examined through more complex multi-causal explanations¹⁷³. Currie and Turchin examine various proposed factors for the emergence of what they call “large-scale societies” - which they equate with empires - finding that these tend to emerge in places where agriculture has been practiced the longest, and where intense warfare has occurred with particular frequency, suggesting that the social structures of growth-oriented imperialistic societies may be produced through a confluence of long-term social, cultural, and political processes of adaptation and change¹⁷⁴. Environmental historian J.D. Hughes also finds much evidence for the relationship between the institutions and practices of large-scale warfare and ecological destruction, supporting the view that the social forms of empire and ecological damage go hand-in-hand without conferring any mechanistic causal role to agriculture or technology itself¹⁷⁵.

Meanwhile, anarcho-primitivist characterizations of Indigenous people sometimes reproduce simplistic and racist “noble savage” narratives that ignore the complexity and variation among Indigenous societies¹⁷⁶. The “primitivist” framing itself rehashes the

¹⁷³Pryor, F. L. 2004. From foraging to farming: The so-called “Neolithic Revolution”. In *Research in economic history*. Emerald Group Publishing Limited.

¹⁷⁴Currie, T. E., Turchin, P., & Gavrillets, S. 2019. History of agriculture and intensity of warfare shaped the evolution of large-scale human societies in Afro-Eurasia.

¹⁷⁵Hughes, J. D. 2013. Warfare and environment in the ancient world. In *The Oxford Handbook of Warfare in the Classical World* (pp. 128-142). Oxford: Oxford University Press.

¹⁷⁶Pellow, pg. 121.

primitive versus civilized binary produced by colonizing societies even as it attempts to qualitatively reverse them. Evidence for the ecological superiority of many Indigenous systems has not supported any monolithic “technologically primitive” system, instead showing a great diversity of technologies and possible forms of biodiversity-sustaining ecological relations, including some which involve various forms of agriculture and a great deal of conscious human activity to shape and manage ecologies. This also raises questions about what gets defined as civilization, technology, or agriculture. Agriculture itself takes many varying forms, from large-scale monocrop systems to systems like permaculture¹⁷⁷ and agroforestry¹⁷⁸ which are designed to bolster local ecosystems and support biodiversity while simultaneously providing food for human beings. While there appears to be no question that agriculture (or at least a particular form of it) is a *necessary prerequisite* to the rise of empire (and therefore is one possible influence on the generation of ecologically-destructive social relations), these facts complicate the anarcho-primitivist narrative, allowing for the possibility of cultural and political interventions that may offset some of the social tendencies generated by technologies like agriculture.

Critics have noted that, like the wider “deep ecology” perspective that de-centers human well-being as the focus of environmental concern, primitivism has demonstrated tendencies toward misanthropy - prejudice against humanity and human well-being rather than simply consideration of humanity in balance with the inherent worth of non-humans. This is enabled by the radical distinction between humanity and nature that these

¹⁷⁷Ferguson, R. S., & Lovell, S. T. 2014. Permaculture for agroecology: design, movement, practice, and worldview. A review. *Agronomy for Sustainable Development*, 34(2), 251-274.

¹⁷⁸Nair, P. R. 1993. *An introduction to agroforestry*. Springer Science & Business Media.

perspectives often espouse, which allows human beings to be problematized as an outside-nature ‘Other’ that is preying on and destroying nature. David Pellow has noted the frequent recurrence of this radical human/nature distinction in the rhetoric of groups such as Earth First!. This perspective flattens power distinctions among human beings and ignores the widely varied relationships that human societies have established with their ecological communities in varying contexts around the world.

These concerns were particularly apparent in a 1991 debate between Murray Bookchin (of the social ecology school to be discussed below) and David Foreman, co-founder of the Earth First! direct action network¹⁷⁹. Citing multiple statements from movement activists and articles from movement newspapers, Bookchin identifies a tendency that demonizes humans, emphasizing overpopulation and immigration as environmental problems. These attitudes were also reflected in the ideology of the ‘unabomber’, a serial-murderer who used mail bombs to attack what he viewed as a technologically over-dependent society. Anarcho-primitivist and green anarchist perspectives have at times offered support, critical or otherwise, to the unabomber's analysis¹⁸⁰. In his debate with Foreman, Bookchin notes that these tendencies resemble and enable fascist political positions - the kinds of positions that lead to his own family's systematic murder in the Holocaust. These tendencies toward anti-humanist, reactionary political positions among environmental activists have a long history, evident before and after Bookchin's assertions. Fascist politics have long drawn on many of the same tropes used by anarcho-primitivists and associated groups. The German Nazi movement

¹⁷⁹Bookchin, M., & Foreman, D. 1991. *Defending the earth: debate between Murray Bookchin and Dave Foreman* (Vol. 162). Black Rose Books Ltd..

¹⁸⁰Luke, T. W. 1999. *Capitalism, democracy, and ecology: Departing from Marx*. University of Illinois Press.

involved early examples of eco-fascism, recruiting environmental conservationists through promises that fascism would curtail the degenerate tendencies of capitalism and would produce environmental benefits - promises that were largely broken when war and state power required greater environmental exploitation, but which nonetheless served the purpose of drawing people into a project of extreme power concentration and rejection of democracy¹⁸¹. The Nazis also exploited simplistic, mythical representations of Indigenous peoples of the Americas in order to build a narrative that the Nazis shared their values and that German people were similarly victims of a degenerate, settler-colonial empire: the United States¹⁸².

The critical pattern across eco-fascist perspectives is a shift of blame away from power and inequality, toward reductive narratives that blame broad targets like humanity, technology, or particular groups of people for ecological crises while exalting a vision of nature that does not include human beings - or only includes a special subset. While it may appear highly ironic that there could be slippage between anarchist politics and fascist politics, these perspectives serve as a warning for what can occur when perspectives that begin with a focus on understanding power, such as those of green anarchists, drift away from this focus as reductionist explanations are allowed to take hold. Arguably this slippage is encouraged by the reductionist nature of anarchist's own power analysis, discussed further on. Today, eco-fascist movements are again on the rise. These range from explicit white-nationalist groups¹⁸³ to proto-fascist groups like "Deep

¹⁸¹Brüggemeier, F. J., Cioc, M., & Zeller, T. (Eds.). 2005. *How green were the Nazis?: nature, environment, and nation in the Third Reich* (Vol. 58). Ohio University Press.

¹⁸²Usbeck, F. 2015. *Fellow tribesmen: The image of Native Americans, national identity, and Nazi ideology in Germany* (Vol. 19). Berghahn Books.

¹⁸³Smith, J. K. 2021. *The (Re) emergence of eco-fascism: white-nationalism, sacrifice, and proto-fascism in the circulation of digital rhetoric in the ecological far-right* (Doctoral dissertation).

Green Resistance” (DGR), founded by environmentalist authors Lierre Keith and Derrick Jensen. While DGR does not identify itself as fascist, the organization has been widely criticized for promoting reactionary gender politics, working with fascist-leaning groups, and promoting a strategic vision of organizing their own dictatorial military to destroy industrial infrastructure as a path toward ecological well-being¹⁸⁴. While DGR emerged out of an anarchist-leaning ecological activist milieu, they seem to have utterly abandoned any problematization of concentrated power. Their website, Youtube.com videos and introductory texts argue for the necessity and military superiority of hierarchical organization, but do not at any point indicate support for organizational democracy¹⁸⁵. As Bookchin warned, the deep-green and primitivist ideologies at the root of groups like DGR lend themselves to a total abandonment of critique of hierarchy through the devaluation of humanity and human liberation.

By contrast with the anti-humanist tendencies within some parts of the deep-green and primitivist movements, Murray Bookchin’s own philosophy - social ecology - maintains the value of human well-being and centers human liberation as the primary foundation of sustainable ecological relations. In his “The Ecology of Freedom”, Bookchin advances his theory of how humanity comes to subjugate and exploit non-human nature, an act made possible through a historically emergent conceptual divide between ‘first’ and ‘second’ nature¹⁸⁶. Perhaps drawing from Lukacs’ earlier *History and Class Consciousness*¹⁸⁷, though there is no citation, Bookchin deploys the same essential

¹⁸⁴For examples from one public discussion of the matter, see Pellow pg. 123-124.

¹⁸⁵Deep Green Resistance. 2011. *Deep Green Resistance - Strategy to Save the Planet*. YouTube. Youtube.com,

McBay, Aric, Lierre Keith, and Derrick Jensen. 2011. *Deep Green Resistance*. New York: Seven Stories Press.

¹⁸⁶Bookchin, M. 1982. *The ecology of freedom* (p. 232). New Dimensions Foundation.

¹⁸⁷Lukács, G. 1972. *History and class consciousness: Studies in Marxist Dialectics*. MIT Press. Pg. 240.

idea through the same vocabulary: That humanity encounters a “first nature” in the “self-created” ecological network in which we emerge, and then imposes a “second nature” of human-generated systems. This distinction, which Bookchin argues is enabled by the rise of social hierarchies and of the psychological and cultural “discipline of rule”, creates a relationship of repression that “extends outward” from our own internal repression as subjugated members of society “to external nature as a mere object of rule and later exploitation¹⁸⁸”. Bookchin proposes social ecology as a theoretical and practical merger of first and second nature, un-doing the categorical divide by calling human beings to become the self-conscious directors of their own activities as an extension of nature rather than against it. This self-consciousness is achieved by the democratization of all of society - thereby freeing humanity from the thoughtless destruction of nature driven by capitalism and the State, and achieving a unity possible through human beings acting for the benefit of both humanity and non-human nature together. This, Bookchin argues, would be the emergence of a “third nature”, a dialectical synthesis born from the contradictions of the first and second forms.

Bookchin’s argument - that social hierarchy precedes the domination of nature and subsequent ecological destruction - is in many ways in direct contradiction to primitivist arguments. Where primitivists see the Neolithic agricultural revolution as the foundation of hierarchy and ecological destruction, Bookchin is adamant (despite acknowledged counter-arguments from Sahlins and others) that the Neolithic revolution was in fact the ecological ‘golden age’ - in which humanity shifted from the “mere parasitism” of hunter-gatherer society to a social form dominated by “matricentric horticulturists” who

¹⁸⁸Bookchin, pg. 8.

“managed to touch the Earth and change it, but with a grace, delicacy, and feeling that may be regarded as evolution’s own harvest¹⁸⁹”. Bookchin provides a compelling possible account for the path through which human societies came to develop hierarchies, and how these hierarchies might lay the psycho-cultural foundations for ecological destruction. In his assessment, male-dominated hunter/warrior groups in society would have tended to form mutually-beneficial patriarchal alliances with elder leaders - a process that would have secured the position of the elders while giving greater power to younger males as new military authorities. This process could be the foundation of the earliest State forms, encouraging the formation of the logic of rule and obedience that Bookchin sees as the precursor to the logic of dominating nature rather than seeking balanced and sustainable relations.

More recently, anarchist theories of ecology have been applied directly to climate change. In “An Anarchist Solution to Global Warming”, Peter Gelderloos sketches a picture of a decentralized non-hierarchical socialist society that has addressed climate change through the abolition of both capitalism and the State. Pulling from the range of anarchist traditions, Gelderloos’ vision includes newly-organized hunter-gatherer societies alongside high-tech cities run by directly-democratic worker’s syndicates¹⁹⁰. Rob Hopkins’ popular “Transition Initiative” proposes that local communities form ‘transition towns’ that try to build low-carbon infrastructure and disaster resilience directly¹⁹¹. While Hopkins acknowledges that “government will be part of the solution”, it isn’t clear what role it is to play, but he does make clear that government is limited in

¹⁸⁹Bookchin, pg. 129.

¹⁹⁰Gelderloos, P. 2010. An Anarchist Solution to Global Warming. *Infoshop News*. Infoshop.org.

¹⁹¹Hopkins, R. 2010. What can Communities Do? *The post carbon reader: Managing the 21st century sustainability crisis*. Richard Heinberg and Daniel Lerch, eds. Healdsburg, CA: Watershed Media. 442-454.

his view because it is reactive and unable to develop forward-looking policy, whereas local communities are able to “do the thinking that governments can’t”. Brian Tokar, an affiliate of the Bookchinite “Institute for Social Ecology” and prominent scholar of the “climate justice movement” - the global movement to address the socio-political and economic justice issues entangled with the problem of climate change - also favors strongly localist perspectives and does not emphasize strategies focused on electoral power. In a recently published collection of essays co-edited with Tamra Gilbertson, another prominent scholar of climate justice movements, opposition to centralization, hierarchy, and state power are strongly emphasized as important elements of movements, while there is no mention of any strategy for advancing climate justice goals through national-level State structures¹⁹². Joel Wainwright and Geoff Mann’s widely-reviewed and influential “Climate Leviathan” makes an explicit argument against centralized State power as a vehicle for climate solutions¹⁹³. Wainwright and Mann argue that there are four ideal types that characterize the forms global society could take in response to climate change, differing on the basis of their orientation toward State power and capitalism. The authors argue that climate change will provoke either a consolidation of un-democratic global State power - capitalist or communist - or a rejection of State power in the form of either a right-wing reactionary nationalist populism or a left-wing revolutionary anti-State democracy. The latter form is what they call “Climate X”, and the authors position this as the only form that could retain democracy and address the stark inequalities of climate change rather than deepening them. The exact structures, or

¹⁹²Tokar, B., & Gilbertson, T. (Eds.). 2020. *Climate Justice and Community Renewal: Resistance and Grassroots Solutions*. Routledge.

¹⁹³Wainwright, J., & Mann, G. 2018. *Climate Leviathan: A political theory of our planetary future*. Verso Books.

the means of attaining them, are - as many reviewers note - not clearly explained, though the authors allude to the direct-action camps of Naomi Klein's "Blockadia" and the revolutionary society of the Zapatistas in Chiapas, Mexico as inspirational models.

The lack of a clear explanation of a viable strategic path for anarchist solutions is especially critical in the face of climate change, which as Wainwright and Mann acknowledge along with most scholars is a problem that strongly suggests globally-enforceable political solutions to contend with the global impacts of local practices. The vagueness of Climate X in terms of its feasibility as a climate change solution is symptomatic of a very common avoidance or deferment of issues of feasibility within anarchist movements more widely. This avoidance is linked to a deep problem in the anarchist theorization of hierarchy generally. While anarchist authors have made interesting and compelling cases for a strong link between hierarchy and ecologically destructive forms - cases that seem to be supported by the chronological parallels of ecological destruction and early State-forms, as well as contemporary ecological tendencies of both authoritarian socialist and liberal capitalist societies - these cases do not provide adequate support for their two fundamental contentions. The first is that hierarchy is *essentially and fundamentally* ecologically destructive, rather than conditionally ecologically destructive via tendencies that could conceivably be restrained without necessitating its total abolition. The second is that non-hierarchical social projects are feasible: That is, that they are capable of not only overthrowing hierarchical power structures, but also of subsequently maintaining a sustained and defensible existence. The evidence suggests that neither of these fundamental propositions is true. Rather, hierarchy is conditionally ecologically destructive, but can be restrained - which

is critical, because hierarchy also appears to be a universally practiced technique of social coordination that, when it is insufficiently present, leaves societies without the means of defending themselves against opponents willing to use this tool.

The empirical case for the fundamentally ecologically destructive nature of hierarchy rests largely on two basic claims: That at some point human societies were non-hierarchical, and that the development of hierarchy is always accompanied by ecological destruction. The contention that many human societies were non-hierarchical *in the sense meant* by contemporary Western anarchists is not supported. Two of the most commonly-cited works of political anthropology that are mobilized to support this claim are those of James C. Scott and Pierre Clastres. Scott's "The Art of Not Being Governed" focuses on the Akha, Hmong, Karen, Lahu, Mien, and Wa peoples of a Southeast Asian highland region called "Zomia"¹⁹⁴. Scott presents an argument that the peoples of this region were in fact Stateless - organized without a central government - by choice, undermining cultural evolutionist arguments that present State development as a mark of social progress and an always-desirable outcome. While Scott's case is understandably attractive for contemporary anarchists - no less so due to his book's subtitle, an "anarchist history" - its utility for anarchist arguments is unavoidably undermined by the clear difference in definitions. For Scott, the peoples described are anarchist only in the sense that they, in his contention, avoid the formal institution of the centralized nation-state. Rather than being non-hierarchical in a more general sense, Scott clearly describes their societies as hierarchical. For instance, in drawing distinctions between the structure of the

¹⁹⁴Scott, J. C. 2009. *The art of not being governed*. Yale University Press.

“anarchist” upland peoples and the state-centric valley peoples, Scott writes that “Distinctions of status and wealth abound in the hills, as in the valleys. The difference is that in the valleys they tend to be supralocal and enduring, while in the hills they are both unstable and geographically confined¹⁹⁵. Surprisingly, these “anarchists” flexibility in relation to hierarchies is apparent with regard to State structures as well: “Among Karen, Kachin, Chin, Hmong, Yao/Mien, and Wa,” Scott writes, “there seem to be both relatively hierarchical subgroups and relatively decentralized, egalitarian subgroups. What is most striking and important is that the degree of hierarchy and centralization is not constant over time”¹⁹⁶. Clastres studies of Indigenous peoples in South America, considered a precursor to Scott’s work and featured in the archives of website “The Anarchist Library”, shows a similar distance from contemporary anarchist politics¹⁹⁷. While the societies he examines lack a formal, bureaucratic and institutionalized State, they are certainly not without hierarchy. To the contrary, Clastres claims that hierarchies are universal in Indigenous cultures across the South American continent, and he describes their common features: chieftainships (often hereditary and patrilineal) lead by a person who acts as a peacemaker, a generous redistributor, and a good orator. He repeatedly describes rule by councils of elders, though this is characterized as a process of community consensus. In some cases such as the Cubeo or the tribes of the Orinoco, he describes explicit command hierarchies, reserved for states of exception like war, which are organized for those purposes and dissolved again when peace returns¹⁹⁸. Peacetime leadership is maintained

¹⁹⁵Scott, pg. 21.

¹⁹⁶Scott, pg. 22.

¹⁹⁷Clastres, P. 2020. *Society against the state: essays in political anthropology*. Princeton University Press.

¹⁹⁸Clastres, pg. 29-30.

in a fragile state through various forms of social sanction and control¹⁹⁹. What we see here, contrary to the anarchist vision of society without hierarchy, is a rich tapestry of variations of hierarchy, characterized by varying methods and degrees of restraint - variations tailored to circumstances which might require the utilitarian advantages of more or less strictly-enforced command.

The work of anthropologist Christopher Boehm addresses this complexity directly. In one example, Boehm conducted a survey of ethnographic accounts of 48 societies around the world described as “egalitarian” consisting of societies with widely varying sustenance systems but all characterized by low levels of social stratification and relative autonomy from neighboring powers. While all of these societies had some degree of inequality - with much variation in the distribution of power by gender - they are labeled ‘egalitarian’ for their weak overall structures of political hierarchy. Boehm sought to discover whether the egalitarianism in these societies was a product of intentional societal restraint of concentrated power²⁰⁰, or whether it was not intentional - which would indicate some strong environmental or other determining variable. Boehm finds evidence that in the large majority of cases, practices of societal restraint - called “levelling mechanisms” - are in fact exercised intentionally. This restraint can take the form of a wide range of behaviors that discourage a leader from becoming excessively dominant - from ridicule and criticism, to exile and even assassination. Boehm emphasizes that the intentionality of these practices indicates that egalitarianism is largely a product of human action, driven by individual desire for personal autonomy, and collective refusal of

¹⁹⁹Clastres, pg. 37.

²⁰⁰Boehm, C., Barclay, H. B., Dentan, R. K., Dupre, M. C., Hill, J. D., Kent, S., & Rayner, S. 1993. Egalitarian behavior and reverse dominance hierarchy [and comments and reply]. *Current anthropology*, 34(3), 227-254.

domination. Boehm terms the established collective exercise of levelling mechanisms a “reverse dominance hierarchy”, in which leaders are in fact dominated by the collective. Boehm’s work offers challenging insights for the claims of Bookchin or the anarcho-primitivists that early ‘egalitarian’ human societies practiced more sustainable ecological relations due to an absence of hierarchy. Boehm not only demonstrates that hierarchies are still present in egalitarian societies - though intentionally restrained via ‘reverse dominance’ - but that, given the powers implied by this relationship of ‘reverse dominance’, it must be assumed that what hierarchies did continue to exist - chiefdoms, councils of elders, war commanders - were accepted and maintained by popular will.

Anarchist writers often recognize the nuanced presence of hierarchies in otherwise “Stateless” societies around the world, but routinely perform an intellectual double-move that obscures what could be perhaps the most important lessons from these social forms - the successful management, restraint, and mobilization of hierarchy rather than its abolition. Anarchists routinely describe stateless societies as “anarchistic”, and are careful to point out that the societies they discuss may not identify with anarchist labels or follow all the principles traditionally associated with anarchist movements. At the same time, the social practices of these societies are brought up within a context in which readers are meant to understand them as examples of anarchist principles in action. They are, as Ramnath notes in “Non-Western Anarchisms and Postcolonialism”, “challenging to anarchism’s ownership of anarchistic praxis and thinking”²⁰¹. The odd implication here is that a challenge exists because these societies have their own “ownership” of “anarchistic praxis and thinking”, even though they themselves may not identify their

²⁰¹Ramnath, M. 2018. *Non-Western Anarchisms and Postcolonialism. The Palgrave Handbook of Anarchism*, 677–695. doi:10.1007/978-3-319-75620-2_38.

own practices this way. This is also visible in Bookchin's mobilization of Indigenous societies to illustrate his concepts of 'organic' society and pre-hierarchical society - simultaneously offering some recognition of difference while subtly claiming these societies in an ideological project that they may not affiliate with or even embody. In his 2010 book "Anarchy Works", anthropologist Peter Gelderloos draws examples of anarchy 'working' from many different societies, some of them indigenous²⁰². Careful not to impose the label 'anarchist' onto these societies, he, like others, labels societies as 'anarchistic' if they do not have a formal State and "identify with egalitarianism". But just as with the other efforts, this label serves to draw these societies into his larger project - the claim that "anarchy works" - when an objective look at these societies' practices suggests that they may be examples of something else entirely. In a related move, anarchists often proclaim opposition to all hierarchy, but then suggest that they would make exceptions for necessary hierarchies - however in practice (evidenced by the widespread organizational absence of elected leaders and the predominance of consensus as a decision-making form) they seem to have accepted the foregone conclusion that there aren't any necessary hierarchies. If anarchism is in fact understood as opposition to hierarchy - as in the several popular introductory texts that I've presented - the practices of these societies might actually represent the related, but critically different project of managing the use of hierarchies to maximize their utility and minimize the potential harms of their mis-use. If anarchists are opposed to hierarchies, these social practices may not be very useful - but to a broader democratic project that is open to the creative use of hierarchical power, they may have essential value.

²⁰²Gelderloos, P. (2010). Anarchy Works.

Cedric Robinson, in his dissertation project, *The Terms of Order*, marks deep distinctions between the formal anarchist traditions and the Tonga, a large ethnic community in what is now southern Zambia and northern Botswana and Zimbabwe, which Robinson identifies as one counterexample to the dominant mythology of the necessity of political leadership for social order and well-being²⁰³. Robinson argues that this mythology is central to the Western tradition of political philosophy and the Western social sciences generally, but that peoples like the Tonga demonstrate that it is only a mythology, and a harmful one at that. Robinson examines ethnographic research on the Tonga, demonstrating that - like the peoples studied by Boehm - Tonga society is characterized by structures of power that are constantly mediated by levelling mechanisms like ridicule and ostracization. Staking out his distinction between the system of the Tonga and the anarchist tradition and directly resisting an anarchist claim on the Tonga, Robinson writes that “the anarchism of the mutualist, the collectivist, the individualist, the syndicalist, bears only a formal resemblance to the anarchism of the Tonga”, explaining further that “one is not the expression of the other in a technologically different context. They are each manifestations of different orderings of things, distinctly different epistemologies or paradigms - that is, languages. They bear a superficial familiarity, but at the phenomenological level, no familiarity”²⁰⁴. Robinson sees anarchism as fundamentally mired in an individualist conception of freedom - the same foundation that is used to justify the mythology of the political and the practice of the State in its supposed role as the guarantor of individual well-being. These contradictions, Robinson believes, help explain how anarchism, a philosophy of

²⁰³Robinson, C. J. 1980. *The Terms of Order*. SUNY Press.

²⁰⁴Robinson, pg. 214.

liberation could so easily and often turn to mass-murder as a political tactic, writing that “the generation into acts of terror by elements of European lower and middle classes influenced by the idea of anarchism are manifestations of the inherent contradiction within the idea itself.”

Critically, while Robinson sees obvious value in the deconstruction of the mythology of political order, he is clear that he does “not intend to argue that [because it is a mythology] it is of no use, for such a presumption would contradict the fundamental relationship which is human knowledge.” What he means, he says, is that the purpose of recognizing the myth of political order is to demonstrate how “as the dominating myth of our consciousness of being together, it is contingent and therefore replaceable.” He seeks to challenge its status not in order to seek its utter abolition, but to reveal its contingency and destabilize its supposed eternal necessity. He goes on to identify two uses for the political in within the larger project of what he terms the “anti-political”: First, “the utilization of the political to defend ourselves from the destructive objectivation of the myth: the apparatuses of repression and control”, and second, “to subvert that way of realizing ourselves”. Rather than suggesting that the diverse practices of Indigenous societies toward political power are necessarily arguments for the universal abolition of the political, Robinson’s approach draws out the more essential lessons of these practices: The ways that we can collectively use political forms for purposes of defense against anti-democratic “repression and control”, so long as we do not succumb to the mythology of political authority as an essential element of human well-being.

All of these examples fundamentally challenge the first claim at the foundation of the anarchist ecological framework, which asserts the necessity of the abolition of hierarchy

to the project of developing sustainable ecological societies. Now let us consider the second fundamental claim of the anarchist ecological framework: That non-hierarchical societies can feasibly defeat hierarchical ones, and sustain themselves in the face of hierarchical opposition. We might consider this the problem of “unarmed prophets,” raised long ago in Niccolo Machiavelli’s “the Prince”. In Chapter 6, Machiavelli discusses the establishment of “new principalities” or “new systems of government”, a project not unlike that of any revolutionary social transformation (and indeed, previous scholars such as Antonio Gramsci have made this comparison). Machiavelli asserts here that it is in the nature of new systems of government to face fierce opposition from those who do not benefit from them (the beneficiaries of the old system) and only lukewarm support from those that do benefit from them (due to uncertainty about the stability of the new system and fear of the old authorities). To support this case, Machiavelli cites the examples of prophets - figures like Moses, who proposed a new social order in the face of an old. He argues that in examining cases such as this, we find that “all armed prophets have conquered, and the unarmed ones have been destroyed.” New social forms must have adequate means of defending themselves, or face destruction by their enemies who enjoy the benefit of their own recent memory of political power and the remnants of the associated networks of communication and coordination required to assert that power. This should not, I think, be read as an endorsement of direct violence or war as methods of social change. Rather, it is a recognition of the ever-present power of physical force and the necessity of overcoming that force in any successful effort at social change. It is a rejection of idealist models of social change in which changes of heart and mind are thought to be sufficient - recognizing instead that without the material ability to

reproduce a given social order, and the material ability to defend it (through either direct, grassroots popular force or force mediated via influence in the established State), any effort at social change will be overcome by its opponents. Someone's law, someone's system, will be enforced, and the balance of power - cultural, economic, and military - will ultimately decide that enforcement.

While many anarchists would not disagree with the basic sentiments of these claims, the anarchist rejection of electoral power and embrace of only non-mediated direct action places the movement in a particularly precarious position. While other political projects can often (depending on their social context) avail themselves of power struggle through the relatively peaceful processes of democratic contest (and therefore be, in a sense "armed" through attaining power or influence in the State), anarchists by their own definitions cannot²⁰⁵. It is common enough for people, when encountering anarchist ideas, to (perhaps too cynically) assert that an anarchist society could never successfully defend itself - common enough that most introductory anarchist texts anticipate and respond to this objection. Returning to the introductory text provided by the Federación Anarquista Rosa Negra / the Black Rose Anarchist Federation, the objection that a society without any hierarchy would be impractical and defenseless against hierarchically-organized aggressors is met with the argument that 3 large-scale anarchist societies have existed in the past century (anarchist Spain, anarchist Ukraine, and some others, all of which lasted for periods of between 3-4 years), and that 2 non-anarchist but

²⁰⁵In practice, many self-identified anarchists do in fact avail themselves of the processes of representation through political struggles. Many, if not most, vote, exert pressure on political representatives' decisions, support legal efforts, etc. My contention is not that these people don't exist - I know many of them - but that these practices suggest a political philosophy that is not entirely consistent with the way anarchism is typically defined by its proponents, and one that seems practical and worthy of articulation in its own right.

“anarchistic” libertarian-socialist societies have existed for longer periods: The Zapatistas of Chiapas, Mexico (1990-present) and the Kurdish territory of Rojava (2012-present). These examples - and particularly Rojava and the Zapatistas - are also offered as proof of anarchist feasibility in Ramnath’s “Non-Western Anarchisms”, though again some reservations about applying the ‘anarchist’ label to these projects are noted. Gelderloos’ “Anarchist Solution to Global Warming” argues that “those who doubt the possibility” of the anarchist vision should turn to the Powhatan Confederacy of the Chesapeake Bay watershed, the Haudenosaunee peoples of north eastern North America, the aforementioned anarchist revolution in Spain of 1936-39, or the Seattle general strike of 1919. This is also reflected in his “Anarchy Works”, which, in a section focused on the question of whether or not anarchist societies could defend themselves against authoritarian neighbors, cites the anarchist territory in the Ukraine that existed for 3 years of the Russian civil war, the Seminole Indigenous people of south eastern North America, the Mapuche of central western South America, and pirate societies. In “The Shock of Victory”, the late David Graeber asserts that anarchists actually tend to achieve their medium-term goals too quickly (citing the cases of the global justice movement and anti-nuclear movements, both of which had strong elements operating on anarchist organizational foundations), and that this generates conflict when it is unclear where to go next²⁰⁶. Like some other anarchist writers, Graeber goes on to abandon the concept of “the revolution” - arguing that anarchist forms of organization are incapable of imposing a new social order over unwilling populations, but positioning this as an ethical advantage rather than a political limitation. What he doesn’t acknowledge is that this cuts

²⁰⁶Graeber, D. 2018. The shock of victory. *The movement of movements. Part, 2*, 393-409.

both ways - while it is true that anarchist forms don't seem capable of imposing oppressive social structures nonconsensually like hierarchical structures can, it is equally true that they don't seem capable of imposing more democratic social forms on territories controlled by undemocratic projects.

The frequently-cited cases offered by anarchists for proof of the feasibility of a non-hierarchical political project, on closer examination, actually suggest the opposite - that creative mobilizations of hierarchy have been utilized throughout even the anarchists' favored examples, and that these mobilizations have shown greater success when they have not been hampered by the ideological commitment to the abolition of hierarchy per say. *None* of the frequently mentioned projects were or are non-hierarchical by the standards of contemporary anarchist activist groups operating on direct democracy and consensus without leadership positions capable of issuing command. While attempting to understand the traditional structures of any Indigenous society that has faced colonization is difficult due in large part to the destructive effects of genocidal settler-colonial war, what evidence exists suggests that the Seminole tribes²⁰⁷, the Haudenosaunee²⁰⁸, the Powhatan²⁰⁹, and the Mapuche²¹⁰ societies were not non-hierarchical in the anarchist sense, though their forms of governance have differed dramatically from Western forms of State power. Rather than an absence of hierarchy, in each of these cases we find complex systems of governance and rule that both institutionalize and problematize

²⁰⁷Covington, J. W. 1993. *The Seminoles of Florida*. University Press of Florida, 15 NW 15th St., Gainesville, FL 32611.

²⁰⁸Williams, K. P. 2018. *Kayanerenkó: wa: the Great Law of peace*. Univ. of Manitoba Press.

²⁰⁹Rountree, H. C. 1992. *The Powhatan Indians of Virginia: their traditional culture* (Vol. 193). University of Oklahoma Press.

²¹⁰Dillehay, T. D. 2016. Reflections on Araucanian/Mapuche resilience, independence, and ethnomorphosis in Colonial (and present-day) Chile. *Chungará (Arica)*, 48(4), 691-702.

hierarchy - often in the form of a society structured into clans with interwoven forms of political power, equipped with rich traditions of practice for the prevention of abuse of authority. In the case of pirates, while they did practice forms of democracy that ran against the authoritarian politics that were dominant in the European world, they also used this democracy to elect officers (captains) tasked with command, provided that they proved themselves capable²¹¹. We also cannot ignore the severely hierarchical practice of slavery amongst some pirates and some Indigenous societies. While the Spanish anarchist revolution and the Ukrainian revolution were both expressly motivated by the goal of a stateless anarchist society, both were organized through armies that employed some degree of hierarchical structure to help secure military success toward this end, whether charismatic commanders like Makhno and Durruti, or elected officers within popular militia brigades²¹²²¹³. These structures were often contested by the anarchists serving within them, and the inherent tension between the need for disciplined military coordination and the goal of total democracy were likely a limitation on military success that helped lead to the defeat of these movements²¹⁴.

This same conflict between the apparent practical necessity of hierarchy for purposes of organized combat and the goal of a revolutionary abolition of hierarchy have played out in the anarchist movement's attitudes toward the oft-cited contemporary examples of "anarchistic" success in the Kurdish territory of Rojava or the Zapatista territory in

²¹¹Woodard, C. 2008. *The republic of pirates: Being the true and surprising story of the Caribbean pirates and the man who brought them down*. Houghton Mifflin Harcourt.

²¹²Palić, M. 1976. The Anarchism of Nestor Makhno, 1918–1921. *Seattle: University of Seattle*.

²¹³Godicheau, François. 2003. *The words of the Spanish Civil War*, Presses Universitaires du Mirail. ISBN 978-2858166848, page 9.

²¹⁴Messenger, D. A. 2014. Organizing the Fight: Armies and the Spanish Civil War. *History: Reviews of New Books*, 42(3), 78-81.

Chiapas, Mexico. While Ramnath, in citing both of these examples within an essay about “anarchisms”, states that “it may or may not be accurate” to use the term anarchism to describe them, this may be an understatement of the facts. At least some Zapatistas have explicitly stated that they are not anarchists, denouncing those who condemn their utilizations of hierarchy as operating from the point of view of a limited and dogmatic European ideological puritanism that replicates colonial thinking patterns²¹⁵, and referring to their anarchist critics as “insignificant elements along an ideological fringe.” The revolution in Rojava has faced similar criticisms from within the ideological anarchist movement²¹⁶, while at the same time demonstrating remarkably innovative forms of democratic social organization, gender representation, and inter-ethnic cooperation²¹⁷. As with the examples of Indigenous forms of social organization, anarchist pre-occupations with the degree to which these societies conform or fail to conform to perfectly non-hierarchical social vision obscure the much more valuable truth: That these societies provide diverse real-world examples of relatively stable egalitarian forms of social organization that problematize but utilize hierarchies, and at the same time demonstrate more successful ecological orientations than capitalist or non-democratic socialist projects.

The anarchist pattern of either implying that hierarchical societies are non-hierarchical, or condemning them for failure to live up to the total abolition of hierarchy

²¹⁵Members of EZLN. 2002. A Zapatista Response to “The EZLN Is NOT Anarchist”. From a letter sent to Green Anarchy. Retrieved from “Indigenous Anarchist Federation.” <https://iaf-fai.org/2019/05/05/a-zapatista-response-to-the-ezln-is-not-anarchist/>.

²¹⁶Authored by “an anarchist eyewitness.” 2015. The grim reality of the Rojava Revolution. Libcom.org., User: Craftwork. 2018. The myth of the Rojava revolution: a reading list. Libcom.org.

²¹⁷Knapp, M., & Jongerden, J. 2014. Communal Democracy: The Social Contract and Confederalism in Rojava. *Comparative Islamic Studies*, 10(1).

that anarchists seek, seems to reflect a long-standing tradition of European ideology that is also visible in the Marxist tradition: a fixation on singular objects of condemnation (hierarchy, capitalism, socialism) as the lone cause of all that is good or bad, rather than thinking in terms of broad goals (ecological and social well-being, for instance) that may have diverse answers, or complex exploration of power dynamics rather than simple stories of which kinds of power are good or bad. These ideological fixations - which at times have lead socialists of varying stripes to murder one another in great numbers - seem to be a continuation of the same attitude present during centuries of inter-denominational religious warfare in Europe, in which thousands of people killed one another under the banner of their particular interpretation of their Christ's calls to unconditional love, mercy, justice and forgiveness. The opposite of this pattern seems present in Forbes' more open theorization of the wétiko disease, or Williams' description of the Haudenosaunee Great Law of Peace in its emphasis on "principles over details". Another alternative can be found in the pluralist ideas of Isaiah Berlin, which problematize what he sees as an endemic European ideological "monism" that fails to account for the many different ways that shared values can be expressed and protected²¹⁸. Berlin does not embrace total value-relativism, but rather affirms shared human values (such as opposition to murder and oppression) and the continued possibility of normatively evaluating whether practices more or less successfully or unsuccessfully embody them. Berlin argues that the alternative to relativism is not a universal monism but an embrace of many paths toward the good. For instance, if we lay down the burden of a necessarily *total* opposition to hierarchies, property, market economics, or other

²¹⁸Berlin, I. 1999. *The First and the Last* (London: Granta).

social dynamics, while retaining our critiques of their problematic tendencies for democracy and ecology, this frees us to evaluate and learn from the ways different societies have sometimes utilized and managed these social dynamics toward ecologically and socially beneficial ends.

Friedrich Nietzsche's *Genealogy of Morality* suggests deeper cultural origins for the ambivalence toward power and its contradictions²¹⁹. In this work, Nietzsche traces the origins of the concepts of 'good' and 'bad', arguing that the etymological roots of these words signify their original association with dividing the upper-class nobility and commoners - the formation of what Nietzsche calls "master morality", a philosophical project of differentiation and subjectification that upholds the value of everything associated with the ruling groups and denigrates everything associated with the ruled. This was a central element of the blood-lineage myths that Robinson sees as formative of the earliest European racialism. The dominated, in Nietzsche's view, respond to their own frustrated desire for vengeance and liberation with the construction of a "slave morality" that inverts the morality of the masters. Slave morality accomplishes an internal, moral vengeance against the powerful by condemning everything associated with power - wealth, health, pride, etc. - and especially power itself. Nietzsche argues that this slave morality, through Christianity (though he specifically and problematically assigns it to Jews), and later through democracy, came to triumph in Western societies, displacing master morality as the dominant moral framework among rulers as well as critics of the ruled. Nietzsche argues that his contemporary radical critics of inequality - socialists, anarchists, and others - are carriers of the same movement of *ressentiment* against the

²¹⁹Nietzsche, F., Clark, M., & Swensen, A. J. 1998. *On the genealogy of morality*. Hackett Publishing.

Greco-Roman “classical ideals” of greatness. This causes them to turn either to individual or personal asceticism, renouncing power and its signifiers and encouraging others to do the same, or to produce revolutionary ‘reigns of terror’, seeking an eternal bloody vengeance against the ever-more-subjectively defined powerful groups. This echoes Robinson’s observations in “Terms of Order” that Western opposition to charismatic authority has taken the form of an incomplete opposition, reifying elements of domination and leading to acts of terror due to an untenable partial negation.

Nietzsche’s theory is useful in that it reveals how resistance to domination can give rise to a total rejection of power that generates a new sort of domination - an imposed powerlessness and paralysis. In anarchist theory we see this: A rejection of power through the refusal of any form of hierarchy even when it might be a necessary element of collective coordination toward radically egalitarian ends. As a movement, anarchism romanticizes its own historical defeats as examples of success, and fails to learn from the advantageous coordinating capacities exhibited by the organizing innovations of groups like the Zapatistas or the Kurds in Rojava, who have been able to militarily defend radical experiments in egalitarianism and democracy with some success. Sometimes the lack of strategic vision for overcoming the concentrated power of opponents manifests in the form of millenarian longing for industrial collapse as a means of utopian deliverance²²⁰. Another form of this is faith in a spontaneous mass revolt not requiring coordination, or the insistence that revolution will come in the form of globally-coordinated mass uprising (coordinated without any positions of hierarchy), as discussed by Gelderloos or Brecher

²²⁰Pellow, pg. 122.

in the form of the “liliputian strategy”²²¹. Scholars in the anarchist-influenced women’s liberation movements have observed how the total rejection of power can also manifest in the form of hidden hierarchies, more difficult to manage or utilize effectively because of their institutional invisibility²²². In the introductory accounts we’ve reviewed, anarchists have even cited examples of movements that had large electoral or institutional strategic elements - such as the global justice movement or anti-nuclear movements in Graeber’s account - but these symbiotic structural efforts are not articulated as essential parts of successful strategy and are certainly not offered as cause to question the overarching rejection of hierarchy.

However, despite lending valuable insight, Nietzsche’s anti-democratic embrace of all of the vital elements of the classical ideal that slave morality represses fails to generate a relationship to power capable of transcending the master/slave symbiosis. His attempted transcendence of the conflict between these moral systems seems simply to be a reproduction of the individualist, anti-egalitarian dominance-based power systems that give rise to the cycle - and which seem intimately tied to the power-growth systems - the *wétiko* systems - that drive ecological destruction. His constant characterization of slave morality as being motivated by “Jewish hatred” stemming from Roman imperial oppression can easily be read as anti-semitism (as evidenced by the activities of his sister in mobilizing his work toward these ends). His conceptualization of both master and slave morality seem unaware of their own Eurocentric limitations, in that they don’t seem applicable to the cultural traditions of many Indigenous societies, or of the Black Radical

²²¹Brecher, J., & Costello, T. 1998. *Global village or global pillage: Economic reconstruction from the bottom up*. South End Press.

²²²Freeman, J. 1972. The tyranny of structurelessness. *Berkeley Journal of Sociology*, 151-164.

Tradition observed in the experience of Black enslaved people described by Robinson - the most common contemporary association with slavery generally. It might be more helpful to frame both master and slave morality as symbiotic elements of systems of concentrated domination, and to seek a true negation beyond either. This negation would embrace the necessity of power - including, at times, power vested into individuals to command others - while simultaneously problematizing and containing that vestiture.

Given the collective and networked reality of power - that power is always only possible through the coordinated action of many - individual power is always still powerless in its isolation, and therefore both vulnerable to collective powers and incapable of real human interplay, and therefore prone to insecurity and constant struggle. As Forbes writes, quoting Black Elk: “no good thing could be done by any person alone.” Individual power-over-others in society creates similar kinds of vulnerabilities as those faced by the isolated individual, as this power depends on the constant constraint and repression of others in the power-network who themselves are simultaneously incentivized to seek these individualist forms of domination and prodded into obedience with another’s will. A true alternative would be neither a rejection of power, nor an embrace of power-over-others, but the construction of a collective project of active mutual empowerment, power-trading, and power-sharing: democracy, in a deep sense. This might take a form like what Robinson describes among the Tonga in *Terms of Order* - participation in a shared subjectivity geared not towards individual dominance, but the protection and nurturing of mutual collective flourishing. Indeed, Robinson proposes the Tonga’s system as a radical antithesis of Nietzschean individualism. “If, in some spiteful play,” he writes, “one were compelled by some demon or god to choose a transgression

against Nietzsche so profound and fundamental to his temperament and intention as to break apart the ground upon which his philosophy stood, one could do no better than this: a society which has woven into its matrix for the purpose of suspending and neutralizing those forces antithetic to individual autonomy, the constructed reality that all are equally incomplete²²³”.

These interventions have also been advanced by other thinkers of the Black Radical Tradition. In an exploration of Nietzsche’s ideas and their application to contemporary culture and politics on her Youtube.com channel Contrapoints, political commentator and “ex-philosopher” Natalie Wynn offers two examples from this tradition that express an approach to power that overcomes Nietzschean individualism²²⁴. Huey Newton of the Black Panther Party for Liberation once wrote that when the Panther’s coined the expression “All power to the people,” “we had in mind emphasizing the word ‘power’ for we recognize that the will to power is the basic drive of man. But it is incorrect to seek power over people. We have been subjected to the dehumanizing power of exploitation and racism for hundreds of years; and the Black community has its will to power also. What we seek, however, is not power over people, but the power of control over our own destiny”. In the eyes of Newton and the Panthers, power is necessary for liberation and Black people must seek it - but there is a critical distinction made between individually concentrated power-over-people and collective control over “destiny” - over the course of the future. This sentiment is also present in Martin Luther King’s meditations on the relationship between power and love: “Power without love is reckless and abusive, and love without power is sentimental and anemic. Power at its best is love implementing the

²²³Robinson, *Terms of Order*, pg. 199.

²²⁴Wynn, Natalie. 2021. *Envy*. Contrapoints. Youtube. Youtube.com.

demands of justice, and justice at its best is power correcting everything that stands against love”.

Nietzsche’s condemnation of the emptiness and futility of rejecting power holds true in King’s words - but an embrace of power requires that power be wielded by a collectivity in social solidarity, and therefore through democratic form - arguably what King refers to as “love” - or it risks repeating the violent cycles of social domination with ever-worsening consequences for all beings vulnerable to being consumed and exploited by it. The anti-hierarchists of the anarchist, social ecologist, and total liberationist traditions appear to be correct in identifying an ecologically destructive drive in the core structure of projects of unrestrained concentration of power. What’s missing is a real recognition of the continued, stubborn necessity of hierarchy as a form of power - of its apparent necessity for effective large-scale coordination, which even anarchists have resorted to in war - in any project that is to have any hope of confronting despotic, growth-driven and ecologically destructive social forms. To reject hierarchy completely is to join in the long tradition of “unarmed prophets” that Machiavelli warned against, condemning oneself and one’s movement to a moralistic self-satisfying defeat.

In practice, if not in theory, the majority of people involved in anarchist movements embrace the more open, practical and pluralistic attitudes toward hierarchical power that are suggested by the above critiques. Most anarchists do vote and many help organize electoral campaigns. Even consensus meetings, which seek to be less hierarchical and more democratic than majoritarian democracy, usually use the position of a ‘facilitator’ to help coordinate the meeting process - though this tends to be the extreme of official hierarchy that anarchist groups are willing to tolerate within. Anarchist-influenced

movements have been widespread in recent years in the form of movements that largely refuse direct electoral representation and are characterized as ‘leaderless’ or movements in which everyone is a leader - from the Occupy movement, to the Black Lives Matter movement, to revolutionary pro-democracy efforts around the world. As a participant in some of these movements and a careful observer of others, I can attest that despite the claims of leaderlessness, there are strong practical efforts within all of these movements to forge and consolidate movement successes through both electoral and street-level efforts. In practice, different utilizations of hierarchy toward egalitarian and ecological ends can act in symbiosis if leaders or representatives can be bound to the interests of the movements behind them, though just as often this symbiosis is undercut by a presumed impenetrable divide between the interests of grassroots and institutional actors.

However common these practices are, there does not seem to be a visible theoretical or political camp that expressly articulates the critique of hierarchical power that clearly recognizes the negative social and ecological tendencies of uncontrolled power concentration, and yet simultaneously recognizes the practical necessity of hierarchy for success in organized political contestation. This position aligns broadly with the tradition of democratic socialism, though democratic socialism does not always necessarily include this analysis. Such a position would reject systems dominated by either capitalism or dictatorial socialism, embracing an open field of strategic and organizational opportunities ranging from revolutionary direct-action movements and grassroots protest to democratic-socialist political reform without seeing any irreconcilable opposition between them. There are many promising intellectual efforts that help lend a theoretical foundation to such a position. These hybrid strategies are of

course reflected in the complex real-world examples of the Zapatistas and the Kurds in Rojava, as described above. Robinson's Terms of Order offers a deconstruction of the mythology of political authority and its supposed social necessity, while also leaving room for practical engagement with the political as a tool for defending democratic space against the repression of systems of domination. Forbes' *wétiko* theory identifies a disease of empire, characterized by power-concentration, undemocratic government, accumulation, ecological destruction and slavery, which he sees present in both capitalism and dictatorial socialism. Without painting any singular practice as the monolithic enemy, the door is left open to a wide range of forms of organization that could challenge these systems provided that participants follow the "pollen path" or the "Good Red Road", including humility, love, and mutual respect with all beings. This is resonant with Martin Luther King Jr.'s recognition of the interdependence of both love and power. Angela Davis and Noam Chomsky have recently expressed a compromising synthesis of radical opposition to the dominant order with immediate practical necessity in their support for the election of Democratic candidate Joe Biden in the 2020 election in order to prevent the advance of the far-right, despite both of their continued opposition to Biden and the systems he supports. This was predictably met with widespread condemnation as 'selling out' and 'opportunism' by elements of the left unwilling to tolerate practical compromises. Michael Hardt and Antonio Negri, two prominent scholars within the anarchist-influenced anti-capitalist global justice movement have tackled these issues directly in their newest book, "assembly", which seeks to understand how democratizing social movements can reject the binary of reform and revolution, instead organizing "active counterpowers" and "antagonistic formations *within and*

against the State²²⁵". Hardt and Negri seek to invert the "centaur" of the old Marxist-Leninist model, in which the movement (horse-body) is directed and used by the leadership (man-head), instead proposing that the movement seek ways to dominate its representatives while retaining the utility of leadership and representation. This strongly echoes the reverse-dominance hierarchies described in Boehm's anthropological work. In "The Network Prince", Nunes offers a similarly fruitful merger of the anthropological observations of Clastres with Machiavellian critique, arguing not for the abolition of political leadership in democratizing social movements, but for the use of leadership provided it is kept in a fragile state that prevents its autonomization from the movement at large²²⁶.

Janet Biehl, a longtime colleague and companion to founder of social ecology Murray Bookchin, tells us that late in his life Bookchin broke with anarchism over its strong emphasis on the total absence of hierarchy and frequent rejection of any sort of structured communal organization²²⁷. He believed that elections and politics should be mobilized to gain the power to organize a more democratic society - whereas many of the anarchists he encountered completely rejected voting and did not believe in majoritarian democracy. He still believed that this acquisition of power should be contained to local politics, to the municipal level - something of an ironic position given that he rejected the emphasis of many anarchists on personal lifestyle and individualism, which is in its own way just a more extreme hyper-localism than Bookchin's own form. It is to the detriment of us all

²²⁵Hardt, M., & Negri, A. 2017. *Assembly*. Oxford University Press. Pg. 254. Emphasis added.

²²⁶Nunes, R. 2015. The Network Prince: Leadership between Clastres and Machiavelli. From Latin American Struggles. *International Journal of Communication*, 9, 11.

²²⁷Biehl, Janet. 2007. Bookchin Breaks with Anarchism. *Communalism.net*. Archived at: <https://theanarchistlibrary.org/library/janet-biehl-bookchin-breaks-with-anarchism>.

that Bookchin was not able to reconsider his positions in Ecology of Freedom in light of his changing ideas. One can only wonder how the problematization of hierarchy as the root cause of ecological crisis might have been transformed had it been allowed to become a conversation on the practical utilization and successful restraint of hierarchies necessary for social coordination.

One possibility would have been to consider hierarchy as both a necessity and a tool with dangerous socially and ecologically destructive tendencies which must be restrained, as I am attempting to do here. This shift may appear subtle, but the arguments above render it necessary: Rather than condemning and attempting to abolish all hierarchy, we must problematize the tendencies of hierarchy toward infinite growth if not socially restrained by forms of majority power. Toward this end, I propose to give a name to the problem of the tendencies of unrestrained hierarchy rather than hierarchy itself. I call this problem “carcinarchy”, what I believe to be the power dynamic fundamental to the global ecological crises and social crises of inequality we face today. We might understand carcinarchy to be usefully opposed not by a flatly anti-hierarchical anarchism, but by a broadly inclusive “ecological democracy”, mindful of the many forms that democracy can take (well beyond its classical European formulations) in the united purpose of restraining growth-oriented power, which by necessity exists in uneven distribution, but which can be prevented from attaining power concentration beyond its utility to the rest of society and the wider ecology.

II. Carcinarchy and HEX Hegemony: Beyond Epochs and Unitary Causes, Toward Power-Ecology and Hegemonic Process

What would it mean to synthesize the strongest elements of the previously described projects? It would mean an “anthropocene” without a fixed start date, and without attributing responsibility to the whole of humanity, instead recognizing a confluence of mutually-amplifying projects of power concentration with unique histories and uneven distributions of historical responsibility. It would mean recognizing that capitalism, non-democratic state socialism, and fascism all exhibit strong tendencies toward ecological destruction, and that these tendencies are visible in the unrestrained projects of power concentration - carcinararchy- evident in each, tending interminably toward growth for the sake of maintaining and enhancing elite power. It would mean recognizing that ecologically-sustaining world-making has been the practice of many Indigenous, land-based societies for millennia, and that practices of ecological destruction have gone hand-in-hand with processes of Empire - of territorial expansion and growth-oriented concentration of social power. This also means recognizing the mutually-constitutive nature of different forms of power - cultural, economic-ecological, politico-military - rather than arguing for a single foundational form, such as economic power, and making this alone the fundamental key to social transformation. It would mean recognizing the inherent tendencies in hierarchical systems toward growth - and opening ourselves to learn from the great wealth of social and cultural techniques through which human societies, many of them Indigenous, have at times been able to restrain the tendencies of hierarchy toward growth and domination wherever the seeds of empire began to take root.

Several important theories have already sought to grapple with the interdependent structure of projects of power concentration in contemporary society, though these theories have had a tendency to emphasize fixed structures of power rather than the dynamics through which the structures are constituted - which also tends these theories toward anarchist conclusions that seek the abolition of power differentials themselves rather than building democratic restraint over inevitably uneven power distributions. Crenshaw's argument for the central importance of intersectionality reveals the consequences of failure to account for multiple manifestations of inequality²²⁸. Her theory offers the critical contribution that the situations of those experiencing multiple axes of exclusion - in her argument, Black women, though later scholars and movements have centered Black and Indigenous women and particularly queer and trans people - reveal the most effective paths toward truly universalist strategies for attacking inequality. Collins offers a Marxist application of this theory that delves into the ways that every aspect of social inequality is an element in the structuration of the other aspects²²⁹. Where intersectionality highlights the confluence of types of social exclusion at the level of the experience of affected groups, the concept of kyriarchy is offered to describe the system characterized by these intersecting inequalities²³⁰. Kyriarchy describes a social system composed of intersecting systems of domination - the interlocking system of various forms of oppression that intersectionality also describes,

²²⁸Crenshaw, K. 1989. Demarginalizing the intersection of race and sex: A black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. *u. Chi. Legal f.*, 139.

²²⁹Collins, P. H. 2000. Gender, black feminism, and black political economy. *The Annals of the American Academy of Political and Social Science*, 568(1), 41-53.

²³⁰Schüssler Fiorenza, Elisabeth. 2001. "Glossary". *Wisdom Ways: Introducing Feminist Biblical Interpretation*. New York: Orbis Books.

though from a perspective emphasizing the experiences of the marginalized rather than an overview of the system's structure.

A frequent limitation in the application of these theories of intersecting forms of domination is their focus on the current structure of oppression rather than the dynamics - the actual operations, pressures, and proclivities of power in action - that constitute and maintain it. This can lead to a view of contemporary vectors of oppression as static and stable facets of the social world, rather than as historically-rooted, continually developing projects created and maintained in the course of concentrating power for ruling groups which can also be undone. An overly-static view of systems of oppression lends itself to two possible missteps, visible in existing literature and counterproductive to the projects of democratization and consequently, ecological sustainability. One is the conception of social inequality as something unavoidable, to be navigated rather than attacked. This view - evident in the IPCC reports, and in various climate change papers that focus on intersectionality - applies the theories of interlocking systems of oppression without a view toward their abolition, meaning that the only possibility left is to be maximally 'mindful' of them, and for ruling classes and their managers to craft more effective responses (rather than radically democratizing social systems so that people have maximal ability to craft political responses themselves)²³¹. This ignores the function of systems of power concentration and inequality in the generation of ecological crises in the first place, and totally displaces the necessity of projects of political democratization.

The other misstep is the anarchist rejection of all forms of concentration of power, most effectively advanced in Pellow's theory of Socio-Economic Inequality (SEI) which

²³¹Osborne, N. 2015. Intersectionality and kyriarchy: A framework for approaching power and social justice in planning and climate change adaptation. *Planning Theory*, 14(2), 130-151.

“does not claim a primary source or origin of our ecological crises, such as racism, capitalism, classism, patriarchy, androcentrism, dominionism, or Western culture. Rather, SEI argues that there are varied and multiple forms of inequality and hierarchy driving our socioecological crises, revealing the importance of intersectionality,”²³². While seemingly intuitive, this theorization in fact undergoes a subtle slip in definitions of power that creates some potential for problems. In the first place, systems of unequal access to and influence over power, based on structural exclusions of whole classes of people, are raised as the forces driving socioecological crisis. However, in the second place, hierarchy itself is blamed: differentiation of relative concentrations of power within a system of governance or management. But are these the same thing?

In “The Mesh of Power”, Foucault suggests that analysis of power in Western societies has thus far been mired in a purely “juridical” conception of power - power as the ability to say “no”, to prohibit²³³. However, Foucault argues that this obscures the true nature of power. Power, to Foucault, is everywhere - “society is an archipelago of different powers” - locally contingent on the actual interaction of beings and their environments. Rather than view power as a “thing”, and especially a thing held primarily by the sovereign power of the state from which all other power derives, Foucault argues that power must be viewed first of all as a *productive technology*. Power doesn’t emerge as prohibition, but as a system of effective coordination. Viewing power through this lens allows us to view hierarchy in its historical and dynamic reality. Rather than purely negative, concentrations of power exist precisely because they are productive. Foucault

²³²Pellow, pg. 8.

²³³Michel Foucault. 2012. The Mesh of Power. *Viewpoint Magazine*. Accessed at <https://viewpointmag.com/2012/09/12/the-mesh-of-power/>.

argues that, like the “reverse dominance hierarchies” of Boehm or Clastres, even Marx demonstrates that power is not simply an issue of a dominant and a dominated group, a one-way force, but an ever-present flow of the capacities of all people in all directions utilized by people throughout social hierarchies. As Latour and other proponents of Actor-Network Theory (ANT) have recognized, power is only possible through the actual capacities and movement of people, non-humans, and objects - meaning that imbalances in social power exist through the actions of networks of individuals²³⁴. Class power, for instance, can only be ‘held’ through the coordinated and semi-predictable action of all those who enforce it - whose action itself relies on their cooperation, their desire for possible reward and their fear of possible consequences which all themselves depend on the cooperation of others in the network. This is precisely what makes social contestation possible in Marxist thought, though its implications challenge some Marxist assumptions: that people can choose to participate differently in the social patterns that constitute the flow of power, thereby exercising their own forms of power.

Radical power imbalances, such as class power, certainly exist - but they are underpinned by the choices of many throughout a network, acting on the probability of how others in the network will act. This is a theory that upholds the presence of human agency, but offers respect for the limitations of that agency given the likely consequences that individuals can expect to result from their actions given the behavior of others. Understood in this way, hierarchies are not merely negative restraints on the actions of those subject to them, but are exercises in collective power which through democratic mechanisms can be more or less shaped and challenged by the actions of people in

²³⁴Latour, B. 1996. On actor-network theory: A few clarifications. *Soziale welt*, 369-381.

different levels of a hierarchy. In the absence of such democratic mechanisms, their power can be crystallized to a greater or lesser degree into structures of oppression and exploitation that are autonomous of the people whose power is mobilized to constitute them (whiteness, patriarchy, and ownership classes, for instance). The possibility of preventing this autonomization and crystallization - the possibility for democratic restraint of hierarchical power concentration - is evident in practices that Boehm and Clastres demonstrate have been implemented in many times and places around the world, as well as in liberatory social struggle of all kinds. An attempt to flatten all social power - to abolish all hierarchy - emerges from the impulse to equate crystallized structures of oppression and exploitation (via projects such as patriarchy, racialization, and capitalism) with all structures of command and all varying concentrations of political power. The result is a reductive view of the possibilities for liberation: Either we utterly forgo the coordinating advantages of hierarchy, however democratically managed, or liberation from structural oppression is not possible. The rich histories of human social organization and social movements demonstrates a wider range of possibilities: the utilization of democratically-constrained hierarchies to defend and advance egalitarian ends.

While it appears crucial to make this distinction and avoid a too-broad condemnation of all forms of hierarchy, Pellow's contribution with SEI still offers the important foundation for recognizing structural oppression and exclusion as basic forces in the generation of ecological destruction - particularly in recognizing the parallels in how differential exclusion allows for the exploitation and destruction of anything and anyone denied political status and power. This approach is consistent with the power-ecology approach of geographers Bauer and Ellis, who argue that while capitalism must be

considered for its unique drives toward ecological destruction, this cannot be recognized at the expense of obscuring the wide range of historical power dynamics driving ecological destruction in other contexts²³⁵. Recognizing the wider range of possible ecologically destructive structures opens us to the analysis of the actual dynamics of elite power concentration - not just its structural form, but its inherent tendencies. Recognizing ecological crisis as flowing from a dynamic of elite power concentration bears a strong resemblance and many useful resonances with Marx's analysis of class struggle and capitalist growth imperatives, as well as with Antonio Gramsci's theories of hegemony. Where my approach departs from Marx is in emphasizing the plurality and semi-autonomy of projects of power concentration, each with internal imperatives to growth with their own ecological consequences that resemble what Marxist scholars have identified as the growth imperatives of capitalism. The anthropological work of Clastres and Boehm demonstrates widespread tendencies in human society for any form of power concentration to have sufficient tendencies toward increasing consolidation as to provoke the intentional intervention and restraint of societies at large, seeking to keep such positions of power concentration fragile and limited. Of course, in identifying class struggle as the revolutionary engine of social transformation that itself generated capitalism, Marx recognized a pre-history of capitalism that includes other economic ruling classes - governing other forms of productive relations - seeking to expand their power through the exploitation of laboring classes. Just as Marxists have recognized the fundamentally ecologically destructive nature of capitalism - which requires economic

²³⁵Bauer, A., & Ellis, E. 2018. The Anthropocene divide: Obscuring understanding of social-environmental change. *Current Anthropology*, 59(2), 209–227. <https://doi.org/10.1086/697198>

growth to sustain its power structure - we can see similar dynamics wherever systems of concentrated power have generated a need for incessant growth.

Marx, however, emphasized economics as the fundamental base of ruling power and of this revolutionary process, and proposed a theory of history progressing through stages toward a predictable end. This is problematic in several ways. For one, as Robinson argues, the economic view does not leave room for a thoroughgoing understanding of the role of racialization in the development of capitalism itself, and necessarily excludes the self-conscious rebellions of enslaved Black people who did not organize as a proletariat or seek primarily economically-defined forms of liberation. For another, as Gramsci (and later Foucault) recognized, this leaves the maintenance of elite power - the continued cooperation of the exploited - undertheorized, which also means that the paths by which those without governing power over the economic system could overthrow ruling class power were undertheorized as well. We can understand the basic Marxist interpretation of power with an analogy to a “compression structure” - like a typical building, this is a structure based on the force of gravity pulling component parts downward so that they ultimately rest on single foundation (in this case the foundation is economic power, the relations of production). Other schools of thought, including political sociology or Foucault and Bourdieu, have emphasized alternative foundations - political power or discursive power respectively. Offering competing “compression structure” accounts of power is not the most analytically accurate or useful approach, given its tendency to provoke an endless debate in which compelling accounts can be made for the critical importance of different power forms. Recognizing the reductive limitations of theories of power that rest on some ultimate cause and neglecting other

forms of power, sociologist Isaac Ariail Reed has offered a useful synthesis of theories of power that sees various accounts of social power as describing dimensions of power rather than necessarily discrete views²³⁶. Reed describes relational, discursive, and performative power as different dimensions which can be used to understand different aspects of human action, offering the storming of the Bastille as an example. In recognizing that theories of power can be understood as describing dimensions of power rather than competing accounts, Reed also opens the possibility of understanding to what degree different dimensions of power are dependent on or autonomous from other forms.

Recognizing Reed's insights into the importance and interplay of various dimensions of power allows for a model of social power that can include class power in addition to projects such as patriarchy and racialization as entangled projects characterized by efforts to consolidate influence through its differing forms. This suggests a different physical model of comparison that could usefully displace the mono-foundational "compression structure" models: A tensegrity structure, one with no foundation but held together by the tension between all components. Consideration of this structure as an illustration of power provokes a re-evaluation of Gramsci's model of hegemony. What would it mean to take seriously the project of hegemony while recognizing the nature of power as multi-dimensional, consisting of varying forms and interdependent projects beyond the primacy of class power - and recognizing the many forms that class power can operate through, from cultural to material to politico-military?

III. HEX Hegemony: The High-carbon Energy Complex as a Hegemonic Network

²³⁶Reed, I. A. 2013. Power: Relational, discursive, and performative dimensions. *Sociological Theory*, 31(3), 193-218.

While Gramsci's theories of hegemony have been productively used to illustrate many aspects of the power dynamics structuring the climate crisis, previous efforts have remained limited to the 'compression structure' model emphasizing economic class power and have not fully incorporated the reality of multiple projects of power concentration simultaneously reinforcing (and in some cases working against) the widespread use of fossil fuel energy and the advance of ecological crises. The essential idea of hegemony in Gramsci's work is that ruling class power relies not just on control of the coercive State, but use of the State and other societal arenas to build consent for elite rule. This mirrors Foucault's assertion that power must be understood productively, not simply negatively - not just prohibitive, but also generative. Gramsci's theory brings culture back into the strategic picture, advancing a view that particularly in societies with more open, democratic political systems, beyond simply wresting control of the coercive apparatus of the State, revolutionary anti-capitalists must strive to achieve forms of power based on public support and moral legitimacy. However, class remains primary in Gramsci's view, and, consistent with the critiques raised by Robinson against Marxist theory generally, the relative autonomy of other projects of power concentration and resistance are given little recognition. Gramsci draws a line between what is "historical" - what is actually important in the trajectory of power relations and large scale social structure - and what is "conjunctural" - collective projects that are not relevant to the more important class-based struggle, and can be understood as accidents of history, present but largely ineffectual. As Robinson has convincingly argued - and as ecological crises have shown - class has not always been the primary moving force of history, and

Marxists have not historically had a perfect record of identifying which forces will show themselves to be primary. These observations suggest that Gramsci's theories would benefit from an expansion to consider an ecology of projects of power concentration; multiple semi-autonomous but often interdependent projects for which class power is a critical structuring force but not a fundamentally determinant one. This expansion beyond pre-determined historical monoliths (capitalists vs. socialists, for example) can be applied to our understanding of both the ruling hegemonic social forces and to the forces contesting dominant power. Neither can be assumed to be monolithic or of a single type.

Sociologist Robert Brulle has provided expansive empirical evidence of the complex nature of the networks in the United States which have mobilized to oppose climate action to reduce carbon emissions. In a study of 2,020 organizations active from 1989-2015 in what he calls the "Climate Change Counter-Movement" (CCCM), Brulle challenges the emphasis in previous literature on the role of conservative think tanks as the main drivers of the CCCM, and also presents evidence that complicates the view that it is only an undifferentiated "fossil fuel industry" driving this counter-movement²³⁷. This counter-movement is characterized by coordinated cultural and political efforts to challenge climate action and re-frame the issue of climate change in order to undermine efforts to address it. Brulle does certainly find fossil fuel interests to be at the heart of the CCCM networks, but they are far from alone. Coal and electric utilities are prominent among the most-interlinked "core" organizations - along with steel and rail industries. However, altogether these represent only 46% of the core. Oil and gas industries add only another 5%. The broader conservative movement represents a full 10% of the core, about

²³⁷Brulle, R. J. 2021. Networks of opposition: A structural analysis of US climate change countermovement coalitions 1989–2015. *Sociological Inquiry*, 91(3), 603-624.

equivalent to the representation of “general business interests” and “other corporate interests”. The broader network beyond the core shows even less representation by fossil fuel industries specifically, and is instead characterized by the dominant representation of general business interests and other corporate interests.

All of this helps to illustrate that the forces invested in maintaining the flow of cheap fossil fuels in the US economy are not only or even primarily a monolithic “fossil fuel industry”, though the fossil fuel industry is clearly and unsurprisingly a major and central player in these efforts. Instead, we see a coalition of organizations representing broad swaths of the industrial economy - from steel to rail to agriculture and logging to automobile manufacturers to construction and shipping - and corporate interests more generally, as represented by groups like the National Association of Manufacturers. In addition to this we see the strong presence of organizations within the conservative movement, outnumbering many of these individual industries. Based on Brulle’s findings, we might conclude that there is a large faction of the capitalist class generally that is driving the CCCM, but acting in alliance with the broader ideologically driven project of the conservative movement. The influence of corporate power more generally seems to be problematized by these findings, rather than the actions of an isolated industrial sector, along with the influence of conservative cultural values entangled with these interests. However, we must add some information to create the full picture. The CCCM does not represent the entirety of forces opposed to climate action, but rather those forces which manifest in these more obviously direct ways. For example, the coal industry may be more strongly represented than the oil and gas industry because coal is at this point an easier political target, less central to the economy and more easily displaced

than oil and gas. Oil and gas industries can rely on their necessity to industrial powers more broadly - and of course important customers like the United States military - to provide a great deal of political insulation. The CCCM analysis does not capture these forms of direct material power - such as the price of gasoline, the most widely-visible and politically consequential commodity price throughout the United States - that translate into political influence. This leads to an analysis that prioritizes cultural contests over framing rather than seeing cultural contests as an element of the contestation of politico-military power and political economy. Meanwhile, the CCCM also does not capture the broader cultural influences of social phenomena that do not manifest as direct attempts at issue-based political intervention. For instance, the ways masculinity becomes identified with fossil fuels - what Nelson terms petro-masculinity²³⁸ - and translated, along with broader opposition to gender and sexual equality, into conservative political ideology and support for the pro-fossil-fuel Republican party. Another example is the historical role of evangelical Christianity and white supremacy in supporting the development and expansion of the oil industry throughout the United States, as key cultural pillars of the conquest of Indigenous lands, genocide against Indigenous peoples, and maintenance of the racial power structure which were and are important enabling elements of these industries' activities²³⁹. The Republican Party, the party most identified with fossil fuel interests today, as well as with evangelical Christianity, has since the Southern Strategy of the late 1960's been opposed to efforts at alleviating racial inequality - continuing today in the Party's staunch opposition to the Black Lives Matter movement against

²³⁸Nelson, J. 2020. Petro-masculinity and climate change denial among white, politically conservative American males. *International Journal of Applied Psychoanalytic Studies*, 17(4), 282-295.

²³⁹Dochuk, D. 2013. *Anointed With Oil: God and Black Gold in Modern America*. Rockefeller Archive Center.

racist police killings, and aggressive efforts at racially-targeted voter suppression. Islamophobia and largely conservative pro-war sentiment have also played key cultural roles in the justification of military efforts that have been used by the oil industry to secure access to oil in central Eurasia²⁴⁰. Military entanglement with and dependency on cheap fossil fuels to accomplish its basic functions also means that the U.S. military (and, as Mills described, the associated military-industrial complex²⁴¹) must be included in our understanding of the wider network of forces defending the flow of high-carbon energy²⁴².

All of this suggests support for the theoretical synthesis of decolonial, anarchist, feminist and Marxist perspectives - recognizing the ways that ecologically destructive projects seem to be continually intertwined with a broad network of political projects aimed at concentrating power through the destruction and dispossession of excluded others. The result is a hegemonic network - a network of carcinarchal, growth-oriented projects of subjugation and dispossession - rather than a hegemonic project coordinated by a single project or class. We need a name for this network, which is more than simply a climate change counter-movement because it has a positive program of expanding the flow of cheap fossil fuels, and is more than a single industry or even the capitalist class generally because it is also composed of projects of racial and gender exclusion and supremacy. I propose calling it the High-carbon Energy CompleX, or “HEX”. The name High-carbon Energy compleX is chosen to emphasize this convergence of varied interests, not necessarily beholden to any one participating party, but all sharing the goal

²⁴⁰Kumar, D. 2012. *Islamophobia and the Politics of Empire*. Haymarket Books.

²⁴¹Mills, C. W., & Wolfe, A. 2000. *The power elite* (Vol. 20). Oxford University Press.

²⁴²Turse, N. 2008. Chapter 3: The Military-Petroleum Complex. *The complex: How the military invades our everyday lives*. Macmillan.

of perpetuating societal reliance on fossil fuels. It is also chosen for the word ‘hex’, to evoke a sense of a spell or a curse cast over society that must be broken to enable progress, reflective of the subjective and ideological elements of hegemony. Recognizing the networked and diverse nature of HEX hegemony helps to understand and strategize around the project of hegemony more generally, and to understand the nature of those projects which can be recognized as carcinarchal - driven by projects of unrestrained, anti-democratic power concentration - so as to understand the role of the HEX in the larger ecology of carcinarchal (and, in opposition, democratic) power projects throughout the world.

Recognition of this network and the central importance of its continued hegemony to the perpetuation of the climate crisis brings forth the critical task of analyzing how this hegemony operates. Several studies have sought to illustrate hegemony as it relates to climate change, but these have largely retained the narrower class-based or even single-industry focused scope that the HEX concept seeks to move beyond. In an in-depth study of the activities of Canadian fossil fuel companies, William Carroll provides an analysis of the multi-dimensional ways the fossil fuel industry seeks to reproduce and expand its power - through political, economic, and cultural influence²⁴³. However, Carroll’s analysis does seem to reflect Gramsci and the Marxist’s emphasis on class power as fundamental. The primary opponent is framed as “fossil capitalism”. White-supremacy is given little attention - and certainly not as an autonomous historical bloc in its own right - and there is no attention to the ways State-owned enterprises, such as the massive Saudi-Aramco or the China National Petroleum Company - might challenge the fundamental

²⁴³Carroll, W. K. 2020. Fossil capitalism, climate capitalism, energy democracy: the struggle for hegemony in an era of climate crisis. *Socialist Studies/Etudes Socialistes*, 14(1).

emphasis on capitalism rather than allowing for the possibility of other forms of organizational drive toward growth, power consolidation, and ecological destruction. Of course the latter two may not have much relevance for the author's Canada-centered analysis, but they do raise important questions for the author's central theoretical framework. To Carroll's great credit, the counter-movement to what is described as "fossil capitalism" is rendered as a broad network representing "ecological democracy" and including decolonial projects and varying social groups, rather than assuming that a proletarian-lead class-based effort must be fundamental. Differences among the capitalist class are also recognized with the analysis of "climate capitalism" as an emergent historical bloc that seeks to address climate change through solutions that will further entrench national and global class inequalities. In "Meet the New Boss, Same as the Old Boss", Anthony Ladd also applies the concept of hegemony to understand the ruling forces driving climate change, but again characterizes these forces as "the fossil fuel industry and allied energy interests"²⁴⁴. The Republican Party is characterized as a major political vehicle for this industry, with the suggestion that it be renamed the "Grand Oil Party" - which seems to obscure the other entangled political projects like social conservatism, white supremacy, and right-wing evangelical Christianity that engage with the party as their primary political vehicle. Racism and settler-colonialism are not discussed - nor are positive models, visions of democracy, socialism, or decolonization, for what might effectively challenge the hegemony that Ladd sees as driving the climate crisis.

²⁴⁴Ladd, A. E. 2017. Meet the new boss, same as the old boss: The continuing hegemony of fossil fuels and hydraulic fracking in the third carbon era. *Humanity & Society*, 41(1), 13-36.

Global studies scholar Theo Lequesne offers a nuanced and compelling analysis of hegemony and strategy as they relate to the climate crisis, but like Carroll and Ladd leaves the scope of the hegemonic network somewhat too narrow and consequently leaves out some critical components of effective counter-hegemony. In “From Carbon Democracy to Carbon Rebellion”, Lequesne employs Mitchell’s concept of “carbon democracy”²⁴⁵ to describe a political system dominated by the fossil fuel industry, and examines three case studies of local opposition to fossil fuel projects. In Richmond, California, Standing Rock, North Dakota, and First-Nations territories in British Columbia, people organized to halt expansions of fossil fuel infrastructure in fights that Lequesne analyzes using the framework of Gramscian hegemony and counter-hegemony. One important contribution offered by Lequesne is the possibility of a strategy of ‘dual power’ to challenge what he calls “petro-hegemony”. Dual power is described as engagement with struggles within existing dominant institutions while simultaneously developing new, movement-centered autonomous institutions that “prefigure” the kinds of institutions that their organizers would prefer were dominant. Lequesne argues that in all of these cases, successful use of dual power was visible. While this does appear to be true, the focus on local struggles leaves out national-level politics, and seems to suggest that hegemony can be contested on a local level even as the theory of carbon democracy suggests that it is constituted on national scales, and global scales where it is heavily influenced by nation-state activities. In addition, the emphasis on “carbon democracy” and “petro-hegemony” reinforces a framework in which fossil fuel industries themselves are seen as the primary hegemonic actors. This obscures the networked reality of varying

²⁴⁵Mitchell, T. 2009. Carbon democracy. *Economy and Society*, 38(3), 399-432.

anti-democratic projects that constitute the hegemonic HEX network, reducing the problem to one of fossil fuel industry influence in State power rather than corporate-capitalist power more generally, in cooperation with white-supremacist, state-militarist and patriarchal power projects operating in the State and society at large. The implication is that the fossil fuel industry's influence could be independently targeted and curtailed, which does not appear to be the case given that a majority of the purveyors of fossil fuel influence in the networks described by Brulle have been industries and social groups that rely on cheap access to fossil fuel while not themselves being members of the fossil fuel industry directly.

Lequesne also offers an expansion of Gramscian theory beyond the usual dichotomy of hegemony as a project of a dominant class securing cooperation via cultivating public consent or deploying public coercion. Lequesne adds the tactic of "compliance" - public dependency produced through the widespread integration of a dominant economic system - in this case fossil fuel infrastructure - into the necessary circuits of public production and reproduction. I've found that this triad model of the capabilities that a hegemonic actor must cultivate - coercion, consent, and compliance - finds some support in Gramsci's original writing as well.

In his explication of hegemonic relations of force, Gramsci describes three "moments" or "levels" in the relations of force: First, those social forces flowing from the physical structure of society - the number of companies, levels of unemployment, distribution of people and resources, etc. Second, the self awareness and level of organization of a particular social group in relation to its common interests within this structure (what might be called class consciousness or collective identity). Third, the

relation of military force. Gramsci states that “historical development oscillates continually between the first and the third moment, with the mediation of the second”²⁴⁶. This statement represents a valuable observation that I also regard as a critical departure from Marx: Rather than a unidirectional flow from structural power to consciousness and military power, Gramsci describes an *oscillation back and forth*: A direct recognition of the reality that consciousness mediates both the construction of politico-military force and, through this, the re-construction of the physical economy and material relations (which we must also understand to include physical ecological relations). While this model retains the political-economic material basis of projects of cultural consciousness, it also opens the possibility of cultural projects attaining material force and therefore the capability of altering their own political-economic conditions. This in itself opens us to the possibility of social development in any number of directions beyond a teleological class struggle, while nevertheless holding on to the essential reality of material resources and material inequality in the formation of those developments.

Lequesne’s own description of hegemonic techniques maps roughly onto this triad - with compliance relating to the first moment, consent to the second, and coercion to the third. Reed’s triadic model of the discursive, performative, and relational dimensions of power also seem resonant, with class consciousness being largely a project of discourse, while military power relies on the physical and often visible performance of threat and relational power flows largely from established social and economic structures. However, in light of the expanded theoretical framing of HEX hegemony beyond a single industry or class but rather a network of power projects, and with specific attention to the

²⁴⁶Forgacs, D. 2000. The Gramsci Reader. *Selected Writings 1916-1935*. Pg. 206-207.

explanation of the oscillating mutual construction of the three relations of force, this tactical triad also requires some reorganization. I suggest retaining the triadic model of the dimensions of hegemony, which do seem to capture the major aspects of the operation of power in social struggle, but renaming and reframing them. Semantically, coercion and Lequesne's compliance seem too close to make a useful distinction between the two (isn't the goal of effective coercion compliance?), and the framework of coercion and consent emphasize desired effects rather than the relations of force themselves, the three unnamed 'moments' Gramsci describes. They are also unclear in their application: While coercion is generally applied to describe military force and consent is genuinely applied to cultural or ideological projects, what do we make of, for instance, economic coercion or terror such as the imposed starvation via economic blockade like that recently carried out by the despotic Saudi petrol-state against the people of Yemen? Finally, I wish to use common language and common symbols to make strategic theory and power analysis as widely accessible as possible, in order for it to be an easy tool to grasp and wield beyond academic fields. For these reasons I propose a new triad of forces of hegemony: The powers of Arrangement, Knowledge, and War. These are meant to be as intuitive as possible, with Arrangement referring to the power to arrange the material world, Knowledge referring to what people believe and understand, and War referring to the capacity for organized violent force.

To capture the constant, mutual re-constitution of these forces, as well as their semi-autonomous coordination on behalf of a "body" of aligned groups working to secure and maintain social dominance, I re-cast them as the three "heads" of the mythical Cerberus. The reader will probably observe that these 3 forces are overlapping and often symbiotic.

This is captured intentionally in the corporeal unity of the model; the three heads of Cerberus attached to one body help to reinforce the concept of their mutual entanglement and semi-autonomous coordination of each facet of power on behalf of a hegemonic body. In mobilizing the metaphor of Cerberus I draw upon the myth of Heracles' 12 Labors, the last of which is to retrieve the hell-hound Cerberus, guardian of the underworld, from her domain, alive. Hegemony-as-Cerberus reminds us that, like Heracles in the twelfth labor, we cannot escape from hell (the hell of our captivity on a warming planet) without somehow overcoming the hegemony of HEX. What's more, like Heracles, we are tasked with capturing, rather than destroying, the Cerberus. Hegemony, a state of social dominance, cannot be destroyed, any more than power itself can be abolished. It can be redirected, held by large and inclusive bodies, balanced and shared, democratized - and it must be if ecological symbiosis is to be achieved.

Even so, the forces, however pluralistic, seeking to establish and expand democratic arrangements must themselves grasp and maintain command over the three heads of the



Fig. 1: The three heads of the hegemonic Cerberus - Knowledge, Arrangement, and War. Image reprinted with permission from artist Subterranean Prints.



Figure 2: Heracles captures Kerberos (Cerberus).

Cerberus if they hope to prevent usurpation by more autocratic powers. This helps us understand some of the limitations of negative counter-hegemonic projects which are often framed as seeking to “undo” hegemony without a positive model for how their movement seeks to secure and obtain dominant control over the forces of Arrangement, Knowledge, and War - and on behalf of what group these forces would be claimed and wielded. Lequesne’s work problematizes some of the ways that social movements weren’t able to overcome the forces of War or Arrangement wielded by their corporate opponents - but even still this is largely framed as a negative project rather than a positive one in which popular movements are seen as capable of seizing and wielding hegemony themselves in these arenas rather than just challenging or undermining dominant power in a particular defensive struggle. By foregrounding this problem, we can highlight the need for positive projects of the construction of hegemony. In light of the anti-ecological and socially destructive dynamics of projects of power concentration and anti-democratic exclusion recognized by the many movements and scholars described above, we can see that this hegemony must be captured effectively on behalf of inclusive and democratic power projects organized into a well-coordinated and networked alliance.

Lequesne’s work highlights the need for all three relations of force to be contested simultaneously. In the case of Standing Rock in particular, he recognizes that the immense, successful cultural effort to de-legitimize the fossil fuel industrial groups behind the Dakota Access Pipeline was not enough to prevent the movement from being physically attacked and dispersed by private and government militarized security forces. Lequesne suggests that cultural efforts - what he would call the project of consent, and what I would call the forces of Knowledge - cannot in themselves overcome hegemony in

other relations of force. Interestingly, even U.S. military scholars of counterinsurgency seem to recognize the importance of simultaneous and balanced strategic action to influence social relations of force analogous to the triple heads of the Cerberus²⁴⁷. The Cerberic metaphor and Gramsci's theory of oscillating mutual construction of forces helps make the reasons for this transparent. While a counter-hegemonic group might attain a high level of cultural influence, gaining the ability to change public understanding of an issue, if this cultural influence does not translate into politico-military force (as Gramsci explains, through either direct military capability or through influence in the military capabilities of the territorial state), it is unable to secure the conditions to reinforce new cultural and material arrangements. To be clear, the recognition that forces of War are essential to social struggle is not a suggestion that movements should *directly* arm themselves: That in itself could have de-legitimizing effects on the movement's status within public consciousness that might make movements an easier target for the opponent's forces of War, akin to Gramsci's analysis of a premature War of Maneuver in a situation requiring the development of the War of Position. Rather, building a hegemonic capacity for the forces of War often means securing greater influence within the established State, the purveyor of violent force whose legitimacy is most widely recognized (however justly or unjustly).

I argue that these frameworks can be usefully applied to many struggles to see these dynamics in operation - including in my own recent experience at a local wilderness defense occupation camp. The police no doubt wielded sufficient powers of violence to clear us out at any time. Our physical blockade of the destruction of the land was

²⁴⁷Kilcullen, D. J. 2006. Three pillars of counterinsurgency. In *US Government Counterinsurgency Conference* (Vol. 28).

effective and essential, but its full success was likely only possible because we had sufficiently cooperative figures emplaced in local government who either out of fear of controversy or out of genuine sympathy did not encourage law enforcement to directly evict us. The physical blockade itself would have been difficult and costly to sustain for a very long period, but through the cooperation of sympathetic local economic elites and politicians, there was a successful effort to purchase the land from the developer and secure its preservation. While it is impossible to say what could have happened, attempting to secure this victory through physical force alone, or electoral efforts alone, or cultural efforts alone, or fundraising alone does not seem likely to have guaranteed success.

Figure 3 is a diagram illustrating how the forces of Knowledge, Arrangement, and War are contested by a Hegemonic Complex and a Counter-Hegemonic Complex. In the case of climate change, the Hegemonic Complex can be effectively framed as the High-carbon Energy Complex (HEX), while the Counter-Hegemonic Complex could be understood as a broad network of movements for varying but compatible visions of ecological democracy. The “empty space” created within the pyramidal structure can be understood to be composed of the actual

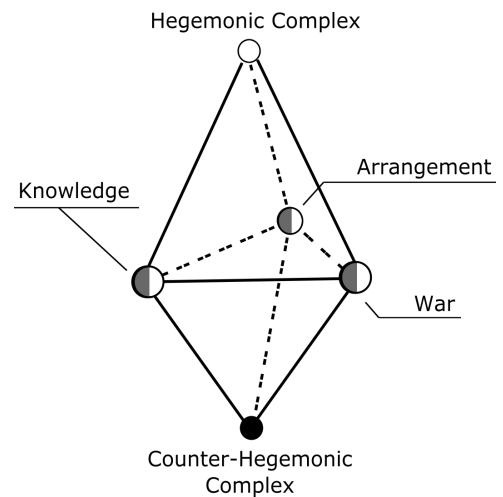


Fig. 3. Diagram of the the Social Forces composing the Hegemonic Cerberus

Hegemonic and counter-hegemonic actors contest one another’s control over the 3 Cerberic Heads: War, Arrangement, and Knowledge.

people and resources constituting the forces of the network - in keeping with Foucault and Latour's observations that social power is not a 'thing', but is the emergent result of the coordinated actions and beliefs of networks of beings.

In Figure 4, the Hegemonic Complex and Counter-Hegemonic Complex are expanded to reveal their networked reality. Rather than being monolithic projects, all power projects are composed of overlapping networks with some degree of symbiosis or antagonism with other power projects, each with their own relative capabilities of War, Arrangement, and Knowledge.

To illustrate the theory of HEX hegemony and the hegemonic Cerberus including War, Knowledge, and Arrangement more clearly, I will proceed through each head of the Cerberus, describing its scope generally and offering specific examples of how it is wielded on behalf of the HEX network in the past and present, along with possibilities for how it could be effectively contested by the forces of ecological democracy.

1. Forces of War: Command over the capacity for violent coercion.

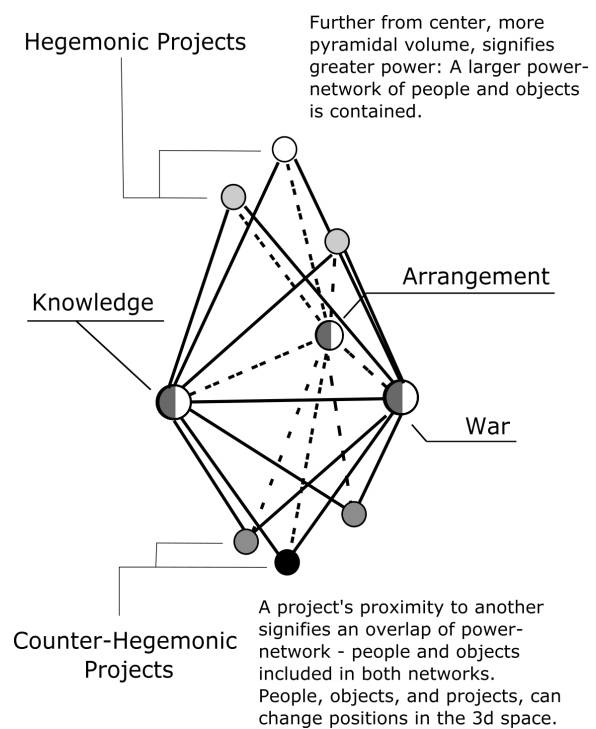


Fig. 4. Hegemonic Cerberus with actors expanded to reveal hegemonic and counter-hegemonic networks

Forces of War describe an individual or collective actor's capacity for violent coercion. This means the capacity to kill, destroy, or threaten killing or destruction. It can be deployed offensively or defensively. While it is common to draw a distinction between State and non-State actors, it is important to recognize that this distinction is, as Weber recognizes, largely a reflection of the successful legitimation of a group in public consciousness rather than a qualitative difference in the type of violent force deployed. Varying governments and non-State actors have historically been democratic or undemocratic, tyrannical or liberatory (and usually both, selectively), and have used terrorism and violations of human rights in the course of the pursuit of their goals. The widespread use of private security guards and private military contractors also significantly blurs the boundaries of what constitutes a legitimate recognized State actor. What is key to recognize in the Cerberic metaphor is that the forces of War, like the other two forces, are useless as ends in themselves but must instead translate into changing or securing the distribution of powers of Arrangement and Knowledge. These forces exist only through their translation into one another - the oscillation described by Gramsci - through actions, beliefs, and choices that maintain or re-arrange the world to facilitate further advantageous actions, beliefs, and choices. It is also critical to recognize that these oscillations or translations between forms of power usually involve the consciously coordinated or unconsciously complementary activity of varied actors with their own aims: A HEX network rather than a single industry or class.

The network of HEX hegemony has utilized both public and private forces in the pursuit of its capacity for War. For instance, under the Trump administration (itself

heavily supported by fossil fuel industries and associated industry groups, as well as wider cultural networks invested in white supremacy and patriarchy), individuals closely affiliated with the fossil fuel industry were appointed to controlling posts within the Environmental Protection Agency²⁴⁸. This is a direct example of regulatory capture - the process of a societal sector that is meant to be regulated by a given agency taking control over that agency, thereby preventing any effective regulation²⁴⁹. Regulatory capture is arguably less an exception than it is the rule in the United States, where unregulated campaign finance systems allow for extensive corporate lobbying, as evidenced by a wave of largely victorious oil and gas lobbying efforts against climate legislation during the period of COVID-19 pandemic lockdown²⁵⁰. The massive military reliance on cheap fossil fuels not only provides an extensive public subsidy to this economic sector, it means that the US government and its policies are unavoidably tied to the acquisition of access to these fuels within the US's geographic sphere of influence²⁵¹. This means that the guns of US military might - whether public soldiers²⁵² or private contractors²⁵³ - are largely aimed on behalf of the defense and expansion of high-carbon energy. This is also evident in the history of US intelligence work to destabilize foreign governments in the attempt to secure greater access to oil²⁵⁴. The complementarity of varying separate

²⁴⁸Bowman, Bryan. 2019. Captured: How the Fossil Fuel Industry Took Control of the EPA. The Globe Post. [Theglobeandmail.com](https://www.theglobeandmail.com).

²⁴⁹Dal Bó, E. 2006. Regulatory capture: A review. *Oxford review of economic policy*, 22(2), 203-225.

²⁵⁰Influence Map. 2020. Fossil Fuel Lobbyists Are Dominating Climate Policy Battles During COVID-19. An Influence Map Briefing. [Influencemap.org](https://www.influencemap.org).

²⁵¹Turse, N. 2008. Chapter 3: The Military-Petroleum Complex. *The complex: How the military invades our everyday lives*. Macmillan.

²⁵²Maass, Peter. 2010. The Ministry of Oil Defense. Foreign Policy. [Foreignpolicy.com](https://www.foreignpolicy.com).

²⁵³Miller, Christian T. 2007. Contractors outnumber troops in Iraq. Los Angeles Times. Los Angeles. [LATimes.com](https://www.latimes.com).

²⁵⁴Storagee, Michael. 2021. "Middle Eastern Oil: A look at how the United States used Iran to gain oil exploits during the Cold War 1953-1979". *Academic Excellence Showcase Proceedings*. 290. <https://digitalcommons.wou.edu/aes/290>

organizations using capacities for War on behalf of the HEX is also visible in the historical function of the police (though perhaps less because of a geopolitically-determined defense of fossil fuels) who have a long-documented use of violence against not only working people resisting corporate might, but also against Indigenous and Black people resisting racialized oppression and dispossession²⁵⁵, and who continue to use that violence against Indigenous opponents of fossil fuel projects today²⁵⁶. Far-right militia groups have also mobilized in counter-movement against police-reform and racial justice movements²⁵⁷, and to attempt to secure the office of the Presidency for Trump in the wake of his failed 2020 electoral bid. These actions can be viewed as more distant but symbiotic extensions of the HEX capacity for war. In several cases, private mercenaries or actual State militaries have been used around the world to directly attack and assassinate activists resisting fossil fuel extraction, sometimes at the direct request of fossil fuel companies²⁵⁸ ²⁵⁹. Quite recently, in an unprecedented move, a lawyer who worked to sue oil companies on behalf of Ecuadorian resisters has been prosecuted and disbarred through a campaign waged by oil company lawyers²⁶⁰.

Contesting the forces of War directly and gaining control over them on behalf of a project of ecological democracy can be accomplished in several ways. In the United States, where the forces supporting fossil fuel infrastructure have largely entrenched

²⁵⁵Williams, K. 2015. *Our enemies in blue: Police and power in America*. AK Press.

²⁵⁶Wong, J. C., & Levin, S. 2016. "Standing Rock protesters hold out against extraordinary police violence". *The Guardian*, 29.

²⁵⁷Hunt, S. L. 2021. "Afterword: A Roadmap for the Study of Para-militaries: Explaining Variations of Violence, Gendered Militias, and Demobilization". *Journal of Perpetrator Research*, 3, 114-125.

²⁵⁸Walker, Christopher, Tony Avirgan, Sheila Nevins, Gordon Durnin, David Fox, and Ian Hill. 1996. "Trinkets & beads". New York: Faction Films. <http://docuseek2.com/if-trin>.

²⁵⁹Seib, Christine. 2009. "Shell agrees \$15.5m settlement over death of Saro Wiwa and eight others". *The Times*. TheTimes.co.uk.

²⁶⁰Klasfeld, Adam. 2020. "Steven Donziger, Who Battled Chevron in Ecuador, Has Been Disbarred". *Courthouse News Service*. Courthousenews.com.

themselves within the Republican party, one element of this is of course preventing the Republican party from holding office. In addition, it has become increasingly common for remaining fossil fuel support within the Democratic party to be challenged at the level of national legislative bodies. Groups like Justice Democrats, the Indigenous Environmental Network, and the Sunrise Movement have mobilized to get pro-climate-action candidates into elected office, particularly through primary campaigns aimed at ousting Democrats with fossil fuel loyalties. Legislative projects such as the Green New Deal have been advanced through these tactics along with pressure campaigns aimed at existing elected officials and the gathering of support from prominent progressive figures like Senator Bernie Sanders and Representative Alexandria Ocasio Cortez. As Lequesne described in Richmond, similar campaigns have been waged to gain support for democratic and ecological movement forces at the level of municipal politics.

Recognizing the wider scope of the HEX also helps us to see how anti-democratic projects like racist voter suppression, gerrymandering, corporate campaign finance, and even the structure of the Senate and the Electoral College itself all act as mutually-reinforcing elements of projects that serve to protect white supremacy and patriarchy along with ecological destruction and high-carbon infrastructure. The Black Lives Matter campaign to abolish contemporary models of repressive and racist policing also appears a promising path toward simultaneously preventing the use of public security forces for the repression of fossil fuel opponents. In addition, Indigenous sovereignty is often wielded against the interests of fossil fuel expansion, and a project of decolonization and the establishment of enforced treaty rights and sovereignty would likely serve to destabilize a good deal of HEX control. A broad campaign linking these issues to the cause of building

true democracy in the United States would appear to be fertile ground to contest the HEX's capacity for War by dismantling its means of control over territory and over the legislative and military State.

2. Forces of Arrangement: Command over the structures through which people and organizations accomplish their day-to-day material production, circulation, and reproduction.

Forces of Arrangement describe the capacity of an individual or collective actor to distribute or alter the distribution of the physical world, including human beings, nonhumans, and nonliving things. While this is often immediately associated with economics, it might not always be easily understood as economic power, and the framework of economics tends to reduce our conception of the things being arranged to lifeless resources or objects, in contradiction of many people's understanding of the inherent sacredness of, for instance, water, soil, trees, and nonhuman beings. Describing these forces as "arrangement" rather than "economics" also helps to highlight how a great deal of the power of these forces flows from latent rather than intentional effects. As with the forces represented by the other two Cerberic heads, forces of Arrangement can serve to reinforce an actor's capacities for both War and Knowledge (as in the effects of US military dependence on cheap fossil fuels, or the effect of gasoline prices on public political sentiment), while forces of Arrangement are simultaneously maintained through the operation of the 2 other Cerberic heads, as in the maintenance of property ownership regimes in various societies by means of law-enforcing State violence, non-State

violence, and dominant ideologies. Another example would be the ways that Arrangement translates into Knowledge by structuring the paths through which an individual learns to act in order to achieve their desired goals (increase their capacities) - most well-illustrated by Pierre Bourdieu's explanations of habitus²⁶¹. Again, this process of oscillation or translation between power forms also highlights a symbiotic complementarity between various projects, institutions, and actors with their own varying but resonant aims.

The greatest example of the HEX network's capacity for the force of Arrangement is in the globally ubiquitous integration of high-carbon energy systems with the circuits of movement, production, and reproduction on which nearly all human beings today depend. This dependence makes it nearly impossible to avoid contributing some portion of one's energy and resources to the maintenance of HEX hegemony in the course of daily life. Lequesne describes this with the term "compliance", the resulting effect of the secured hegemony over the power of Arrangement. Petroleum and its chemical cornucopia of by-products have radically altered American life and global society, giving rise to an unprecedented era of mass production most iconically visible in the ubiquity of plastics²⁶². The society based on consumer identity criticized by Marcuse and Barthes²⁶³ is in its basic material foundation a fossil-fuel society. This is also visible in the near-total contemporary reliance of civilian, government, and commercial actors on fossil fuels for transportation, evidenced by the hugely disproportionate ratio of electric vehicles to fossil

²⁶¹Bourdieu, P. 1987. *Distinction: A social critique of the judgement of taste*. Harvard university press.

²⁶²Black, B. C. 2012. "Oil for living: petroleum and American conspicuous consumption". *The Journal of American History*, 99(1), 40-50.

²⁶³Barthes, R. 2012. *Mythologies: The complete edition*. New York: Hill and Wang.

fuel vehicles for road travel (even in the numbers predicted for the year 2030²⁶⁴) and the not-yet-materialized possibility of commercial electric aircraft²⁶⁵. The same can be said of the US military reliance on fossil fuels, which ensures that, if this reliance is not shifted, the US State is likely to act in ways that strengthen a global infrastructure based on cheap fossil fuels. This is evident in the US military defense of fossil fuel infrastructure described above, but also in the State's own mobilization of its internal powers of Arrangement as an extension of the HEX network in the provision of enormous subsidies to the fossil fuel industry which are recognized as "formidable financial, institutional and political obstacles" to a transition away from fossil fuel dependence²⁶⁶. The latent power of Arrangement is also visible in the dependence of financial markets - and therefore the investment accounts of major institutions - on fossil fuel commodities because of their ubiquity. For example, major technologies companies who have publicly pledged to become 'carbon neutral' nonetheless remain invested in fossil fuels and remain members of larger industrial associations that actively campaign against climate action²⁶⁷. The power of Arrangement is the most obvious reason for the alliances across capital sectors demonstrated by Brulle's analysis of the climate change counter-movement: A huge cross-section of capital currently depends on cheap fossil fuels, regardless of their own direct involvement or lack of involvement in actual fossil fuel extraction. This renders broad swaths of capital amenable to this cooperation with

²⁶⁴Becker, T. A., Sidhu, I., & Tenderich, B. 2009. "Electric vehicles in the United States: a new model with forecasts to 2030". *Center for Entrepreneurship and Technology*, University of California, Berkeley, 24.

²⁶⁵Thapa, N., Ram, S., Kumar, S., & Mehta, J. 2021. "All electric aircraft: A reality on its way". *Materials Today: Proceedings*, 43, 175-182.

²⁶⁶Erickson, P., van Asselt, H., Koplrow, D., Lazarus, M., Newell, P., Oreskes, N., & Supran, G. 2020. "Why fossil fuel producer subsidies matter". *Nature*, 578(7793), E1-E4.

²⁶⁷Influencemap. 2021. "Are the Technology Giants Deploying Political Capital on Climate Change?" *Influencemap.org*. Retrieved from <https://influencemap.org/report/Big-Tech-and-Climate-Policy-afb476c56f217ea0ab351d79096df04a>.

the HEX project. This alliance means that capital's broader powers of Arrangement to influence society and politics - evident in Woll's account of corporate power in government flowing from structural dependence (on employment, growth, productive cooperation) rather than active lobbying²⁶⁸ - are deployed as an extension of the HEX network.

Powers of Arrangement demonstrate clearly the need to contest control of these forces rather than simply criticize or protest them. As Marx observed, the basic functions of capital can only be altered by the seizure of control over capital and its democratization in the hands of the people at large, which he envisioned as occurring through either direct revolutionary movements or through working people's electoral victory in the democratic State. The active effects of Arrangement can be challenged directly via protest and political reform, but the passive effects can only change if Arrangement itself is altered. Gaining the power of Arrangement requires shifting public consciousness (Knowledge) to recognize the inherent dynamics of private capital and the dangers of powerful, undemocratic economic institutions, as well as gaining the legislative power (War) to re-arrange economic relations, re-distribute funds via taxation or seizure of assets, and to regulate corporate power. However, the activity of the HEX network in seizing the powers of War for itself indicates that efforts at challenging the HEX should aim not just to win legislative positions, but to use any powers to actively deconstruct HEX powers of Arrangement. The formation and public subsidization of cooperative enterprises, the expansion and proliferation of (democratized) labor unions, and the alteration of corporate law to guarantee public control over all large economic

²⁶⁸Woll, C. 2019. "Corporate power beyond lobbying". *American Affairs*, 3(3), 38-55.

institutions should aid in the expansion of public control over ecological relations via public control over economic relations. Some movement towards these ends is evident in the Green New Deal vision, the goals articulated by the Sunrise movement, the efforts of grassroots economic democratizers like the Cooperation Jackson network, and the growth of the democratic socialist movement more broadly in recent decades. It is critical to recognize, however, that the mere democratization of the forces of Arrangement is not enough to prevent their mobilization in new ecologically destructive carcinarthal projects if that democratization does not aim for arrangements that integrate our circuits of production and reproduction into ecological networks that increase sustenance for the whole rather than a narrowly conceived human-as-species. This also requires development via the forces of Knowledge toward new and old ecological subjectivities - ways of knowing ourselves that recognize our inescapable interdependence with all other forms of life in balance and reciprocity, and that recognize non-human beings as beings in their own right worthy of respect, honor, and care. Key to this process would be the development of decolonial subjectivities and their concomitant projects of War and Arrangement in order for Indigenous people to rebuild their own networks of relation. Such efforts are embodied today in the #landback campaign to return Indigenous land rights to the peoples that were in historical relation with those places.

3. Forces of Knowledge: Power over the ways people think about themselves and their place in the world.

The forces of Knowledge include the capacity to construct, maintain, and alter what people know - how they think about themselves and their place in the world. This concept is indicated by the Marxian conception of class-consciousness, further elaborated via Gramsci's explanation of the hegemonic project of building consent - and his concept of the 'second moment' of relations of force, the translation of material relations into consciousness of material relations, from there into politico-military power, and back through consciousness to the re-arrangement of material relations. Foucault helps to move the discussion of the relationship between power and the subject - the individual's self-conception and institutional positioning - beyond class, to understand how power-projects in general engage with the structuration of knowledge and the discipline of individuals to produce subjective self-governance to suit their own ends²⁶⁹. Fanon produced similar insights in his analysis of the psychological effects of coloniality and racialization²⁷⁰, and Robinson developed a powerful account of Black resistance to racial projects of subjectification in the traditions of Black resistance and rebellion²⁷¹. Forbes' *wetiko* theory deals heavily with the ways that the *wetiko* syndrome, the contagious logics of empire and slavery, are reproduced through knowledge projects that are simultaneously reinforced by and reinforcing of ecological and military-political projects²⁷², what I describe as the forces of Arrangement and War. Forbes highlights the ways that these systems produce patriarchal and racist subjectivities to achieve their political-economic ends - an insight strongly supported by Silvia Federici's work

²⁶⁹Foucault, M. 1982. "The subject and power". *Critical inquiry*, 8(4), 777-795.

²⁷⁰Fanon, F. 2008. *Black Skin, White Masks*. Grove Press.

²⁷¹Robinson, C. J. 2020. *Black Marxism, Revised and Updated Third Edition: The Making of the Black Radical Tradition*. UNC Press Books.

²⁷²Forbes, J. D. 2011. *Columbus and other cannibals: The Wetiko disease of exploitation, imperialism, and terrorism*. Seven Stories Press.

demonstrating the violent construction of contemporary (capitalist) gender norms via the terror of the witch hunt²⁷³, and Simonetta Falasca-Zamponi's account of the conscious mobilization of a wide range of aesthetic strategies by Mussolini's regime to build and defend the fascist project in Italy²⁷⁴. All of these examples demonstrate the ways that Knowledge is transformed and managed via the capacities of Arrangement and War, and how this in turn alternates the conditions of these forces.

The most direct and obvious example of HEX deployment of the forces of Knowledge is in the half-century of explicit climate denial campaigns, through which think-tanks, conservative groups and politicians, fossil fuel companies and their allies sought to de-legitimize and sew doubt about the growing scientific recognition of human-caused climate change²⁷⁵. These campaigns have been sophisticated, widespread, and effective - but they are far from the only Knowledge projects supporting HEX hegemony. Historically, the rise of fossil fuel reliance was constructed through Knowledge campaigns - including extensive media efforts to convince the public to adopt the in-home gas stove that remains widespread to this day²⁷⁶. More recently, investigators have found that over the course of a single year, pro-fossil-fuel ads have been viewed over 431 million times²⁷⁷, and scholars have examined sophisticated deployments of images and

²⁷³Federici, S. 2004. *Caliban and the Witch*. Autonomedia.

²⁷⁴Falasca-Zamponi, S. 1997. *Fascist spectacle*. University of California Press.

²⁷⁵Oreskes, N., & Conway, E. M. 2011. *Merchants of doubt: How a handful of scientists obscured the truth on issues from tobacco smoke to global warming*. Bloomsbury Publishing USA.

²⁷⁶Leber, Rebecca. 2021. "How the Fossil Fuel Industry Convinced Americans to Love Gas Stoves". Mother Jones Magazine. MotherJones.com.

²⁷⁷Egan. 2021. "Pro-Fossil Fuel Facebook Ads were Viewed 431 Million Times - In One Year". CNN. CNN.com.

themes relating to motherhood and gender in some examples of fossil fuel public relations media²⁷⁸.

In addition to these direct campaigns, we find much more subtle efforts. The concept of recycling - today universally associated with environmentalism - is in fact deeply misleading, hiding the ineffective nature of recycling and its development and promotion as public relations tool by plastics companies to shift the burden of responsibility for ecological destruction onto individuals as consumers²⁷⁹. This closely parallels the equally influential concept of the “carbon footprint”, invented by the public relations firm Ogilvy & Mather on behalf of oil giant British Petroleum to promote the idea that climate change is a burden to be borne by individuals - and a source of environmental angst²⁸⁰. The construction of the environmentalist identity as one of individual asceticism, personal discipline and carefully managed consumption is a clear example of Foucault’s concept of governmentality - the shift, evident in the development of capitalist society - of responsibility for governance from the repressive State to the self-governing individual. The environmentalist-consumer is a construction of “green governmentality²⁸¹” that produces subjects primarily concerned with their own consumption, rather than with the issues of power, strategy, policy, and hegemony necessary to alter the larger structuring forces governing society. While it may be possible that “green governmentality” simultaneously encourages support for policy change, at least one study shows that it has

²⁷⁸Bell, Shannon Elizabeth, Jenrose Fitzgerald & Richard York. 2019. “Protecting the power to pollute: Identity co-optation, gender, and the public relations strategies of fossil fuel industries in the United States”. *Environmental Sociology*, 5:3, 323-338, DOI: 10.1080/23251042.2019.1624001.

²⁷⁹Taddonio, Patrice. 2020. “Plastics Industry Insiders Reveal the Truth About Recycling”. *PBS Frontline*. PBS.org.

²⁸⁰Lyon, T. P., & Montgomery, A. W. 2015. “The means and end of greenwash”. *Organization & Environment*, 28(2), 223-249.

²⁸¹Luke, T. W. 1999. “Environmentality as green governmentality”. *Discourses of the Environment*, 121-151.

the opposite effect, through a process by which engagement with household behavior change “crowds out” willingness to engage in larger-scale political efforts²⁸². In a similar but mirrored effect, we find the construction of pro-fossil-fuel subjectivities resulting from the sheer dependency of individuals on this infrastructure. Brulle finds that the cultural inertia generated by this dependency produces a trauma-avoidance response to deny or avoid climate change²⁸³, and Browne deploys the concept of reification to describe how the ever-present nature of this infrastructure pushes us to view it as the only possible reality and to reinforce that reality through our passivity²⁸⁴. These effects are empirically visible in the influence of gas prices on public presidential approval²⁸⁵. While Dochuk examines direct links between the fossil fuel industry’s historic support for white supremacist projects²⁸⁶, and the confluence of those projects with its own interests, in light of the evidence presented throughout this chapter, patriarchy and white supremacy must be understood as historically (and still, today, structurally) linked to the development of ecologically destructive systems, so these larger projects should be recognized as extensions of the HEX network in all of their diverse manifestations.

An analysis of the HEX mobilization of the forces of Knowledge suggests several avenues for contestation. The development of a political subjectivity that emphasizes strategy and systemic analysis is one essential point of intervention - as is challenging

²⁸²Werfel, S. 2017. “Household behaviour crowds out support for climate change policy when sufficient progress is perceived. *Nature Climate Change* 7, 512–515.

²⁸³Brulle, R. J., & Norgaard, K. M. 2019. “Avoiding cultural trauma: Climate change and social inertia”. *Environmental Politics*.

²⁸⁴Browne, P. L. 2018. “Reification and passivity in the face of climate change”. *European Journal of Social Theory*, 21(4), 435-452.

²⁸⁵Harbridge, L., Krosnick, J. A., & Wooldridge, J. M. 2016. “Presidential Approval and Gas Prices: Sociotropic or Pocketbook Influence?”. *Political Psychology* (pp. 260-289). Psychology Press.

²⁸⁶Dochuk, D. 2013. *Anointed With Oil: God and Black Gold in Modern America*. Rockefeller Archive Center.

knowledge projects that reify the idea of the “green consumer” in the absence of necessary systemic change and political contestation. Promotion of the widespread recognition of how we ourselves have already been influenced by projects of patriarchy and racialization - and challenging the collective sense of investment in whiteness, patriarchy, and settler-colonialism - is a key element of this struggle, though we must not forget that if this work is not translated into material and political re-arrangements, it is likely to be more easily undone. Many scholars - from Forbes to Haraway to Tsing to Latour - have suggested an animist subjectivity, in which we cultivate a sense of the ‘aliveness’ of non-human beings and objects, as a strategy for cultivating ecological relation. This may be critical, but without efforts to secure greater and greater means of cultural intervention and reproduction via a social movement that builds hegemony across the three Cerberic heads, these efforts are likely to remain marginal, pushed out by the juggernaut of carcinarthal subjectification. This study itself is meant to be an intervention to develop our collective forces of Knowledge on behalf of the project of ecological democracy, by analyzing the state of public consciousness of climate change as an issue of power, and identifying areas where we can make interventions to build political subjectivities based in democracy, solidarity, strategy, and ecology.

Chapter 3. Public Opinion, Hegemony, and Climate Change

In the previous chapter, I proposed an argument that climate change results from the hegemony of a network of power-projects I call the HEX, exercised through anti-democratic elite political and economic influence. This begs the question of the role and import of public opinion in the United States as it relates to climate change. If climate change results from the actions of a network of projects in a position of hegemony over the major forms of social power, resulting in a situation of captivity in which the majority preferences are often overruled, re-shaped, or tempered by hegemonic forces, what is the significance of public opinion? Why have I chosen to base this study on a survey of public opinion? Why study it at all? Certainly some sociologists have come to the conclusion that we shouldn't - that public opinion isn't relevant. Nagel, for instance, argued in 2011 that the public is easily manipulated by elite forces that are so effectively consolidated that public opinion isn't likely to be shifted positively, or to have any significant effect on policy outcomes. He observes that while the US military appears to be recognizing climate change in order to call for increased military spending, significant portions of the general public continue to report that they do not believe in anthropogenic climate change. "Does it matter much," he writes, "that many if not most Americans are (mis)led by conservative interests to disbelieve the science and pooh-pooh the risk of climate change? Once again, I must conclude: Not much when we consider *the powerful structural economic and organizational forces at work aligning their interests around climate and energy security*. Like the physical science reality that soon will come knocking on our collective door, the military industrial pursuit of climate security will

render irrelevant the misinformed intransigence of the U.S. conservative media and its followers²⁸⁷” (emphasis added). The model of societal change underlying Nagel’s argument is one in which “powerful structural economic and organizational forces” are capable of swaying public opinion to such an extent that the public cannot be counted on as a significant force in social contestation. This position is reflective of an elite-dominance perspective on the structure of representative government - reflected in the work of scholars like Domhoff²⁸⁸ - which can be contrasted with pluralist perspectives exemplified in the work of Dahl²⁸⁹, in which elite groups are considered to be just some of the many interest groups exerting power in US politics. Dahl’s view is much more optimistic about the state of democracy in the United States, whereas Domhoff’s view essentially concludes - like Nagel - that the US political system is so beholden to elite dominance that the public exerts no real democratic influence.

In the same year that Nagel’s article was published, Eagan and Mullin made the argument that given the existence of strong (minority) opposition to climate change policy, it is “improbable that public opinion in its present state will play a decisive role in catalyzing demand for policy,” concluding that if there is any success in legislative solutions to the climate crisis, “they will be implemented in ways that are difficult to trace to reelection oriented politicians²⁹⁰”. While it is of notable importance that these pessimistic analyses were written at the tail end of a significant multi-year decline in public support for

²⁸⁷Nagel, J. 2011. “Climate change, public opinion, and the military security complex”. *The Sociological Quarterly*, 52(2), 203-210.

²⁸⁸Domhoff, G. W. 1968. “Who Rules America?”. *Science and Society*, 32(3)., Domhoff, G. W. 2018. “Who Rules America?”. In *Social Stratification* (pp. 297-302). Routledge.

²⁸⁹Dahl, R. A. 2005. *Who governs?: Democracy and Power in an American City*. Yale University Press.

²⁹⁰Eagan, P. J., & Mullin, M. 2017. Climate change: US public opinion. *Annual Review of Political Science*, 20, 209-227.

climate policy and concern about climate change, even at the lowest points in that period, majorities of Americans believed climate change was happening, supported government funding for renewable energy, and supported the regulation of greenhouse gases as pollutants²⁹¹. Their pessimism results from their analysis that, like “many other issues in contemporary US politics,” climate change public opinion is characterized by “stability in the aggregate that masks partisan and ideological polarization enhanced by communications from elites.” In this view, partisan division is viewed as an obstacle to the implementation of popular policy, due to “re-election oriented politicians”. While it is true that climate change is one arena of many in which it is clear that popular progressive policies that enjoy majority support nonetheless fail to see legislative success, it is not at all clear that this is evidence of the powerlessness of public opinion as a political force. Not all sociologists share this pessimism about the social power of public opinion, though it does seem particularly common among sociologists compared to scholars in other disciplines. In “Bringing the Public Back In”, Paul Burstein argues that sociologists have long been ignoring the influence of public opinion in representative government without sufficient justification for this neglect²⁹². In a survey of 49 sociological analyses of the determinants of public policy published between 1980 and 1997, Burstein found that only 10 engaged sufficiently with what he calls “democratic theory” - the theoretical tradition arguing for the possibility and efficacy of public control over democratic government.

²⁹¹Yale Program on Climate Change Communication (YPCCC) & George Mason University Center for Climate Change Communication (Mason 4C). 2020. “Climate Change in the American Mind: National survey data on public opinion (2008-2018)” [Data file and codebook]. doi: 10.17605/OSF.IO/JW79P.; Ballew, M. T., Leiserowitz, A., Roser-Renouf, C., Rosenthal, S. A., Kotcher, J. E., Marlon, J. R., Lyon, E., Goldberg, M. H., & Maibach, E. W. 2019. “Climate Change in the American Mind: Data, tools, and trends”. *Environment: Science and Policy for Sustainable Development*, 61(3), 4-18. doi: 10.1080/00139157.2019.1589300

²⁹²Burstein, P. 1998. “Bringing the public back in: should sociologists consider the impact of public opinion on public policy?”. *Social forces*, 77(1), 27-62.

Only 3 presented a theoretical argument about the potential influence of public opinion on policy formulation and implementation, and only 3 included measures of public opinion or proxies for public opinion in their models. Burstein considers two possible justifications for this neglect: First, that established research may show that public opinion does not have a significant effect and so does not need to be considered (reflected in the analyses of the climate change studies reviewed above). Second, that public opinion - impactful or not - can be ignored because the sociologist's focus is elsewhere, on the impact of social movements, for instance, or corporate elites. To answer the first objection, Burstein widens his original search to consider 22 studies, across disciplines, that directly examine the impact of public opinion on policy - finding that while the effect of public opinion varies in significance across studies, all but one of the 22 found evidence for a significant positive relationship between public opinion and policy.

Turning to the second objection, Burstein compares studies that examine the impact of political parties and interest groups and also examine public opinion with those that leave out public opinion. Finding that when public opinion is included, the impact of interest groups and parties is much more often found to be of lesser strength, Burstein concludes that leaving out the impact of public opinion is unjustifiable even if it is not the central issue of study.

Some recent studies by some of the foremost researchers on public opinion and policy have also supported the optimistic, pluralist-friendly view that public opinion does indeed have significant influence in US policy implementation. In Lax and Phillip's "Gay Rights in the States", public opinion is found to have a strong effect on policies shaping sexual

minority rights at the state level across the country²⁹³. Stimson's 2015 "Tides of Consent" argues that public opinion can largely be categorized into that of the passionate, the uninvolved, and the scorekeepers - and that it is the shifting center of scorekeepers who determine the direction of policy, largely in response to the condition of economic growth and unemployment rates²⁹⁴. In the 2002 book "The Macro Polity", Erikson, Mackuen, and Stimson present an ambitious model of policy change in the United States which they suggest shows the powerful role of public opinion in determining policy direction - particularly in response to economic conditions²⁹⁵.

However, these three studies all share common qualifications that usefully illustrate the possible limitations of the policy influence of public opinion. "The Tides of Consent" doesn't examine movement between the categories of passionate vs. uninvolved vs. scorekeepers - downplaying the essential element of political change that is the recruitment of the relatively uninvolved into the ranks of the passionate, or the demobilization of passionate opponents who are shifted into the role of scorekeepers or uninvolved. The result is a deterministic model in which democracy is reduced to a function of economic fluctuations affecting the shift of centrists to one side or another. "The Macro Polity" model's attempt to demonstrate the relationship between public opinion and policy involves a complicated dance with historical reality. The author's note that in order for the model's predictions to hold, they must adjust it for "accidents of history" that include the effects of wars like Vietnam, military efforts like the failed

²⁹³Lax, J. R., & Phillips, J. H. 2009. "Gay rights in the states: Public opinion and policy responsiveness". *American Political Science Review*, 103(3), 367-386.

²⁹⁴Stimson, J. A. 2015. *Tides of consent: How public opinion shapes American politics*. Cambridge University Press.

²⁹⁵Erikson, R. S., MacKuen, M. B., & Stimson, J. A. 2002. *The Macro Polity*. Cambridge University Press.

attempt to rescue hostages in Iran under Carter, and other events “exogenous” to the model. This creates a serious problem for the construction of the overall system, which must assume that these exogenous circumstances are outside of total systemic dynamics rather than bound up with its dynamics - including the impacts that elite maneuverings and grassroots social movements might have on the origins and effects of these otherwise exogenous events. To their credit the authors do take this problem seriously - acknowledging in chapter 10 that history does, indeed, matter and that the course of policy and public opinion has been crucially and clearly altered by the Civil Rights Movement, Vietnam, Watergate, and the Gulf War, for instance. Controlling for these “particulars” generates a model that - like Stimson’s other work - shows a pendulum swing between major parties dictated by their predictable management of the economy. Problematic as this already is, it also naturalizes the movement of the economy, treating growth and unemployment as organic features of reality rather than phenomena shaped by the larger, historically contingent power structures of capitalism. It is acknowledged that the public gets most of their information about the state of business and the economy from mass media, but this isn’t problematized to account for the exercise of elite power through the media. Lax and Phillips reveal similar limitations, finding a strong degree of incongruence between public opinion and policy on some issues - particularly when these issues dealt with economic inequality. When this was found to be the case, policy went against public opinion by trending in a conservative direction. All of this raises critical questions about how elite economic power may mediate the role of public opinion in US democracy. Given the establishment of climate change as an issue driven by the activities

of economic elites in alliance with other social forces, understanding public opinion must involve particular attention to the role of this power.

In “Bringing the Public Back In”, Burstein argues that while no scholar suggests public opinion is some “uncaused cause” and all acknowledge that public opinion is subject to possible persuasion or manipulation, he believes that the record of studies showing the impact of public opinion provides strong enough evidence that while manipulation is possible and should be investigated, it shouldn’t be assumed. He echoes this point in a later essay reviewing the literature on the policy impacts of public opinion, writing that “what distinguishes those who believe democracy gives citizens genuine control over their government from those who believe it does not is thus disagreement over matters of degree: how much impact does public opinion have on public policy²⁹⁶”. It should be clarified that while Burstein frames this as a question of whether or not scholars “believe in democracy”, it is in fact a question of whether scholars believe that democracy in the United States is adequately or meaningfully democratic. This is a crucial clarification because it has a significant impact on his conclusions. Critiques of the democratic nature of the US system fall into two major categories: Either that public opinion is not a sufficiently influential force in US politics, or that public opinion itself is so effectively manipulated by elites that its policy impact is meaningless and pre-determined. To Burstein, the US system can be considered democratic because it responds to public opinion. On the issue of manipulation of public opinion, Burstein says only that this is difficult to determine, but that it is at least clear that public opinion is not entirely a

²⁹⁶Burstein, P. 2003. “The impact of public opinion on public policy: A review and an agenda”. *Political Research Quarterly*, 56(1), 29-40.

product of manipulation²⁹⁷. This is, however, an essential point. A system is not meaningfully democratic simply because it responds to public opinion. Even dictatorships and militaries have to care about public opinion or troop morale and respond in some way in order to maintain discipline. The question of how public opinion is formed - and how political responses are formed - are thus crucial elements of determining the degree to which a system is democratic. These are questions about the democratic nature of the political structure, and the democratic nature of the space and processes within which public opinion itself is formulated.

More recently, strong evidence has been presented finding that although broad surveys of public opinion's impacts do seem to support a democratically optimistic pluralist view, breaking down public opinion into segmentations by income and examining differences in public opinion across a variety of types of issues reveals strong limitations to this view. In two reports, Martin Gilens and Benjamin Page compellingly argue a case that manages to explain previous, pluralist-friendly findings while calling into the meaning of their conclusions into question. "Affluence and Influence" is the original study supporting both reports, in which Gilens' team examines survey data on policy preferences for 1,779 policy issues and compares these preferences with actual policy change 4 years later - while also examining interest group mobilization surrounding each of these issues²⁹⁸. Gilens finds that on the surface, it seems that public opinion aligns with policy about 2/3rds of the time, the same as what Burstein finds in his review of the literature. However, when public opinion is disaggregated by income level, an entirely opposite

²⁹⁷ Burstein, pg. 35.

²⁹⁸ Gilens, Martin. 2012. *Affluence and Influence: Economic Inequality and Political Power in America*. Princeton, N.J.: Princeton University Press.

picture emerges. When this is done, policy preferences only closely track for policy outcomes for one group: The top 10% of income earners. The correlation between policy preference and policy outcomes drops to near zero for average Americans when their interests do not align with the rich. In a further evaluation of the study results by Gilens and Page, they find that economic elites have an independent effect on policy outcomes that is almost twice as large as that of organized business groups. The preferences of these organized business groups, in turn, have twice the impact on policy outcomes compared with the policy preferences of average Americans. These findings reflect a powerful structural domination that goes beyond the more typically problematized practice of corporate lobbying. Inequality itself seems to be a powerful anti-democratic force, rather than simply specific problematic expressions of inequality. This is especially concerning in light of numerous studies demonstrating that economic inequality has been steadily and dramatically increasing in the United States and the world²⁹⁹, especially since the 2019-2021 Covid-19 pandemic lockdown³⁰⁰. Schlozman, Verba and Brady identify some of the practical means through which this structural inequality translates into policy, finding that economic inequality shows up dramatically in an “inequality of political voice”³⁰¹. That is to say, the wealthier are better organized and more politically involved - they are overrepresented in terms of political participation and in interest-

²⁹⁹Kuhn, M., Schularick, M., & Steins, U. I. 2020. “Income and wealth inequality in America, 1949–2016”. *Journal of Political Economy*, 128(9), 3469-3519., Piketty, T. 2013. *Capital in the 21st Century*. Cambridge, MA: President and Fellows, Harvard College., Saez, E. and Zucman, G. 2016. Wealth inequality in the United States since 1913: Evidence from capitalized income tax data. *The Quarterly Journal of Economics*, 131(2), pp.519-578., Smith, J. P. 2001. “Why is wealth inequality rising?”. *The Causes and Consequences of Increasing Inequality*. Ed. Finis Welch. Chapter 3, 83-116. University of Chicago Press.

³⁰⁰Collins, Chuck. 2021. “Global Billionaire Pandemic Wealth Gains Surge to \$5.5 Trillion”. Inequality.org. <https://inequality.org/great-divide/global-billionaire-pandemic-wealth-surges/>.

³⁰¹Schlozman, K. L., Verba, S., & Brady, H. E. 2012. *The Unheavenly Chorus*. Princeton University Press.

group representation. These findings profoundly echo Schattschneider's famous observation from which their book title is drawn: "The flaw in the pluralist heaven is that the heavenly chorus sings with a strong upper-class accent³⁰²". The authors also find that the internet has served to reproduce these problems rather than ameliorate them, with continued evidence of unequal political voice in online spheres³⁰³.

A structural diagnosis of the undemocratic impacts of inequality is consistent with the analysis of political scientist Cornelia Woll. In a report titled "Corporate Power Beyond Lobbying", Woll argues that preoccupation with corporate lobbying has helped to obscure several critical structural avenues through which corporate power is able to influence government in the United States. "American politics works in the interests of capital" she writes "but our understanding of the mechanisms of this influence is patchy at best". Her analysis of the political science literature takes the position that corporate lobbying is not sufficient - or even necessary - to explain the power that corporations have in government. Woll argues instead that it is primarily structural dynamics - capital flight, regulatory competition, dependence on financial markets, and economic reliance on large-scale financial institutions - that shape politics. These structural issues pose a big problem for studies that base their case for the policy impact of public opinion on public responses to economic signals that are in effect measures of the profitability of large corporations. These structural economic mechanisms mean that public opinion can be effectively tied to and channeled into corporate interests in the absence of widespread systemic analysis, setting limits on the kinds of reform that appear possible. This does not

³⁰²Schattschneider, E. E. 1975. *The semisovereign people: A realist's view of democracy in America*. Wadsworth Publishing Company.

³⁰³Schlozman, K. L., Verba, S., & Brady, H. E. 2010. "Weapon of the strong? Participatory inequality and the Internet". *Perspectives on Politics*, 8(2), 487-509.

mean that reform to increase democratic efficacy is impossible, but that it must be structurally targeted. Gilens, Patterson, and Haines, for instance, examine policy outcomes before and after the 2010 Citizens United v. FEC supreme court ruling (which substantially lifted restrictions on corporate, union, and non-profit campaign contributions), finding that even small differences in campaign finance policy produce appreciable differences in political outcomes. This appears to be the sort of avenue by which public opinion really can be translated into democratic power: When, as in Gramsci's analysis of social forces, people come to understand the structures governing their lives and mobilize to change these structures directly rather than aiming for reforms that maintain their overall political disempowerment.

The structural, rather than directly intentional, effects of inequality are visible as powerful anti-democratic forces in the primary shaping of public opinion in addition to its policy impact. To be sure, intentional manipulation of public opinion by elites certainly does occur, and has historically been an important part of the American political landscape. As early as 1928, Edward Bernays began to publish on the issue of how public opinion could be successfully manipulated, effectively inaugurating the modern public relations industry³⁰⁴, and this legacy has continued in the much-studied and discussed efforts of fossil fuel companies and right-wing media groups to purposefully mislead the public³⁰⁵. However, outright denial of climate change has remained a minority, albeit influential, position. Consideration of the state of democracy in the United States, via the potential for the public to meaningfully influence policy, must include analysis of the

³⁰⁴Bernays, E. L. 1928. "Manipulating public opinion: The why and the how". *American Journal of Sociology*, 33(6), 958-971.

³⁰⁵Oreskes, N., & Conway, E. M. 2011. *Merchants of doubt: How a handful of scientists obscured the truth on issues from tobacco smoke to global warming*. Bloomsbury Publishing USA.

subtler structural constraints on the ways public opinion is formed. One compelling path toward this analysis is consideration of the structural imperatives of the corporate mass media in the United States, as in Justin Lewis' "Constructing Public Opinion". In this book, Lewis makes the case that public opinion polling is an ideological project - one which always leaves out some possibilities and populations while centering others. The inherent partiality of public opinion study doesn't necessarily undermine its use in determining public preferences and adding to our understanding of people's beliefs, but the way that is mobilized in US politics and by the dominant media organizations, Lewis says, renders it a tool for a center-right ideological project. Lewis finds that while majorities of the American public consistently support progressive-left policies, these preferences are not reflected in the polling data promoted by mass media organizations and politicians. This is partly intentional and politically motivated, as when politicians selectively cite incomplete or biased polling data, but it is often structural, as in the news media's tendency to construct news around already-dominant political figures and their agendas in the 'horse race' of political coverage. Indeed, even the construction of public opinion as a matter of policy preference frames the public as a passive consumer of options - as opposed to exploring public opinion in terms of the potential for the public to strategize and act in its own multiple interests.

This is also resonant with the "propaganda model" developed by Herman and Chomsky in their book "Manufacturing Consent"³⁰⁶. The authors identify 5 characteristics of mass media in the United States that act as a set of "filters" that limit and mold what information ultimately reaches the majority public. These include (1) the structure of

³⁰⁶Herman, Edward S. and Noam Chomsky. 1988. *Manufacturing Consent: The Political Economy of the Mass Media*. London: Vintage.

news media organizations as profit-driven, privately owned corporations, (2) reliance of these organizations on advertising (from similarly large corporations) as the primary source of revenue, (3) reliance on powerful institutional actors in government and economy for information, access, and expertise, (4) attacks on the credibility and integrity of dissident sources, which the authors call ‘flak’, and finally (5), the tendency of news media to conform to notions of a common enemy due to a widespread ideology of ‘anticommunism’. These 5 characteristics are mutually-reinforcing: For example, conformity with anticommunism is encouraged by the political interests of the private corporate owners, and their positions are buoyed by widespread resistance to ‘socialist’ policies such as state regulation of media or development of publicly-owned media institutions. Some, like Jeff Goodwin, have criticized this model for “black boxing” the process of news generation, giving more effort to laying out a possible theoretical model than to analyzing the day-to-day experience of journalists in the field³⁰⁷. Nevertheless, Goodwin acknowledges that Herman and Chomsky do “convincingly demonstrate that wealth and political power act as a megaphone - to use another metaphor - for the ideas and ideologies of powerful elites,” and that regardless of the mechanical details, the resulting situation is one in which “only a small segment of the potential spectrum of political viewpoints in liberal societies may be broadly aired and discussed³⁰⁸”. This perspective is in fact reinforced by more granular empirical studies, and with particular attention to climate change, as in findings of Boykoff and Boykoff³⁰⁹ that journalistic

³⁰⁷ Goodwin, J. 1994. “What's right (and wrong) about left media criticism? Herman and Chomsky's propaganda model”. *Sociological Forum* (pp. 101-111). Eastern Sociological Society.

³⁰⁸ Goodwin, pg. 110.

³⁰⁹ Boykoff M.T. and J. M. Boykoff. 2007. “Climate change and journalistic norms: a case-study of US mass-media coverage”. *Geoforum* 38(6):1190–1204.

norms themselves have served fossil fuel interests by consistently providing a platform for unscientific objections to climate science through journalistic prioritization of novelty and a presentation of ‘balanced’ perspectives on issues where balanced scientific disagreement does not actually exist. It is not coincidental that this practice also serves to provide entertaining conflict where there might otherwise be less entertaining consensus. While the authors don’t emphasize the for-profit structure of news media, it appears likely that these norms emerge from the profit-driven and corporate-owned nature of large media organizations. Updating Herman and Chomsky’s model, Fuchs finds that all of the same characteristics can still be found in the social-media platforms that are a dominant source of news today - and in some cases their effects seem to be amplified³¹⁰.

All of this is consistent with the theoretical model advanced in the previous chapter - that climate change and the larger ecological crisis result from a crisis of democracy, in which mutually-reinforcing projects of power concentration work to maintain hegemony via politics, economy, and culture - or war, arrangement, and knowledge. We see economic inequality increasing, and inequality itself producing direct and latent effects on the formation of public opinion and on the possibility of mass opinion to influence politics - consistent with a climate crisis flowing from the disempowerment of the majority and the channeling of social energies into extractive projects for the benefit of a few. To the extent that climate change can be addressed through projects that benefit segments of the elite, these exclusions are largely immaterial - but given the dynamics of the crisis, it appears unlikely that solutions which are not also egalitarian democratic

³¹⁰Fuchs, C. 2018. “Propaganda 2.0: Herman and Chomsky’s Propaganda Model in the Age of the Internet, Big Data and Social Media”. In: Pedro-Carañana, J., Broudy, D. and Klaehn, J. (eds.). *The Propaganda Model Today: Filtering Perception and Awareness*. Pp. 71–92. London: University of Westminster Press. DOI: <https://doi.org/10.16997/book27.f>. License: CC-BY-NC-ND 4.0.

reforms - redistributing the power of the institutions that gave rise to these crises - will be effectual. To the extent that solutions are democratizing, they face the structural obstacles outlined here. None of this, however, justifies the view of some sociologists that public opinion is irrelevant or should be ignored - a view that is tantamount to an abandonment of democratic possibility. Instead, they demonstrate the ways that public opinion is contested and contained, which can inform a critical and practical engagement with public opinion as a social force. These more liberatory possibilities require that public opinion has some autonomous space to foster critical conversation and to develop beyond the constraints of mass media, and that this development can translate into strategic political action that could undo structural constraints and democratize society in the course of addressing the climate crisis. These possibilities are clearly identifiable in the realm of social movements.

Eyerman and Jamison have explored the ways that social movements “provide alternative public space for the reconstitution of knowledge,”³¹¹ and, along with Rudig and Cramer, have found this to accurately describe the ways environmental movements have provided space to incubate social thought that challenges dominant power structures and their ecological narratives³¹². This is akin to the process of counterculture formation, the creation of frames, narrative and symbols that challenge the dominant culture, described by Stuart Hall’s work on subcultures³¹³, and Reed and Foran’s description of

³¹¹Eyerman, R., & Jamison, A. 1991. *Social movements: A cognitive approach*. Penn State Press.

³¹²Rudig, W., Jamison, A., Eyerman, R., & Cramer, J. 1991. *The making of the new environmental consciousness: a comparative study of environmental movements in Sweden, Denmark and the Netherlands*. Edinburgh University Press.

³¹³Hall, Stuart. (Ed.). 1993. *Resistance through rituals: Youth subcultures in post-war Britain* (Vol. 7). Psychology Press.

revolutionary “political cultures of opposition”³¹⁴. However, despite views that privilege cultural and discursive power to the neglect of other forms, the successful translation of sentiment into social change requires more than simply the presence of an alternative space in which sentiment can be formulated. Incomplete projects of resistance - that is, those which fail to build capacities in all three of the Cerberic relations of force - are likely to remain dependent upon and symbiotic with dominant structures without posing a threat to their dominance³¹⁵. In Gramscian terms, consciousness must translate into other social forces - political and economic forces - in order for hegemony to be built. A strong body of social movement literature confirms this, demonstrating consistently that independent social movement impact on policy is not well-supported, but instead that social movement power is mediated and amplified by both public opinion and elite support - often in the form of movement-friendly political elites³¹⁶.

This view is confirmed by Brulle, Carmichael and Jenkin’s investigation of factors influencing climate change concern in the United States³¹⁷. The authors use data from 74

³¹⁴Reed, J. P., & Foran, J. 2002. “Political cultures of opposition: exploring idioms, ideologies, and revolutionary agency in the case of Nicaragua”. *Critical Sociology*, 28(3), 335-370.

³¹⁵Hall, P. D. 2012. “Countercultural space does not persist: Christiania, and the role of music”. *Volume! La revue des musiques populaires*, (9: 1).

³¹⁶Amenta, Edwin, Neal Caren, and Sheera Joy Olasky. 2005. “Age for Leisure? Political Mediation and the Impact of the Pension Movement on U.S. Old-Age Policy.” *American Sociological Review* 70., Amenta Edwin, Bruce G. Carruthers, and Yvonne Zylan. 1992. “A Hero for the Aged? The Townsend Movement, the Political Mediation Model, and U.S. Old-Age Policy, 1934-1950.” *American Journal of Sociology* 98: 308-39.,

Amenta, Edwin, Kathleen Dunleavy, and Mary Bernstein. 1994. “Stolen Thunder? Huey Long’s Share our Wealth, Political Mediation, and the Second New Deal.” *American Sociological Review* 59: 678-702., Cress, Daniel M., and David A. Snow. 2000. “The Outcomes of Homeless Mobilization: The Influence of Organization, Disruption, Political Mediation, and Framing.” *American Journal of Sociology* 105: 1063-1104.,

Kane, Melinda D. 2003. “Social Movement Policy Success: Decriminalizing State Sodomy Laws, 1969-1998.” *Mobilization* 8: 313.334.

³¹⁷Brulle, R. J., Carmichael, J., & Jenkins, J. C. 2012. “Shifting public opinion on climate change: an empirical assessment of factors influencing concern over climate change in the US, 2002–2010”. *Climatic change*, 114(2), 169-188.

separate surveys between the years of 2002 to 2010, examining 5 factors theorized to account for changes in levels of concern. These factors included extreme weather events, public access to scientific information, media coverage, elite cues (statements made by political elites - not elites in the sense of economic elites referred to elsewhere), and advocacy for and against climate change policy. Surprisingly, extreme weather events were found to have virtually no impact, and access to scientific information had only minimal impact. Media was found to have an impact, but media coverage itself seemed to be determined primarily by the state of the economy and by the statements of political elites. Democratic statements supporting climate action increased concern, while Republican counter-statements tended to moderate it, while elite cues in general are seen as facilitating media coverage. The most powerful forces in the construction of concern about climate change appeared to be communications from political elites and the campaigns of advocacy groups. Examining this data in light of the anti-democratic dynamics described in this chapter, social movement power appears critical. Social movements can generate media coverage directly through protest, direct action and spectacle, but can also contribute to the election of representatives who will themselves spur public opinion directly and indirectly through the generation of media coverage via their communications and actions. However, it is important to note that Brulle, Carmichael and Jenkins were investigating the factors influencing climate concern, not necessarily policy success. Concern, like any other aspect of public opinion, can be neutralized, co-opted, or ignored if it is not mobilized strategically via politically engaged social movements to overcome and dismantle the anti-democratic barriers previously described. Other studies suggest support for the need for multi-front efforts that engage

political representatives, protest, and public opinion. Jon Agnone has found that in the history of US environmental movements, protest action and civil disobedience were effective amplifiers of public opinion, raising issue salience for legislators and thereby overcoming legislator's abilities to ignore an issue until it disappears³¹⁸.

While social movements and electoral efforts are often studied as separate realms of collective action (quite often defined specifically as existing outside of the established order and systems of governance³¹⁹, the reality does not seem to justify these distinctions. Important scholarship such as the work of Daraka Larimore-Hall highlights the critical interdependency between grassroots social movement work and the work of activists throughout the California Democratic Party, as one example³²⁰. Social movements and electoral efforts can both be functions of a hegemonic project - and indeed appear to both be critical aspects of a successful one that aims to overcome antidemocratic barriers. Certainly the forces of HEX hegemony have recognized the importance of electoral victories for their ends. Indeed, as Leah Stokes explains in her recent book *Short Circuiting Climate Policy*, the struggle for climate policy in the United States is best characterized as organized political contestation that hinges on the continued knowledgeable and strategic engagement of movement actors with electoral processes³²¹. Stokes finds that climate policy is often undone in the "fog of enactment" following the passage of new law, when movements and the public tend to lose some of their

³¹⁸ Agnone, J. 2007. Amplifying public opinion: the policy impact of the US environmental movement. *Social forces*, 85(4), 1593-1620.

³¹⁹ Stewart, Charles J., Craig Allen Smith, and Robert E. Denton Jr. 2001. *Persuasion and Social Movements*, 4th ed. Prospect Heights, IL: Waveland, pp. 5– 6.

³²⁰ Larimore-Hall, Daraka. 2014. "The Movement Democrat". Doctoral dissertation, University of California Santa Barbara.

³²¹ Stokes, Leah C. 2020. *Short circuiting policy: Interest groups and the battle over clean energy and climate policy in the American States*. Oxford University Press, USA.

immediate engagement with policy. In the United States, electoral success on climate change only appears to be possible through contestation within the Democratic Party - due to the massive and ever-increasing polarization of fossil fuel interests favoring the Republican Party, the entangled mutually-constitutive power projects involved in that party, and the long history of support for the conclusions of Duverger's Law in this context, where a plurality system strongly selects against the success of third parties³²². However, I emphasize that the evidence suggests contestation within, rather than uncritical support for, the Democratic Party. As other scholars have noted and as is apparent in contemporary political fights, elite interests that support either HEX hegemony or an elite-friendly 'climate capitalism' have a strong presence within the Democratic Party as well. Stokes emphasizes that intra-party contestation via political primaries is a critical venue for climate fights.

The antidemocratic processes outlined above suggest that if collective action on climate change linking ecology and democracy is to be successful, it must take the form of social movements that can communicate strategic climate analysis to a broad public, build electoral power, and bring otherwise excluded working-class people into the political process. Given the structural power of economic elites and their dependence on the labor of non-elites, labor action also appears critical. As Matto Mildenberger has explored in his book *Carbon Captured*, one of the great bulwarks of defense for carbon polluters around the world has been their "double representation" via powerful business interests as well as the labor unions representing working people who depend on those business

³²²Riker, W. H. 1982. "The two-party system and Duverger's law: an essay on the history of political science". *American political science review*, 76(4), 753-766.

interests and through them, the flow of cheap fossil fuels³²³. Many scholars have written about the potential power of so called “blue-green” labor and environmentalist coalitions to break this double representation³²⁴. Organized labor has the potential to act as a social movement in its own right, with the power to overcome the manipulation and exclusion of non-elite policy preference. This potential - and the potential for the failure of blue-green alliance to spell great danger for successful climate policy - is strong evidence that successful climate policy must be an egalitarian, democratizing, redistributive force - a force for ecological democracy - if it is to build the mass support, strategic consciousness, and coordinated action required for success.

The most important implications of all of this for the study of public opinion are threefold. First, public opinion is indeed important and should be studied - because the beliefs of average Americans can indeed impact policy outcomes, provided that these beliefs are mobilized in strategies that can win electoral victories and overcome systemic biases that favor elites both in the construction of preferences and in their translation into political action. Second, if scholars wish to understand what sorts of interventions might contribute to a public capable of more effective democratic mobilization, studies of public preference should be accompanied by studies of public strategy - that is, public attitudes toward different possible means of attaining policy ends. Third, in order to overcome the tendency of policy preference studies to reproduce the limited scope of

³²³Mildenberger, M. 2020. *Carbon captured: how business and labor control climate politics*. MIT Press.

³²⁴Mayer, B. 2009. “Cross-movement coalition formation: Bridging the labor-environment divide”. *Sociological Inquiry*, 79(2), 219-239.,

Miller, A. S. 1980. “Towards an: Environmental/labor coalition”. *Environment: Science and Policy for Sustainable Development*, 22(5), 32-39.,

Barca, S. 2016. “Labor in the age of climate change”. Jacobin. jacobinmag.org,

Snell, D., Fairbrother, P., & Hart, A. 2009. “Blue-green alliances: Union capacities and prospects as environmental actors”. In *Annual conference of the Australian Sociological Association*, Canberra.

what is considered realistic (and to generally exclude policy possibilities that could radically redistribute economic power), policy options should be included that offer steps toward dismantling structural inequalities. These three guidelines seem essential if public opinion research is to be useful for democratic public mobilization rather than as a measure of the public as a passive population. Measuring levels of concern or policy preferences in the absence of power analysis or strategic questions would seem to make studies most useful to political elites seeking room to maneuver, rather than to publics seeking to make their preferences reality.

The majority of studies of public opinion on climate change appear to fall short of these three guidelines. Most studies show a strong focus on psychological factors and are primarily engaged with how to increase public concern about climate change or how to increase what are considered to be beneficial behaviors (though these behaviors are rarely structurally-targeted strategic social movement activity). Much attention has been focused on persuading climate change deniers to support climate action³²⁵. One of the foremost institutions producing public opinion research about climate change, the Yale Program on Climate Change Communication (YCCC), has produced a tremendous body of work based on surveys of the American public concerning climate change, but no attention is given to connecting climate change policy with larger issues of anti-democratic barriers. Policy preferences are explored - and to the Program's credit, some of the policies asked about are somewhat redistributive, such as taxing polluters to help pay for social programs - but the actual influence of polluters and elite forces generally

³²⁵Stern, Paul C. 2012. "Fear and Hope in Climate Messages." *Nature Climate Change* 2(8):572-73., Bain, Paul G., Matthew J. Hornsey, Renata Bongiorno, and Carla Jeffries. 2012. "Promoting Pro-Environmental Action in Climate Change Deniers." *Nature Climate Change* 2(8):600-603.

over politics are not discussed, nor are ways to dismantle these exclusions. The core importance of the redistribution of power, and the core democratic crisis connected to the climate crisis, is not articulated. Recently, the YCCC has begun to investigate social movement activity, in the form of climate activism³²⁶ - a strong step toward recognizing the link between climate action and democratic contestation, given the critical importance of extra-institutional social movements to overcoming structural systemic biases - however, the analysis offered doesn't reflect on these structural biases or what sorts of actions might be necessary to challenge them. Despite these limitations, any attention to activism at all marks an increase in engagement with collective action over the career of the Program. From 2005 to 2012, discussion of action that people could take was limited to consumer activism and engagement with local politics. Beginning in 2012, studies on actions people could take still engaged most heavily with consumer choices, but added in the possibility of signing petitions, or general participation in an electoral campaign. Beginning in 2019, the Program began to engage with climate activism beyond calling an elected official, signing a petition, or taking part in an electoral campaign³²⁷. The limited historical engagement with social movement action, and the total absence of discussion of anti-democratic barriers and elite bias in the United States' democratic process, has been accompanied by strong support for consumer activism as a path to change. In one study, the Program's authors even explicitly argue that consumer activism can be

³²⁶Leiserowitz, A., Maibach, E., Rosenthal, S., Kotcher, J., Wang, X., Carman, J., Goldberg, M., Lacroix, K., & Marlon, J. 2021. "Climate activism: A Six-Americas analysis". Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication.

³²⁷Leiserowitz, A., Maibach, E., Rosenthal, S., Kotcher, J., Bergquist, P., Gustafson, A., Ballew, M., & Goldberg, M. 2019. "Climate Activism: Beliefs, Attitudes, and Behaviors". Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication.

effective³²⁸, though they cite studies about targeted boycotts for singular products as part of limited political campaigns, rather than anything near as broad as attempting to boycott the fossil fuel infrastructure that surrounds every aspect of our lives. The omission of redistributive solutions, and the lack of connection between climate change and the crisis of democracy, is most apparent in the expressly political writing of Anthony Leiserowitz, the director of the YPCCC. He approaches climate change from an expressly political and strategic direction in his 2019 chapter contribution to the book “A Better Planet: Forty Big Ideas for a Sustainable Future.” In his chapter, “Building Public and Political Will for Climate Change Action”, Leiserowitz begins by acknowledging the necessity of “system level changes” to address climate change, and the foundation of public and political will that legislation to achieve such changes will be built upon. This appears a promising start, but the strategy he outlines is entirely focused on mobilizing the concerned public to solve climate change without any mention of the ways the system itself must change. There is no content - no redistributive model, no vision of how the public will gain greater power, more equally distributed wealth, increases in democracy and social equality, as a result of this movement. Instead, Leiserowitz vision emphasizes the need to achieve diverse “buy in” from different social groups - but he expressly mentions economic and military elites. This isn’t necessarily wrong, but in the absence of a redistributive call, it implies a program for maintenance of the system that this elite power rests upon rather than a program for challenging it. We are left to assume that the climate solutions we are meant to build political will for are technocratic fixes that leave the power structure, with all of its antidemocratic elite bias, intact. Meanwhile, framing

³²⁸Roser-Renouf, Atkinson, Maibach and Leiserowitz. 2016. "The Consumer as Climate Activist". *International Journal of Communication*, 10, 4759–4783 1932–8036/20160005.

the problem as a lack of political will rather than power contestation within a biased field obscures the ways that elite domination operates to stymie progressive public policy preference.

All of this together suggests a dominant logic of Foucauldian “green governmentality” in the work of scholars of climate change public opinion, in which the public are meant to take on the burdens of being good environmental subjects without problematizing the system generating both ecological crisis and mass disempowerment. By omitting the entangled nature of inequality and ecological destruction - by omitting hegemony - the majority of public opinion research frames the public primarily as a passive body to be stoked and prodded by raising concern and channeling that concern into actions - whether these actions are consumer choices, or policy support - that help regulate the system without requiring any fundamental changes to its structure. In order to avoid the reproduction of an individualistic green governmentality that reinforces a passive consumer subjectivity, or a depoliticizing framing that suggests the problem is a lack of public desire for solutions rather than systemic exclusion and antidemocratic bias, this project attempts to engage directly with public opinion on climate change with attention to democratic and redistributive politics. This is done by expressly investigating strategic questions in public consciousness - questions of public beliefs about power, public desire for redistributive policy, and attitudes toward the various tactics that are likely necessary for the success of deeper systemic social transformations. I must admit that this project does not go far enough in any of these directions - but it is an attempt to start.

Chapter 4. Methods: The 2-Phase Qualitative-Quantitative Approach

The third chapter of the study explains my broad methodological plan as well as the development and analysis of the qualitative and quantitative portions. The novel data for this study was collected using a 2-phase method in which small-scale qualitative research with a focused population was used to inform the development of subsequent large-scale quantitative research focused on a general United States public. As I sought to measure public beliefs about climate change in the United States, the ways people conceptualize climate change as a political issue, and how people think about the different ways of taking action to address climate change that had all been under-explored in previous studies, I sought first to explore these topics with individuals who were highly engaged with climate change in their day-to-day lives - and found academics who study climate change to be a convenient and accessible population embodying this variable. These are climate change experts, but with a framework of expertise that goes beyond the physical sciences focus normally associated with expertise on the issue.

The purpose of mobilizing expert and lay-person opinion in this mixed methods study is not to compare the more likely correct opinions of the experts with the more likely mistaken view of the lay person. If this were simply a study of empirical knowledge cultivated within a given discipline, such a framework might be useful - though this would still require attention to the potentially anti-democratic nature of expert cultures and the emergent problems associated with ascribing trained professionals with

unassailable authority³²⁹. Because this is a study of understandings of power and politics and how these affect the future, as much as it is a study of how people imagine the future unfolding, there is no reason that academic training would guarantee that a person would have views that are necessarily more rigorous in their understanding and critique of social domination.

People whose academic career is based on some aspect of climate change are not outside of society and the career pressures we face don't consistently reward accurate thoroughgoing critique of the dominant systems that themselves influence these careers and the institutions that govern them. While we are certainly required to be steeped in the common knowledge pool of climate change science and policy, we are not required to be equally steeped in critical traditions, even in disciplines that have rich histories of engagement with these traditions. I believe that obtaining a critical, strategic, and systemic understanding of climate change has more to do with exposure to the accumulated knowledge of critical philosophical and activist traditions³³⁰ - which can occur inside or outside of the academy - than it does with academic training. An academic professional's success in their field is no indicator in itself of the level of effort they've made to understand the systems within which they operate in a critical light. The very nature of highly technical modern systems of concentrated power by definition requires a large population of experts who can combine technical proficiency with deference to the operations of the powerful. As John Sanbonmatsu has argued in the

³²⁹Habermas, J. 1987. *The Theory of Communicative Action. Volume 2*. Trans. Thomas McCarthy, Boston, MA: Beacon.

³³⁰Snow, D. A., & Soule, S. A. 2010. *A primer on social movements*. WW Norton. Pg. 119. Snow and Soule stress the vast empirical support across social movement literature for the primacy of network ties in determining movement participation.

Postmodern Prince, academics are in fact often rewarded for distancing themselves from any direct political analysis of their own knowledge and work, especially given the twin pressures of reduced departmental financing and increased pressure to publish marketable books³³¹.

Instead, the expert population was chosen for two main reasons. First, because these are people who think, write, and teach about climate change, and so can be considered to be dedicated and influential figures in the development of American intellectual understanding of the climate crisis. Studying this population tells us something about the content and dynamics of climate change belief within the influential field of the academy. Second, I chose this population because they provide a convenient surrogate for a population defined by a high level of engagement with these issues whether or not their imagination of the socio-political context of these issues is accurate. This high level of engagement made this population ideal for the initial exploration of possible subjects and responses that could inform the construction of the more limited, researcher-controlled possible responses in the subsequent national survey.

Participants were gathered via convenience sampling. I sought trained researchers with a postgraduate degree studying climate change as a major topic of their research, and I sought qualifying participants from a variety of disciplines in order to maximize the potential for diverse theoretical approaches. I used two methods of soliciting participants. The first was to search out and contact researchers at my own university. The second was to solicit researchers via an email advertisement written to the Environmental Studies and Sciences email forum. I had participated in this forum for several years and found it to be

³³¹Sanbonmatsu, John. 2004. *The postmodern prince: Critical theory, left strategy, and the making of a new political subject*. NYU Press.

a place where it was possible to speak with climate change researchers from many different academic backgrounds who were enthusiastic about collaborating with other researchers. When I made contact with a participant by email, I provided them with an informed consent form and discussed my intention to maintain their anonymity as much as possible, and asked them about any other boundaries or concerns they would like to suggest. I also ended each interview with an open question about any additional concerns they might have. Interviews were conducted in person when possible, and via the video conferencing platform Zoom when this was not possible.

I chose to maximize participant anonymity because it had already become clear to me from my interactions with colleagues that scholars studying climate change often have private views on the severity of climate change or the political possibilities for addressing it that differ in important ways from their public-facing statements. I wanted to open up space for researchers to share their beliefs without fear of professional or public judgement. Scholars across a range of disciplines were chosen, and the great variation of attention to climate change as a systemic socio-political problem among the academics surveyed proved to be fruitful. Given different academics' varying depth and areas of knowledge, and varying degrees of critical systemic analysis, but consistently high levels of climate change knowledge and engagement with the issue more broadly, interviews with this population provided a rich range of possible answers across each topic explored.

Table 1. Interview Participants

Participant	Area of Study	Location (US Region)
1	Env. Studies	Northeast
2	Forestry	Northeast
3	Law	West
4	Geography	Northeast
5	Physics	West
6	Sociology, Env. Studies	West
7	Sociology	Midwest
8	Public Health	South
9	Ecology	West
10	Political Science	Midwest
11	Geology	West
12	Ecology	West
13	Political Science	West
14	Sociology	South
15	Env. Studies, Geography	Southwest
16	Sociology, Env. Studies	West
17	Sociology, Env. Studies	West
18	Political Science	South
19	Sociology	South
20	Political Science	West
21	Political Science	West
22	Sociology	West

I developed a set of interview questions based on several large overarching themes that I felt would be important to the ways people understand climate change and its relation to social power. These themes covered far more than the narrower range of subjects chosen for analysis in this dissertation. This is also true of the survey. This was also intentional: Not knowing what would emerge as the most important subjects, I chose to collect data on the widest possible range within the subjects of interest while still

keeping interview and survey times low enough to avoid loss of participant interest. This breadth of questioning was performed in accordance with my preferred approach in the tradition of grounded theory. This is a theoretical model in which the researcher develops hypotheses through the evaluation of data collected within a broad overarching subject, rather than beginning with a specific hypotheses that informs a more focused data collection effort³³². While the subject areas of the interviews were broad, all subject areas ended up contributing to the survey questions.

The first of the subject areas covered in the interview was climate action. I asked participants to describe their own actions contributing to addressing climate change, and what actions they felt were most important for others to take. These questions were purposefully broad, designed to elicit a wide range of possible actions in order to help develop possibilities for the subsequent national survey, and in order to allow participants to speak to the actions that were most prominent in their own thinking rather than being prompted by a set of suggested actions pre-determined by the researcher. I felt that if I suggested possible actions and asked them to describe the importance of each, they would feel some obligation to show support for all of the actions. I wanted to know what types of activities researchers would prioritize without specific prompting. Following this, I asked about specific types of policy or technological solutions, drawn from the primary forms of policy that I see most often debated in academic writing and within the wider climate movement. These were more specific in terms of their topics, but were open-ended, phrased in terms of asking how a participant felt about a particular type of policy. I then asked participants to describe what they predicted would happen in the future if

³³²Strauss, A., & Corbin, J. 1994. "Grounded Theory Methodology: An Overview". In N. Denzin & Y. Lincoln *Handbook of Qualitative Research*. 1st ed. (pp. 273–284).

more was not done to address climate change than is currently being done. This section involved questions about the imagined consequences and the timeline on which they would occur, as well as who would be affected most. I follow this with questions about their optimism or pessimism about the possibility of adequately addressing climate change. This is one of the key areas in which I get a sense of their personal models of political strategy. Finally, I ask about participant's main sources of knowledge and attitudes toward knowledge sources, and their emotions about the subjects we've discussed.

When interviews were completed, I saved the recording made via Zoom or a handheld recorder onto a password-protected computer. I then evaluated my options for transcription services and chose to have the interviews transcribed via the GoTranscript service of GoTranscript.com. This service was selected for high customer evaluations for accuracy, security, and affordability, and my own satisfaction with the result of test transcriptions after attempting them on different platforms. When the interviews were transcribed, I downloaded each and edited them for maximal readability and to correct any obvious errors in transcription.

With the transcribed interviews in hand I began the coding process. Consistent with the grounded theory approach, I formed a coding schema through close reading of the interview transcripts - a process of open coding - rather than by following a pre-established schema based on a deductive hypothesis model with variables already identified³³³. This was performed through my preferred method of physical engagement with the text - printed, organized into a binder, and subject to multiple readings. As

³³³Strauss, A.L., & Corbin, J. 1990. *Basics of qualitative research: Grounded theory procedures and techniques*. Thousand Oaks, CA: Sage.

subjects began to emerge, I began to color-code them with highlighters. To aid in my cross-comparison, I then began to organize summaries of question responses into the columns of an online spreadsheet with emergent common variables emphasized. With responses directly comparable, I was able to see how different types of actions appeared to cohere into more distinct comparable subjects. From open-ended questions about actions to address climate change, for instance, I began to identify emergent areas of activity including lifestyle and consumption choices, voting and electoral action, teaching and education, research, and social movement activity and protest. This allowed me to create a new spreadsheet with more specific variables as columns, into which I entered color-coded values for each based on how much a given area of activity was emphasized - with a heavy emphasis, moderate emphasis, slight emphasis or none at all. The final spreadsheet allowed me to see possible relationships between different attitudes and emphases across different responses which could be explored in the survey.

In preparation for survey construction, I realized that a pure grounded theory approach was not ideal to my situation without some adjustment. I wanted to build a theoretical framework for the political economy of climate change that could be used as a third point of comparison between the survey and the interviews. There were empirical relationships - such as those between projects of elite power concentration and the possibilities for democratic policy construction in the United States - established through a larger body of research that were reflected in some of the interviews but not others. For example, while it was clear to me that the anti-democratic influence of corporate and economic elite power played a strong role in the dynamics of climate policy in the United States, attention to this obstacle was nearly absent from the interview responses. As one

specific example, labor organizing seems to be a promising and important aspect of response to climate change, but labor activities are absent from climate change activism surveys and also were not mentioned in the interviews I conducted. I sought to develop a theoretically and empirically informed model based on existing research - reflected in chapters 1 and 2 - that would guide the analysis of the survey and interviews, as well as help shape the construction of the survey. While much of the survey framework emerged from the grounded theory coding analysis of the interview set, it was also shaped by the development of my own theoretical foundation that I believe reflects a more comprehensive analysis of the issues despite this analysis being only partially reflected in the interview responses themselves.

At this point I began to construct my survey instrument. Given my lack of experience with quantitative data collection (having previously only conducted interview-based and ethnographic research) I began a process of introducing myself to the theory and practice of these research forms. During this period I developed and conducted a smaller quantitative research project separate from this dissertation utilizing a survey on the Qualtrics platform - the platform provided by my University - in part to familiarize myself with the tools available to establish a basic technical proficiency. I then set up meetings to consult with specialists in the areas of quantitative data collection and analysis at my University. I met with 4 different professors across disciplines - some specialized in environmental public opinion research, and one, Hunter Gehlbach, who works in the field of education but specializes particularly in survey methods. I must be absolutely clear that I cannot claim to have been entirely successful in the attempt to understand and implement the knowledge shared by these consultants, though I am

deeply grateful for their efforts and indebted to them for their help nevertheless. Professor Gehlbach directed me to several of his recent publications on best practices and common problems in survey research, and helped me schedule a consultation with one of the graduate students in his training in order to closely study the readings and ensure my grasp of the concepts and practices involved. I was directed to research that suggested that the inclusion of “No Response” options - often given in order to capture neutral respondent attitudes - actually seems to detract from survey accuracy by giving respondents the possibility of “opting out” rather than thinking through an answer³³⁴. Gehlbach’s own “Survey Checklist Manifesto” provided an excellent source for best practices in the creation of questions and the formatting of the survey in general - including ensuring that questions are understandable, that scales are intuitive and well-labeled, that demographic questions and others which could cause respondents to alter their responses be left to the end of the survey, and much more³³⁵. Following this advice, I chose not to foreground the focus of the survey on climate change, instead framing it as a survey about attitudes toward the future, allowing me to gather a good deal of information before the subject of climate change was introduced and avoiding the potential of priming respondents with controversial language early on.

Gehlbach’s “Measure Twice, Cut Once” provided a clear guide to the basic process of survey construction. Following this guide, I reviewed the established literature to find prior attempts to measure what had become my core variables: Support for various

³³⁴Krosnick, J. A., Holbrook, A. L., Berent, M. K., Carson, R. T., Michael Hanemann, W., Kopp, R. J., & Conaway, M. 2002. “The impact of “no opinion” response options on data quality: non-attitude reduction or an invitation to satisfice?”. *Public Opinion Quarterly*, 66(3), 371-403.

³³⁵Gehlbach, H., & Artino, A. R. 2018. “The survey checklist (manifesto)”. *Academic Medicine*, 93(3), 360-366.

climate policies, involvement in various ways to address climate change, conceptualization of the importance of various methods to address climate change, and attitudes toward corporate power and wealth redistribution. I found several past studies that developed likert scale measures for each of these areas, but no study that captured the particular conceptualizations of climate action that emerged from my interviews, the range of policies that addressed anti-democratic obstacles in the formation of US climate policy, or put these measures into comparison with one another. Gehlbach suggests following the literature review with the use of interviews and focus groups to help build a full conception of the constructs to be investigated via the survey. This is essentially the purpose that my interview set served, providing a range of commonly recognized possibilities for the ways activist intervention, political analysis, and policy support could be constructed as measurable survey items.

Like the interview, the survey was designed to provide a broad set of data that could be narrowed down to subjects of analysis that emerged as the most interesting and important. Ultimately, the key areas of interest that emerged from both the interviews and the survey were those most directly associated with the conception of climate change as a problem of power, inequality, and democracy. This meant investigating the prevalence of participant support for redistributive policy in general, support for redistributive climate policy in particular, participant's sense of the efficacy of different forms of collective or individual social action in general, their level of participation in these forms of action in relation to climate change, and their support for these forms of action regardless of their level of participation. Together, these questions allow for the investigation of the connection of climate change with various power structures in the public consciousness,

and the state of public analysis of various forms of action to address these power structures. While surveys of public opinion often exclude issues of inequality, structural obstacles to democratic power, and the state of tactical and strategic understanding of these issues in the public mind, these questions make these issues central.

Support for general redistributive policy was investigated with 3 key questions that collectively dealt with 3 different forms of power redistribution which could take place over the next three decades. Redistribution is conceived of not only in terms of wealth, but in terms of power more broadly. Participants were asked to indicate their support for progressive taxation (taxation of the wealthiest to aid the less wealthy), reduction of corporate influence in US politics, and a shift of US government focus to support environmental sustainability rather than economic growth. Respectively, these policies represent the redistribution of economic power from the wealthy to the less wealthy, the redistribution of political power from economic elites to non-elites, and the subjugation of economic power concentration to environmental efforts, essentially a shift of power from projects of power concentration to projects of collective ecological well-being. Participants were asked to indicate their support or opposition for these policies with answers on a four point scale from “totally oppose” to “totally support”. Participants were also asked to gauge the likelihood of each of these policies becoming reality with answer choices on a four point scale from “not at all likely” to “very likely”, allowing for investigation into a sense of efficacy.

Redistributive climate policy was addressed with questions gauging participant support for different possible funding mechanisms for a transition to an environmentally friendly economy. Participants were asked to give support for policies that would tax the

wealthiest Americans and large corporations to pay for a transition, or cuts to the military budget to pay for a transition, alongside less redistributive policies and even regressive policies that place the burdens of transition costs on the public more generally, such as those resulting in increases in gasoline prices. While reducing the military budget is not usually included in a conception of ‘redistributive’ policy, in the larger framework of interconnected pro-fossil-fuel actors, the military stands out as a primary element of this network and reductions in military budget to pay for climate solutions can be conceived of as a form of power redistribution from within the network to beyond it. Each of these funding mechanism questions had answer options along a four point scale from “strongly oppose” to “strongly support”.

Participants' support for and involvement in different forms of social action to address climate change were addressed through 4 question sets. The first sought to gauge participants’ sense of the efficacy of different forms of social action beyond the issue of climate change. Participants were asked to rate the amount of power different types of actions have over the way life will be in the future, on a five point scale from “no power” to “tremendous power”. These actions include those which emerged from the interviews - voting, educating others, choosing which products to buy or use, joining in protest marches and demonstrations - and one which was not mentioned but is structurally important - joining in labor actions including strikes and work stoppages. These actions were chosen to gauge public support for different aspects of social action - from the purely consumerist forms to political forms, from less contentious forms to more contentious forms. This same set of actions is repeated later but in direct connection to climate change. For each of these types of actions, participants were asked to report how

important they believe the action is for addressing climate change on a four point scale from “not at all important” to “extremely important”. They were also asked to report how involved they are in each of these kinds of actions to address climate change - from “not at all involved” to “heavily involved”. Finally, I asked participants to report the level of importance they assign to different forms of action framed as collective, rather than individual, actions, for addressing climate change. Participants reported the importance of these forms of action with answers on a four point scale from “not at all important” to “extremely important”. While any actions can be understood collectively or individually depending on the level of analysis (are we looking at a group, or an individual?), I felt that this reframing provided another dimension through which to gauge participant support for actions ranging from contentious to institution-friendly, and from the political (government and social movement solutions) to the more individual (consumer choice). The survey concludes with a large set of demographic questions to allow for the detailed evaluation of the composition of the answer groups in future research.

Once the survey items were constructed, I reviewed the survey with colleagues and advisors, and performed cognitive testing with colleagues, friends, and family. At this point I sought in particular people who were not deeply familiar with climate change, academic research, or political activism, in order to carefully review the wording of each question and ensure that the meanings I sought to express were likely to be transmitted faithfully.

The survey instrument itself was constructed on the Qualtrics platform. Qualtrics is a company that provides cloud-based research services, most often used by companies

engaged in market research but also widely used for academic social research³³⁶.

Qualtrics access is provided to researchers studying at or employed with the University of California. The service provides a wealth of tools for the detailed construction of different types of questions, response options, and ways that a participant can be directed through the course of survey completion.

One of the major goals of the consultations with scholars familiar with survey research was to learn about my options for gathering participants. This is often a costly element of research - especially given my goal of collecting a survey sample that could be nationally representative and therefore allow for generalization about attitudes among the US population at large. Following the advice of friends, my initial inclination was to utilize mTurk or Mechanical Turk, an online platform that allows people to take research surveys in return for small monetary payments. However, the researchers I consulted with advised against this, informing me that professional firms like Dynata (formerly SSI) offered sample collection services that were likely to be more accurate, reliable, and still within my possible budget. After researching my options and comparing prices, I decided to use Dynata's sample collection services at a cost of approximately \$4,500 for a

³³⁶Albaum, G. S., & Smith, S. M. 2006. *Handbook of Marketing Research*. London, United Kingdom: Sage Publications. byu.edu,

Strutz, M. L. 2008. "A Retrospective Study of Skills, Traits, Influences, and School Experiences of Talented Engineers". *ASEE North Central Section Conference*. ilin.asee.org,

University of North Carolina at Chapel Hill, Carolina Population Center (CPC). 2007. Measure Evaluation, (57) p. (SR-07-39| USAID Cooperative Agreement No. GPO-A-00-03-00003-00), db.jhuccp.org.

Brunson, K. W. 2008. "Electronic Textbooks: An Empirical Study of Adoption Potential". *The Liberty Business Review* VI.1, 44–55, works.bepress.com,

Zikmund, William G.; Babin, Barry J. 2009. *Essentials of Marketing Research (with Qualtrics Card) 4th Edition*. Cengage Learning. ISBN 978-1439047545.,

Zikmund, William G.; Babin, Barry J.; Jon C. Carr, Jon C. 2012. *Business Research Methods (with Qualtrics Printed Access Card) 9th Edition*. South-Western College Publishing. ISBN 978-1111826925.,

Malhotra, Naresh K. 2008. *Basic Marketing Research & Qualtrics Pkg / Edition 3*. Prentice Hall. ISBN 9780137155934.,

Sue, V. M., & Ritter, L. A. 2007. *Conducting Online Surveys*. United States of America: Sage Publications.

nationally-representative sample in terms of sample size and composition. While it was feasible to fundraise for this cost through research grants, it was more convenient to my desired research schedule to raise these funds independently through a job as a restaurant server (in addition to my regular employment as a university course instructor) rather than to rely on the grant disbursement calendar and the added expense of time in researching and pursuing grants. I also found that non-academic employment provided me with frequent opportunities to discuss my research with the wide range of people from across the country that came through the hotel restaurant where I was employed. These conversations proved invaluable to my attempts to frame and communicate the ideas involved in a way that seems understandable to people outside of my normal academic environment.

The survey was conducted using Dynata's mixed-method respondent collection systems between January 1, 2020 and February 6, 2020 (notably, prior to the Covid-19 pandemic). Dynata uses online outreach in addition to the maintenance of panels of regular survey participants representing groups that are often hard to reach via online-only methods. Dynata is a member of the European Society of Opinion and Marketing Research (ESOMAR) and provides limited information about their proprietary data collection methods as required. In their ESOMAR compliance document, Dynata reports that they "control the blend of multiple sample sources" depending on the research requirements of the client, using "third party digital fingerprint technology" to prevent duplicate respondents and other problems³³⁷. Through Dynata, I was able to collect a sample of n=1065 valid respondents, with demographic representation across race,

³³⁷Dynata. 2018. "Panel Quality: Our Values. Answers to ESOMAR's 28 Questions". Survey Sampling International, LLC. Dynata.com.

gender, age group, US region, income level and education level within close proximity to US census numbers for the general population. This sample size should allow for a margin of error contained to 3% at a 95% confidence interval for the general US population³³⁸.

Table 2. Survey Demographics

Generation	Frequency	Percentage	Cumulative Percent
Gen Z	121	11.4	11.4
Millennial	300	28.2	39.5
Gen X	260	24.4	63.9
Baby Boomer	323	30.3	94.3
Silent Generation	61	5.7	100.0
Total	1065	100.0	

US Region	Frequency	Percentage	Cumulative Percent
Northeast	197	18.5	18.5
Midwest	224	21.0	39.5
South	410	38.5	78.0
West	234	22.0	100.0
Total	1065	100.0	

Education	Frequency	Percentage	Cumulative Percent
No high school	17	1.6	1.6
Some high school	87	8.2	9.8
High school diploma	273	25.6	35.4
Some college	190	17.8	53.2
Associate or Trade Degree	115	10.8	64.0
Bachelors Degree	245	23.0	87.0
Masters Degree	107	10.0	97.1

³³⁸One population group with slightly greater discrepancy with census numbers was the Hispanic population. Due to my greater familiarity with forms of identification common in southern California, I mistakenly assumed that Latino/Latina/Latinx would be widely accepted identifiers across the country. However, after I conducted the survey and saw the discrepancy in my numbers, I did further reading into the labels with which people self-identify and found that these labels are uncommon in many parts of the country. I suspect that this mistake compromised the possibility of my data being representative in this sense, and I therefore do not use my data to make claims about the racial composition of the groups whose attitudes I explore in my work.

Doctoral Degree or equivalent	31	2.9	100.0
Total	1065	100.0	

Race	Frequency	Percentage	Cumulative Percent
Native American	24	2.3	2.3
Mixed Race	67	6.3	8.6
SWA/NA	1	.1	8.7
White/Euro Origin	718	67.4	76.7
East Asian	26	2.4	79.2
South Asian	17	1.6	80.8
Pacific Islander/Native Hawaiian	3	.3	81.1
Black/African Origin	128	12.0	93.2
Latinx/Latina/Latino	72	6.8	100.0
Total	1056	99.2	

Gender	Frequency	Percentage	Cumulative Percent
Genderqueer/Nonbinary	5	.5	.5
Female	566	53.1	53.6
Male	493	46.3	99.9
Other (please enter)	1	.1	100.0
Total	1065	100.0	

Income	Frequency	Percentage	Cumulative Percent
Less than 10k	72	6.8	6.8
10k-15k	42	3.9	10.7
15k-35k	188	17.7	28.4
35k-75k	361	33.9	62.3
75k-150k	281	26.4	88.6
150k-200k	74	6.9	95.6
200k+	47	4.4	100.0
Total	1065	100.0	100.0

Chapter 5. Interview Findings

In prior chapters I've argued that an investigation of climate change public opinion should be attentive to structural power and the political strategies necessary to transform it. Public preference does have the potential to influence policy change in the United States, but policy change is significantly biased toward the preferences of economic elites. One implication of this is that climate policy that doesn't challenge structural inequality is more likely to succeed than climate policy which does redistribute power - but these structural inequalities are themselves enablers of ecological crisis at large and the climate crisis in particular. As long as elites can channel public resources toward environmentally destructive projects for their own benefit, environmentally destructive behavior will be incentivized despite whatever elite-friendly climate policy changes might come to pass. The potential of public preference to change society in ways that could reverse these dynamics depends on the desire and ability of public actors to alter the antidemocratic obstacles in place, which include economic inequality and corporate political power, among many others. If the (HEX) hegemony of fossil fuel supporters and the power dynamics that enable ecological destruction are to be overcome, democracy (and along with it economic equality) must be meaningfully expanded.

For an analysis of public opinion to be useful in these efforts, these investigations must attend to hegemony and the contestation of power. This focus was not fully developed when the interviews were conducted. The role of the interviews was to generate possible areas of interest and reveal possible problems that could be worth investigating in the public survey. The interviews were structured with open-ended questions, and it was from analysis of these questions that the focus on systemic analysis,

hegemony, and strategy began to take form. This focus emerged from analysis of the ways respondents appear to understand climate change in relation to social-structural power, which were most evident in their responses to questions examining their beliefs about effective courses of action and government policies aimed at addressing climate change. While the sample interviewed is not random or statistically representative and cannot be used to make generalized conclusions about any larger population, the interviews do provide insights.

Most importantly, these interviews demonstrate that even among highly educated people with a high level of engagement with climate change as a subject of research and action, a thoroughgoing systemic perspective - in which climate change is viewed as a result of the dynamics of the distribution of social power - is lacking. When it is present, it is most often not accompanied by strategies that seem to match the systemic analysis. Support for tactics and policies actually aimed at challenging entrenched elite power, and altering the distribution of power, appeared largely absent even in this highly-engaged and highly educated sample. This suggests that among a general public that can be expected to be less engaged and less educated on average, a systemic understanding rooted in issues of social power and strategic tactical analysis to accompany this framework may be even less present, highlighting a key possible area for intervention and advocacy: the cultivation of systemic analysis and strategy aimed at understanding and challenging the anti-democratic dynamics that enable ecologically destructive practices.

Characteristics of the Sample

While a key characteristic of all the scholars interviewed was that their work was in some way focused on climate change - and that therefore they would be highly engaged in thinking about climate change in the course of their daily lives - the 22 interview participants represent some disciplinary variety. Of these 22, 9 had an exclusively social science academic background, trained in either political science or sociology. 5 had an exclusively natural science academic background. These included one trained in forestry, one in physics, one in geology, and two in ecology. 7 of the 22 participants had a background in fields that tend to involve both natural and social sciences - namely geography and environmental studies, but also public health. 3 of the environmental studies scholars also had a background in sociology, meaning that 7 total participants had formal training in sociology, and 12 total participants had a formal academic background in social sciences while 10 did not. Key differences between academics with a social science background and those with an exclusively natural science background emerged in the course of the analysis.

10 of the 22 participants were women, while 12 were men. None of the participants identified themselves as non-binary or genderqueer. Notably, nearly all of the scholars interviewed saw themselves as white - 18 of the 22 - while one was Middle Eastern, one was mixed race, one identified as non-white and Jewish, and one was African American and mixed race. The lack of racial diversity in the sample may be influenced by the pre-existing patterns of racial exclusion in the field of environmental studies broadly. While only 5 participants had explicit training in the field of environmental studies, all of the participants were environmentally-oriented researchers and most were collected through an interdisciplinary environmental science email listserv. Writing for *Diverse*, a magazine

focused on diversity issues in higher education, Jessica Ruf describes how environmental studies continues to be one of the most disproportionately white-dominated fields in the United States due to factors including the high costs of schooling, prejudicial popular narratives about who is or is not interested in the environment, and both formal and informal historical systems of terror and exclusion aimed at making non-white people and particularly Black and Indigenous people feel unsafe and unwelcome in wilderness spaces³³⁹. A 2018 PNAS study found that while white people and non-white people were likely to underestimate levels of environmental concern among non-whites, environmental concern was actually lower among whites³⁴⁰. As Ruf highlights, this should be unsurprising given the disproportionate impacts of environmental harms on racial minority groups throughout the United States.

Participants also varied by the region in which they are based, though in part due to my convenience sampling method, participants were overwhelmingly based in the Western United States with 12 participants representing that region. 3 are based in the North East, 4 in the South, and 1 in the South West. The vast majority are currently employed as professors engaged in research and teaching at the university level, with the exception of one who is employed as a consultant.

High Levels of Engagement, Concern - and Pessimism

³³⁹ Ruf, Jessica. 2020. "Why Environmental Studies is Among the Least Diverse Fields in STEM". *Diverse: Issues in Higher Education*. DiverseEducation.com.

³⁴⁰ Pearson, A.R., Schuldt, J.P., Romero-Canyas, R., Ballew, M.T. and Larson-Konar, D. 2018. "Diverse segments of the US public underestimate the environmental concerns of minority and low-income Americans". *Proceedings of the National Academy of Sciences*, 115(49), pp.12429-12434.

As expected, participants reported being highly engaged in addressing climate change in many different areas of their lives. Responses concerning participant engagement were elicited through asking participants to describe how they were trying to address climate change through their own actions. Every participant reported high levels of personal involvement in several different types of activities to address climate change. Personal involvement nearly always involved scholarly research in the participant's area of expertise. As one political scientist put it,

“My research agenda is entirely structured around trying to answer questions about climate change and climate politics... all of those questions are oriented by either problems I see in the world that need some academic activity, or, alternatively, by the types of problems or research requests that a variety of advocates or climate practitioners have pointed to as gaps in their work. I make a public effort to communicate and disseminate my findings, [and] engage with policymakers and practitioners on the implications of the research that I do.”

Most seemed to feel confident that their research served as a positive and effective contribution. Only 2 respondents didn't mention their research as one of the ways in which they were addressing climate change. One, a sociologist, expressed skepticism about the utility of producing climate change research, stating that “as a scientist, I hope to make a contribution. At the same time, sometimes I feel a little skeptical because I don't know, I feel like there's a lot of articles out there and there's a lot of people sometimes saying and repeating the same important things without any real political action happening.”

Teaching was also extremely important to the participants. 15 of the 22 respondents also emphasized their teaching as a primary activity through which they were addressing climate change. One sociologist said she was working to address climate change

primarily “through education, through research, and giving a voice to those who are normally not heard in spaces of privilege and power.” As a scholar of environmental studies and geography said, “I think for me, the biggest thing that I do is getting students to be curious about and ask intelligent questions about climate change and global warming.” 15 of the 22 discussed addressing climate change through their personal consumer and behavior choices, and many discussed voting and campaigning for electoral change as an avenue of action as well. Relatively few discussed involvement in social movement or protest activity to address climate change. Only 6 described personal involvement in social movement organizations - including groups like 350, Extinction Rebellion, and the Sunrise movement - and another 2 described contributing indirectly to those movements by producing research that could be utilized in their efforts.

In addition to high levels of engagement, this sample also indicated high levels of personal concern. This was demonstrated through the high degree of time and effort expended in addressing climate change, but also through participants' emotional responses to the issue. I asked participants to report how they felt emotionally when they think about the issue of climate change. The most common answers were a mixture of anger, depression, worry - and a smaller amount of optimism or inspiration. One described feeling “depressed” and “a profound sense of loss”, but also occasionally perceiving people’s actions to address climate change as “heroic”. Another reported “anger, depression” and sometimes “a little bit of hope”.

The overwhelmingly negative emotions were accompanied by predominantly gloomy views of the future. Despite their high levels of engagement in actions to address climate change, very few of the climate change scholars interviewed felt that collective actions to

address climate change would result in averting the worst harms of the crisis. Only 4 indicated anything approaching strong optimism that greenhouse gas emissions could be reduced adequately in the next decades. When asked how they thought the future would play out, many described a sense that the future was bifurcated: that there is a fork in the road and depending on the collective actions of individuals and institutions, humanity could take a course toward adequately addressing climate change, or not. Most felt that we would not. Despite the strong sense of pessimism about the likelihood of desirable outcomes, these scholars remain engaged in actions to address the crisis - demonstrating what I've written about elsewhere as a kind of "unconventional optimism"³⁴¹, in which motivation is found in the course of doing what the participant believes should be done rather than through confidence that these actions will be effective. As one political scientist put it, "there are degrees of bad", and while he felt that the future was essentially doomed to involve quite a lot of "bad", any action taken to make it less bad is still significantly meaningful. Notably, several scholars described a sense of needing to hide their pessimistic feelings and outlooks from others in order to avoid damaging others' motivation to act. As one geographer put it, "teaching about it is tricky because you want to be able to teach about it in a way that doesn't make folks feel like it's inevitable, and that they're powerless and there's nothing they can do."

Climate Change as a Systemic Social-Structural Crisis? Degrees of Power Analysis

³⁴¹King, Zachary. 2020. "Unconventional Optimism: Lessons from Climate Change Scholars and Activists". *Resilience*. Resilience.org.

My analysis of the interviews with climate scholars prompted me to focus more deeply on the way people do or do not understand climate change to be a systemically-generated issue: A problem of hegemony, in which elite-biased political, economic, and cultural systems serve to render public support for climate action (and other ecologically sustaining actions) incapable of effectively shifting dominant policy. In this view, fully developed in the theoretical literature reviewed in chapters 1 and 2 of this study, *democratizing* solutions (solutions which aim to more equitably redistribute power) are likely to be the most effective in addressing climate change, because they challenge the hegemony of elites who benefit from systems generating mass harm, while non-democratizing solutions preserve the systems that incentivize ecological destruction for the private gain of powerful actors. It wasn't the presence of an articulation of this consciousness in the interviews with climate scholars that prompted my interest in investigating issues of power structure and strategy in the public survey and the background literature for this project, but the absence of this explicit articulation in most of the interviews, and often the beginning of an articulation that then seemed incompletely addressed by participants' advocated interventions.

I determined the degree to which participants saw climate change as a systemic issue based on the presence or absence of explicit statements about climate change resulting from larger patterns determined by structures of social power, and by participants' stated beliefs about what types of social change would be necessary to address it. Participants did not simply fall into a binary set of those who saw climate change as a systemic issue and those who did not. Although they could be sorted broadly into these two categories, there was variation within each of these categories in terms of what power structures

were to blame and how radical were the transformations necessary to address them. It ultimately seems most useful to sort participants into the following three categories:

1. Those who did not describe climate change as a systemically-generated issue (12 of 22 participants). This camp could include people who see climate change as having roots in dominant social systems, but who did not believe that these social systems needed fundamental transformation in order to address it adequately.
2. Those who did present climate change as systemically-generated, but did not address how the hegemony of dominant social forces could be adequately contested and what systemic transformations would be necessary to do this (7 of 22 participants).
3. Those who did present climate change as systemically-generated, and also addressed strategies to contest the hegemony of dominant social forces and specific ways to alter dominant systems (3 of 22 participants).

Those who did not describe climate change in systemic terms composed the majority of scholars I interviewed. This group generally omitted any discussion of whether or not it was an issue bound to social structures beyond the technical infrastructure of fossil fuel use and other greenhouse gas emitting practices. They tended to see climate change as a problem to be dealt with through government action to regulate emissions or to promote low-carbon technologies, but didn't mention institutional transformations in politics or economy that might be necessary to achieve this. This aligns this group with the theoretical tradition I've identified in the literature as the 'technical functionalist' frame, in which climate change is understood to be primarily a technical problem capable of resolution via existing social structures rather than a systemic problem requiring the transformation of dominant structures. Even in this group, participants nearly all expressed skepticism that market activity alone would generate solutions to climate change, instead arguing that some amount of government regulation and guidance would

be necessary. This group was generally as pessimistic about the resolution of the climate crisis as those who did present a systemic diagnosis. Of the four ‘optimists’ in the sample, two presented systemic diagnoses and two did not.

In this non-systemic camp, a few were relatively direct in their opposition to systemic frameworks. One, for instance, indicated that she was against “radical change”, and argued that small, everyday behavioral and consumer actions are much more important for addressing climate change. Another didn’t argue that she was against systemic transformation - she indicated that she found it desirable - but she did reject the position that climate change could only be resolved through the “end of capitalism”. She indicated that she didn’t think climate change would be *adequately* addressed at all, but what changes would be made would not be transformative of the dominant economic system. In her words, “I don’t advocate for it, but I think that capitalism is an incredibly powerful regenerative beast that knows how to reinvent itself and has done so, has demonstrated this ability to reinvent itself... I don’t think we’re going to see the end of capitalism, so I don’t think that’s happening. I don’t think climate change is the death knell for capitalism.” Another, a geologist, focused strongly on issues of population growth as a major contributor to climate change and other ecological crises, but didn’t problematize, for instance, capitalism or elite power as drivers of these crises. This is a dangerous logic, because population control in a context of elite domination is a recipe for authoritarian repression rather than reproductive autonomy. He did quite often emphasize that these issues are taking place in a context of a concerning global decline in democratic norms. While this position ostensibly supports democracy, it must be noted that without qualification it simultaneously positions the status quo as unproblematically desirable and

democratic. Such a position precludes an analysis of the status quo as not only deeply flawed, but characterized by power dynamics that are inherently generative of ecological harms.

The next largest group in the sample were those who did make reference to climate change as a systemic product of dominant power arrangements, but - like the final example from the previous group - offered analyses that are by implication somewhat inconsistent with a systemic diagnosis. These positions reflect a position that begins with systems-thinking but doesn't fully account for the implications of the systemic dynamics described. Of course, one can present a systemic diagnosis of the problem and at the same time support reforms and actions to help address it that may not be *completely* transformative of dominant social systems - this is not inconsistent. For example, if one's position is that capitalism is at the root of the climate crisis due, for instance, to the necessity of capitalist economies to grow infinitely, one could consistently believe that reforms like carbon taxes which fall short of abolishing capitalism might still be beneficial and necessary as long as these reforms are accompanied by other measures aimed at altering the fundamental power dynamics and economic logics. However, the dynamics of hegemony in a capitalist society - for example, corporate influence in government - needs to be accounted for when considering the possibility of these smaller-scale reforms, or the analysis is contradictory in its implications. If climate change results from the ability of capitalist power to resist profit-limiting reforms, then even smaller-scale reforms need to contend with system-transformative questions about how the balance of power is to be tipped. Scholars in the second category include those who do

not contend with the full implications of their systemic diagnosis. They see a full-system problem, but don't present system-transforming solutions.

Scholars varied in the level of specificity articulated in their systemic diagnosis. Some argued that some kind of "large, institutional" change would be necessary, but then to describe policy changes of a more technical or physical-infrastructure nature rather than changes to the basic structure of dominant institutions. Consider this argument from an environmental scientist:

"I know that it's like the individual is not where the change lies. Even though I think it's great if everyone starts driving less and starts - I do think food choices are making a big impact, but I think that our country, our society really is just built in a way that makes it very difficult. I do think that we need just larger structural change. I think voting is probably the biggest thing that people need to be doing is voting on climate so that we have real structural and institutional change, so that we have better public transit systems and better food choices and the large scale things that are really going to make an impact."

This scholar describes a need for "structural and institutional change", but these changes appear to fit a more technical diagnosis than a political one. This position recognizes that individual choices are limited because of their systemic context, situated as individuals are within collective arrangements that structure the degree of impact that can result from their personal choices and the range of personal choices that are even possible. However, only the physical-infrastructure systemic context seems to be acknowledged, while the power context is absent. Why are these food and transit systems arranged this way? Who benefits and gains power from this arrangement, and what can and will they do to secure it? If there are elite groups wielding disproportionate power to shape physical infrastructure, they are

only able to do so through the co-constitutive shaping of social and political conditions - Gramsci's tripartite movement of social forces. This is a view that addresses the Cerberic head of Arrangement, seeking physical infrastructural change, but without accounting for the critically interdependent role of the other two heads, the law-enforcing political power of War via political influence and the belief-shaping power of Knowledge via the production of discourse that emphasizes or fails to emphasize the role of power and the necessity of power struggle.

Some perspectives in this second group were attentive to political-economy, directly identifying capitalism as a root cause of climate change. For instance, one sociologist presented the following analysis, identifying large-scale structures including not only capitalism but contemporary systems of government as at the root of the crisis:

“A lot of the problems of climate change in my view as a sociologist informed by history and structural processes suggests that we have a governance problem and we have a private sector problem and it's through both of those that the real change must come as people from the bottom like us pressure the powers that be to reform themselves accordingly... That could take the form of sincere and wide reaching environmental regulation that seeks to cut back on carbon emissions... that sort of governance piece. It could also be a rethinking of the overall economic systems that have got us here to begin with. I'm not someone who's particularly bullish on capitalism being able to reform itself. We have no evidence really that that is possible or has ever occurred as it relates to environmental degradation.”

However, in the second group, even those scholars who identified the power dynamics of capitalism as key to the crisis did not advocate positive courses of action that accounted for redistributing these concentrations of power and transforming the dynamics behind them. This sociologist mentioned the necessity of

“non-market forces in government and sometimes from social movements that pressure for those changes”, but specific changes that might transform these structures weren’t described. What changes are necessary to move beyond capitalism? This absence was relatively common where social movements were mentioned. They were described as necessary, but the specific goals that they would be necessary for weren’t addressed. Another scholar said that “the root of the problem... is capitalism” and that if we don’t find a way beyond it, climate change won’t be sufficiently addressed. However, he didn’t describe what sorts of changes would need to be made to move beyond capitalism. Another said that “in a capitalist system where infinite growth is one of the main goals, then those gains or advances will automatically by necessity have to be zeroed out. They have to be negated because the capitalist system cannot thrive or exist or live without infinite growth.” But what would take us beyond this system? Nationalization of industry and resources? Placing private property in the hands of worker’s unions or municipalities? And politically, how is this to be accomplished? If capital is so powerful, what are we to do about the ways the political structure is biased to serve the power of economic elites? Many of these scholars took a strong position on the importance of voting and of electoral outcomes in the United States, but almost none addressed how the power distribution within the contemporary system problematized democratic possibility through elections themselves. One sociologist did identify a problem - declaring that elections made little difference, because the two major parties in the United States didn’t offer substantially different programs -

but he didn't describe any alternative pathway to political power, leaving crucial aspects of hegemony unaddressed.

This incomplete systemic analysis was also reflected in scholar's responses to who would be most affected by the consequences of climate change. Answers to this question suggested systemic dynamics that weren't incorporated into the larger analysis and strategic model. For instance, most scholars described vulnerability to climate change as resulting from power discrepancies. Those people who are systematically excluded from societal power are the ones who are also facing the most harm. This is widely agreed upon in the social climate change literature and is even acknowledged in the IPCC report. However, most of these scholars follow the same path as the authors of the IPCC report in acknowledging these differences in vulnerability without acknowledging that these differences are not incidental but rather central to the dynamics of climate change. Climate change doesn't just result in inequality - it is this inequality, this deficit of democracy, that enables it and other social problems like it based on the externalization of the costs of harms generated by projects of elite gain. Climate change is politically and economically enabled by social structures that allow powerful elites to amass personal profit through actions that generate mass harm and ecological disruption. There appears to be a widespread scholarly trend to acknowledge the systemic nature of the outcomes of inequality without problematizing inequality as a driver of ecological crisis in itself.

Finally, a very few scholars did articulate an approach that attended to the critical questions of power and hegemony, levelling a systemic critique that was

simultaneously accompanied by some appropriately systemic solutions. One political scientist emphasized that key to this problem was efforts to “break [the fossil fuel industry’s] power”. “They have a lot of money,” she said, and “taking down these corporations is going to be difficult”, but she did offer some specific possibilities. For example, one strategy she described was “to sue fossil fuel companies, nationalize them, the same with electric utilities. That’s not a simple strategy, it’s not a simple strategy, given the way the Supreme Court is.” She also acknowledged cultural obstacles and their political-economic generators - arguing that the climate change fueled immigration crisis is fueling white nationalism and that this provides a cultural basis for reactionary political movement. This scholar’s analysis addressed hegemony holistically, through the 3 critical Cerberic heads. Another political scientist centered democracy as key to the problem of climate change, arguing that “if democratic institutions worked better, we’d be better addressing climate change.” He made a more complete systemic diagnosis than most, connecting problems of physical infrastructure and forms of energy production directly to problems of power distribution. “When we centralize production of energy, we centralize power,” he argued, “and that creates really bad incentives for being able to hold people accountable.” Another scholar, a sociologist, offered similarly holistic analysis and strategy. While nearly every respondent advocated for public participation in elections in order to address climate change, this scholar was the only one to problematize the undemocratic obstacles within the electoral process itself. As she put it,

“We have just such a corrupt system of electing leaders in this country that needs to be completely overhauled and reformed. I think people have lost a lot of time and energy and hope putting forward candidates that never had a chance because of the way the electoral system works and so, I think there are some procedural, logistical kinds of things that need to change before I can say “yes we have a very good system, and we can get done what we need to get done....If it was a game, if you were playing a game with a friend and you knew they were cheating, you would call “Foul”. And you wouldn’t want to play the game. You would throw the game in the air and toss the pieces everywhere and say “no”.”

She followed this argument with explicit calls for electoral reform, and an argument that electoral reform needs to be a more central issue within the climate movement - one that is, so far, neglected. While she did not describe the specific electoral reforms that might be necessary, hers was the only interview that directly addressed the underlying dynamics of the electoral system as a potential site of climate struggle, along with other avenues of social mobilization. Arguing that changes of consciousness, social protest, electoral efforts and direct action activism were all simultaneously necessary, his scholar’s analysis also attended to the multi-fronted nature of a hegemonic struggle, Her analysis was also one of just four that directly recognized inequality not only in the outcomes of climate change, but for its central role in enabling the crisis in the first place. “For me,” she said, “climate change is fundamentally an issue of social inequity, and that takes on many different forms. We have immigrant rights, anti-black racism,. We have reproductive justice, we have native American and indigenous struggles.” Only two other scholars identified settler-colonialism and Indigenous struggles as central to addressing the climate crisis - and these two others were also sociologists who

emphasized the importance of social movements and the ways inequality not only results from, but generates, ecological crisis.

The majority of interview participants identified themselves politically with some kind of movement or position traditionally associated with systemic structural transformation. Politically, the respondents were disproportionately left-leaning, indicating some degree of opposition to class domination and structurally-reproduced social injustice. Only three identified as something other than progressive, leftist, left-liberal, socialist, or left-of-center. Of these, one identified as a radical centrist, another as a classical liberal, and one simply declared “I just care about climate change”. The lack of a leftist political identification was certainly associated with an opposition to a systemic analysis: the one identified radical centrist felt that the primary obstacle in addressing climate change was the difficulty of finding “charismatic leaders” to address it, while the self-identified classical liberal felt that solving climate change was primarily an issue of technological breakthroughs or climate catastrophe generating sufficient political will. However, the presence of a left-leaning political identification was no guarantee that a participant would describe climate change as a problem of structural inequalities and articulate some kind of larger redistributive program as part of addressing it. 10 of the 12 that didn’t describe climate change as a problem requiring social-structural transformation identified themselves with leftist political labels.

However, the area of formal academic background did seem to be strongly associated with critical systemic assessments. Out of 10 who indicated a belief that climate change was in some sense a structural problem requiring structural transformation, 8 were either political scientists or sociologists. One was in the general discipline of environmental

studies and one was a geographer. Of the 12 who didn't make this kind of structural critique, only 4 were political scientists or sociologists. This hints at the operation of a disciplinary siloing. While training in sociology or political science is clearly not a guarantee that a person will emphasize a structural analysis and a program of social-structural transformation, it does seem possible that academics outside of these disciplines are less likely to share these perspectives.

Policies and Tactics

In order to elicit participants' analysis of the most effective forms of action to address climate change, scholars were asked to describe the ways that they are personally engaged in addressing climate change, and then to describe what they would advocate as the most important things for others to do to address climate change. In both categories, electoral politics was by far the most popular form of action advocated by the scholar participants. Most scholars argued that voting was the most important thing that a person could do. As one sociologist put it, "I think, and I tell my students this, I think we need to be voting for politicians who take this issue seriously. This needs to be an election issue and that is the way I think people can be really effective in making this an election issue. My take on this, is this is a problem you need government action and government leadership to address this problem in any kind of meaningful way. Vote and ask."

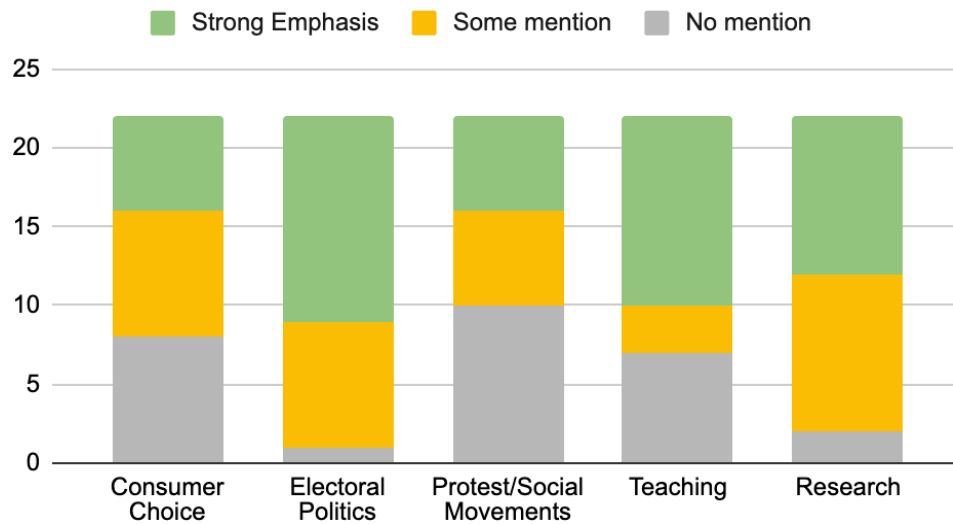
Research and teaching were mentioned heavily, as would be expected, and also as expected, research was offered as something the scholars themselves did but was not something they emphasized as an important action for others to engage in. Teaching was more mixed - it was mentioned by many respondents as an important action, and some of

these indicated that education was something that others should be performing as well. Strikingly, the least important actions in the eyes of these scholars were consumer lifestyle choices, and engagement in protest and social movements. Much of the discussion of consumer choice activities were accompanied by critique. Many scholars indicated that they do try to address climate change through individual consumer and behavioral choices - such as biking to work, or reducing meat consumption - but about half of these also indicated that they didn't think these activities would do much if they weren't accompanied by some kind of larger scale political effort. As one sociologist stated, "To be honest I am somebody who thinks more structurally about this and I think without that piece then our individual actions won't probably be able to move the needle."

Consumer choice was at the very least mentioned by a majority of respondents, but only a minority of respondents mentioned social movement action at all. This is striking when we remember that only two scholar participants raised critical questions about the anti-democratic obstacles presented by the current US electoral system itself, and one of these respondents was also one of the few to suggest that electoral politics in the US are largely unimportant in the struggle for climate solutions. Not only was electoral politics not problematized by most respondents, but extra-institutional action was rarely mentioned at all. The chart below displays the breakdown of scholar participants' emphasis on different kinds of actions to address climate change.

Figure 5. Climate Actions Advocated by Interview Participants

Climate Actions Advocated by Interview Participants



Given the evidence suggesting the centrality of elite hegemony to the climate crisis, and the continuing elite bias in the process of policy formation in the United States, four possible conclusions present themselves. 1), consumer choices at the individual level are likely to be relatively powerless, mediated as they are by the infrastructural context and the political dynamics that shape it. 2), teaching and research are critical because they are a means of providing information to shape necessary strategies to address the crisis, but without political power to implement infrastructural and political solutions, they cannot change society in themselves. 3), this renders political power and policy-making essential, but the evidence suggests that, 4), extra-institutional social movement power is required to generate pressures beyond the electoral system because the electoral system itself is subject to several dynamics that favor the policy preferences of elites.

These interviews with climate change scholars suggest that even in a community of highly engaged climate action advocates, these conclusions are uncommon and there is much room for the development of holistic critical consciousness informed by these

observations. An analysis of climate change as resulting from dominant institutional power dynamics - capitalism, white supremacy, settler-colonialism, and patriarchy, for example - is not widespread. The absence of critique of the elite biases built into the political system lends itself to an unqualified embrace of electoral politics likely to run up against obstacles that will require more than voting and policy campaigning to overcome. In particular, social movement action like protest, labor stoppages, and disruption could play a key role in creating political pressures to support popular climate policies that by necessity must be aimed at the redistribution of power and therefore will run counter to elite-friendly policy preferences. At this time, consciousness of antidemocratic obstacles in the electoral system and consciousness of the importance of social movements in overcoming them appears limited in the academic community and strongly associated with a formal academic background in the social sciences. This may be evidence of the continuing operation of disciplinary siloing, a phenomenon that facilitates elite power projects by ensuring that academic communities produce technical knowledge without at the same time producing critical anti-systemic knowledge. This suggests that continued efforts toward interdisciplinary critical scholarly collaboration could be essential to the development of solutions to contemporary political and ecological crises.

Chapter 6. Survey Findings

Public Support for General Redistributive Policy

While analyses of the forces driving ecological crisis at large and studies of the forces organizing to defend fossil fuel use in particular demonstrate that the situation is one of capture - of antidemocratic, elite-biased systems preventing majority public preference from generating policy - it is unclear to what degree such an analysis is generally present in the minds of the American public. As Marx and Gramsci observed, one of the critical enabling features of ruling class dominance - what Gramsci calls hegemony - is its acceptance and invisibility among the general public. Even among academics who study climate change, it is possible that other forms of analysis, such as the techno-functionalist frame, could be dominant. One critical element of public resistance to this domination is awareness of the situation and desire to change it. I examine public preference for redistributive policies - policies with the potential to alter the distribution of social power - as an indication of this critical consciousness.

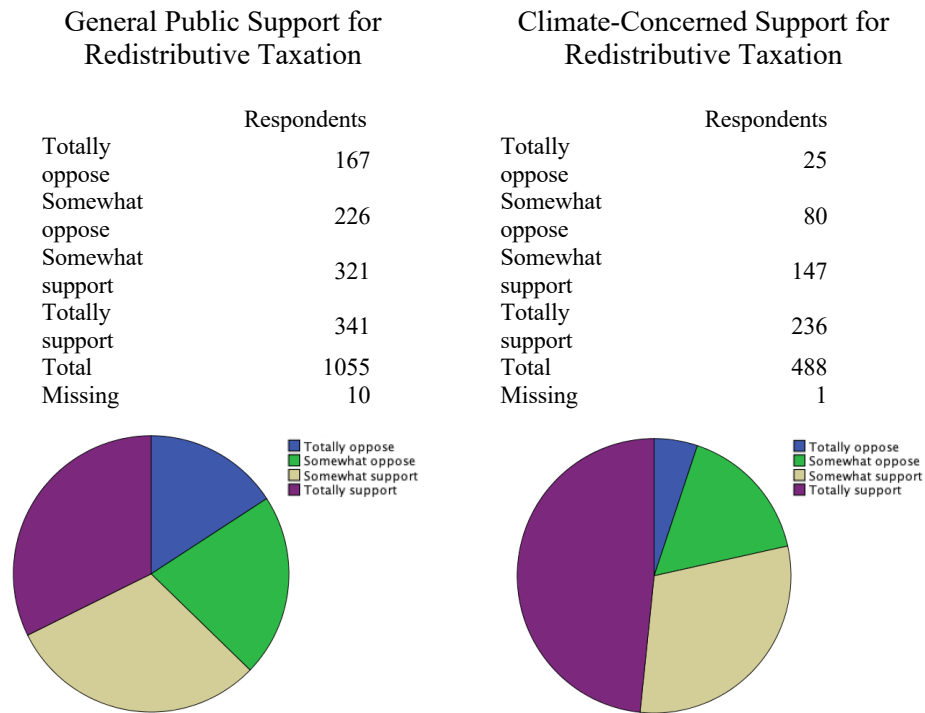
As explored in the analysis of the interview data, a critical structural and systemic analysis of climate change was surprisingly uncommon in my interviews with climate change scholars. Only 10 - less than half - of participants described climate change as a systemic issue requiring large-scale institutional changes in politics or economy. These were disproportionately scholars with explicit training in the social sciences. Even among these, few suggested any concrete institutional transformations that would deal with these systemic issues when asked what they themselves were doing to address climate change or what they thought others should do. Only one suggested a specific economic

transformation (the nationalization of the fossil fuel industry) and one other suggested that the democratic process itself was deeply flawed and needed to be transformed. The general absence in the interviews of an emphasis on anti-democratic elite domination as a structural enabler of the climate crisis, and the near total absence specifically articulated strategies to transform and dismantle these forms of domination, prompted me to first develop my own theoretical understanding of the power dynamics of the crisis and potential to challenge them reflected in chapters 1 and 2, and second to investigate these issues more directly in the national survey that followed. To investigate public understanding of structural obstacles and desires to overcome them, I sought to measure public preference for redistributive policy in three key areas: Redistributive taxation, restraint of corporate power in US government, and the deprioritization of economic growth in favor of environmental sustainability. To measure the degree to which public desire for these policies was connected to concern about climate change, I compared support for these policy interventions among the general public with the subset of the public that I describe as ‘climate-concerned’ (those who indicated some degree of worry about climate change along with ranking climate change as at least “somewhat important”).

The first structural intervention I investigated was a program for redistributive taxation. Among the scholars interviewed, redistributive taxation was mentioned a few times - mostly on the subject of carbon taxes and the need to make them politically acceptable. They were not mentioned as a means of altering economic inequality. To measure support for these policies in the public survey, I asked participants to indicate their level of support or opposition for increasing taxes on the wealthiest Americans in

order to fund social programs that benefit less wealthy Americans. Among the general public, I found strong majority support for these kinds of policies. 62.1% of respondents indicated that they somewhat or totally support these policies. Nearly as many Americans “totally support” these policies as those who somewhat or totally oppose them combined. Among the climate-concerned public, this support is much stronger, with nearly half of respondents indicating their total support, and only a fifth of respondents indicating any level of opposition.

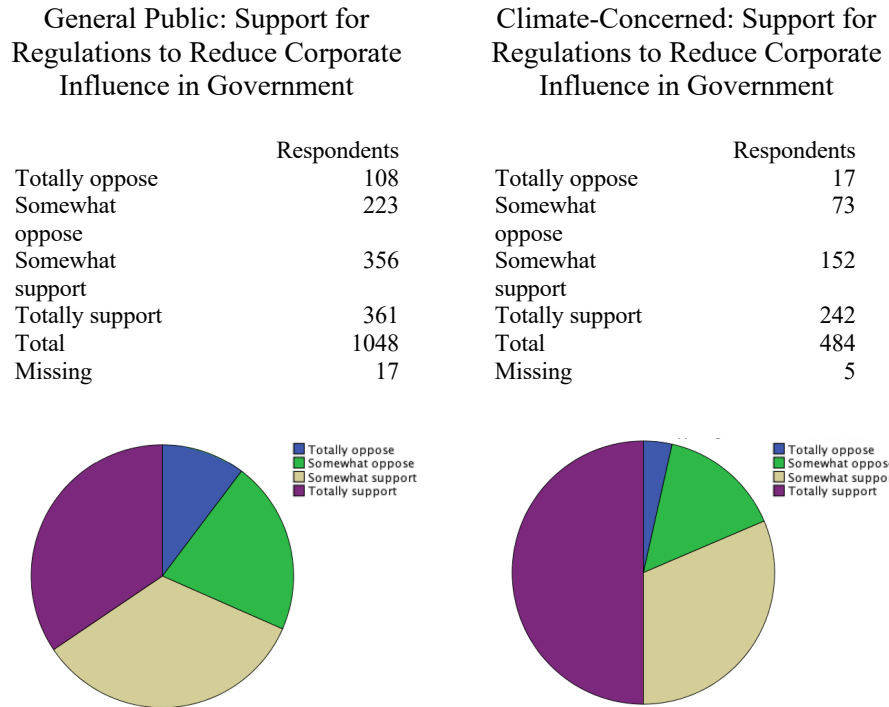
Figure 6: General Public and Climate-Concerned Support for Redistributive Taxation



The next redistributive structural intervention I investigated was policy to regulate corporate influence in US politics. Again, there was very little mention of challenging corporate power in government in the interviews with climate scholars, despite the suggestion by some that corporate power was an element of the structure of the climate

crisis. In the general survey, I asked participants to indicate their level of support or opposition for regulations to reduce the power of owners of large corporations to influence politics in the United States. In this case, general public support was even greater than it was for redistributive taxation. 67.3% of respondents indicated that they somewhat or totally support such an effort to restrain corporate power. A full 33.9% indicated total support. Less than a third of those surveyed indicated any kind of opposition, with only 10% of the population surveyed reporting that they totally opposed this effort. As with the issue of redistributive taxation, the climate-concerned showed dramatically higher levels of support for these policies. Of the climate-concerned survey respondents, only 18.4% indicated any level of opposition to this kind of intervention, with over 80% indicating some level of support. 49.5% indicated total support for this policy. Regulation of corporate political influence in the United States appears to be very popular - and extremely popular among those who are concerned about climate change. While it remains uncertain whether respondents explicitly connect corporate power in government to the issue of climate change or see it as an element of an overarching political strategy, the potential for this connection appears prevalent at the very least. Again however, even among the climate-concerned, nearly 20% of respondents indicated opposition to this policy rather than support.

Figure 7: General Public and Climate-Concerned Support for Reducing Corporate Influence in Government

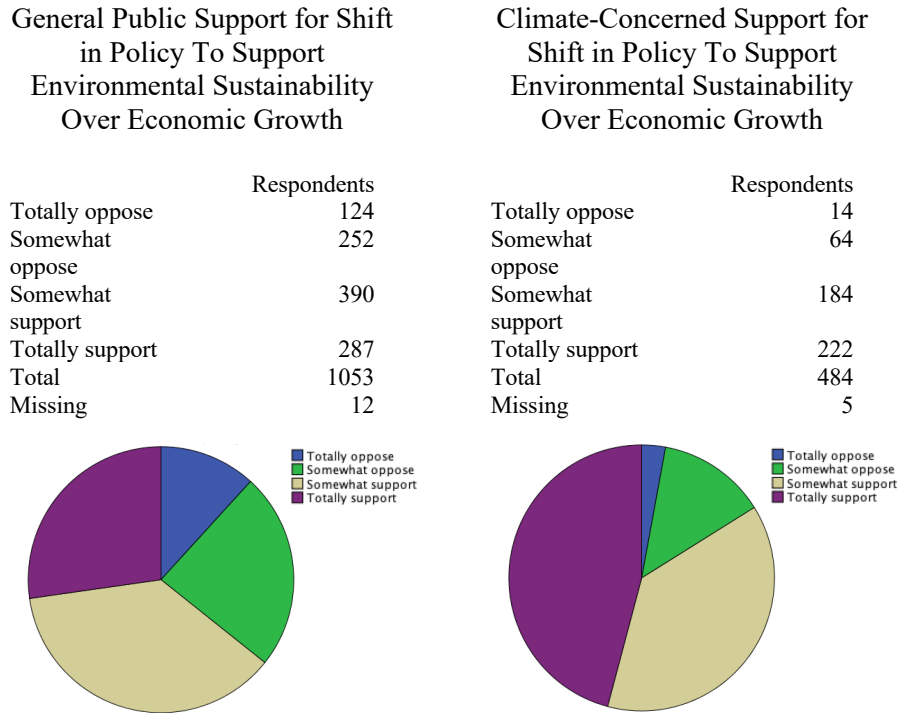


The last form of general structural policy shift that I investigated was a shift in governmental focus from economic growth to environmental sustainability. This shift would be a radical transformation, given the virtually universal focus of governments on growing their economies - especially in the United States, where economic growth is often considered a measure of political and economic success for the country and for a given ruling administration. Sometimes called ‘degrowth’, the possibility of shifting priorities away from economic growth has been suggested by many scholars as a necessary direction for ecologically sustainable economies, given the increasing resource consumption inherent in growing economic production. This shift would represent a shift in power in two ways: First, it would mean divorcing government interests from the

interests of for-profit economic institutions, and second, it would mean a shift in general social power from activities seeking to increase the material wealth of the population to activities that seek to increase the material well-being of the ecological system as a whole. This is, in a sense, a collective effort to abandon a project of power concentration (general material enrichment) and a collective redistribution of that power into ecological efforts.

While support for degrowth policies was significantly less than support for the other structural interventions explored, it was still considerable. In the full sample, support for prioritizing environmental well being over economic growth was 63.5%. Nearly a third of respondents totally supported this position. The climate-concerned sample again showed higher levels of support than the general public sample, but the share indicating “total support” was smaller than it has been for the other two structural interventions previously considered. Degrowth policies appear to be less popular than redistributive taxation or restraint of corporate power in government, but still show the same pattern of majority support and even stronger support among the climate-concerned.

Figure 8: Public Support for Shift in Policy to Support Environmental Sustainability over Economic Growth

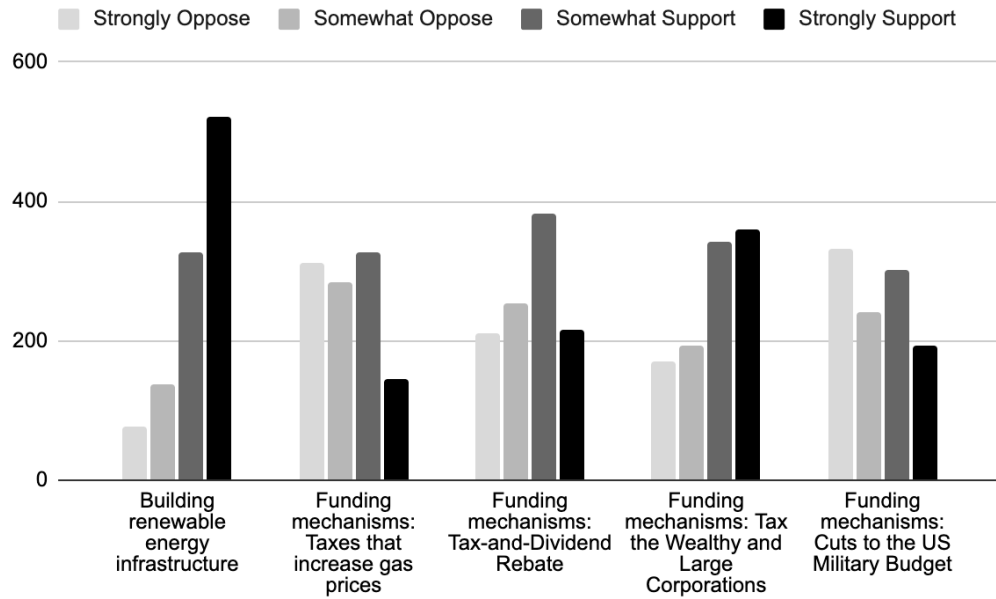


Public Support for Climate-Focused Redistributive Policy

I first asked survey respondents to indicate support or opposition for a societal effort to build more solar and wind power generation, to establish a baseline of support for an energy transition. I then asked respondents to indicate their support or opposition for four different forms of funding mechanisms to provide the resources for climate change solutions. These options included a tax that could increase the price of gas - which would include most forms of carbon tax without progressive structure. The next options included a regressive tax with consumer rebates (so-called ‘tax and dividend’), a tax burdening the wealthy and large corporations in particular, and the reallocation of tax

money for climate solutions by reducing the US military budget. The breakdown of responses from these questions among the general survey sample are visible in the following chart and table.

Figure 9: General Public Support for Climate Solutions and Funding Mechanisms



		Respondents	Percent
Support for Building New Renewable Energy	Strongly oppose	77	7.2
	Somewhat oppose	138	13.0
	Somewhat support	328	30.8
	Strongly support	522	49.0
Regressive Funding: Taxes that Could Increase Gas Prices	Strongly oppose	311	29.2
	Somewhat oppose	283	26.6
	Somewhat support	327	30.7
	Strongly support	144	13.5
Tax-and-Dividend Funding	Strongly oppose	212	19.9
	Somewhat oppose	254	23.8
	Somewhat support	382	35.9
	Strongly support	217	20.4
Progressive Funding: Taxing the Rich and Large Corporations	Strongly oppose	170	16.0
	Somewhat oppose	193	18.1
	Somewhat support	341	32.0
	Strongly support	361	33.9

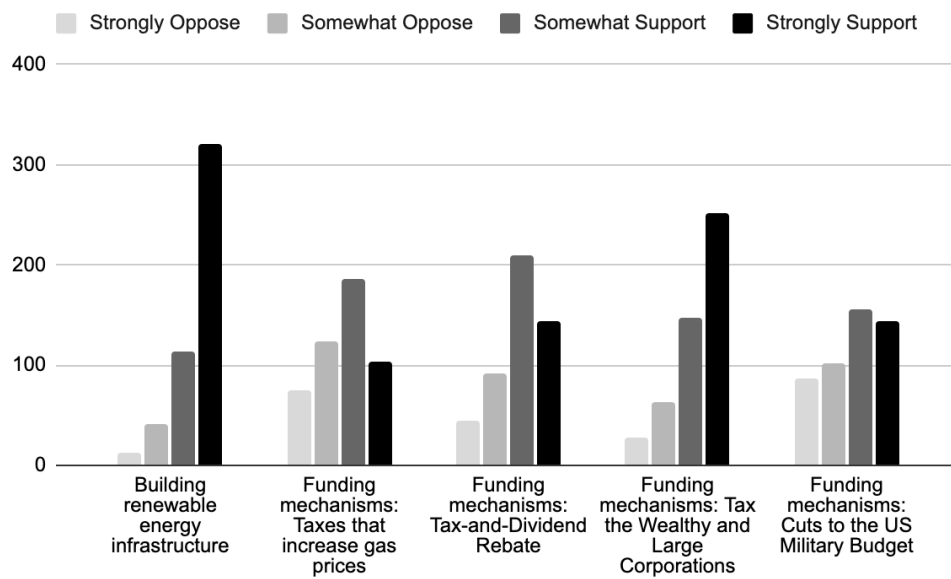
Cutting the Military Budget to Pay for Climate Solutions	Strongly oppose	332	31.2
	Somewhat oppose	240	22.5
	Somewhat support	301	28.3
	Strongly support	192	18.0
	Total	1065	100.0

Support for building renewable energy is extremely high in the general sample, with nearly half of the total indicating strong support and only about 20% indicating any level of opposition. Funding mechanisms for this transition show considerably greater variation. The least popular funding mechanisms are cutting the military budget, or increasing taxes through a method that could increase gas prices. These two methods are comparably unpopular, each with less than 50% of the sample respondents indicating any level of support, but cutting the military budget elicited a slightly more polarized response with higher numbers in both the strongly support and strongly oppose categories. The tax-and-dividend method does raise support considerably above the levels of a strictly consumer-burdening tax plan, bringing levels of support beyond a majority of the sample. The strictly progressive option, however, is by far the most popular, with 65.9% of those surveyed indicating support for funding a climate transition through taxes on the wealthiest Americans and large corporations. Overall responses show strong support for a transition to renewable energy - but a transition that is paid for by burdening economic elites. This would represent a redistributive solution, reducing the wealth of economic elites while providing collective environmental benefits.

As demonstrated in the following chart, responses from the climate-concerned population fit the previous patterns examined in other redistributive policy questions: Higher support overall for all options, but the same internal patterns of difference in the popularity of individual options. Among the climate-concerned, only a tiny minority

present any opposition to a renewable energy transition. When it comes to funding mechanisms, all options have over 50% support, but a progressive taxation plan is by far the most popular, followed by a tax-and-dividend plan. A regressive tax plan is just as unpopular as a reduced military budget, but the reduction in military budget is, again, more polarizing.

Figure 10: Climate-Concerned Support for Climate Solutions and Funding Mechanisms



		Respondents	Percent
Support for Building New Renewable Energy	Strongly oppose	13	2.7
	Somewhat oppose	42	8.6
	Somewhat support	113	23.1
	Strongly support	321	65.6
Regressive Funding: Taxes that Could Increase Gas Prices	Strongly oppose	75	15.3
	Somewhat oppose	124	25.4
	Somewhat support	186	38.0
	Strongly support	104	21.3
Tax-and-Dividend Funding	Strongly oppose	44	9.0
	Somewhat oppose	91	18.6
	Somewhat support	210	42.9
	Strongly support	144	29.4

Progressive Funding: Taxing the Rich and Large Corporations	Strongly oppose	27	5.5
	Somewhat oppose	63	12.9
	Somewhat support	148	30.3
	Strongly support	251	51.3
Cutting the Military Budget to Pay for Climate Solutions	Strongly oppose	87	17.8
	Somewhat oppose	102	20.9
	Somewhat support	156	31.9
	Strongly support	144	29.4
	Total	489	100.0

Public Support for Collective and Individual Climate Intervention Actions

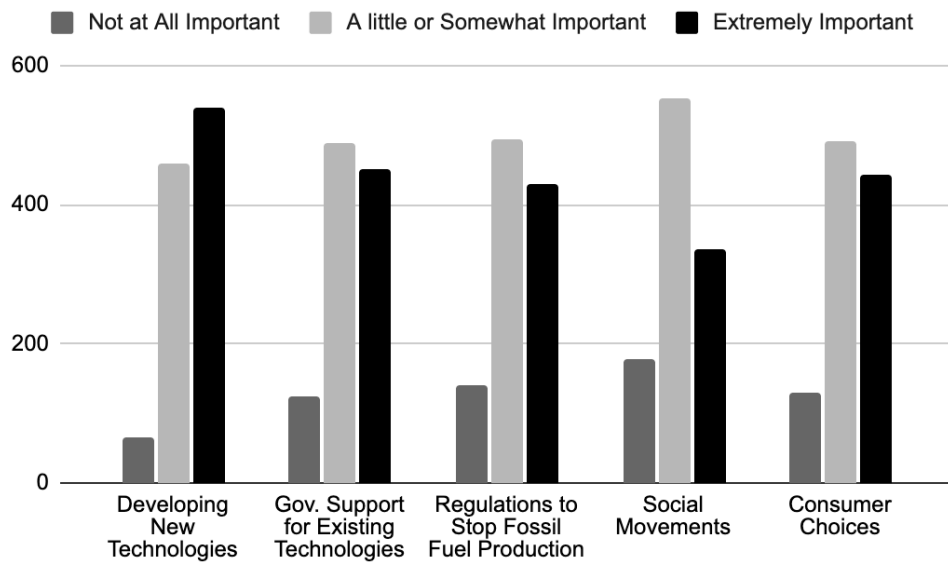
In addition to the kinds of policies supported by the American public, I investigated a broader conceptualization of the kinds of collective and individual interventions that the public considers to be important in addressing climate change. The distinction between collective and individual is blurry when it comes to addressing a social issue, because of course all collective actions are performed by coordinated individuals and all individual actions amount to collective action with enough coordination. The main advantage of approaching forms of action in these two ways is that the redundancy of subjects with different frames allows the researcher to see whether the same trends exist when the issues are understood differently. For example, we can ask individuals how important it is to engage as individuals in voting and electoral politics, and we can also ask them to rate the importance of government action in addressing climate change. Of course government action requires the coordinated engagement of individuals as voters. Parallel or contradictory findings with these different framings have the potential to be informative.

Climate interventions framed in collective terms were investigated by asking participants to indicate how important various actions are for addressing climate change. These actions include developing new technologies for energy generation and transportation, increasing government support for existing technologies, government regulations to halt the production and burning of fossil fuels, social movements to stop the production and burning of fossil fuels, and consumer choices to pressure companies to stop contributing to climate change. These actions have different levels of potential as structural interventions that could have redistributive effects on social power. Social movements present the greatest possibility to alter power relations, as collective extra-institutional action is a proven method for people to present challenges to the anti-democratic nature of official channels themselves. Government regulation of fossil fuel production has some limited potential for this, as it implies increased direct public (democratic) power over economic practices with the effect of reducing the economic potential of fossil fuel enterprises, though this doesn't necessarily alter the undemocratic nature of capitalist enterprise in general or expand democratic public power over government directly. Government support for existing renewable energy technologies has similar potential both in terms of rebalancing power and being limited by its constraint to operating within the rules of the present economic structure. Consumer choices and new technological development are both very limited in their potential to alter power relations, as these essentially leave the power of producers over technological development and the construction of the conditions of consumer choice untouched.

As the chart below demonstrates, survey respondents indicated that their evaluation of the importance of these different forms of collective action is essentially the inverse of

the importance that I've assigned them based on my own evaluation of the structural nature of the crisis. That is, respondents see the actions that seem to have the most potential to alter structural power as the least important forms of action - despite the widespread public support for redistributive policy previously reported. The most popular form of action is the development of new technologies. Government support for existing technologies is next, almost equal to respondent's rating of the importance of consumer choices as a means to pressure companies. Direct regulation of fossil fuel production is less popular, and social movements are ascribed the least importance of any of these forms of action. All of these forms of action are evaluated as at least somewhat important by large majorities of respondents - but social movements are considered to be the least important among these.

Figure 11. Importance of Collective Climate Interventions - General Public

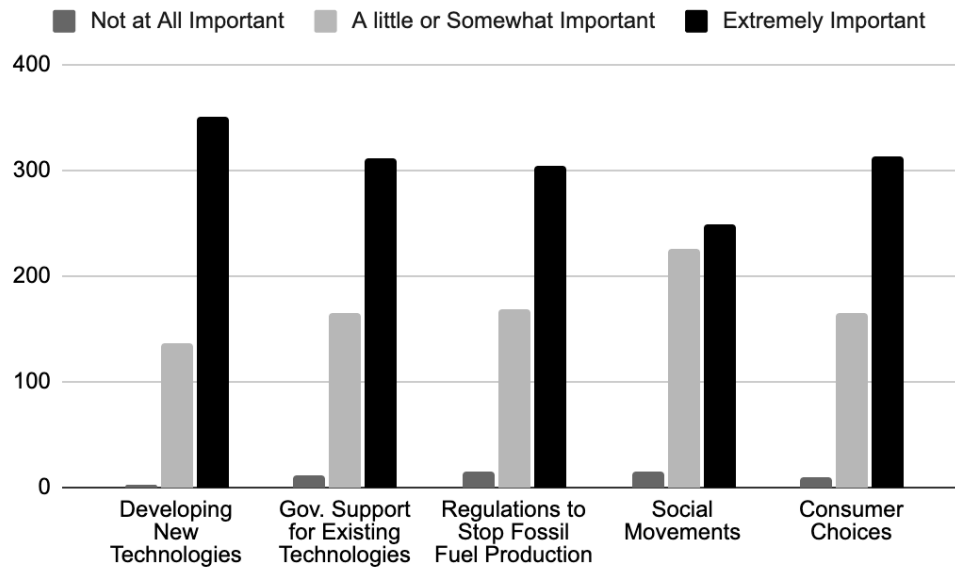


		Respondents	Percent
Developing New Technologies	Not at All Important	66	6.2
	A Little or Somewhat Important	460	43.2
	Extremely Important	539	50.6

Gov. Support for Existing Technologies	Not at All Important	124	11.6
	A Little or Somewhat Important	489	45.9
	Extremely Important	452	42.4
Regulations to Stop Fossil Fuel Production	Not at All Important	140	13.1
	A Little or Somewhat Important	495	46.5
	Extremely Important	430	40.4
Social Movements	Not at All Important	177	16.6
	A Little or Somewhat Important	553	51.9
	Extremely Important	335	31.5
Consumer Choices	Not at All Important	131	12.3
	A Little or Somewhat Important	491	46.1
	Extremely Important	443	41.6
Total		1065	100.0

Does this pattern hold true among the climate-concerned public? Indeed it does. The climate-concerned report the same ranking of actions by their importance - although every action is deemed by the vast majority of climate-concerned to be at least a little important. The numbers who hold that an action is extremely important are the smallest for social movements, about equal for consumer choice, government regulations, and government support for existing technologies, and are highest for the development of new technology, as illustrated in the chart below.

Figure 12. Importance of Collective Climate Interventions - Climate-Concerned



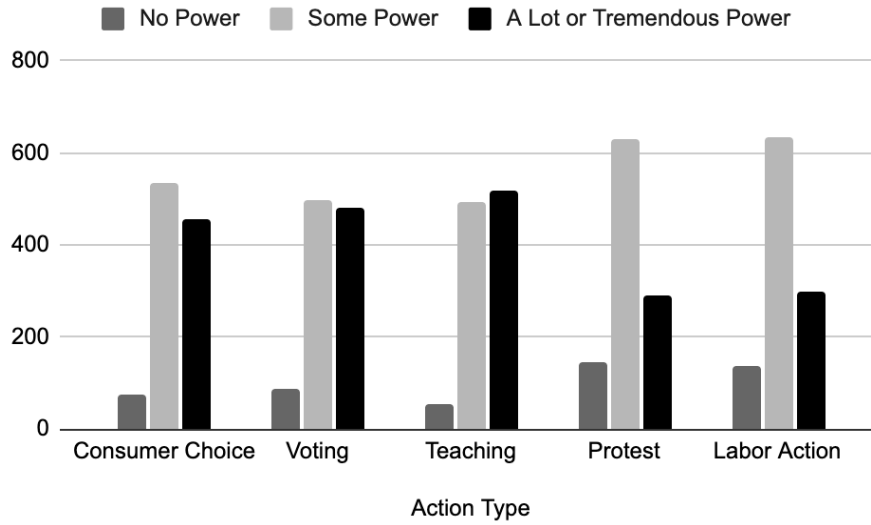
		Respondents	Percent
Developing New Technologies	Not at All Important	2	0.4
	A Little or Somewhat Important	136	27.8
	Extremely Important	351	71.8
Gov. Support for Existing Technologies	Not at All Important	11	2.2
	A Little or Somewhat Important	166	33.9
	Extremely Important	312	63.8
Regulations to Stop Fossil Fuel Production	Not at All Important	16	3.3
	A Little or Somewhat Important	169	34.6
	Extremely Important	304	62.2
Social Movements	Not at All Important	15	3.1
	A Little or Somewhat Important	225	46.0
	Extremely Important	249	50.9
Consumer Choices	Not at All Important	10	2.0
	A Little or Somewhat Important	165	33.7
	Extremely Important	314	64.2

Now we examine public attitudes toward actions framed as individual interventions. First, to establish an understanding of public attitudes toward different types of individual action without the prompting effects of an explicit climate change frame, I asked participants to report their belief in the power of different kinds of actions to change the way that life would be in the future. The possible individual actions examined were constructed on the basis of those actions which had emerged as climate change interventions in the interviews with climate scholars: Consumer choice, voting, teaching others, and social protest. I also added in labor action (including strikes), as a form of action that appears to me to be deeply important for structural interventions against elite economic power but which was not mentioned by any of the scholars I interviewed.

Public perception of the general power of these types of actions to alter social life showed a pattern in which actions seemed to group along lines of contentious or non-contentious actions. Contentious actions are those, including protest and labor action, which can be used to exert pressure outside of established institutional channels and which therefore have the potential to create pressures that are otherwise limited by action within institutional channels. Contentious actions were viewed by the general survey sample as having far less power to alter social life than non-contentious actions. When we examine the attitudes of the climate-concerned in comparison with the general sample, we see an interesting repeat of the previous patterns: All actions are ranked as significantly more powerful, but the trend still holds that contentious forms of action are viewed as the least powerful forms. It is also clear that the vast majority of those in the general sample who rank contentious actions as very powerful are also members of the

climate-concerned subgroup, whereas the climate-concerned subgroup makes up only about half of those in the general sample who rank non-contentious actions as very important. Results for both the general sample and the climate-concerned subset are visible in the charts below.

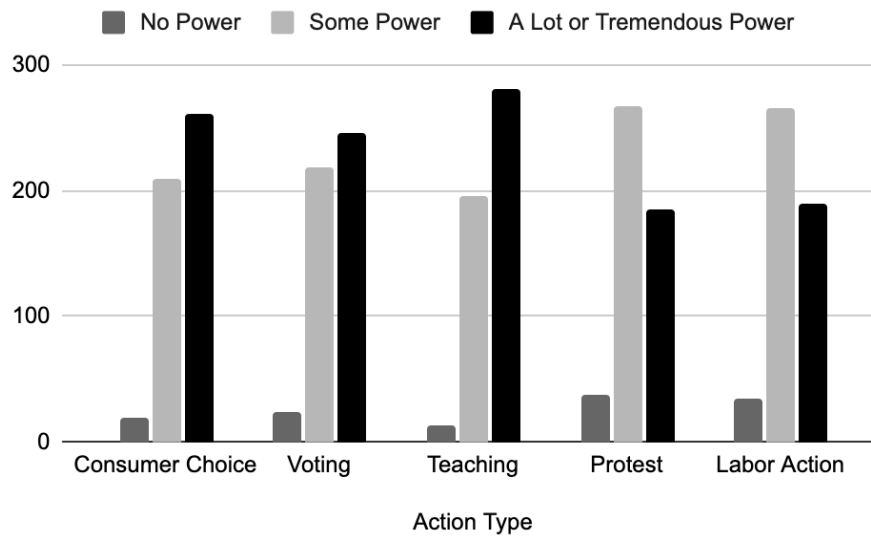
Figure 13a. General Public: Perception of the Power of Social Actions to Change Society



		Respondents	Percent
Consumer Choice	No Power	75	7.0
	Some Power	535	50.2
	A lot or Tremendous Power	455	42.7
Voting/Electoral efforts	No Power	86	8.1
	Some Power	499	46.9
	A lot or Tremendous Power	480	45.1
Education/Teaching	No Power	55	5.2
	Some Power	493	46.3
	A lot or Tremendous Power	517	48.5
Protest	No Power	144	13.5

	Some Power	629	59.1
	A lot or Tremendous Power	292	27.4
Labor Action	No Power	135	12.7
	Some Power	633	59.4
	A lot or Tremendous Power	297	27.9
	Total	1065	100

Figure 13b. Climate Concerned: Perception of the Power of Social Actions to Change Society



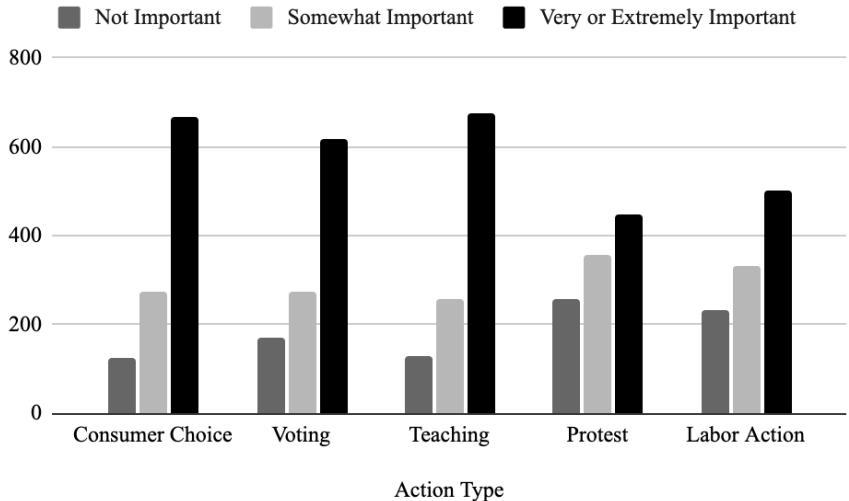
		Respondents	Percent
Consumer Choice	No Power	19	3.9
	Some Power	209	42.7
	A lot or Tremendous Power	261	53.4
Voting/Electoral efforts	No Power	24	4.9
	Some Power	219	44.8

	A lot or Tremendous Power	246	50.3
Education/Teaching	No Power	13	2.7
	Some Power	196	40.1
	A lot or Tremendous Power	280	57.3
Protest	No Power	37	7.6
	Some Power	267	54.6
	A lot or Tremendous Power	185	37.8
Labor Action	No Power	34	7.0
	Some Power	265	54.2
	A lot or Tremendous Power	190	38.9
	Total	489	100.0

Next, I sought to examine how the importance of these same forms of action are ranked when contextualized as actions meant to address the climate crisis. The same pattern held. Among the general survey sample, non-contentious actions (consumer choice, voting, and education) all held about the same level of high importance. The numbers of respondents ranking non-contentious actions as “very” or “extremely” important were about equal to the combined numbers of those ranking these actions as not important or only somewhat important. The contentious forms of action - protest and labor action - were ranked as far less important. Many more respondents ranked these forms of action as not important or only somewhat important, compared to the minority of respondents ranking them as very or extremely important. The climate-concerned

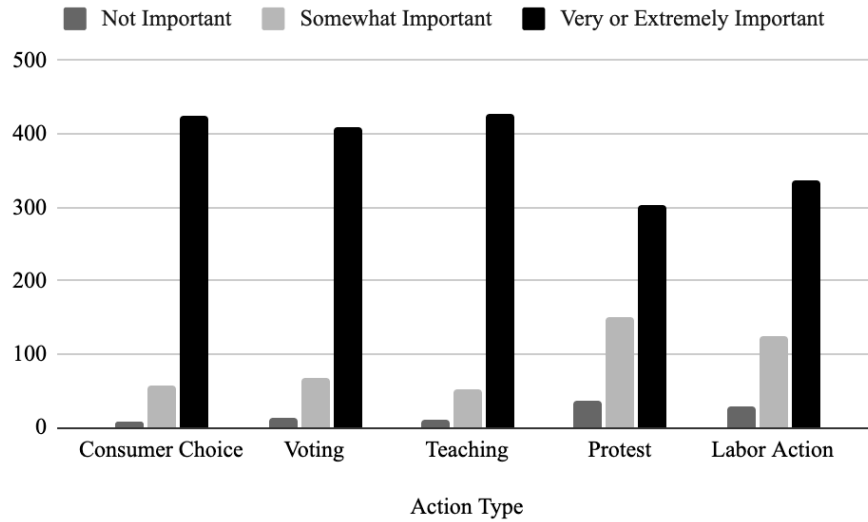
subgroup was far more likely to rank all forms of action as very or extremely important - but this is again much more true of non-contentious forms of action than it is of contentious forms. Contentious forms of action are again assigned far lower levels of importance while non-contentious actions are almost universally embraced as very or extremely important.

Figure 14a. General Public: Importance of Actions to Address Climate Change



		Participants	Percent
Consumer Choice	Not Important	123	11.5
	Somewhat Important	274	25.7
	Very or Extremely Important	668	62.7
Voting/Electoral Efforts	Not Important	172	16.2
	Somewhat Important	275	25.8
	Very or Extremely Important	618	58.0
Education/Teaching	Not Important	130	12.2
	Somewhat Important	259	24.3
	Very or Extremely Important	676	63.5
Protest	Not Important	259	24.3
	Somewhat Important	358	33.6
	Very or Extremely Important	448	42.1
Labor Action	Not Important	232	21.8
	Somewhat Important	330	31.0
	Very or Extremely Important	503	47.2
	Total	1065	100

Figure 14b. Climate-Concerned Public: Importance of Actions to Address Climate Change



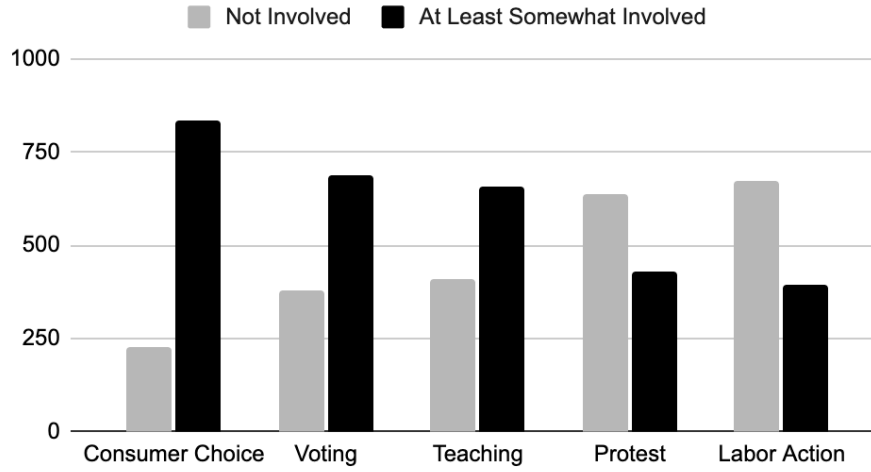
		Participants	Percent
Consumer Choice	Not Important	9	1.8
	Somewhat Important	56	11.5
	Very or Extremely Important	424	86.7
Voting/Electoral Efforts	Not Important	14	2.9
	Somewhat Important	67	13.7
	Very or Extremely Important	408	83.4
Education/Teaching	Not Important	10	2.0
	Somewhat Important	52	10.6
	Very or Extremely Important	427	87.3
Protest	Not Important	37	7.6
	Somewhat Important	149	30.5
	Very or Extremely Important	303	62.0
Labor Action	Not Important	28	5.7
	Somewhat Important	124	25.4
	Very or Extremely Important	337	68.9
	Total	489	100.0

Is there any relation between the levels of importance assigned to actions by the population, their perceived power, and actual participant involvement in actions? In order

to understand this I also examined self-reported participant involvement in actions to address climate change. Levels of involvement followed nearly the same pattern: contentious forms of action prove to be far less popular. When asked whether they were “not at all involved”, “somewhat involved”, “very involved”, or “heavily involved” in the range of listed actions to address climate change, majorities of respondents in the general sample indicated that they were at least somewhat involved in non-contentious forms of action, while for contentious forms, the ranks of the “not at all involved” were much larger than the numbers of “somewhat involved”. It is notable that the numbers of people indicating that they were “somewhat involved” in protest or labor action to address climate change also seem quite high - perhaps high enough to raise questions about the accuracy of participants' responses. Still, if we were to assume that participation in contentious action could be lower than what is reported, this only strengthens the observed phenomena. This pattern is also visible in the reported action involvement of the climate-concerned population. Overall the proportion of those “not at all involved” to those “somewhat involved” in the climate-concerned population is much smaller for all actions when compared to the general sample, but still far higher for contentious actions. While “not at all involved” is a tiny fraction for non-contentious actions, it is equal to the somewhat involved for protest actions, and it is larger than the somewhat involved for labor actions.

Figure 15a. General Public Involvement in Actions to Address Climate

Change

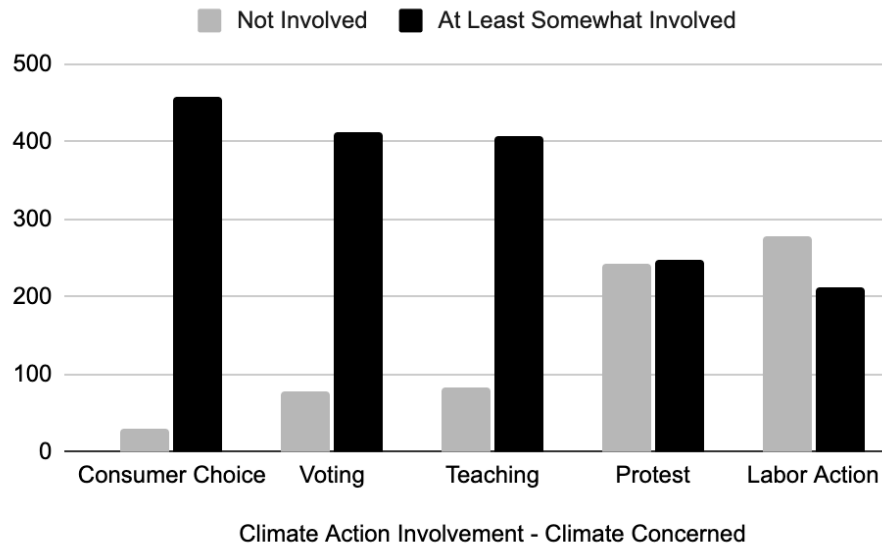


Involvement in Climate Action - General Public

		Respondents	Percent
Consumer Choice	Not Involved	229	21.5
	At Least Somewhat Involved	836	78.5
Voting/Electoral Efforts	Not Involved	379	35.6
	At Least Somewhat Involved	686	64.4
Consumer Choice	Not Involved	409	38.4
	At Least Somewhat Involved	656	61.6
Voting/Electoral Efforts	Not Involved	637	59.8
	At Least Somewhat Involved	428	40.2
Consumer Choice	Not Involved	671	63.0

At Least Somewhat Involved	394	37.0
Total	1065	100.0

Figure 15b. General Public Involvement in Actions to Address Climate Change



		Respondents	Percent
Consumer Choice	Not Involved	31	6.3
	At Least Somewhat Involved	458	93.7
Voting/Electoral Efforts	Not Involved	77	15.7
	At Least Somewhat Involved	412	84.3
Consumer Choice	Not Involved	83	17.0
	At Least Somewhat Involved	406	83.0
Voting/Electoral Efforts	Not Involved	242	49.5
	At Least Somewhat Involved	247	50.5

Consumer Choice	Not Involved	278	56.9
	At Least Somewhat Involved	211	43.1
	Total	489	100.0

Summary of Findings

The findings of this research show that within the sample surveyed there exists broad majority support for a range of redistributive policies that, if enacted, could represent democratizing shifts in distributions of social power. Majority support exists for a progressive wealth tax, regulations to reduce corporate power over government, and a governmental shift of priorities away from economic growth and toward environmental sustainability. Very high majority support exists for the general project of building new renewable energy infrastructure, and the preferred funding mechanism for such a transition is also redistributive: A tax on the wealthiest Americans and on large corporations. Regressive taxation is comparatively unpopular, but so is cutting the military budget to pay for a decarbonization transition. However, the types of collective and individual interventions prioritized by the population studied suggest a strong preference for action types that are constrained to current institutional channels - channels like electoral efforts and capitalist markets which (barring extra-institutional pressures like social movements) show strong tendencies toward disproportionate influence by economic elites. Not only do the survey respondents report lower levels of participation in contentious action types - they also ascribe less importance to those action types for

addressing climate change and less potential for social power to contentious action types in general.

All of these trends are also present when the climate-concerned population is studied in isolation. The main differences are that among the climate-concerned, support for redistributive policies is much higher, support for and involvement in climate interventions is higher, and the climate-concerned rank all forms of social action as more powerful than the general sample does. Despite these differences, the same trends hold: Contentious forms of action are consistently ranked lower in terms of their importance and power than non-contentious forms of action, and interventions that pose far less of a direct challenge to structural power enjoy both higher levels of involvement and higher ascriptions of importance than those, like social movements and labor action, that describe the coordination of social power outside of the fields disproportionately controlled by dominant social forces. The climate scholars interviewed showed similar patterns with some key differences. The climate-focused scholars interviewed seemed to give less emphasis to consumer choices as a means of addressing climate change, and electoral campaign efforts were almost universally supported. Flaws in the electoral system, including anti-democratic influence of economic elites, were not raised as critical to the issue of climate change, and social movement action was not frequently mentioned. The scholars interviewed showed strong preferences for redistributive policies and strongly supported the Green New Deal, though despite their scholarly focus many felt that they lacked information about the Green New Deal's specifics. However, support for redistributive policy was often framed in terms of political feasibility rather than as a response to an analysis of climate change as rooted in unequal social structures. Few

scholars described climate change in these terms - and those that did emphasize the nature of the climate crisis as rooted in structural crises - crises of democracy - were nearly all scholars in political science or sociology rather than the other fields represented.

Chapter 7. Discussion and Conclusion

While the majority of writing about the climate crisis today frames it as a technical problem with little attention given to its roots in dominant social structures, critical scholarship in the social sciences has made a compelling case that climate change and ecological crisis more generally results from the domination of societies by projects of majority oppression and power concentration in the hands of elite groups. Various schools of thought have emphasized one or another of these projects as foundational to ecological destruction - whether that be economic domination in capitalism, racialist and colonialist imperialism, or hierarchy itself. While all of these perspectives make strong cases, some have ignored the important implications of other scholarship for their views - notably the lack of analysis of non-capitalist ecological destruction in the ecological Marxist view, and the lack of attention by anarchist scholars to the widespread (perhaps universal) utility of hierarchy as a technique of social organization and organized combat even amongst the contemporary and historical societies upon which they base the case for the feasibility of anarchist forms of social structure. Many scholars and political projects have produced views that synthesize the strongest elements of these traditions - including the theory of wétiko syndrome advanced by Jack Forbes, and the social praxis of ecologically and democratically oriented anti-capitalist projects like the Zapatistas in Chiapas or the democratic confederalists in the Kurdish territory of Rojava. To some extent these ideas are also reflected in more moderate progressive and democratic socialist projects around the world, which in one form or another seek to problematize political, economic, and other social inequalities - abolishing those which are

unnecessary and restraining those which are maintained. I have attempted to contribute my own framing of the power dynamics at the root of these relations, offering the concept of carcinararchy as a social state in which projects of power concentration dominate society, tending that society toward unrestrained ecological extraction and destruction.

The analysis of climate change public opinion and the obstacles to public preference as a democratic force in the United States resonate with these views. Despite majority support for greater climate action, climate policy in the United States has remained inadequate. Scholarship on the policy effects of public opinion have shown that the power of public opinion to impact policy appears to be severely constrained by the outsized power of the preferences of economic elites, and to a lesser but still large extent by the policy preferences of organized business groups. Public opinion as a social force to advance climate policies that would benefit a majority of the public is also hampered by structural restraints on the formation of public opinion itself. Scholarship has shown that the structures of mass media and the effects of dominant journalistic norms function to moderate public debate and systematically exclude more progressive possibilities that threaten elite power. Social movements appear to be a force capable of countering some of these effects - by creating an alternative space for the formation of public consciousness and by mobilizing to alter the structures moderating and constraining democratic possibility. Most scholarship on climate change public opinion has not addressed anti-democratic constraint and systemic elite bias, or the critical importance of extra-institutional efforts to channel public sentiments beyond structures that are biased against their impact.

My data indicates that there is likely broad support among the American public for redistributive policy that could have beneficial ecological effects both directly and through the restraint of projects of elite power concentration. Majorities support taxation on the wealthiest Americans to support the less wealthy, restraints on corporate power in government, and the redirection of social effort away from economic growth and toward ecological well-being - although this final effort, that of de-growth, shows less support than the others. This data also suggests that Americans want a transition to an economy based on renewable energy, and that they strongly prefer a progressive tax on the wealthiest Americans and large corporations to pay for such a transition over regressive taxes that burden consumers or tax-and-dividend plans. These trends are all much more intensive within the climate-concerned community, where there is even greater support for redistributive measures and all forms of climate intervention - though support for progressive taxation remains stronger than other funding forms. All of this suggests a strong basis of public preference for the kinds of broad democratizing efforts that could challenge elite power in fundamental ways by reducing economic and political inequalities.

However, these preferences are accompanied by what appear to be important contradictions between the policy preferences of respondents and their evaluation of the importance of different forms of collective and individual intervention. Among the broad American public, the development of new technologies, consumer choice, and government support for existing technological deployment are ranked as more important than government regulation of fossil fuel production, and even more important than social movement action. These comparisons hold true among the climate-concerned even

as the importance of all these interventions is shown to be significantly higher. This trend is also reflected in public evaluation of the power and importance of different forms of social action to address climate change. Contentious forms of action, including protest and labor action, are consistently ranked as less important - even among the climate-conscious - than institutionally-friendly forms of action like consumer choice, voting, and educating others. These same patterns are reflected in participants' reported involvement in these various forms of actions. The dominant preference for new technological development, consumer choice, and education as means to address the climate crisis reflects the presence of a strong Foucauldian “green governmentality” in public consciousness: A conception of environmental problems as issues of individual choice and individual responsibility - individual self-governance - rather than issues of structural power and anti-democratic domination.

The individualized conception of climate change as an issue to be addressed through choices within established structures rather than through collective action to alter those structures represents a potential obstacle to effective climate action. This obstacle also seems to be present among scholars who study climate change - with many conceiving of climate change as a problem best addressed through electoral efforts, but few advancing a view of the anti-democratic structural impediments to these efforts, and few advocating extra-institutional social movements as means to challenge these systemic structural biases. In terms of hegemony and the hegemonic Cerberus, these views suggest an approach that emphasizes the powers of knowledge and to some extent war (through seeking electoral influence) but which fails to directly challenge powers of arrangement - structural economic power. The disconnect between public support for democratizing,

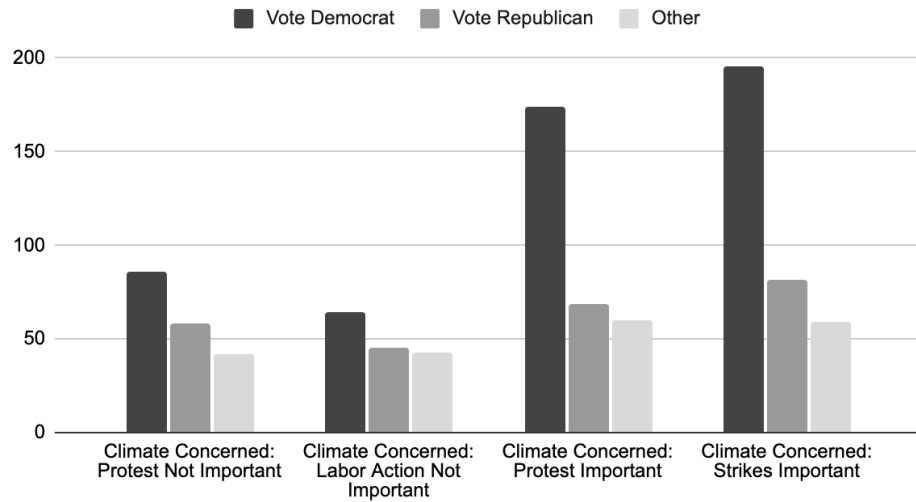
redistributive policies and public emphasis on forms of action that have less power to advance policies that are not favored by elites means that without intervention, there is a strong basis for only elite-friendly climate policy to advance that fails to challenge fundamental structures of inequality that drive environmental crises more generally. We can see this today in the efforts to pass large-scale climate infrastructure legislation. At this moment, the Biden administration is attempting to pass an unprecedented legislative package in the Senate to address climate change - while senators representing a minority of the US population (and receiving significant funding from fossil fuel interests) stand opposed to this legislation and may succeed in derailing significant portions of it. Meanwhile, market-friendly efforts such as electric vehicle production plans coordinated with auto manufacturers are able to advance without significant opposition. Social movements focused on climate justice and indigenous rights have succeeded in making significant mobilizations in Washington D.C. - including over 650 arrests in acts of civil disobedience in the past week alone - but as my data demonstrates, these sorts of efforts stand to be strengthened enormously if the portions of the climate-concerned population that do not emphasize the power of protest and social movements were convinced to lend their support.

While much scholarship on climate change public opinion has focused on questions of increasing public concern or public engagement, or on altering the beliefs or behavior of climate deniers, my research suggests that a more fruitful intervention might be to increase public awareness of the power and necessity of protest and labor action as means of advancing democratic agendas. Rather than trying to convince those who are ideologically opposed to environmental agendas to change their most deep-seated

worldviews, it may be easier and more effective to speak to those people who are already concerned about climate change and who want redistributive, structurally-altering policies that extra-institutional forms of action are important and effective forms of social engagement. Even small shifts among this population - which is likely easier to sway than the remaining climate deniers - could have huge effects on policy, given scholarship which shows the amplifying effects between public opinion and social protest on the passage of previous environmental legislation.

Some might object that the sub-population of the climate concerned that does not believe that protest or labor action are important is likely to be composed of a set of conservatives or republicans who, while concerned about climate change, are unlikely to embrace contentious forms of social action, especially for redistributive and democratizing ends. However, my data suggests that this is not the case. As the chart below shows, while those who believe contentious action is unimportant are more likely to be Republicans, about half of those ranking these actions as unimportant are people who generally vote Democrat. This indicates that their views on the power of protest or labor action aren't strictly determined by an underlying ideological worldview, but may be more open to challenge.

Figure 16. Political Party Affiliation of Climate Concerned vs. Support of Contentious Tactics



Political Breakdown of Climate Concerned Who De-Emphasize Protest

		Respondents	Percent
Protest Not Important	Vote Democrat	58	11.9
	Vote Republican	86	17.6
	Other	42	8.6
Labor Action Not Important	Vote Democrat	45	9.2
	Vote Republican	64	13.1
	Other	43	8.8
Protest Important	Vote Democrat	69	14.1
	Vote Republican	174	35.6
	Other	60	12.3
Labor Action Important	Vote Democrat	82	16.8
	Vote Republican	196	40.1
	Other	59	12.1
Total		489	100.0

Public belief in the importance and power of contentious extra-institutional forms of social action is not the only area of potential intervention. My data shows that among the broad public, a majority opposes cuts to the military budget, suggesting continued public

support for the maintenance of the United States' status as the world's pre-eminent military superpower - which in the current context also means the continued public subsidization of the world's leading consumer of fossil fuels at the expense of funds that could be used for decarbonization efforts and democratizing social programs. Other projects of democratization and redistribution that are just as critical to challenging the power structures of HEX hegemony were not examined in my study. Future research should examine the links between public concern about climate change and public support for racial justice movements like Black Lives Matter, Black voting rights, reparations, and the reimagining of public security, gender justice movements, and efforts toward decolonization and increased indigenous sovereignty, in order to evaluate where linkages between these important mutually-beneficial efforts need to be established or strengthened through education about the ways in which these liberation struggles are interdependent. This research project was also performed at a more limited point in the development of my own analysis. As a result, the survey effort does not reflect the full scope of the critical questions of power and ecology raised by the accompanying theoretical framework. Future research should more directly attend to more specific redistributive and democratizing efforts like those raised above, in addition to economic democratization, specific possibilities for electoral reform such abolition of private election funding and automatic voter registration, and more specific investigation of the forms of action to which people ascribe power and the ways in which public understanding of power takes form. Research could also examine those groups - such as the Sunrise Movement and the Indigenous Environmental Network - which are already engaged in broad campaigns with a full range of tactics fit for hegemonic contestation -

cultural, economic, political - aimed at expansive projects of ecological democracy and better futures. I dedicate my current and future efforts to them.

References

- Agnone, J. 2007. Amplifying public opinion: the policy impact of the US environmental movement. *Social forces*, 85(4), 1593-1620.
- Akimoto, H. 2003. Global air quality and pollution. *Science*, 302(5651), 1716-1719
- Albaum, G. S., & Smith, S. M. 2006. *Handbook of Marketing Research*. London, United Kingdom: Sage Publications. byu.edu.
- Amenta Edwin, Bruce G. Carruthers, and Yvonne Zylan. 1992. "A Hero for the Aged? The Townsend Movement, the Political Mediation Model, and U.S. Old-Age Policy, 1934-1950." *American Journal of Sociology* 98: 308-39.
- Amenta, Edwin, Kathleen Dunleavy, and Mary Bernstein. 1994. "Stolen Thunder? Huey Long's Share our Wealth, Political Mediation, and the Second New Deal." *American Sociological Review* 59: 678-702.
- Amenta, Edwin, Neal Caren, and Sheera Joy Olasky. 2005. "Age for Leisure? Political Mediation and the Impact of the Pension Movement on U.S. Old-Age Policy." *American Sociological Review* 70.
- Anderegg, William, James W. Prall, Jacob Harold, and Stephen H. Schneider. 2010. Expert Credibility in Climate Change. *Proceedings of the National Academy of Sciences of the United States of America* 107: 12107-9, <https://doi.org/10.1073/pnas.1003187107>.
- Authored by "an anarchist eyewitness." 2015. The grim reality of the Rojava Revolution. Libcom.org.

- Axtell, J. 1975. The white Indians of colonial America. *The William and Mary Quarterly: A Magazine of Early American History*, 55-88.
- Bain, Paul G., Matthew J. Hornsey, Renata Bongiorno, and Carla Jeffries. 2012. "Promoting Pro-Environmental Action in Climate Change Deniers." *Nature Climate Change* 2(8):600–603.
- Bakunin, M. A. 1970. *God and the State*. Courier Corporation.
- Ballew, M. T., Leiserowitz, A., Roser-Renouf, C., Rosenthal, S. A., Kotcher, J. E., Marlon, J. R., Lyon, E., Goldberg, M. H., & Maibach, E. W. 2019. "Climate Change in the American Mind: Data, tools, and trends". *Environment: Science and Policy for Sustainable Development*, 61(3), 4-18. doi: 10.1080/00139157.2019.1589300
- Barca, S. 2016. "Labor in the age of climate change". *Jacobin*. Jacobinmag.org
- Barthes, R. 2012. *Mythologies: The complete edition*. New York: Hill and Wang.
- Bauer, A. M., & Ellis, E. C. 2018. The Anthropocene divide: Obscuring understanding of social-environmental change. *Current Anthropology*, 59(2), 209-227.
- Becker, T. A., Sidhu, I., & Tenderich, B. 2009. "Electric vehicles in the United States: a new model with forecasts to 2030". Center for Entrepreneurship and Technology, University of California, Berkeley, 24.
- Bell, Shannon Elizabeth, Jenrose Fitzgerald & Richard York. 2019. "Protecting the power to pollute: Identity co-optation, gender, and the public relations strategies of fossil fuel industries in the United States". *Environmental Sociology*, 5:3, 323-338, DOI: 10.1080/23251042.2019.1624001.

- Benford, R. D. 1997. An insider's critique of the social movement framing perspective. *Sociological inquiry*, 67(4), 409-430.
- Berlin, I. 1999. *The First and the Last* (London: Granta).
- Bernays, E. L. 1928. "Manipulating public opinion: The why and the how". *American Journal of Sociology*, 33(6), 958-971.
- Biehl, Janet. 2007. *Bookchin Breaks with Anarchism*. Communalism.net. Archived at: <https://theanarchistlibrary.org/library/janet-biehl-bookchin-breaks-with-anarchism>.
- Bird-David, N., Abramson, A., Altman, J., Bicchieri, M. G., Burch Jr, E. S., Ember, C. R., & Wenzel, G. W. 1992. Beyond "The Original Affluent Society": A Culturalist Reformulation [and Comments and Reply]. *Current anthropology*, 33(1), 25-47.
- Black, B. C. 2012. "Oil for living: petroleum and American conspicuous consumption". *The Journal of American History*, 99(1), 40-50.
- Boehm, C., Barclay, H. B., Dentan, R. K., Dupre, M. C., Hill, J. D., Kent, S., & Rayner, S. 1993. Egalitarian behavior and reverse dominance hierarchy [and comments and reply]. *Current anthropology*, 34(3), 227-254.
- Bookchin, M. 1982. *The ecology of freedom* (p. 232). New Dimensions Foundation.
- Bookchin, M., & Foreman, D. 1991. *Defending the earth: debate between Murray Bookchin and Dave Foreman* (Vol. 162). Black Rose Books Ltd..
- Bourdieu, P. 1987. *Distinction: A social critique of the judgement of taste*. Harvard university press.

- Bowman, Bryan. 2019. Captured: How the Fossil Fuel Industry Took Control of the EPA. The Globe Post. Theglobepost.com.
- Boykoff M.T. and J. M. Boykoff. 2007. "Climate change and journalistic norms: a case-study of US mass-media coverage". *Geoforum* 38(6):1190–1204.
- BR Tucker., Kropotkin, P. 2015. *The conquest of bread*. Penguin UK.
- Brecher, J., & Costello, T. 1998. *Global village or global pillage: Economic reconstruction from the bottom up*. South End Press.
- Brookes, A., & Fratto, E. 2020. Towards a Russian Literature of the Anthropocene. Introduction. *Russian Literature*, 114, 1-22.
- Brooks, T. M., Mittermeier, R. A., Mittermeier, C. G., Da Fonseca, G. A., Rylands, A. B., Konstant, W. R., & Hilton-Taylor, C. 2002. Habitat loss and extinction in the hotspots of biodiversity. *Conservation biology*, 16(4), 909-923.
- Browne, P. L. 2018. "Reification and passivity in the face of climate change". *European Journal of Social Theory*, 21(4), 435-452.
- Brüggemeier, F. J., Cioc, M., & Zeller, T. (Eds.). 2005. *How green were the Nazis?: nature, environment, and nation in the Third Reich (Vol. 58)*. Ohio University Press.
- Brulle, R. J. 2021. Networks of opposition: A structural analysis of US climate change countermovement coalitions 1989–2015. *Sociological Inquiry*, 91(3), 603-624.
- Brulle, R. J., & Norgaard, K. M. 2019. "Avoiding cultural trauma: Climate change and social inertia". *Environmental Politics*.

- Brulle, R. J., Carmichael, J., & Jenkins, J. C. 2012. "Shifting public opinion on climate change: an empirical assessment of factors influencing concern over climate change in the US, 2002–2010". *Climatic change*, 114(2), 169-188.
- Brunson, K. W. 2008. "Electronic Textbooks: An Empirical Study of Adoption Potential". *The Liberty Business Review* VI.1, 44–55, works.bepress.com.
- Burstein, P. 1998. "Bringing the public back in: should sociologists consider the impact of public opinion on public policy?". *Social forces*, 77(1), 27-62.
- Burstein, P. 2003. "The impact of public opinion on public policy: A review and an agenda". *Political Research Quarterly*, 56(1), 29-40.
- Camatte, J. 1995. *This World We Must Leave and Other Essays*. New York: Autonomedia.
- Carroll, W. K. 2020. Fossil capitalism, climate capitalism, energy democracy: the struggle for hegemony in an era of climate crisis. *Socialist Studies/Etudes Socialistes*, 14(1).
- Carroll, W. K. 2020. Fossil capitalism, climate capitalism, energy democracy: the struggle for hegemony in an era of climate crisis. *Socialist Studies/Etudes Socialistes*, 14(1).
- Carson, R. 2002. *Silent spring*. Houghton Mifflin Harcourt.
- Ceballos, G., Ehrlich, P. R., Barnosky, A. D., García, A., Pringle, R. M., & Palmer, T. M. 2015. Accelerated modern human–induced species losses: Entering the sixth mass extinction. *Science advances*, 1(5), e1400253.
- Clastres, P. 2020. *Society against the state: essays in political anthropology*. Princeton University Press.

- Climate Action Tracker. 2021. Warming Projections Global Update. Climate Analytics and New Climate Institute. [Climateactiontracker.org](https://climateactiontracker.org).
- Collins, Chuck. 2021. "Global Billionaire Pandemic Wealth Gains Surge to \$5.5 Trillion". [Inequality.org](https://inequality.org/great-divide/global-billionaire-pandemic-wealth-surges/). <https://inequality.org/great-divide/global-billionaire-pandemic-wealth-surges/>.
- Collins, P. H. 2000. Gender, black feminism, and black political economy. *The Annals of the American Academy of Political and Social Science*, 568(1), 41-53.
- Colman, Zack and Ben Lefebvre. 2021. Biden pitching a much vaster climate plan than Obama ever attempted. *Politico*. [Politico.com](https://www.politico.com).
- Covington, J. W. 1993. *The Seminoles of Florida*. University Press of Florida, 15 NW 15th St., Gainesville, FL 32611.
- Crenshaw, K. 1989. Demarginalizing the intersection of race and sex: A black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. *U. Chi. Legal f.*, 139.
- Cress, Daniel M., and David A. Snow. 2000. "The Outcomes of Homeless Mobilization: The Influence of Organization, Disruption, Political Mediation, and Framing." *American Journal of Sociology* 105: 1063-1104.
- Cronon, W. 1996. The trouble with wilderness: or, getting back to the wrong nature. *Environmental history*, 1(1), 7-28.
- Crutzen, P. J., & Stoermer, E. F. 2000. The Anthropocene, *Global change newsletter*. 41, 17-18. International Geosphere–Biosphere Programme (IGBP).
- Currie, T. E., Turchin, P., & Gavrillets, S. 2019. History of agriculture and intensity of warfare shaped the evolution of large-scale human societies in Afro-Eurasia.

- Currie, T. E., Turchin, P., & Gavrilets, S. 2019. History of agriculture and intensity of warfare shaped the evolution of large-scale human societies in Afro-Eurasia.
- Dahl, R. A. 2005. *Who governs?: Democracy and Power in an American City*. Yale University Press.
- Dal Bó, E. 2006. Regulatory capture: A review. *Oxford review of economic policy*, 22(2), 203-225.
- Dartt-Newton, D., & Erlandson, J. 2006. Little choice for the Chumash: colonialism, cattle, and coercion in Mission Period California. *The American Indian Quarterly*, 30(3), 416-430.
- Davis, H., & Todd, Z. 2017. On the importance of a date, or decolonizing the Anthropocene. *ACME*, 16(4), 761–780.
- Davis, J., Moulton, A. A., Van Sant, L., & Williams, B. 2019. Anthropocene, capitalocene,... plantationocene?: A manifesto for ecological justice in an age of global crises. *Geography Compass*, 13(5), e12438.
- De Cleyre, V. 1908. They who marry do ill. *Mother Earth*, 2, 500-11.
- De Cleyre, V. 1908. Why I am an Anarchist. *Mother Earth*, 3(1), 16.
- Deep Green Resistance. 2011. *Deep Green Resistance - Strategy to Save the Planet*. YouTube. Youtube.com
- Dillehay, T. D. 2016. Reflections on Araucanian/Mapuche resilience, independence, and ethnomorphosis in Colonial (and present-day) Chile. *Chungará (Arica)*, 48(4), 691-702.
- Dochuk, D. 2013. *Anointed With Oil: God and Black Gold in Modern America*. Rockefeller Archive Center.

- Dochuk, D. 2013. *Anointed With Oil: God and Black Gold in Modern America*.
Rockefeller Archive Center.
- Domhoff, G. W. 1968. "Who Rules America?". *Science and Society*, 32(3).
- Domhoff, G. W. 2018. "Who Rules America?". In *Social Stratification* (pp. 297-302).
Routledge.
- Doran, Peter and Maggie Kendall Zimmerman. 2009. Examining the Scientific
Consensus on Climate Change. *Eos, Transactions American Geophysical Union*
90, no. 3: 22–23, <https://doi.org/10.1029/2009EO030002>.
- Dunham, Y., & Olson, K. R. 2016. Beyond discrete categories: Studying multiracial,
intersex, and transgender children will strengthen basic developmental science.
Journal of Cognition and Development, 17(4), 642-665
- Dynata. 2018. "Panel Quality: Our Values. Answers to ESOMAR's 28 Questions".
Survey Sampling International, LLC. Dynata.com.
- Egan, P. J., & Mullin, M. 2017. Climate change: US public opinion. *Annual Review of
Political Science*, 20, 209-227.
- Egan. 2021. "Pro-Fossil Fuel Facebook Ads were Viewed 431 Million Times - In One
Year". CNN. CNN.com.
- Ekwurz, B., J. Boneham, M. W. Dalton, R. Heede, R. J. Mera, M. R. Allen, and P. C.
Frumhoff. 2017. The Rise in Global Atmospheric CO₂, Surface Temperature, and
Sea Level from Emissions Traced to Major Carbon Producers. *Climatic Change*
144(4):579–90.
- el-Ojeili, C., & Taylor, D. 2020. "The Future in the Past": Anarcho-primitivism and the
Critique of Civilization Today. *Rethinking Marxism*, 32(2), 168-186.

- Ellis, E. C., Gauthier, N., Goldewijk, K. K., Bird, R. B., Boivin, N., Díaz, S., ... & Watson, J. E. 2021. People have shaped most of terrestrial nature for at least 12,000 years. *Proceedings of the National Academy of Sciences*, 118(17).
- Engels, F. 2021. *The origin of the family, private property and the state*. Verso Books.
- Erickson, P., van Asselt, H., Koplow, D., Lazarus, M., Newell, P., Oreskes, N., & Supran, G. 2020. "Why fossil fuel producer subsidies matter". *Nature*, 578(7793), E1-E4.
- Erikson, R. S., MacKuen, M. B., & Stimson, J. A. 2002. *The Macro Polity*. Cambridge University Press.
- Eyerman, R., & Jamison, A. 1991. *Social movements: A cognitive approach*. Penn State Press.
- Falasca-Zamponi, S. 1997. *Fascist spectacle*. University of California Press.
- Fam, S. D. 2017. China Came, China Built, China Left?: The Sarawakian Experience with Chinese Dam Building. *Journal of Current Chinese Affairs*, 46(3), 119-158.
- Fanon, F. 1986. *Black skin, white masks*. Pluto classics.
- Fanon, F. 2008. *Black Skin, White Masks*. Grove Press.
- Federici, S. 2004. *Caliban and the Witch*. Autonomedia.
- Ferguson, R. S., & Lovell, S. T. 2014. Permaculture for agroecology: design, movement, practice, and worldview. A review. *Agronomy for Sustainable Development*, 34(2), 251-274.
- Foner, P. S. 1970. The IWW and the Black Worker. *The Journal of Negro History*, 55(1), 45-64.

- Forbes, J. D. 2011. *Columbus and other cannibals: The Wetiko disease of exploitation, imperialism, and terrorism*. Seven Stories Press.
- Forgacs, D. 2000. *The Gramsci Reader. Selected Writings 1916-1935*. Pg. 206-207.
- Fortune. 2019. "Global 500." Fortune Media Limited. Fortune.com. Retrieved May 20, 2020 (<https://fortune.com/global500/2019/>).
- Foster, J. B. 1999. Marx's theory of metabolic rift: Classical foundations for environmental sociology. *American journal of sociology*, 105(2), 366-405.
- Foster, J. B. 2020. *The Return of Nature: Socialism and Ecology*. NYU Press.
- Foster. 2015. Late Soviet Ecology and the Planetary Crisis. *Monthly Review*. Monthlyreview.org. <https://monthlyreview.org/2015/06/01/late-soviet-ecology-and-the-planetary-crisis/>.
- Foucault, M. 1982. "The subject and power". *Critical inquiry*, 8(4), 777-795.
- Frank, A.B. 1877. "Über die biologischen Verhältnisse des Thallus einiger Krustflechten" [On the biological relationships of the thallus of some crustose lichens]. *Beiträge zur Biologie der Pflanzen (in German)*. 2: 123–200
- Freeman, J. 1972. The tyranny of structurelessness. *Berkeley Journal of Sociology*, 151-164.
- Fuchs, C. 2018. "Propaganda 2.0: Herman and Chomsky's Propaganda Model in the Age of the Internet, Big Data and Social Media". In: Pedro-Carañana, J., Broudy, D. and Klaehn, J. (eds.). *The Propaganda Model Today: Filtering Perception and Awareness*. Pp. 71–92. London: University of Westminster Press. DOI: <https://doi.org/10.16997/book27.f>. License: CC-BY-NC-ND 4.0.

- Gehlbach, H., & Artino, A. R. 2018. "The survey checklist (manifesto)". *Academic Medicine*, 93(3), 360-366.
- Gelderloos, P. (2010). *Anarchy Works*.
- Gelderloos, P. 2010. *An Anarchist Solution to Global Warming*. Infoshop News. Infoshop.org.
- Giddens, A. 2009. *Politics of climate change*. Polity.
- Gilens, Martin. 2012. *Affluence and Influence: Economic Inequality and Political Power in America*. Princeton, N.J.: Princeton University Press.
- Gill, B. 2021. Beyond the premise of conquest: Indigenous and Black earth-worlds in the Anthropocene debates. *Globalizations*, 1-17.
- Gill, B. 2021. Beyond the premise of conquest: Indigenous and Black earth-worlds in the Anthropocene debates. *Globalizations*, 1-17.
- Giovanni, Thomas. 2017. *Who are the Anarchists and what is Anarchism?* Federación Anarquista Rosa Negra / Black Rose Anarchist Federation. <https://blackrosefed.org/who-are-the-anarchists-and-what-is-anarchism/>
- Godicheau, François. 2003. *The words of the Spanish Civil War*, Presses Universitaires du Mirail. ISBN 978-2858166848, page 9.
- Goldman, E. 1916. The social aspects of birth control. *Mother Earth*, 11(2), 468-475.
- Goldman, E. 1969. *Anarchism: and other essays*. Courier Corporation.
- Goodwin, J. 1994. "What's right (and wrong) about left media criticism? Herman and Chomsky's propaganda model". *Sociological Forum* (pp. 101-111). Eastern Sociological Society.
- Graeber, D. 2018. The shock of victory. *The movement of movements*. Part, 2, 393-409.

- Green, Marcus. 2002. Concordance Table of Gramsci's Prison Notebooks. International Gramsci Society.
http://www.internationalgramscisociety.org/resources/concordance_table/index.html
- Greenpeace. 2021. President Biden's 100 Day Climate Progress Report. Greenpeace.org.
- Griffin, P. 2017. The Carbon Majors Database CDP: Carbon Majors Report 2017. Climate Accountability Institute. Climateaccountability.org.
- Grim, J. A. 2019. Indigenous lifeways and ecology. Available online. Accessed, 14.
- Gross, David, ed. 2007. The Price of Freedom: Political Philosophy from Thoreau's Journals. p. 8. CreateSpace Independent Publishing Platform; 1st edition. ISBN 978-1-4348-0552-2.
- Grosse, C. J. 2017. Working Across Lines: Resisting Extreme Energy Extraction in Idaho and California. University of California, Santa Barbara.
- Grovogui, S. 2006. Postcolonialism. In T. Dunne, M. Kurki, & S. Smith (Eds.), International relations theories: Discipline and diversity (pp. 229–246). Oxford University Press. Pg. 251.
- Habermas, J. 1984. The theory of communicative action: Reason and the rationalization of society (Vol. 1). Beacon press.
- Habermas, J. 1987. The Theory of Communicative Action. Volume 2. Trans. Thomas McCarthy, Boston, MA: Beacon.
- Hall, P. D. 2012. "Countercultural space does not persist: Christiania, and the role of music". Volume!. La revue des musiques populaires, (9: 1).

- Hall, Stuart. (Ed.). 1993. Resistance through rituals: Youth subcultures in post-war Britain (Vol. 7). Psychology Press.
- Hanjra, M. A., & Qureshi, M. E. 2010. Global water crisis and future food security in an era of climate change. *Food policy*, 35(5), 365-377.
- Haraway, D. 2015. Anthropocene, capitalocene, plantationocene, chthulucene: Making kin. *Environmental humanities*, 6(1), 159-165.
- Haraway, Donna. 2016. *Staying with the Trouble: Making Kin in the Chthulucene*. Durham: Duke University Press. p. 48.
- Harbridge, L., Krosnick, J. A., & Wooldridge, J. M. 2016. "Presidential Approval and Gas Prices: Sociotropic or Pocketbook Influence?". *Political Psychology* (pp. 260-289). Psychology Press.
- Hardt, M., & Negri, A. 2017. *Assembly*. Oxford University Press. Pg. 254. Emphasis added.
- Herman, Edward S. and Noam Chomsky. 1988. *Manufacturing Consent: The Political Economy of the Mass Media*. London: Vintage.
- Hiltner, K. 2019. *Writing a New Environmental Era: Moving Forward to Nature*. Routledge.
- Hiltner, K. 2019. *Writing a New Environmental Era: Moving Forward to Nature*. Routledge.
- Hoare, Q., & Nowell-Smith, G. 2005. *Selections from prison notebooks*. Lawrence & Wishart.
- Holland, C. H. 1986. Does the golden spike still glitter?. *Journal of the Geological Society*, 143(1), 3-21.

- Hopkins, R. 2010. What can Communities Do? The post carbon reader: Managing the 21st century sustainability crisis. Richard Heinberg and Daniel Lerch, eds. Healdsburg, CA: Watershed Media. 442-454.
- Hughes, J. D. 2013. Warfare and environment in the ancient world. In *The Oxford Handbook of Warfare in the Classical World* (pp. 128-142). Oxford: Oxford University Press.
- Hulme, M. 2009. *Why we disagree about climate change: Understanding controversy, inaction and opportunity*. Cambridge University Press.
- Hunt, S. L. 2021. "Afterword: A Roadmap for the Study of Para-militaries: Explaining Variations of Violence, Gendered Militias, and Demobilization". *Journal of Perpetrator Research*, 3, 114-125.
- Influence Map. 2020. Fossil Fuel Lobbyists Are Dominating Climate Policy Battles During COVID-19. An Influence Map Briefing. [Influencemap.org](https://influencemap.org).
- InfluenceMap. 2019. Industry Groups and their Carbon Footprints. [Influencemap.org](https://influencemap.org).
- Influencemap. 2021. "Are the Technology Giants Deploying Political Capital on Climate Change?" [Influencemap.org](https://influencemap.org). Retrieved from <https://influencemap.org/report/Big-Tech-and-Climate-Policy-afb476c56f217ea0ab351d79096df04a>.
- InfluenceMap. 2021. Big Tech and Climate Policy. [Influencemap.org](https://influencemap.org).
- IPCC. 2014. *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, R.K. Pachauri and L.A. Meyer (Eds.)]. Geneva, Switzerland: IPCC.

- IPCC. 2014. Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (Eds.)]. Geneva, Switzerland: IPCC.
- Jenkins, W., Berry, E., & Kreider, L. B. 2018. Religion and climate change. *Annual review of environment and resources*, 43, 85-108.
- John Cook et al. 2013. Quantifying the Consensus on Anthropogenic Global Warming in the Scientific Literature. *Environmental Research Letters* 8, no. 2: 024024, <https://doi.org/10.1088/1748-9326/8/2/024024>.
- Josephson, P., Dronin, N., Mnatsakanian, R., Cherp, A., Efremenko, D., & Larin, V. 2013. *An environmental history of Russia*. Cambridge University Press. Pg. 13.
- Jun, N. 2017. Kropotkin, Read, and the Intellectual History of British Anarchism: Between Reason and Romanticism. *Anarchist Studies*, 25(2), 96-98.
- Kane, Melinda D. 2003. "Social Movement Policy Success: Decriminalizing State Sodomy Laws, 1969- 1998." *Mobilization* 8: 313.334.
- Kebede, A., Shriver, T. E., & Knottnerus, J. D. 2000. Social movement endurance: Collective identity and the Rastafari. *Sociological Inquiry*, 70(3), 313-337.
- Kilcullen, D. J. 2006. "Three pillars of counterinsurgency". In *the US Government Counterinsurgency Conference* (Vol. 28).
- Kimmerer, R. W. 2002. Weaving traditional ecological knowledge into biological education: a call to action. *BioScience*, 52(5), 432-438.
- Kimmerer, R. W. 2013. *Braiding sweetgrass: Indigenous wisdom, scientific knowledge and the teachings of plants*. Milkweed Editions.

- King, T. L. 2015. Interview with Dr. Tiffany Lethabo King. *Feral Feminisms*, 4, 64–68.
- King, Zachary. 2020. “Unconventional Optimism: Lessons from Climate Change Scholars and Activists”. *Resilience*. Resilience.org.
- Kitzinger, C. 1999. Intersexuality: Deconstructing the sex/gender binary. *Feminism & Psychology*, 9(4), 493-498.
- Klasfeld, Adam. 2020. “Steven Donziger, Who Battled Chevron in Ecuador, Has Been Disbarred”. *Courthouse News Service*. Courthousenews.com.
- Klein, N. 2015. *This changes everything: Capitalism vs. the climate*. Simon and Schuster.
- Knapp, M., & Jongerden, J. 2014. Communal Democracy: The Social Contract and Confederalism in Rojava. *Comparative Islamic Studies*, 10(1).
- Knoll, Stefanie and Aragorn Eloff. 2010. 2010 Anarchist Survey Report. Retrieved from: <https://web.archive.org/web/20110911203728/http://www.anarchistsurvey.com/results/>
- Krosnick, J. A., Holbrook, A. L., Berent, M. K., Carson, R. T., Michael Hanemann, W., Kopp, R. J., & Conaway, M. 2002. “The impact of” no opinion” response options on data quality: non-attitude reduction or an invitation to satisfice?”. *Public Opinion Quarterly*, 66(3), 371-403.
- Krupke, C.H.; Prasad, R.P.; Anelli, C.M. 2007. Professional entomology and the 44 noisy years since Silent Spring. Part 2: Response to Silent Spring. *American Entomologist*. 53 (1): 16–25.
- Kuhn, M., Schularick, M., & Steins, U. I. 2020. “Income and wealth inequality in America, 1949–2016”. *Journal of Political Economy*, 128(9), 3469-3519.
- Kumar, D. 2012. *Islamophobia and the Politics of Empire*. Haymarket Books.

- Laclau, E., & Mouffe, C. 2014. *Hegemony and socialist strategy: Towards a radical democratic politics*. Verso Trade.
- Ladd, A. E. 2017. Meet the new boss, same as the old boss: The continuing hegemony of fossil fuels and hydraulic fracking in the third carbon era. *Humanity & Society*, 41(1), 13-36.
- Ladd, A. E. 2017. Meet the new boss, same as the old boss: The continuing hegemony of fossil fuels and hydraulic fracking in the third carbon era. *Humanity & Society*, 41(1), 13-36.
- LaDuke, W. 1994. Traditional ecological knowledge and environmental futures. *Colo. J. Int'l Envtl. L. & Pol'y*, 5, 127.
- LaDuke, Winona. 2020. Winona LaDuke on earth-based economics in ‘the time of the seventh fire’. *Nonviolence Radio*. Metta Center for Nonviolence.
- Larimore-Hall, Daraka. 2014. “The Movement Democrat”. Doctoral dissertation, University of California Santa Barbara.
- Latour, B. 1996. On actor-network theory: A few clarifications. *Soziale welt*, 369-381.
- Lax, J. R., & Phillips, J. H. 2009. “Gay rights in the states: Public opinion and policy responsiveness”. *American Political Science Review*, 103(3), 367-386.
- Leaf Van Boven, Phillip J. Ehret, and David K. Sherman. 2018. Psychological Barriers to Bipartisan Public Support for Climate Policy,” *Perspectives on Psychological Science* 13, no. 4: 492–507, <https://doi.org/10.1177/1745691617748966>.
- Leaning, J. and D. Guha-Sapir. 2013. Natural Disasters, Armed Conflict, and Public Health. *New England Journal of Medicine* 19: 1836–42.

- Leber, Rebecca. 2021. "How the Fossil Fuel Industry Convinced Americans to Love Gas Stoves". Mother Jones Magazine. MotherJones.com.
- Leiserowitz, A., Maibach, E., Rosenthal, S., Kotcher, J., Bergquist, P., Ballew, M., Goldberg, M., Gustafson, A., & Wang, X. 2020. Climate Change in the American Mind: April 2020. Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication.
- Leiserowitz, A., Maibach, E., Rosenthal, S., Kotcher, J., Bergquist, P., Gustafson, A., Ballew, M., & Goldberg, M. 2019. "Climate Activism: Beliefs, Attitudes, and Behaviors". Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication.
- Leiserowitz, A., Maibach, E., Rosenthal, S., Kotcher, J., Carman, J., Wang, X., Marlon, J., Lacroix, K., & Goldberg, M. 2021. Climate Change in the American Mind, March 2021. Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication.
- Leiserowitz, A., Maibach, E., Rosenthal, S., Kotcher, J., Wang, X., Carman, J., Goldberg, M., Lacroix, K., & Marlon, J. 2021. "Climate activism: A Six-Americas analysis". Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication.
- LeQuesne, T. 2019. From Carbon Democracy to Carbon Rebellion: Countering Petro-Hegemony on the Frontlines of Climate Justice. *Journal of World-Systems Research*, 25(1), 15-27

- LeQuesne, T. 2019. Petro-hegemony and the matrix of resistance: What can Standing Rock's Water Protectors teach us about organizing for climate justice in the United States?. *Environmental Sociology*, 5(2), 188-206.
- Levitz, Eric. 2019. Here Are 7 'Left Wing' Ideas (Almost) All Americans Can Get Behind. *Intelligencer*. New York Magazine.
- Lewis, S. L., & Maslin, M. A. 2015. Defining the anthropocene. *Nature*, 519(7542), 171-180.
- Liesman, Steve. 2019. Majority of Americans support progressive policies such as higher minimum wage, free college. *CNBC: All-America Economic Survey*. Cnbc.com.
- Lukács, G. 1972. *History and class consciousness: Studies in Marxist Dialectics*. MIT Press. Pg. 240.
- Luke, T. W. 1999. "Environmentality as green governmentality". *Discourses of the Environment*, 121-151.
- Luke, T. W. 1999. *Capitalism, democracy, and ecology: Departing from Marx*. University of Illinois Press.
- Lyon, T. P., & Montgomery, A. W. 2015. "The means and end of greenwash". *Organization & Environment*, 28(2), 223-249.
- Maass, Peter. 2010. *The Ministry of Oil Defense*. Foreign Policy. Foreignpolicy.com.
- Maisano, C. 2017. *Politics Without Politics: A new book offers a flawed road map for rebuilding the Left*. *Jacobin Magazine*. Retrieved from:
<https://jacobinmag.com/2017/11/hegemony-how-to-gramsci-organizing>
- Malatesta, E., & Malatesta, E. 1985. *The anarchist revolution*. SRAFPprint Co-op.

- Malhotra, Naresh K. 2008. *Basic Marketing Research & Qualtrics Pkg / Edition 3*.
Prentice Hall. ISBN 9780137155934.
- Malm, A. 2016. *Fossil capital: The rise of steam power and the roots of global warming*.
Verso.
- Malm, A., & Hornborg, A. 2014. The geology of mankind? A critique of the
Anthropocene narrative. *The Anthropocene Review*, 1(1), 62–69.
- Marcuse, H. 2013. *One-dimensional man: Studies in the ideology of advanced industrial
society*. Routledge.
- Margulis, L., & Fester, R. (Eds.). 1991. *Symbiosis as a source of evolutionary
innovation: speciation and morphogenesis*. Mit Press.
- Marks, R. B. 2017. *China: An environmental history*. Rowman & Littlefield.
- Marsh G. P. 1965. *The earth as modified by human action*. Belknap Press/Harvard
University Press, Cambridge.
- Marx, K. 2007. *Capital: A critique of political economy. Part VIII: Primitive
Accumulation*. Duke University Press.
- Mayer, B. 2009. “Cross-movement coalition formation: Bridging the labor-environment
divide”. *Sociological Inquiry*, 79(2), 219-239.
- McBay, Aric, Lierre Keith, and Derrick Jensen. 2011. *Deep Green Resistance*. New
York: Seven Stories Press.
- McKey, D., Rostain, S., Iriarte, J., Glaser, B., Birk, J. J., Holst, I., & Renard, D. 2010.
Pre-Columbian agricultural landscapes, ecosystem engineers, and self-organized
patchiness in Amazonia. *Proceedings of the National Academy of Sciences*,
107(17), 7823-7828.

- McKittrick, K. 2011. On plantations, prisons, and a black sense of place. *Social & Cultural Geography*, 12(8), 947–963.
<https://doi.org/10.1080/14649365.2011.624280>
- Members of EZLN. 2002. A Zapatista Response to “The EZLN Is NOT Anarchist”. From a letter sent to Green Anarchy. Retrieved from “Indigenous Anarchist Federation.” <https://iaf-fai.org/2019/05/05/a-zapatista-response-to-the-ezln-is-not-anarchist/>.
- Menand, Louis. 2001. *The Metaphysical Club: A Story of Ideas in America*. Farrar, Straus and Giroux. pp. 123–124.
- Messenger, D. A. 2014. Organizing the Fight: Armies and the Spanish Civil War. *History: Reviews of New Books*, 42(3), 78-81.
- Meybeck, M., & Helmer, R. 1989. The quality of rivers: from pristine stage to global pollution. *Global and Planetary Change*, 1(4), 283-309.
- Michel Foucault. 2012. The Mesh of Power. *Viewpoint Magazine*. Accessed at <https://viewpointmag.com/2012/09/12/the-mesh-of-power/>.
- Mildenberger, M. 2020. *Carbon captured: how business and labor control climate politics*. MIT Press.
- Mildenberger, M. and Leiserowitz, A. 2017. Public opinion on climate change: Is there an economy-environment trade-off? *Environmental Politics*, Vol. 26, no. 5, 801-824.
- Miller, A. S. 1980. “Towards an: Environmental/labor coalition”. *Environment: Science and Policy for Sustainable Development*, 22(5), 32-39.

- Miller, Christian T. 2007. "Contractors outnumber troops in Iraq". Los Angeles Times.
Los Angeles. LATimes.com.
- Mills, C. W., & Wolfe, A. 2000. *The power elite* (Vol. 20). Oxford University Press.
- Milstein, C. 2010. *Anarchism and its aspirations*. AK Press.
- Mitchell, T. 2009. Carbon democracy. *Economy and Society*, 38(3), 399-432.
- Moore, J. W. 2015. *Capitalism in the Web of Life: Ecology and the Accumulation of Capital*. Verso Books.
- Moore, J. W. 2016. Anthropocene or capitalocene? Nature, history, and the crisis of capitalism.
- Moore, J. W. 2017. The Capitalocene, Part I: on the nature and origins of our ecological crisis. *The Journal of peasant studies*, 44(3), 594-630.
- Morris, W. 2002. *News from nowhere*. Broadview Press.
- Mumford, L. 1967. *The Myth of the Machine: Technics and Human Development*. New York: Harcourt, Brace and World.
- Muniesa, F., 2015. "Actor-Network Theory", in James D. Wright (Ed.), *The International Encyclopedia of Social and Behavioral Sciences*, 2nd Edition, Oxford, Elsevier: vol. 1, 80-84.
- Murphy, M. W., & Schroering, C. 2020. Refiguring the Plantationocene. *Journal of World-Systems Research*, 26(2), 400-415.
- Nagel, J. 2011. "Climate change, public opinion, and the military security complex". *The Sociological Quarterly*, 52(2), 203-210.
- Nair, P. R. 1993. *An introduction to agroforestry*. Springer Science & Business Media.
- National Association of Manufacturers. 2021. "The Promise Ahead". Nam.org.

- Nelson, J. 2020. Petro-masculinity and climate change denial among white, politically conservative American males. *International Journal of Applied Psychoanalytic Studies*, 17(4), 282-295.
- Nietzsche, F., Clark, M., & Swensen, A. J. 1998. *On the genealogy of morality*. Hackett Publishing.
- Nunes, R. 2015. *The Network Prince: Leadership between Clastres and Machiavelli. From Latin American Struggles*. *International Journal of Communication*, 9, 11.
- Oldeman, L. R. 1992. Global extent of soil degradation. In *Bi-Annual Report 1991-1992/ISRIC* (pp. 19-36). ISRIC.
- Omi, M., & Winant, H. 2014. *Racial formation in the United States*. Routledge. Pg. 107.
- Open Secrets. 2020. *Total Cost of Election (1998-2020)*. Opensecrets.org.
- Open Secrets. 2021. *Oil & Gas: Long-Term Contribution Trends*. Opensecrets.org.
- Oreskes, N., & Conway, E. M. 2011. *Merchants of doubt: How a handful of scientists obscured the truth on issues from tobacco smoke to global warming*. Bloomsbury Publishing USA.
- Oreskes, N., & Conway, E. M. 2011. *Merchants of doubt: How a handful of scientists obscured the truth on issues from tobacco smoke to global warming*. Bloomsbury Publishing USA.
- Oreskes, Naomi and Erik M. Conway. 2010. *Merchants of Doubt*. New York, NY: Bloomsbury Press.
- Oreskes, Naomi. 2004. The Scientific Consensus on Climate Change. *Science* 306, no. 5702: 1686, <https://doi.org/10.1126/science.1103618>.

- Oreskes, Naomi. 2007. The Scientific Consensus on Climate Change: How Do We Know We're Not Wrong?. In DiMento, Joseph F. C.; Doughman, Pamela M. Climate Change: What It Means for Us, Our Children, and Our Grandchildren (MIT Press, 2007), 65–66.
- Ortega, Carlos. 2013. "Anarchism, Nudism, Naturism". Archived from the original on 13 December 2013. Retrieved 10 December 2013: <http://interactivist.autonomeia.org/node/4694>.
- Osborne, N. 2015. Intersectionality and kyriarchy: A framework for approaching power and social justice in planning and climate change adaptation. *Planning Theory*, 14(2), 130-151.
- Paliy, M. 1976. *The Anarchism of Nestor Makhno, 1918–1921*. Seattle: University of Seattle.
- Parenti, C. 2011. Reading the world In a loaf of bread -- soaring food prices, wild weather, upheaval, and a planetful of trouble. Retrieved from <http://www.tomdispatch.com/archive/175419>
- Pascaline Wallermeacq and Rowena House, “Economic Losses, Poverty & Disasters: 1998-2017,” United Nations Office for Disaster Risk Reduction & Center for Research on the Epidemiology of Disasters, 2018.
- Pearson, A.R., Schuldt, J.P., Romero-Canyas, R., Ballew, M.T. and Larson-Konar, D. 2018. “Diverse segments of the US public underestimate the environmental concerns of minority and low-income Americans”. *Proceedings of the National Academy of Sciences*, 115(49), pp.12429-12434.

- Pellow, D. N. 2014. Total liberation: The power and promise of animal rights and the radical earth movement. U of Minnesota Press. Pg. xxi-xiv.
- Pendergraft, C. A. 1998. Human dimensions of climate change: Cultural theory and collective action. *Climatic Change*, 39(4), 643-666.
- Pew Research Center. 2019. U.S. Public Views on Climate and Energy.
- Pew Research Center. 2020. As Economic Concerns Recede, Environmental Protection Rises on the Public's Policy Agenda.
- Piketty, T. 2013. *Capital in the 21st Century*. Cambridge, MA: President and Fellows, Harvard College.
- Plumwood, V. 2005. *Environmental culture: The ecological crisis of reason*. Routledge.
- Podd'iakov, N. 2012. Initial Forms of Categorical Thinking Processes in Preschool-Age Children. *Journal of Russian & East European Psychology*, 50(2), 75-79.
- Pratt, M. L. 1991. Arts of the contact zone. *Profession*, 33–40.
<https://www.yumpu.com/en/document/view/48757941/arts-of-the-contact-zone-authors-mary-louise-pratt-source-#>
- Price, R. (Ed.). 1996. *Maroon societies: Rebel slave communities in the Americas*. JHU Press.
- Proudhon, P. J. 1876. *What is property?: An inquiry into the principle of right and of government (Vol. 1)*.
- Pryor, F. L. 2004. From foraging to farming: The so-called “Neolithic Revolution”. In *Research in economic history*. Emerald Group Publishing Limited.
- Ramnath, M. 2018. Non-Western Anarchisms and Postcolonialism. *The Palgrave Handbook of Anarchism*, 677–695. doi:10.1007/978-3-319-75620-2_38.

- Reed, I. A. 2013. Power: Relational, discursive, and performative dimensions. *Sociological Theory*, 31(3), 193-218.
- Reed, J. P., & Foran, J. 2002. "Political cultures of opposition: exploring idioms, ideologies, and revolutionary agency in the case of Nicaragua". *Critical Sociology*, 28(3), 335-370.
- Riker, W. H. 1982. "The two-party system and Duverger's law: an essay on the history of political science". *American political science review*, 76(4), 753-766.
- Risling Baldy, Cutcha. 2014. On telling native people to just get over it, or why I teach about the Walking Dead in my Native Studies classes. Accessed January 2016: <http://www.cutcharislingbaldy.com/blog/on-telling-native-people-to-just-get-over-it-or-why-i-teach-about-the-walking-dead-in-my-native-studiesclasses-spoiler-alert>
- Robbins, P. 2011. *Political ecology: A critical introduction* (Vol. 16). John Wiley & Sons.
- Robinson, C. J. 1980. *The Terms of Order*. SUNY Press.
- Robinson, C. J. 2020. *Black Marxism, Revised and Updated Third Edition: The Making of the Black Radical Tradition*. UNC Press Books.
- Rojek, C., & Turner, B. 2000. Decorative sociology: Towards a critique of the cultural turn. *The Sociological Review*, 48(4), 629-648.
- Roser-Renouf, Atkinson, Maibach and Leiserowitz. 2016. "The Consumer as Climate Activist". *International Journal of Communication*, 10, 4759–4783 1932–8036/20160005.

- Rountree, H. C. 1992. *The Powhatan Indians of Virginia: their traditional culture* (Vol. 193). University of Oklahoma Press.
- Rudig, W., Jamison, A., Eyerman, R., & Cramer, J. 1991. *The making of the new environmental consciousness: a comparative study of environmental movements in Sweden, Denmark and the Netherlands*. Edinburgh University Press.
- Ruf, Jessica. 2020. "Why Environmental Studies is Among the Least Diverse Fields in STEM". *Diverse: Issues in Higher Education*. DiverseEducation.com.
- Saad, Lydia. 2019. *Americans as Concerned as Ever About Global Warming*. Gallup, Inc. <http://www.news.gallup.com>.
- Saez, E. and Zucman, G. 2016. Wealth inequality in the United States since 1913: Evidence from capitalized income tax data. *The Quarterly Journal of Economics*, 131(2), pp.519-578.
- Sahlins, M. 1998. *The original affluent society. Limited wants, unlimited means: A reader on hunter-gatherer economics and the environment*, 5, 41.
- Sanbonmatsu, John. 2004. *The postmodern prince: Critical theory, left strategy, and the making of a new political subject*. NYU Press.
- Schattschneider, E. E. 1975. *The semisovereign people: A realist's view of democracy in America*. Wadsworth Publishing Company.
- Schlozman, K. L., Verba, S., & Brady, H. E. 2010. "Weapon of the strong? Participatory inequality and the Internet". *Perspectives on Politics*, 8(2), 487-509.
- Schlozman, K. L., Verba, S., & Brady, H. E. 2012. *The Unheavenly Chorus*. Princeton University Press.

- Schüssler Fiorenza, Elisabeth. 2001. "Glossary". *Wisdom Ways: Introducing Feminist Biblical Interpretation*. New York: Orbis Books.
- Scott, J. C. 2009. *The art of not being governed*. Yale University Press.
- Seib, Christine. 2009. "Shell agrees \$15.5m settlement over death of Saro Wiwa and eight others". *The Times*. TheTimes.co.uk.
- Sklair, L. 2017. Sleepwalking through the Anthropocene. *British Journal of Sociology* 68(4): 775–784.
- Sklair, L. 2019. The corporate capture of sustainable development and its transformation into a 'good Anthropocene' historical bloc. *Civitas-Revista de Ciências Sociais*, 19, 296-314.
- Sluyter, A. 2001. Colonialism and landscape in the Americas: Material/conceptual transformations and continuing consequences. *Annals of the Association of American Geographers*, 91(2), 410–429. <https://doi.org/10.1111/0004-5608.00251>
- Smith, A. 1937. *The wealth of nations [1776]* (Vol. 11937). na.
- Smith, J. K. 2021. *The (Re) emergence of eco-fascism: white-nationalism, sacrifice, and proto-fascism in the circulation of digital rhetoric in the ecological far-right* (Doctoral dissertation).
- Smith, J. P. 2001. "Why is wealth inequality rising?". *The Causes and Consequences of Increasing Inequality*. Ed. Finis Welch. Chapter 3, 83-116. University of Chicago Press.
- Smits, D. D. 1994. The frontier army and the destruction of the buffalo: 1865-1883. *Western Historical Quarterly*, 25(3), 312-338.

- Snell, D., Fairbrother, P., & Hart, A. 2009. "Blue-green alliances: Union capacities and prospects as environmental actors". In Annual conference of the Australian Sociological Association, Canberra.
- Snow, D. A., & Soule, S. A. 2010. A primer on social movements. WW Norton. Pg. 119.
- Solway, J. 2006. The original affluent society': four decades on. The politics of egalitarianism: theory and practice. New York: Berghahn Books, 65-77.
- Somerville, S. 1994. Scientific racism and the emergence of the homosexual body. *Journal of the History of Sexuality*, 5(2), 243-266.
- Stern, Paul C. 2012. "Fear and Hope in Climate Messages." *Nature Climate Change* 2(8):572-73.
- Stewart, Charles J., Craig Allen Smith, and Robert E. Denton Jr. 2001. Persuasion and Social Movements, 4th ed. Prospect Heights, IL: Waveland, pp. 5- 6.
- Stimson, J. A. 2015. Tides of consent: How public opinion shapes American politics. Cambridge University Press.
- Stokes, Leah C. 2020. Short circuiting policy: Interest groups and the battle over clean energy and climate policy in the American States. Oxford University Press, USA.
- Storagee, Michael. 2021. "Middle Eastern Oil: A look at how the United States used Iran to gain oil exploits during the Cold War 1953-1979". Academic Excellence Showcase Proceedings. 290. <https://digitalcommons.wou.edu/aes/290>
- Strauss, A., & Corbin, J. 1994. "Grounded Theory Methodology: An Overview". In N. Denzin & Y. Lincoln Handbook of Qualitative Research. 1st ed. (pp. 273-284).
- Strauss, A.L., & Corbin, J. 1990. Basics of qualitative research: Grounded theory procedures and techniques. Thousand Oaks, CA: Sage.

- Strutz, M. L. 2008. "A Retrospective Study of Skills, Traits, Influences, and School Experiences of Talented Engineers". ASEE North Central Section Conference. ilin.asee.org.
- Sue, V. M., & Ritter, L. A. 2007. *Conducting Online Surveys*. United States of America: Sage Publications.
- Taddonio, Patrice. 2020. "Plastics Industry Insiders Reveal the Truth About Recycling". PBS Frontline. PBS.org.
- TallBear, K. 2016. Making love and relations beyond settler sexualities. YouTube. Social Justice Institute, University of British Columbia, 55, 39.
- Tarrow, S. G. 2011. Power in movement: Social movements and contentious politics. *American Political Science Review* 90.4 (1996): 874-883.
- Thapa, N., Ram, S., Kumar, S., & Mehta, J. 2021. "All electric aircraft: A reality on its way". *Materials Today: Proceedings*, 43, 175-182.
- Tokar, B., & Gilbertson, T. (Eds.). 2020. *Climate Justice and Community Renewal: Resistance and Grassroots Solutions*. Routledge.
- Trujillo, S. V. 2020. The Indigenous Materialism of Jack D. Forbes: Notes Toward a Speculative Historiography for a Future without Europe. *Theory & Event*, 23(4), 1106-1129.
- Tsing, A. L. 2015. *The mushroom at the end of the world: On the possibility of life in capitalist ruins*. Princeton: Princeton University Press.
- Tucker, W. H. 2002. *The funding of scientific racism: Wickliffe Draper and the Pioneer Fund*. University of Illinois Press.

- Turse, N. 2008. Chapter 3: The Military-Petroleum Complex. *The complex: How the military invades our everyday lives*. Macmillan.
- UNDP. 2021. World's largest survey of public opinion on climate change: a majority of people call for wide-ranging action. News Centre: [Undp.org](https://www.undp.org).
- UNFCCC. 2021. Nationally determined contributions under the Paris Agreement Synthesis report by the secretariat. Glasgow Climate Change Conference.
- UNFCCC. 2015. Paris Agreement. In Report of the Conference of the Parties to the United Nations Framework Convention on Climate Change (21st Session, 2015: Paris).
- University of North Carolina at Chapel Hill, Carolina Population Center (CPC). 2007. Measure Evaluation, (57) p. (SR-07-39| USAID Cooperative Agreement No. GPO-A-00-03-00003-00), db.jhuccp.org
- Usbeck, F. 2015. *Fellow tribesmen: The image of Native Americans, national identity, and Nazi ideology in Germany (Vol. 19)*. Berghahn Books.
- User: Craftwork. 2018. The myth of the Rojava revolution: a reading list. [Libcom.org](https://libcom.org)
- Verheggen, Bart, Bart Strengers, John Cook, Rob van Dorland, Kees Vringer, Jeroen Peters, Hans Visser, and Leo Meyer. 2014. Scientists' Views about Attribution of Global Warming. *Environmental Science & Technology* 48, no. 16: 8963–71, <https://doi.org/10.1021/es501998e>.
- Vernadsky V.I. 1998. *The biosphere*. Translated and annotated version from the original of 1926. Copernicus/Springer, New York.

- Vidal, John, Adam Vaughan, Suzanne Goldenberg, Lenore Taylor and Daniel Boffey. 2015. World leaders hail Paris climate deal as ‘major leap for mankind’. The Guardian. [Theguardian.com](http://theguardian.com).
- Wainwright, J., & Mann, G. 2018. *Climate Leviathan: A political theory of our planetary future*. Verso Books.
- Walker, Christopher, Tony Avirgan, Sheila Nevins, Gordon Durnin, David Fox, and Ian Hill. 1996. “Trinkets & beads”. New York: Faction Films.
<http://docuseek2.com/if-trin>.
- Watts, V. 2013. Indigenous place-thought and agency amongst humans and non-humans (first Woman and Sky woman go on a European world tour!). *Decolonization: Indigeneity, Education and Society*, 2(1), 20–34.
- Werfel, S. 2017. “Household behaviour crowds out support for climate change policy when sufficient progress is perceived. *Nature Climate Change* 7, 512–515.
- Whyte, K. 2017. Indigenous climate change studies: Indigenizing futures, decolonizing the Anthropocene. *English Language Notes*, 55(1), 153-162.
- Wilderson, F. 2010. *Red, white & Black: Cinema and the structure of U.S. antagonisms*. Duke University Press.
- Williams, K. 2015. *Our enemies in blue: Police and power in America*. AK Press.
- Williams, K. P. 2018. *Kayanerenkó: wa: the Great Law of peace*. Univ. of Manitoba Press.
- Woll, C. 2019. “Corporate power beyond lobbying”. *American Affairs*, 3(3), 38-55.
- Wong, J. C., & Levin, S. 2016. “Standing Rock protesters hold out against extraordinary police violence”. *The Guardian*, 29.

- Woodard, C. 2008. *The republic of pirates: Being the true and surprising story of the Caribbean pirates and the man who brought them down*. Houghton Mifflin Harcourt.
- Woodwell, G. M., Hobbie, J. E., Houghton, R. A., Melillo, J. M., Moore, B., Peterson, B. J., & Shaver, G. R. 1983. Global deforestation: contribution to atmospheric carbon dioxide. *Science*, 222(4628), 1081-1086.
- World Bank. 2021. Total greenhouse gas emissions (kt of CO2 equivalent). World Bank Development Indicators.
- Wynn, Natalie. 2021. *Envy*. Contrapoints. Youtube. Youtube.com.
- Wynter, S. 1971. Novel and history, plot and plantation. *Savacou*, 5, 95–102.
- Wynter, S. 2003. Unsettling the coloniality of being/power/truth/freedom: Towards the human, after man, its overrepresentation—an argument. *CR: The New Centennial Review*, 3(3), 257–337. <https://doi.org/10.1353/ncr.2004.0015>
- Yale Program on Climate Change Communication (YPCCC) & George Mason University Center for Climate Change Communication (Mason 4C). 2020. “Climate Change in the American Mind: National survey data on public opinion (2008-2018)” [Data file and codebook]. doi: 10.17605/OSF.IO/JW79P.
- Yusoff, K. 2018. *A billion black Anthropocenes or none*. U of Minnesota Press.
- Zikmund, William G.; Babin, Barry J. 2009. *Essentials of Marketing Research (with Qualtrics Card) 4th Edition*. Cengage Learning. ISBN 978-1439047545.
- Zikmund, William G.; Babin, Barry J.; Jon C. Carr, Jon C. 2012. *Business Research Methods (with Qualtrics Printed Access Card) 9th Edition*. South-Western College Publishing. ISBN 978-1111826925.

Appendix A. Interview Instrument

You are not obligated to answer any of the questions presented in this interview, and you may end the interview at any time. Additionally, you may request the absence of any personally identifying information from published material, and I will comply with your request.

Please tell me your name, your age, your discipline, and your research focus.

How would you describe your gender identity?

How would you describe your racial identity?

Do you have any religious affiliation?

Do you have children?

Are you a member of any political party? Which one?

How would you describe your political identification? Left, Right, etc.?

Do you think you're contributing to an effort to address climate change? How?

What efforts do you think people need to be making?

How do you feel about geoengineering?

Nuclear power?

How do you feel about carbon taxes?

How do you feel about the Green New Deal?

How do you feel about the potential for market forces to address climate change without significant government intervention?

When you think about the way climate change will unfold in the future, in terms of physical impacts and social changes, what do you picture happening?

Who do you think will be most affected by climate change in the future, and in what ways?

In 5 years, what sort of changes do you think will happen, in terms of physical changes and social changes? Please give your answer, as well as the degree to which you feel certain about this timing (out of 10). 10 years? 20 years? 50 years? 100 years?

To you, what would it mean to adequately address climate change?

Do you think this will happen? Approximately what year do you think these changes will happen, and how will they happen?

What role do you think US elections will play in this process, if any?
If not, why do you think it most likely won't be adequately addressed?

What do you base your knowledge of climate change and beliefs about the future on?
How important is firsthand experience in your sense of the future?
(have you had firsthand experience with climate change? movements)
How important is climate modelling in your sense of the future?

What emotions do you feel when you think about future climate change?

Do you have anything you'd like to say about this interview? Closing thoughts?

Appendix B. Survey Instrument

Consent to Participate in Survey

The Future in the American Imagination: Survey

Declaration of Consent to Participate in the Survey

You are invited to participate in a survey on the subject of American's imagination of the future. The goal is to better understand the way that people imagine the future, and the relationship between the ways we imagine the future and other aspects of our lives.

The survey shouldn't take much longer than **15-20 minutes**.

Participation

Your participation in this research is voluntary. Participation is defined as completing the survey.

Benefits

You will receive no direct benefits from participating in this research study. However, your responses may help all of us learn more about the significance of the ways we imagine the future.

Risks

There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life.

Confidentiality

The survey data may be used in future research publications. However, your contact information and any other sensitive information will not be published in any way. I will ask basic demographic information but nothing that could easily be used to identify you.

Contact the Researcher

If you have questions at any time about the study or the procedures, you may contact me at ztking@ucsb.edu, or my research supervisor, Professor John Foran via email at: foran@soc.ucsb.edu.

If you feel you have not been treated according to the description here, or that your rights as a participant in research have not been honored during the course of this project, or you have any questions, concerns, or complaints that you wish to address to someone other than the investigator, you may contact the University of California Santa Barbara Institutional Review Board at UCSB, Santa Barbara, CA 93106 or email hsc@research.ucsb.edu.

If you agree to take this survey, click on the box below and then click the arrow in the bottom right to continue.

I have read the above statement and agree to participate in this survey.

US Residency

Is the United States the country where you currently live? This study is focused on the American public. If you are not a US resident, please indicate this and the survey will be completed.

- Yes, I live in the United States.
- No, I am not a US resident.

Media

How much of your information about current events in the world comes from each of the following sources?

	None	A little	A lot
Social media (Twitter, Reddit, Facebook)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
News websites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Podcasts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TV news	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Radio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Printed newspapers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Printed magazines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blogs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	None	A little	A lot
Peer-reviewed academic journals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-fiction books	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nonfiction films / documentaries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People I know (friends, family, co-workers)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Future Agency and Future General

How much power do you think each of the following groups has over the way life will be in the future, from "No power" to "Tremendous power"?

	No power	A little power	Some power	A lot of power	Tremendous power
Scientists	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Politicians	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business Executives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	No power	A little power	Some power	A lot of power	Tremendous power
Ordinary Americans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How much power do each of the following types of actions ordinary people can take have over the way life will be in the future, from "no power" to "tremendous power"?

	No power	A little power	Some power	A lot of power	Tremendous power
Voting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Educating others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Choosing which products we buy or use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Joining protest marches and demonstrations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Joining organized labor action: Strikes and work stoppages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you think that human life on Earth will end in your lifetime?

- I am certain that it will.
- I am very confident that it will
- I think it is likely that it will, but I have some doubt.
- I'm not sure.
- I think it is unlikely that it will, but it is possible.
- I am very confident that it will not.
- I am certain that it will not.

How would you feel if, over the next 30 years, the wealthiest Americans were to be taxed more heavily to pay for social programs that benefit less wealthy Americans?

First rate how likely you think this is to happen, then rate how much you would support or oppose it happening.

How likely do you think this is to happen?	Not at all likely <input type="radio"/>	Not likely, but possible <input type="radio"/>	Likely, but I have some doubts <input type="radio"/>	Very likely <input type="radio"/>
Do you support or oppose this happening?	Totally oppose	Somewhat oppose	Somewhat support	Totally support



How would you feel if, over the next 30 years, regulations were put in place to reduce the power of the owners of large corporations to influence politics in the United States?

First rate how likely you think this is to happen, then rate how much you would support or oppose it happening.

How likely do you think this is to happen?	Not at all likely <input type="radio"/>	Not likely, but possible <input type="radio"/>	Likely, but I have some doubts <input type="radio"/>	Very likely <input type="radio"/>
Do you support or oppose this happening?	Totally oppose <input type="radio"/>	Somewhat oppose <input type="radio"/>	Somewhat support <input type="radio"/>	Totally support <input type="radio"/>

How would you feel if, over the next 30 years, the United States government became more willing to abide by environmental regulations negotiated by the international community?

First rate how likely you think this is to happen, then rate how much you would support or oppose it happening.

How likely do you think this is to happen?	Not at all likely <input type="radio"/>	Not likely, but possible <input type="radio"/>	Likely, but I have some doubts <input type="radio"/>	Very likely <input type="radio"/>
Do you support or oppose this happening?	Totally oppose <input type="radio"/>	Somewhat oppose <input type="radio"/>	Somewhat support <input type="radio"/>	Totally support <input type="radio"/>

How would you feel if, over the next 30 years, the United States government were to more aggressively assert American interests in the world, even against the wishes of other governments?

First rate how likely you think this is to happen, then rate how much you would support or oppose it happening.

How likely do you think this is to happen?	Not at all likely <input type="radio"/>	Not likely, but possible <input type="radio"/>	Likely, but I have some doubts <input type="radio"/>	Very likely <input type="radio"/>
Do you support or oppose this happening?	Totally oppose <input type="radio"/>	Somewhat oppose <input type="radio"/>	Somewhat support <input type="radio"/>	Totally support <input type="radio"/>

How would you feel if, over the next 30 years, the United States government began to focus much more on environmental sustainability than on economic growth?

First rate how likely you think this is to happen, then rate how much you would support or oppose it happening.

How likely do you think this is to happen?	Not at all likely <input type="radio"/>	Not likely, but possible <input type="radio"/>	Likely, but I have some doubts <input type="radio"/>	Very likely <input type="radio"/>
Do you support or oppose this happening?	Totally oppose <input type="radio"/>	Somewhat oppose <input type="radio"/>	Somewhat support <input type="radio"/>	Totally support <input type="radio"/>

Economic Insecurity

Which best describes your situation?

- I have a full-time job and am not looking for more work

- I have a full-time job and I am looking for more work
- I have multiple part-time jobs or gigs and am not looking for more
- I have multiple part-time jobs or gigs but I'm still looking for more
- I have one part-time job or some gig work but I am not looking for more
- I have one part-time job or some gig work and I am looking for more
- I do not have a job and I want one
- I do not have a job and I do not want one (can include retired)

If you suddenly had to pay an emergency expense this month equal to 25% or 1/4th of your yearly income this year, which best describes the financial situation you would be put in?

- I could afford this extra expense without taking money out of a savings account.
- I could afford this extra expense, but would have to spend some of my savings account.
- I could afford this extra expense, but would have to spend all of my savings.
- I could not afford this extra expense, but could cover it if I took on debt, such as credit card debt or a loan.
- I could not afford this expense, and do not have sufficient credit to take it on even as debt.
- My monthly expenses are paid by someone else besides me.

6 Americas Question Block

The following section asks about climate change. Climate change, also called global warming, means all of the changes to the Earth's climate caused by the average increase in global temperatures.

How important is the issue of climate change to you personally?

- Not too important.
- Somewhat important.
- Very important.
- Extremely important.

How worried are you about climate change?

- Not very worried
- Somewhat worried
- Very worried

How much do you think climate change will harm you personally?

- Not at all
- Only a little
- A moderate amount
- A great deal

How much do you think climate change will harm future generations of people?

- Not at all
- Only a little
- A moderate amount
- A great deal

Rapidity of Climate Change Impacts

How confident are you that humanity will find a way to stop human-caused climate change?

- Totally confident
- Very confident
- Somewhat confident
- A little confident
- Not at all confident
- I don't believe in human-caused climate change.

The world's governments have had some debate about how much warming from climate change to allow in our global climate system, above what the average temperatures used to be before human-caused climate change started. How much temperature increase do you think the world's governments should allow?

- None; there is no safe temperature increase
- 1 degree Celsius / 1.8 degrees Fahrenheit
- 1.5 degrees Celsius / 2.7 degrees Fahrenheit
- 2 degrees Celsius / 3.6 degrees Fahrenheit
- 3 degrees Celsius / 5.4 degrees Fahrenheit

- 4 degrees Celsius / 7.2 degrees Fahrenheit
- 5 degrees Celsius (or more) / 9 degrees Fahrenheit (or more)
- I don't believe in human-caused climate change

By what point will it be too late to take effective action to stop the worst harms of climate change?

- It is already too late
- 1-5 years
- 5-15 years
- 15-30 years
- 30-50 years
- More than 50 years
- It is never too late
- I don't believe in human-caused climate change, or don't believe it will cause much harm
- Climate change has already been stopped.

Solving climate change could require big changes to how the American economy and society work. Should these changes happen

quickly, or slowly?

- Change must be extremely fast
- Change must be very fast
- Change must be somewhat fast
- Change must be somewhat slow
- Change must be very slow
- Change must be extremely slow
- I do not believe in human-caused climate change
- I believe in human-caused climate change, but do not think big changes should be made.

Extremity of Climate Impacts

How **likely or unlikely** do you think the following events are to eventually occur if humanity does not do more than is presently being done to stop climate change?

Certainly will not happen	Very unlikely to happen	Unlikely, but possible	Likely, but I have some doubts	Very likely	Certainly will happen
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	Certainly will not happen	Very unlikely to happen	Unlikely, but possible	Likely, but I have some doubts	Very likely	Certainly will happen
Rising seas will flood most of the world's coastal cities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Extreme weather events and disasters will grow in strength and frequency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Food shortages will occur and starvation will increase.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Millions more people will be forced to migrate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A major collapse of the social order (economies, governments) around the world will occur.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Humanity will die out.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Approximately **when do you think these events will happen**, if humanity does not do more than is presently being done to stop climate change?

	This will never happen	Already happening	1-5 years from now	5-15 years from now	15-30 years from now	50 or more years from now
Rising seas will flood most of the world's coastal cities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Extreme weather events and disasters will grow in strength and frequency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Food shortages will occur and starvation will increase.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Millions more people will be forced to migrate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A major collapse of the social order (economies, governments) around the world will occur.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	This will never happen	Already happening	1-5 years from now	5-15 years from now	15-30 years from now	50 or more years from now
Humanity will die out.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Climate Change Policy Positions

How **important** is each of the following actions an individual could take for addressing climate change?

	Not at all important	Somewhat important	Very important	Extremely important
Voting and campaigning for politicians who will address it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Individuals personally lowering their impact on climate change through what they buy and use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not at all important	Somewhat important	Very important	Extremely important
Working to educate others about climate change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Joining in protest movements and demonstrations for action on climate change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organizing workers in unions to use their power to push for action	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How **involved** are you **right now** in each of the following ways an individual can address climate change?

	Not at all involved	A little involved	Very involved	Heavily involved
Voting and campaigning for politicians who will address it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not at all involved	A little involved	Very involved	Heavily involved
Personally lowering my impact on climate change through what I buy and use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working to educate others about climate change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Joining in protest movements and demonstrations for action on climate change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organizing workers in unions to use their power to push for action	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How *important* are each of the following actions people broadly could support for addressing climate change?

Developing new technologies to create transportation and energy alternatives	<input type="text"/>
Developing new technologies to reverse the effects of climate change	<input type="text"/>

Government action to deploy, support, and promote existing low-carbon technologies	<input type="text"/>
Government regulations that force companies to slow and stop the production and burning of fossil fuels	<input type="text"/>
Social movements to force corporate and government action on climate change	<input type="text"/>
Consumer choices creating pressure on companies to stop making climate change worse	<input type="text"/>

How much do you **support or oppose** each of the following different kinds of climate change solutions?

	Strongly oppose	Somewhat oppose	Somewhat support	Strongly support
Building new nuclear power plants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Launching substances into the atmosphere that would block some of the sun's heat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New taxes on pollution that could cause gasoline to become more expensive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly oppose	Somewhat oppose	Somewhat support	Strongly support
New taxes on pollution combined with rebates for low-income people to get back the extra money they spend each month on things like gasoline	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Building more solar and wind power to generate renewable energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New taxes on the wealthiest Americans and large corporations to pay for a transition to an environmentally friendly economy and green jobs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cutting the US military budget to pay for a transition to an environmentally friendly economy and green jobs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Demographic Questions

What is your year of birth?

Which of these best describes your gender identity?

- Genderqueer/Nonbinary
- Female
- Male
- Other (please enter)

What racial categories describe you? You may choose more than one.

- | | |
|--|--|
| <input type="checkbox"/> Native American | <input type="checkbox"/> South Asian |
| <input type="checkbox"/> Mixed Race | <input type="checkbox"/> Native Hawaiian or Pacific Islander |
| <input type="checkbox"/> SWANA (South West Asian and North African)/Middle Eastern | <input type="checkbox"/> African/Black |

- White/European
- East Asian
-

- Latino/Latina/Latinx
- Other

Which of the following best describes your sexual orientation?

- Heterosexual/Straight
- Bisexual
- Pansexual
- Homosexual/Gay/Lesbian
- Asexual
- Queer

Do you have any children? If so, how many?

Are you:

- Single
- Partnered
- Married

Do you have any religious affiliation? You may choose more than one.

- No Religious Affiliation
- Reform Judaism
- Orthodox Judaism
- Unaffiliated or Other Jewish
- Catholic
- Southern Baptist Convention
- United Methodist
- Mormon / Church of Jesus Christ of Latter-Day Saints
- Church of God in Christ / Pentecostal
- Other Christian denomination
- Non-denominational Christian
- Muslim
- Buddhist
- Sikh
- Hindu

Other (please write)

Which political party do you tend to vote for most often?

- Republican
- Democrat
- Green Party
- Libertarian Party
- Other (please write)
- I don't usually vote

Which best describes your political position?

- Liberal
- Conservative
- Centrist
- Further left than liberal
- Further right than conservative
- Apolitical / No political affiliation / Not sure

Other

What is the highest level of schooling you have completed or the most advanced degree you have received?

- No degree or diploma
- Elementary school (kindergarten to 6th grade)
- Junior high school (approximately 6th to 9th grade)
- High school
- Some college but no degree
- Associate degree in college (2-year)
- Bachelor's degree in college (4-year)
- Master's degree
- Doctoral degree
- Trade school / Technical degree

What is the average combined annual income of your household before taxes? This would include you and, if you live together, your

spouse. If you live with your family, it can include your family members with income as well.

- Less than \$12,500
- \$12,500-\$14,999
- \$15,000-\$29,999
- \$30,000-\$74,999
- \$75,000-\$149,999
- \$150,000-\$499,999
- \$500,000 and above

What was the combined annual income of your parents or primary caregivers when you were 16 (if they covered at least half of your financial support)?

- Less than \$12,500
- \$12,500-\$14,999
- \$15,000-\$29,999
- \$30,000-\$74,999
- \$75,000-\$149,999
- \$150,000-\$499,999
- \$500,000 and above

- I did not have parents or primary caregivers who provided at least half of my financial support when I was 16.

Which of the following industries most closely matches the ones in which you are most regularly employed within the past 5 years? You may choose more than one.

- Arts, entertainment or recreation
- Construction
- Mining
- Management of companies or enterprises
- Transportation or warehousing
- Professional, scientific or technical services
- Health care or social assistance
- Wholesale trade
- Information technology
- Forestry, fishing, hunting or agriculture
- Waste management services
- Utilities
- Accommodation or food services
- Finance or insurance
- Manufacturing

- Retail trade
- Educational services
- Real estate or rental and leasing
- Other (please fill in)
- Public administration / Government
- Not regularly employed within past 5 years
- Military or Law Enforcement
- Private security

Which US state do you live in?

We ask your zip code to help study how opinions vary by location.
You will still remain anonymous.

What is your zip-code?

Would you describe the place you live as primarily rural, urban, or suburban?

- Rural
- Urban
- Suburban

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