This will Change Everything: Teaching the Climate Crisis

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Abstract

We argue that U.S. sociologists have been woefully remiss in incorporating the climate crisis into our research agendas and even more, into our teaching. After laying out the gravity of the situation we issue a call for sociologists to consider whether they wish to continue this striking denial of responsibility to our students and to knowledge production.

We then present four ways that we have infused our understanding of climate change, climate crisis, and climate justice into courses on global issues, social movements, inequality, and much more. We believe that "climate justice" – the key concept that drives our concern as scholar-activists working closely with undergraduate students – allows for a proper sociological emphasis on structured inequality and relational/intersectional thinking.

The essay also points interested readers to resources that we have created, and invites them to contribute to a new project on writing case studies for teaching the climate crisis.

This Will Change Everything: Teaching the Sociology of the Climate Crisis

The New Situation:

New realities have always called for new paradigms, and sociology--the study of everything--is built on the foundational work of scholars such as Karl Marx and Max Weber, who grappled with explaining the rise, functioning, and future of capitalism in the nineteenth and early twentieth centuries. The most original and critical twentieth-century social science rose to the challenge of keeping up with the changes that followed: corporate control of the global economy; the great social revolutions; the rise of movements demanding human rights for women, people of color, gendered others, and for people generally, and, now, people's responsibilities toward animals, the planet, and the future we hope to have.

While doing this work, however, sociology lost some of its critical punch, reducing too many of us in the social sciences in the US to specialists writing largely for each other. Nowhere has this been as dramatic as in the striking inattention of both mainstream and critical intellectual currents to issues of environmental and climate-induced destruction in the early twenty-first century, even as their effects have become inescapable realities.

The relative absence of the climate crisis from social science discourse demands immediate attention, as the academy, like humanity itself, now must scramble to address the existential question of climate change, and to do so with urgency. In the past few years, a new generation of scholars, teachers, and activist intellectuals has been prompted to create new fields in response to this omission, specifically a sociology of the climate crisis and a sociology of climate justice, alongside the movement that bears the same name. These scholars and their allies have begun to forge a new understanding of the climate crisis within every field of sociology and across the social sciences, humanities, natural sciences, and education, both in the university and among public and movement intellectuals.

Our appeal to focus sociology on the climate crisis is grounded in a decades-old call for the social sciences and humanities to take on this issue, the physical realities which the earth sciences have long understood. Two decades ago, environmental scientist Jane Lubchenco (1998:491) put it eloquently:

> Urgent and unprecedented environmental and social changes challenge scientists to define a new social contract.… The new and unmet needs of society include more comprehensive information, understanding, and technologies for society to move toward a more sustainable biosphere – one which is ecologically sound, economically feasible, and socially just. New fundamental research, faster and more effective transmission of new and existing knowledge to policy- and decision-makers, and better communication of this knowledge to the public will all be required to meet this challenge.

Scholars from diverse disciplines have echoed and answered her call. Paul Sabin (2010) argues that historians have an important role to play in shaping the historical interpretations and myths that inform climate policy dialogues. Sherilyn MacGregor (2010) urges greater inclusion of feminist perspectives on climate change in the social sciences, highlighting a lack of conversation between scholars of feminism and scholars of climate change – exactly the kind of gap we hope to bridge with our call for climate justice pedagogy and scholar activism. Lisa Kretz (2012) brings ethics to bear on climate change, examining the gap between

theoretical commitments and action. Geoff Mann and Joel Wainwright's *Climate Leviathan* (2018) advocates a political theory of climate futures with key insights for teaching climate justice in political science and theory. The arts and humanities have equally significant contributions to make. The Association of Literature and the Environment's 2018 co-presidents placed climate justice front and center in their mission statement; the association's journal, *Interdisciplinary Studies in Literature and Environment*, published a special issue devoted to climate change in 2014 (Volume 21, Issue 1). It includes Siperstein's (2014) "Teaching Climate Change," a poem pondering how teachers might guide students to manage the severity of the crisis and to search for solutions. Alaimo's powerful "Bring Your Shovel!" (2014) offers another literary call to arms to develop climate resilience. The Banff Center for Arts and Creativity (known for supporting artists and filmmakers) is dedicating their 2018 conference to Beyond Anthropocene (https://www.banffcentre.ca/programs/beyond-anthropocene-banff-research-culture-bric-0). Media scholar Janet Walker and environmental attorney Ariel Nelson (Forthcoming) bring their respective lenses of analysis to bear on the *Juliana v. United States* case in which youth are suing the United States for violating their right to life, liberty, and property by not advancing climate justice. In sum, many disciplines are enhancing understanding and calling for action around climate change.

Despite this recognition of the need for scholarship on climate justice and climate crisis, there are only a few resources for parallel pedagogies. Burnham et al. (2014) highlights geography's potential to contribute to climate justice in an article and teaching and learning guide in *Geography Compass*. Selin (2016), an earth and planetary scientist, examines teaching strategies and learning outcomes for incorporating UN climate summits into teaching, outlining an approach similar to one we explore in this article. Meadows, Sweeney, and Mehers (2016) offer *The Climate Change Playbook* with games for encouraging systems thinking and effective climate change communication in the classroom, while Siperstein, Hall, and LeMenager explore useful pedagogical strategies in their anthology *Teaching Climate Change in the Humanities* (2017). NGOs are also publishing teaching tools, including the Mary Robinson Foundation's *The Geography of Climate Justice* (2011) and the NAACP's *Teaching Intersectionality and Environmental Justice in Our Classrooms* (n.d.), a publication whose first line highlights climate science. Institutions are also responding to the lack of systematic and collaborative teaching resources for teaching climate change through initiatives such as the University of California and California State University System UC-CSU Knowledge Action Network to bring climate change teaching insights and resources together for college and K-12 classrooms

[http://climatechampions.ucop.edu/uc-csu-knowledge-action-network-for-transformative-climate-and-sustainability-education-and-action/#07e637130bad09562]. Here, we take up Lubchenco's call within the particular context of sociology, stressing the need for sociological pedagogy to grapple with this new social contract of climate crisis.

Climate science is clear that the business as usual (BAU) economic model of the current phase of capitalist globalization will take average world surface temperatures past a two degrees Celsius (3.6 degrees Fahrenheit) rise compared with the pre-industrial revolution early 1800s. This two degrees is best understood as the boundary between "extremely dangerous" and "chaotic" levels of climate change (Anderson). Consider the following: to have a 66 percent chance of staying under two degrees, there is a total remaining carbon budget of about 500 tons of carbon dioxide (for simplicity other greenhouse gases are left out of these calculations). In recent years, the world has been burning through more than 30 tons of this total annually. Based on these calculations, a BAU approach gives only a two-thirds chance of avoiding social and political chaos by the year 2035 or so.

The situation is far worse than this data. The proven reserves held by the coal, gas, and oil companies and countries come to five times the amount of fossil fuels that can be burnt for the rest of the century. In addition, climate science has established the threshold of 1.5 degrees celsius as a safer upper limit for staving off climate change-precipitated chaos. Indeed, climate "disruption" has grown as temperatures have blown past the 1.0 degree mark. This data addresses only average surface temperature warming: what counts is the impact of this change on food systems, fresh water supplies, ocean life, and the air we breathe. There will also be an increase in the number of devastating storms, droughts, floods, fires, and so on, all of which will vary by region. Moreover, elementary social science suggests that current and subsequent decades will witness dangerous social, economic, and political consequences, including massive migrations--possibly of up to several billion people--away from flooded coastal cities.[1] Other possible consequences include chronic wars and other forms of violence over food, land, and water. Social, economic, and political instability could lead to the end of democracy and a resurgence of authoritarian, omni-surveillant, militarized states across most of the globe. "In 2013, James Clapper, the highest-ranking intelligence official in the United States, testified to the Senate that 'extreme weather events (floods, droughts, heat waves) will increasingly disrupt food and energy markets,

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[1] According to the United Nations Environmental Program (UNEP), fifty percent of the world's people live within forty miles of a coastline, and three-quarters of the world's large cities are on the coast.

exacerbating state weakness, forcing human migrations, and triggering riots, civil disobedience, and vandalism'" (quoted in Ghosh 140). Though the Obama administration's concern with vandalism seems quaint, the Trump intelligence agencies are being obliged to cannot even mention the term "climate change." A lucid look at these social facts suggests that variants on these scenarios become increasingly probable with every tenth of a degree rise above 1.5 degrees celsius.

This looming crisis means dropping BAU sociology and scholarship in the BAU university, in favor of transforming what, how, and who we teach. Call this potential sea change the first pillar of the new sociology of climate change. As public intellectual and climate activist Naomi Klein puts it: *This Changes Everything*.

Toward a Sociology of the Climate Crisis:

What might a sociology of climate change look like? In 2011, English sociologist and social theorist John Urry made a path-setting contribution in *Climate Change and Society*, and Danny Chivers' contemporaneous *No-Nonsense Guide to Climate Change* is still one of the best short overviews of the climate crisis. The 2015 American Sociological Association anthology edited by Riley Dunlap and Robert Brulle, *Climate Change and Society: Sociological Perspectives*, with important chapters on "Climate Justice and Inequality" and "Civil Society, Social Movements, and Climate Change," authored by Sharon Harlan, David Pellow, and Timmons Roberts (with Shannon Bell, William Holt, and Joane Nagel), and by Beth Caniglia, Robert Brulle, and Andrew Szasz, respectively. These are some of the key U.S. players in the new sociologies of climate and environmental justice of which we are in need. Finally, as we mention above, there is now the edited collection *Teaching Climate Change in the Humanities*, with an "Afterword" by Bill McKibben, which should be on every teacher's bookshelf.

Our own scholarship points to two crucial areas of study inside a sociology of climate change: the crisis itself and the movements that seek to resolve the crisis. The terms "environmental justice" and "climate justice" refer to a set of insights and practices that center the effects of environmental decision-making and climate change on the stakeholders and communities who are most affected by them but who are least responsible for them and who often possess the fewest resources to adapt to such policies. These populations live on the "frontlines" of the climate problem--from low-lying island nations to the Global South to communities of color and low-income areas across the United States.

Moreover, the concepts of environmental and climate justice are consonant with the educational goal of the United Nations' 2030 Agenda for Sustainable Development adopted in 2015 and expressed in Sustainable Development Goal 4.7: "To ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development" (United Nations 2015).

The sociology now required can be defined as the study of everything about the climate crisis and its possible trajectories. The first principle of this sociology is that everything is connected to everything else--the first principle of ecology, or the worldview of Buddhism (Batchelor). Two further principles follow from this foundation. Empirically, our present moment and the foreseeable future can be viewed as a *triple crisis* of economics, democracy, and violence in the context of cultural and ideological change. We are living through several profound deteriorations in the quality of life on earth: 1) a deep and persistent economic crisis manifested in global economic uncertainty and inequality, including vast gender, racial/ethnic, and national disparities; 2) a crisis of democracy as governments and political parties fail to live up to public expectations in many regions of the world, and 3) a growth in militarism and violence as a result of both the economic crisis and the democratic deficit. The nodes of this triple crisis are bound together by and exacerbate the increasing likelihood of climate chaos. The interdependency of the crises means that holistic and relational thinking are essential to confront climate change and to create climate justice.

The theoretical and methodological counterparts to this "wicked problem"[2] invite us to practice a "transboundary" sociology. Instructors and students need to learn to connect the dots in confronting the climate crisis leading to the breaking down of traditional disciplinary boundaries in our paths. Thus, we must embrace the proactive challenge of injecting the implications of the climate and environmental crises (and consider making this the central academic enterprise for

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[2] A "wicked" problem is "difficult or impossible to solve because of incomplete, contradictory, and changing requirements that are often difficult to recognize" (Wikipedia, citing the Australian Public Service Commission). Climate change may in fact be considered a *super* wicked problem, characterized by three further features: 1) time is running out, 2) those seeking to end the problem (humans, and more precisely, global elites) are also causing it, and 3) it is a global collective action problem overseen by at best a weak central authority (as anyone who has ever witnessed a U.N. climate summit can attest) (Levin et al.).

the foreseeable future) into our teaching across the disciplines, from introductory classes to courses on gender, race/ethnicity, social change, social movements, globalization, culture, and much more.

If we are concerned about the possible state of the world in, say, 2050, then scholars will have to analyze the future better and more intensively than we currently do. Responding to the world's calls for climate justice entails entertaining visions of different futures, and a distinctive feature of teaching in this context involves envisioning scenarios of change and transformation and encompassing creative endeavors by artists, writers, and performers who can help re-imagine the seeming inevitability of climate chaos into a society where there is hope.

Four Perspectives on Teaching Climate Justice

Climate Justice and Scholar-Activism in the Case Study Classroom – John Foran

My teaching, research, and public sociology/activist scholarship changed irrevocably after I witnessed the global climate justice movement in action at the two-week long alternative Klimaforum that shadowed the UN climate summit in Copenhagen in 2009. Here I encountered such voices as Naomi Klein, Bill McKibben, and Mohamad Nasheed, ex-president of the Maldives. Studying the causes of twentieth-century revolutions enabled me to take up the causes of contemporary social movements for radical change. As a result of this work, I have seen that if it can reach its potential the global climate justice movement is potentially an unprecedented transformative force for change.

Because more conventionally-oriented academics often are skeptical (always a good thing) or dismissive (not so good) of scholarship that is informed by and informs activism, I want to make a brief argument about the methods, techniques, theories, and value of scholar-activism and public scholarship.

Participatory action research (PAR) is a methodological approach intended to disrupt the traditional boundaries and hierarchies between scholars and research subjects, allowing for both groups to engage one another in the processes of knowledge production (Gaventa and Cornwall). In the PAR model, choices concerning research questions, research design, data collection and analysis, conclusions, and publishing are often made in collaborative, consensus-based ways rather than unilaterally or by fiat by university scholars. The underlying assumption and intention is that more democratic research methods will produce

more rigorous scholarship that reflects greater respect and accountability across traditional university-community and other unequal divides.

There are significant and sometimes underappreciated advantages to the study of social movements by scholar-activists. These include the access that is afforded to the movements themselves, of course, by our participation in them, the collection of richer data by our presence at both mundane and key moments of social movement self-creation, and the cultivation of a depth of understanding that occurs in forming relationships of trust. This form of research also has more subtle advantages: participation, whether as ordinary members or in leadership capacities, provides opportunities to directly test and refine our ideas of how such movements form, grow, and sometimes succeed. Each of the authors have seen this on more than one occasion in our own lives, and know that it is a mutually enlightening, enjoined experience for scholars to become activists and for activists to become agents of theoretical, conceptual, and empirical knowledge production. It seems quite certain that social movements will never be fully understood – let alone aided in their objectives – by remaining entirely outside them.

This way of learning is more important than ever due to Trumpism and the climate crisis, both of them glacial and deadly. It can inform our teaching and transform our students' lives. The courses I now teach include Sociology 134EC: Earth in Crisis, Sociology 134CJ: Climate Justice, Sociology 134A: Activism (discussed below by Corrie Grosse), and most recently, Sociology 130SD: The World in 2050: Sustainable Development and Its Alternatives.[3] These courses offer some of the techniques and best practices discussed by all three of my co-authors below; in fact, all three have been teaching assistants in them, and I now include them among my own teachers because of their visionary, next-generation brands of scholarship, teaching, and activism.

One pedagogical technique that has been particularly effective for teaching about the climate crisis is the case method. The case method is a student-centered, interactive pedagogy which changes the classroom process into a collective search for an analysis and/or solution to a specific problem based on a "case." The case provides information about a situation, without analyzing it. In other words, it is much more a story than a standard journal article. Students encounter the "facts" much in the same way as historical actors do – finding them messy, partial, ambiguous. The job of the students, with their instructors, is to fashion solutions to the problem presented in the case through a process of facilitated dialogue. The

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[3] These syllabi can be found on the website of The Climate Justice Project (http://www.climatejusticeproject.org/pedagogy/).

case method allows students to build confidence in defining, confronting, analyzing, and solving problems through interactive discussions, by constructing analytic bridges between theory and data, and by exercising and developing skills in both public speaking and group problem solving.[4]

The case method revolves around discussion and role-playing—both highly collective exercises. One might think of the class as a group of community members or colleagues, a team of government ministers, or members of a political party, who have been asked to work together on a problem. At other times students play a single central protagonist facing a seemingly intractable predicament. The typical "flow" of a case discussion in my classes starts with a series of factual questions that set the scene and allow students to enter the discussion comfortably at a low barrier to participation, followed by a lively role play,[5] in which they "inhabit" the case and debate the terms of the dilemma (sometimes this ends with a vote on a set of alternative courses of action) and then stepping out of their roles and moving on to an extensive analytic section in which the larger implications of the discussion are drawn out.

I have used this method to tremendous effect in my courses that dealt with issues of development and social revolutions in the Global South. Together with a group of talented graduate students and the help of grants from the American Sociological Association grant, I helped create a set of cases that could be used in such classes, as well as a website for teachers of the case method (http://www.soc.ucsb.edu/projects/casemethod/intro.html). The method can and has been adapted in less rigorous forms by many of us. Cases can be found anywhere, from the news to everyday life, and good teachers bring them into the classroom all the time. The extended role play, as described by Theo LeQuesne

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[4] This characterization of the goals of the case method, and some of the procedures and classroom processes described later in this essay are adapted from the course syllabi of professors Louis L. Ortmayer of Davidson College and Brian Mandell of the Kennedy School of Government, Harvard University, who in turn adapted it from David Schodt of Saint Olaf College. Thanks are also due to John Boehrer, former director of the Pew Faculty Fellowship in International Affairs, Kennedy School, Harvard, and director of teaching resources for the Electronic Hallway, Evans School of Public Affairs, University of Washington.

[5] My instructions to role players include: "Study what is told to us about your character. Then think about what your character's point of view would be on the issues raised in the case. You should use your own words to capture the flavor of the character in the role play (don't read the text back to us) and are encouraged to try to go beyond what is given to us to make arguments about the issues at hand, as long as you keep within what is known about the character. By the way, use the first person when you speak: 'I say we should do this,' – inhabit the person you are playing, let yourself act!"

below, is a useful experience for undergraduates and the deep learning that occurs can be qualitatively different than with lecturing based on the usual classroom materials of scholarly books and articles. As Summer Gray shows below, the same can be said of the use of visual materials, including film, as "cases" for analysis.

The dilemma for using the method in teaching about the climate crisis today is that we lack a body of case materials for these subjects, and that gap is one that we must close as soon as possible. One promising initiative is the UC Case Studies in the Environment which can be viewed at http://cse.ucpress.edu/. We must support this and develop our own cases around the climate crisis and the social movements that confront it.

Envisioning Sustainable Futures and Other Tools of Reflection – Summer Gray

Marx told his children stories on long walks across London's Hampstead Heath. A Sunday afternoon ritual, these wanderings were said to entertain spontaneous worlds with characters and plots brought to life by the untethered imagination of a serious mind on its day of rest. Over the years, an endless book unraveled, tucked away and concealed in the intimate and illegible space of Marxian fatherhood and a slew of childhood memories. I have often wondered what stories came to light in this playful exchange, what solutions might have been worked out in the lighter moments of an intellect burdened by such a profound calling as *to change the world.* Letting go of any hope to excavate the true content of Marx's unwritten tale – I will leave that to the biographers and historians – I imagine (with creative license) that his stories involved harrowing accounts of a planet on the verge of transformation, perhaps not much different than the world we inhabit today, with its many problems and unrealized possibilities.

Storytelling, in this sense, is more than a companion to critical thought. It is a quintessentially human exercise that produces its own problems and unrealized possibilities. While the tendency to produce "grand narratives" has been heavily criticized for good reasons, it is worth noting that no critique is possible without a narrative of injustice, however large or small, nuanced or straightforward, empirical or theoretical, entertaining or mundane. Such stories provide a platform for envisioning alternatives, and as Frederic Jameson (2005) cautions, we must not abandon the intellectual architecture or our untapped talent for imagining utopian futures. While Marx was a closet storyteller in his time, I like to imagine that if he roamed the parks of London today, he might be friends with China Miéville, Kim Stanley Robinson, Saci Lloyd, Franny Armstrong, Amitav Ghosh, and other pioneers of climate storytelling, blurring the boundaries between fiction and nonfiction in order to envision a way out of the climate crisis.

What does this mean for the students of today, who must now confront – and be invited to confront – a host of new oppressions and existential crises posed by climate change? I believe it means that we must move beyond traditional modes of teaching and learning, returning to the roots of critical thought while engaging fully in the arts of storytelling.

There are limitless pedagogical possibilities for integrating storytelling into the curriculum, including the most obvious example of including fiction and film in the course syllabus.[6] I have used Octavia Butler's *Parable of the Sower* and Jonathon Porritt's *The World We Made* in my own courses, and John Foran has used novels such as Saci Lloyd's *Carbon Diaries* and films such as Franny Armstrong's *The Age of Stupid* with great success. There are of course other methods for engaging in storytelling that allow students to play a leading role. Corrie Grosse once asked students to collectively write a fictional account of the world in 2050, which resulted in a spectacular display of handwritten notes and drawings tacked onto a roll-out paper timeline.

One of my favorite tools for engaging in storytelling is filmmaking, made possible by the increasing accessibility of cameras and film editing software. In the digital age of corporate capitalism, the tools of representation are no longer monopolized by corporate media, but are at the fingertips of our students. While at the University of California Santa Barbara (UCSB) I collaborated with John Foran, Corrie Grosse and undergraduate students to film and document activism surrounding the U.N. Climate Treaty Negotiations in Poland. Through this process, I learned how to hold a camera and make short films in a matter of hours – a trick that doesn't require special training thanks to the user-friendly interfaces of modern technology.

More importantly, I found that the process of editing film footage mirrors qualitative processes widely used in sociological research. For example, filmmaking involves a careful study of the acquired information, a coding system, analysis, and a decision about how to construct a narrative. Each "draft" or "cut" exposes the multiple phases typically obscured in the writing process, making the social process more visible, accessible, and open to debate.

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[6] For a discussion of the new climate fiction – "cli-fi" – as a genre, see Manjana Milkoreit, and for a set of short stories actually developed by students at the Arizona State University, Milkoreit, Martinez, and Eschrich. Restore name. presents an annotated guide to films and video shorts on climate issues.

As a teaching assistant, I began to work with students to create spontaneous short films in the classroom, including one in which students looked into the camera while holding a message about climate change (https://www.youtube.com/watch?v=C5mVCuokAkY) and another in which students created a collective portrait of climate justice through an image and two sentences each (https://www.youtube.com/watch?v=mSjePFsSMoA). [URL removed]. I was surprised at how meaningful these projects became to the students because of the many voices and the diverse ways of thinking that were engaged in the process of making them. In a reflection paper about the film experience, one student wrote: "I am in awe of our class. The words, which I think were the most impactful aspect, came from our minds. With about two sentences each, we managed to come up with a product that defined climate justice in all of its many facets, called the listener to action, and most importantly, evoked genuine emotion."

One could call this method "cinematic sociology," a term utilized by Joyce Sebag and Jean-Pierre Durand who use documentaries to create a site for deconstructing social problems. In an interview for *Global Dialogue*, a newsletter of the International Sociological Association, Joyce Sebag explains: "We do research to create this space for reflection, and as a way to debate with people who are not in the situation of being a sociologist, and, at the same time, to create something new. It is a meeting place ... a way to enter into a multiplicity of points of view."

I would like to push "cinematic sociology" one step further, to include students in the filmmaking process as a form of visual writing and as a pedagogy of critical storytelling. As I design new courses on climate justice, I can envision an assignment in which students work in groups to turn the same sampling of raw footage into a story, and then discuss how the narrative structure differs from one group to another. The use of film in this way would help students to engage in the methods of the qualitative social sciences and humanities while also becoming aware of how critical the construction of narratives is for the purpose of imagining sustainable futures.

Think of it as a modern day walk with Marx on the Hampstead Heath, accompanied by the students of today and their nascent potential to blend sounds, images, and words into powerful analyses of the climate crisis.

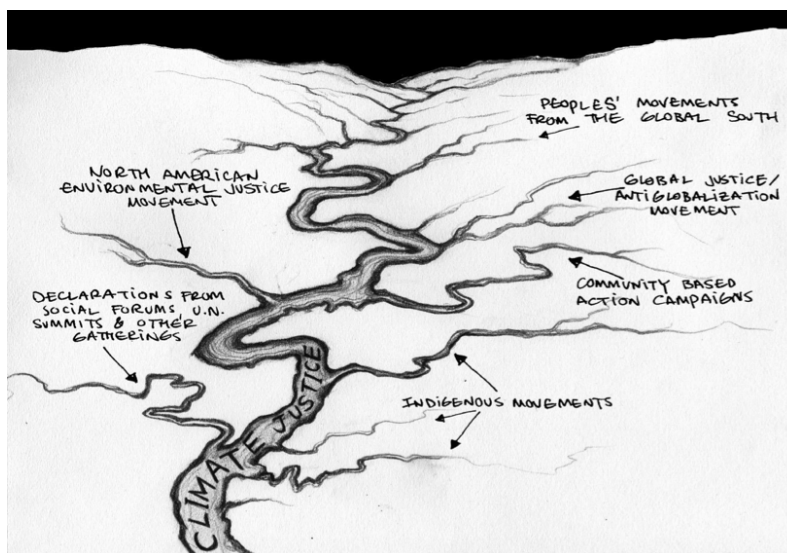*Teaching Feminist Climate Justice – Corrie Grosse*

Teaching climate justice must embrace a feminist approach, what I call a feminist climate justice imagination. Feminist scholars have long emphasized how injustice and paths toward justice are best understood from the perspective of the most marginalized communities. Climate change is no different. Throughout the world and across classes and racial and ethnic identities, women are affected first and worst by climate crisis. Solutions that prioritize women's and other marginalized communities' knowledge and experience will be most capable of creating the kinds of "feminist futures" (Bhavnani, Foran, and Kurian) needed to imagine alternatives that might transform society, or even replace capitalism!

Similarly, teaching climate justice could prioritize the lived experience of women and reveal how their oppression, exploitation, and marginalization by capitalist development or cultural and social norms is linked to climate crisis. A course on feminist climate justice need not be entirely devoted to issues of gender and women. At minimum, however, it should begin from an understanding of inequalities and draw from a diverse set of perspectives of feminist scholars and activists. Synthesizing this information, the course would strive to develop a shared definition of feminist climate justice – what Gaard terms "ecofeminist climate justice" – with which to study climate justice. I turn to experiences in two sociology courses, "Feminist Climate Justice and Activism," taught at University of California Santa Barbara in 2015 and 2014, to offer methods for teaching feminist climate justice.

All courses focused on climate change and social justice have the potential to be and, I argue, *should be* feminist climate justice courses, whether or not the majority of the content is devoted to this idea. Feminist climate justice can be a topic, but it is more importantly a *lens* of analysis, as basic a principle as the sociological imagination. A feminist climate justice imagination will resonate with anyone employing a sociological imagination in today's world, if it is based on the actual experiences of people. Our personal biographies shape and are shaped by a climate crisis with inequality at its roots, an inequality that affects each of us differently depending on the "configuration" (Bhavnani and Bywater) or "intersection" (Crenshaw) of our various identities. There are at least two ways to infuse an existing course with a feminist climate justice imagination. These methods can also serve as springboards for a course devoted to the topic.

First, imbue the course with a feminist climate justice imagination on day one. In 2015, I opened the new course Feminist Climate Justice (see syllabus at http://www.climatejusticeproject.org/pedagogy/) with a brief introduction to environmental justice and climate justice. Key insights from both include the environmental justice movement's definition of environment as where we live,

work, and play, and climate justice's attention to historical responsibilities for climate change, capitalism, and inequality as root causes of the crisis, and to the injustices of proposed "solutions" – targets like two degrees Celsius (a level of warming that would raise sea levels enough to submerge many small island nations).[7] I introduced Image 1 from Moore and Russel, illustrating the interconnections of social movements that are coalescing around the struggle for climate justice.

For the concept of "climate justice," I highlighted two definitions by U.S.-based activists:

> Climate justice includes a focus on the root causes of climate change and making the systemic changes that are therefore required, a commitment to address the disproportionate burden of the climate crisis on the poor and marginalized, a demand for participatory democracy in changing these systems which require dismantling the fossil fuel corporate power structure, and a commitment to reparations and thus a fair distribution of the world's wealth. – Rebecca Hall (2013)

> [C]limate action [like environmental action] is not always action for climate *justice* [or environmental justice]. Depending on the theory of change and strategies you are employing, the action must either, and ideally in combination advance a *rights-based agenda* consistent with

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[7] See Seager (2009) on the problems with a two degrees target. For an excellent summary of the term climate justice and its core components, see Bond (2014) and the Bali Principles of Climate Justice (2002).

the frameworks established collectively by the international climate justice movement; take *leadership* from and *be accountable* **to** those most directly impacted and least responsible; or engage in *community struggles* on the root causes of climate change. – Gopal Dayaneni (2009, emphases mine)

I described feminist climate justice as a focus on women's experiences, on gender inequalities, and generally on the lives of marginalized communities, drawing on feminist perspectives that theorize and take action to create a world where everyone can live well. I addressed the "why" of this approach by emphasizing that it helps us to better understand society, inequalities, and sustainable paths forward. This explanation, along with an introduction to the aforementioned importance of identifying interlocking *systems* of oppression at the heart of concepts like "configurations" (Bhavnani and Bywater) and "intersectionality" (Crenshaw) provide a foundation for students, one that could ground a variety of courses. The class was built on this foundation with course readings (e.g. Sherilyn MacGregor, Joni Seager, Irene Dankelman, Noël Sturgeon, Winona LaDuke, Zohl dé Ishtar), films (e.g. *Disruption*, *Cowspiracy*, *Occupy the Farm*, *H2Oil*, *The Shape of Water*), and guest speakers (Greta Gaard, ecofeminist writer and Professor of English at University of Wisconsin River Falls; Madeline Stano, Todd Darling, and Ashoka Finley), thereby foregrounding a diversity of knowledge producers, as well as weekly writing responses in which students analyzed how course materials, current events, and popular culture related to the themes of feminist climate justice.

The second way to nurture a feminist climate justice imagination is to create a final project that engages students with a change-making organization. This is a crucial part of courses dealing with climate change because this crisis, to a larger (if not clearer) extent than other sociological topics, will affect all of our students. It has the potential to render their entire adult lives – already made stressful by economic and political conditions offering relatively fewer opportunities for educated young adults (Goodman) – quite challenging. Identifying *real*, justice-oriented solutions is, therefore, important for warding off despair and preparing students to create the future they desire. A final feminist climate justice project can ask students to research an organization, interview its members, and/or engage in participant observation with the goal of assessing whether and how one of the group's proposed actions is, as Dayaneni (2009) would say, merely a climate action, or whether it is an action for feminist climate justice. It is optimal to have students engage directly with the organization for a number of hours throughout the term because this allows them to build in-person relationships with fellow

change-makers and learn skills that enhance their capacity to work effectively with others to organize around issues they care about.

In Sociology 134A: Activism, John Foran and I organized student participation in one of four local environmental organizations – UCSB Fossil Free, System Change Not Climate Change Santa Barbara, The Santa Barbara Water Guardians, and the Green Party of Santa Barbara County/UCSB Campus Greens. Many of the groups were engaged in an effort to collect signatures to qualify a ballot measure that would have banned fracking and other intensive oil extraction techniques in our county. We also enhanced community/university connections by hosting a Re-Imagining Climate Justice conference at UC Santa Barbara in May 2014. Students participated as volunteers, artists, workshop hosts, and attendees. Conversations with students and student evaluations evidenced how rewarding these activities were for them. Each group of students made a 15-minute, academic conference-style presentation on what they had learned about "their" organization to the class.

I adapted this model for the final project in "Feminist Climate Justice." Drawing on interviews with organizational representatives and materials produced by organizations, as well as scholarly sources, students wrote a final paper about a change-making organization of their choice, assessing how its proposed solutions embodied feminist climate justice. Because of constraints, this course did not have a volunteering component. Nonetheless, students valued the project. As one said, "Nice to know a solution!" In both courses, some students went on to find employment in climate change and community organizations, take more courses on climate justice, and seek out climate justice organizations and events in their home communities over the summer or after graduation. It seemed that the courses inspired many students to not only understand and care about climate justice, but to also develop the range of skills and making of a feminist climate justice imagination that drive them to be change-makers.

Teaching Climate Justice through Experiential Learning – Theo LeQuesne

Teaching climate justice is necessarily and crucially a diverse and wide-ranging project with a pedagogy that can encompass a significant array of different schools of thought, methods of teaching, disciplinary backgrounds, and theories of change. In all its diversity, however, the teaching of climate justice should aim to engage students with several key learning objectives:

– Students should gain a firm understanding of the debates surrounding who – or what – is most responsible for pollution and climate change.

– Students should gain a firm understanding of the debates surrounding who is most vulnerable to the impacts of greenhouse gas emissions, pollution, and climate change – and why.

– Students should have a keen awareness of the impacts different climate solutions and/or policies may have on different populations, distinguishing between "climate solutions" and "climate justice solutions."

– Students should gain the conceptual tools necessary to inform their own perspective on each of these subjects.

– Students should recognize climate change as an intensely political phenomenon, with political obstacles and political solutions.

– Students should feel equipped with the knowledge and/or skills necessary to help them combat climate injustice (and advance climate justice) where they see it and where they feel compelled to engage with it.

To help students translate theory derived from these six objectives into practices that will enable their realization, climate justice educators can help students engage with them personally, emotionally, and perhaps intuitively, through activities that bring at least a sense, however muted, of what climate (in)justice actually feels like into the classroom. Intensive role-play exercises are one of the best methods for this, allowing students to put theory into practice through experiential learning and empowering them to act on, and not just know about, struggles for climate justice.

In John Foran's classes, students are asked to read three foundational works by Naomi Klein, Gopal Dayaneni, and Patrick Bond. Through Bond, students learn that climate justice has emerged as a rejection of dominant, but depoliticized, climate change narratives that reinforce "techno-fixes" and market-based solutions as opposed to engagement with profound systemic change. Climate justice is communicated as a direct challenge to powerful interests with stakes in maintaining dominant social and economic relations. Similarly, in Dayaneni's article, students find an account of who is most and least responsible for our situation and who is most and least severely impacted. Here, in a state of climate *in*justice, class, race, and nation exclude those most affected by climate change from influencing powerful decision makers and changing discriminatory climate policy. Finally, in her introduction to *This Changes Everything*, Klein argues that

"climate change can be a People's Shock, a blow from below. It can disperse power into the hands of the many rather than consolidating it in the hands of the few" (10). Klein's book emphasizes the potential for progressive radical social change that addressing climate change could unleash. The kind of power Klein outlines here is people power, and it is crucial – and possible – for students of climate justice to interact with this too.

Students reading these arguments will undoubtedly engage with the six learning objectives above. Through readings and lectures alone, however, UCSB undergraduates – often with a relatively high level of privilege, studying at a university (seemingly) far removed from the frontlines of environmental racism and discrimination – may be unlikely to understand at a more profound, empathic level how those power differentials are reinforced and lived every day. Experiential learning is a powerful mode through which students internalize and reflect upon information and learn how to apply it in their daily lives (Ord). Through experiential learning students can personally and emotionally engage with an argument or subject that is otherwise only communicated to them as an abstraction. Outlining the crucial findings of education scholars in this field, John Ord cites Mark Smith's three premises of experiential learning in *Creators Not Consumers* as the following:

1. People learn best when they are personally involved in the learning experience;

2. Knowledge has to be discovered by the individual if it is to have any significant meaning to them or make a difference in their behaviour; and

3. A person's commitment to learning is highest when they are free to set their own learning objectives and are able to actively pursue them within a given framework (Smith 16, quoted by Ord 55)

John Foran and I have experimented with role-playing as one method of experiential learning. The role-play was designed to resemble the negotiations at the United Nations Framework Convention on Climate Change (UNFCCC) annual Conference of the Parties (COP). Students took on the role of delegates at the conference and tried to negotiate and agree on a realistic climate treaty with emission scenarios that reflected the agenda of each nation but also aligned with climate science. The class met twice a week for seventy-five minutes, and the COP role-play extended over five class sessions. Students were asked to form groups of two or three and choose a nation or civil society group to represent. On the first

two days of the role-play, the instructor, taking on the role of the chair of negotiations, welcomed the delegates and set out the procedural details. Then, each delegation gave their opening speeches. In the next two classes groups lobbied one another and tried to agree on language for a resolution that best captured the interests of the nations represented in the room. Delegates made speeches proposing certain commitments, critiquing other delegations, or clarifying their terms and conditions. The closing plenary in the fifth class creates a space for finalizing the language of the resolution, agreeing (if possible) on it, and establishing a treaty.

Students were also given three assignments that helped them "inhabit" their roles and critically reflect upon the exercise and its purchase on reality. Their first assignment was to write a "position paper," in which they would outline their negotiating stance based on their country's or organization's geopolitical interests, relative wealth, vulnerability to climate change, and their position on responsibility for greenhouse gas emissions. Students also provided a transcript of their short opening speech, introducing their country or organization's negotiating stance and their expectations of the other delegates. After these often moving and eloquent opening speeches the groups wrote up their second assignment, a "strategy paper" which explained how the group intended to achieve a deal that would be most in their favor. The papers included who they would lobby, how they would negotiate with more powerful groups, who they proposed to form alliances with, and what bargaining chips they were prepared to use. After the role-play was over, the third assignment was to write a paper reflecting on the process, detailing where breakdowns occurred in the negotiations, if and how they were resolved, whether they thought the treaty was a just treaty, how they could have changed the outcome, and the extent to which the role-play reflected the reality of the UN negotiations. A unique feature of the course between 2011 and 2015 was that in the two weeks immediately after the simulation, the instructor (and sometimes the TA) attended the actual two-week long UN climate summit that the students had just role-played, and Skyped back to the classroom from the summit.

In its fourth and fifth iterations we added another dimension to the role-play in which civil society groups, which had formerly only played a lobbying role but couldn't directly participate in the negotiations, were encouraged to stage protests and publicly call on countries to make stronger commitments to climate justice. They soon set up "inside" and "outside" groups, closely reflecting the inclusion and exclusion of different actors and perspectives at the real COPs. The outside group, comprised of the more radical non-governmental organizations and members of the climate justice movement, worked on strategy, debated what a

"just treaty" would actually look like, planned direct actions, and argued over whether to disrupt the treaty proceedings or just make noise outside the building. Students representing the climate justice movement staged an Occupy-style "mic check," a sit-in, and a protest as delegates entered and left the classroom.

The role-play helped students experience the deal brokering that happens at the COP as delegates inevitably negotiate their citizens' lives and livelihoods away. The students participated in the very real and difficult process of fighting for "their" country's interests while knowing these may not align with the interests of the global community. By adding the "outside" group of movement activists to the role-play, students also felt the deep frustration and sense of injustice that those on the outside experience as their concerns and voices are excluded from the proceedings. Finally, students come to understand how agency can exist outside as well as inside the negotiations, that they can be a part of this agency, and that they possess a variety of ways to exercise power. After the quarter ended, several students from the class went on to join or create new climate justice organizations.

By the end of a class about climate justice, students have engaged all six of the learning objectives above. Role-play was the key to the high level of engagement students experienced. As such, the COP role-play is an excellent exercise that allows students to learn about these ideas by actively assuming the role of different climate actors, making tangible and relatable some of the more abstract concepts, while also giving them a sense of their own agency in the face of the climate crisis. Through trial and error, it also became apparent that role-play could work in large classroom settings of up to 150 students. With a generous grade incentive, many students took the role-play very seriously and remarked that it was a highlight of the course. Most importantly, the role-play helped to inspire students to take further action for climate justice. In these ways, teachers of climate justice can deliver on six valuable learning objectives and communicate the importance of climate justice to a new generation of movers, shakers, and leaders.

CONCLUSION

Teaching climate change forces instructors to be inventive. The dramatic onset of the climate crisis and our dawning awareness of it require us to teach in new ways, to find clues to help students make a strong personal and affective commitment to the greatest existential threat of the twenty-first century, and to empower them (and us) to become Earth citizens ready to fight for greater democratic space, less social inequality, and new economic arrangements informed by social justice. We can no longer afford the luxury of considering politics a spectator sport, or worse, as either irrelevant or beyond our abilities to influence,

let alone transform. As we wrote the first draft of this essay, Donald Trump had just assumed office in the United States, muzzled scientists, and issued an executive order to restart the Dakota and Keystone XL Pipelines. The systemic crises we now find ourselves dealing with have become pressingly acute. Our very survival rests on findings ways to mitigate them.

ACKNOWLEDGMENTS

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RESOURCES

Document of resources and teaching activities described in this article, updated frequently:

https://docs.google.com/document/d/1EYi4gQzY4Jp3Kgq8o-azS7kjba6AsNq1q0bPo0Y_qaM/edit?usp=sharing