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Fisher, Ryan Joseph

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Freiligrath's Gift: A Marxian Roadmap for the Climate Crisis

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by

Ryan Joseph Fisher

Committee:

Professor Kevin B Anderson, Chair
Professor Verta A Taylor
Professor William I Robinson
Professor David A Takacs, UC Hastings College of the Law

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The thesis of Ryan Joseph Fisher is approved.

Verta A Taylor

William I Robinson

David A Takacs

Kevin B Anderson, Committee Chair

May 2020

ABSTRACT

Freiligrath's Gift: A Marxian Roadmap for the Climate Crisis

by

Ryan Joseph Fisher

The “very gist, the living soul, of Marxism” (per Lenin) is *a concrete analysis of a concrete situation*. Such a situation is the climate crisis: an exigent issue for humankind and nature. No longer the exclusive purview of scientists, it has emerged into the mainstream media, political debate, and real lives of those suffering periodic climatic catastrophes: the climate crisis is a labyrinthine global threat. It straddles capital, value, production, class, corporate power, geopolitics, and diplomacy. This paper provides a synthesis of certain writings by Karl Marx over 1844–75 (including his articulation of the public trust doctrine), several contemporary theorists in the Marxian tradition, and other radical voices as they relate to the climate crisis. It also features cameo appearances by topical literary figures, including Marx’s friend Ferdinand Freiligrath, whose serendipitous gift of G.W.F. Hegel’s *LOGIC* enhanced Marx’s draft manuscript *GRUNDRISSE* and subsequent *CAPITAL*. The paper argues that Marxian dialectics—with its dimensions of philosophy of internal relations, process of abstraction, and dialectical laws—is an appropriate tool for analyzing the climate crisis, particularly in light of the exigency’s interconnectedness. Frederick Engels—who defines dialectics as “the science of universal inter-connection”—writes, “[Marx] was the first to have brought to the fore again the forgotten dialectical method, its connection with Hegelian dialectics and its distinction from the latter, and at the same time to have applied this method.” The subject of dialectics, according to Bertell Ollman, is “change, all change, and interaction, all kinds and degrees of interaction” and the key problem addressed by dialectics is how to “think about change and interaction so as not to miss or distort the real changes and interactions that we know, in a general way at least, are there.” And, as John Berger writes, “Never before has the devastation caused by the pursuit of profit, as defined by capitalism, been more extensive than it is today. Almost everybody knows this. How then is it possible not to heed Marx who prophesied and analyzed the devastation?”

**FREILIGRATH'S GIFT:
A MARXIAN ROADMAP FOR THE CLIMATE CRISIS**

Ryan J Fisher

*Above my head lie brightly spread the flowers that Summer gives,
Free waters flow, fresh breezes blow, all nature laughs and lives;
But where you tread the flowers drop dead, the grass grows pale and sere,
And round you floats in clotted waves Hell's lurid atmosphere!*

—Ferdinand Freiligrath (1871: 188)

Introduction

The Green New Deal, championed by New York Congressional Representative Alexandria Ocasio-Cortez and Massachusetts Senator Ed Markey, has been described as “the most ambitious and comprehensive program to deal with climate change ever made by political representatives to Congress and the U.S. public” (Hudis 2019: 1). In its addressing a crisis with a combination of ambition and optimism, the Green New Deal strikes a sense of *déjà vu*, like the stage number from the Broadway musical *Annie*: “A New Deal for Christmas.”¹ This is, perhaps, because the Green New Deal is inspired by and modeled after Franklin Delano Roosevelt’s New Deal of programs, projects, reforms, and

¹ *The snowflakes are frighting of falling,
And oh, what a fix
No peppermint sticks!
And all through the land folks are bawling,
And filled with despair,
'Cause cupboards are bare.
But Santa's got brand new assistants,
There's nothing to fear:
They're bringing a new deal for Christmas this year!*
(Strouse 2014)

regulations enacted during 1933–39 to address the Great Depression. Unlike FDR’s New Deal, however, the Green New Deal has no chance of becoming a reality in the United States in the absence of tectonic political and sociological shifts.²

The climate crisis the Green New Deal addresses is an exigent issue for humankind and nature. No longer the exclusive purview of scientists, it has emerged into the mainstream media, political debate, and real lives of those suffering periodic climatic catastrophes such as floods, hurricanes, droughts, and wildfires, as well as infectious disease, food and water insecurity, air pollution, and other health risks.³ The climate crisis is a labyrinthine global threat. It straddles capital, value, production, class, corporate power, geopolitics, and diplomacy. As Karl Marx’s collaborator Frederick Engels (1972: 55) might have observed—crediting Charles Fourier for terminology: *see* Fourier (1829: 39)—the climate crisis is a “*crise pléthorique*,’ a crisis from plethora.”

Evoking a recent definition of sociology as “the study of everything” (Foran et al. 2018: 126), analyzing the climate crisis is daunting: the thesis of this paper is that Marxian dialectics⁴ is the appropriate method for so doing, for filling the lacuna of thinking that results from the in vogue siloization of disciplines in academia⁵ and in politics. As Bertell Ollman (2019: 97) observes, “Most methods are meant to apply to only one or at most a

² As David Harvey observes, “All proposals about the environment are to some degree, or other, proposals about how to reshape society” (Ollman, Harvey, and Hudson 2019).

³ In September 2019, the Intergovernmental Panel on Climate Change released a report showing that low-lying coastal zones—home to 10% of the world’s population—are under severe risk of climate-related sea level rise and extreme weather. *See* Pörtner et al. (2019) and Raboteau (2019). And according to the United Nations Emissions Gap report released in November 2019 global greenhouse gas emissions must *decline* by 7.6% annually over 2020–30; *see* United Nations Environment Programme (2019).

⁴ Engels—who defines *dialectics* as “the science of universal inter-connection” (Engels 2012: 17)—writes, “[Marx] was the first to have brought to the fore again the forgotten dialectical method, its connection with Hegelian dialectics and its distinction from the latter, and at the same time to have applied this method in *Capital* to the facts of an empirical science, political economy” (Engels 2012: 49). Marx (1990a: 103) describes dialectics as “being in its very essence critical and revolutionary.”

⁵ *See, eg,* Das (2020) for a discussion of the inherent conflict between “disciplinary chauvinism” and Marxism. *See also* Royle (2014: 116): “If we try to treat the world as if it can be divided up into separate elements and as if everything in it stays the same we risk letting something important slip from our grasp.”

few of our problems, but there is at least one method that applies to almost everything, and that is dialectics.” Furthermore, Paul McGarr (1990: 152) argues, “[B]ecause every aspect of the world, including nature, is undergoing continual change and development the fixed static categories of formal logic are not sufficient. Dialectics is a critique of the *limits* of those static categories to *fully* grasp a dynamic, developing world.”⁶

Marxian dialectics can be mystifying. This is partly due to negative associations many Americans have with Marx, informed by propaganda over almost a century that sought to pit the American way of life (capitalism) against the perceived Soviet and allied way of life (communism). This propaganda infused cycles of fear and stifled substantive American debate on Marx’s writings. Intellectual and popular confusion have reigned because of a general lack of any-more-than-superficial knowledge about Marx’s work and how he visualizes execution of his theories. More recently, according to William Robinson (2017: 606–07), the Left’s withdrawal “into post-modern identity politics and other forms of accommodation with the prevailing social order” has led to previously anti-capitalist intellectuals’ “ced[ing] a certain *defeatism* before global capitalism” as well as “a degeneration of intellectual criticism.” There is also controversy over Marxian dialectics as a method among members of the Academy, be they resident in silos of sociology, politics, philosophy, geography, or law. This is a tale of two cities: one the so-called “analytical” Marxists⁷ and the other the adherents of dialectics. Unlike Paris and London in Dickens’s classic, however, *these* two cities are situated in the same nation: Marxism. This is essentially an internecine conflict.

⁶ Renton (2001: 142), for example, alludes to the influence of dialectics on Albert Einstein’s theory of relativity. (For the elucidation of Einstein’s own socialist vision—opining that “crippling of the social consciousness of individuals” is “the worst evil of capitalism”—see Einstein (1949)).

⁷ Illustrative of this sort of academician, here are two email replies, from eminent professors at renowned universities, that I received in fall 2017 as I was launching my campaign to pursue a PhD:

“I don’t really work on dialectics, nor do I promote it as a method of study—mostly because I’m not sure it exists.”

“If you know anything about my work, you’ll know that I don’t think ‘Marxist dialectical methodology’ has any value.”

This paper—evidencing the process of abstraction, one of the dimensions of Marxian dialectics—comprises five parts: the *Green New Deal*, *Climate Social Movements*, the *Commons*, *Marx’s Ecological Perspective*, and *Marxian Dialectics*; their “handrails” are summarized below.

The *Green New Deal* section appears for its topicality in our current political season: it is a sprout of hope embraced by, among others, Democratic Party leaders.⁸ The objective is not to analyze the Green New Deal in detail; rather, it is to point out some of its limitations. *Climate Social Movements* represent another sprout of hope; the overview in this paper presents the context for climate change activism within the longstanding social movement of American environmentalism (since a cornerstone of Marxian dialectics is understanding the present in the context of formative events), an ecosocialist vision for the future, and two legal arguments—public trust doctrine and rights of nature—with recent internationally-successful application to the climate crisis. The *Commons* is discussed as an epistemological paradigm for addressing the climate crisis; in addition, this section revisits Garrett Hardin’s *The Tragedy of the Commons* (1968)—an ideological springboard for green capitalism still invoked, unfortunately, in the discussion of “rational” climate change policy.

Marx’s Ecological Perspective draws on Marx’s topical insights in his ECONOMIC AND PHILOSOPHICAL MANUSCRIPTS (1844), THE HOLY FAMILY (1845), MANIFESTO OF THE

⁸ See, eg, Biden for President (2020), which details a ten-year Federal \$1.7 trillion climate and environmental justice proposal intended to (1) ensure the US achieves a 100% clean energy economy and net-zero emissions no later than 2050 (including \$400 billion investment over ten years in clean energy research and innovation), (2) build a stronger, more resilient nation (including increasing infrastructure investment by 1% of GDP), (3) rally the rest of the world to address the grave climate threat (including the US’s recommitment to the Paris Agreement on climate change and integration of climate change into foreign policy, national security, and trade strategies), (4) stand up to the abuse of power by polluters who disproportionately harm communities of color and low-income communities, and (5) fulfill our obligation to workers and communities who powered our industrial revolution and decades of economic growth.

See also Bernie 2020 (2020), which details a platform of declaring climate change a national emergency, reaching 100% renewable energy for electricity and transportation by 2030, decarbonizing the economy by 2050, creating 20 million jobs, making \$16 billion of public investments, ensuring justice for frontline communities and workers, and reducing global emissions.

COMMUNIST PARTY (1848), GRUNDRISSE (1857–58), CAPITAL (1867–75), and CRITIQUE OF THE GOTHA PROGRAM (1875), and reviews ideas from several contemporary theorists in the Marxian tradition and other radical voices on the subject of ecology and its relation to the climate crisis.

Marxian Dialectics appears in explicit support for the thesis, and is the vital part of this paper because Marx, although he adapted and utilized this method,⁹ wrote scant descriptions of its constituent steps.¹⁰ This section carries at Marx’s THE GERMAN IDEOLOGY (1845–46), THE POVERTY OF PHILOSOPHY (1847), and THE 18TH BRUMAIRE OF LOUIS BONAPARTE (1852). Most importantly, it employs dialectics—described by Engels as the “best tool [*bestes Arbeitsmittel*]” and “sharpest weapon [*schärfste Waffe*]” (Engels 1903: 96)¹¹—for analyzing the climate crisis.

Finally (and, I hope, piquantly), the paper features cameo appearances by several literary figures, including Marx’s friend Ferdinand Freiligrath¹²—whose gift is *not* a MacGuffin: its serendipitous contribution to history is revealed in the 61st footnote—James Joyce, Ernest Hemingway, William Faulkner, John le Carré, Joan Didion, David Foster Wallace, and John Berger. Capturing this paper’s essential message, the last of these writes, “Never before has the devastation caused by the pursuit of profit, as defined by capitalism, been more extensive than it is today. Almost everybody knows this. How then is it possible not to heed Marx who prophesied and analyzed the devastation?”

⁹ “Marx’s commitment to dialectics never wavered, and his use of it . . . can be found in his writings from all the periods of his life” (Ollman 2019: 97).

¹⁰ According to Andrushchenko (2010: xviii), Marx “had the intention, which he unfortunately never carried out, of writing a book on th[e] subject [of dialectics].” As reported by Ollman (2019: 97), Marx chose *not* to publish, for his A CONTRIBUTION TO THE CRITIQUE OF POLITICAL ECONOMY (1859), “a general introduction which [he] had prepared” on certain aspects of his dialectical method because “results [were] still to be proven” (Marx 1904: 9). A draft unfinished manuscript of such introduction—including a subsection 3 entitled “The Method of Political Economy”—was published in 1904: *see* Marx (1904: 265–312).

¹¹ According to Ollman (2019: 97), Engels is “a co-equal spokesman with Marx on [dialectics].”

¹² On leap day 1860, Marx (2010c: 80) wrote to Freiligrath, “[T]here are very few people with whom I strike up a friendship, but when I do I adhere to it. My friends of 1844 continue to be my friends today.”

(Berger 2008: 113).

Vladimir Lenin (1965: 166) writes “the very gist, the living soul, of Marxism” is *a concrete analysis of a concrete situation*. The climate crisis is such a situation.

Green New Deal

In an opinion piece in the *New York Times*, not usually the forum for anti-capitalist perspectives, Benjamin Fong (2017) writes:

The real culprit of the climate crisis is . . . the very *way* in which we globally produce, which is for profit rather than for sustainability. So long as this order is in place, the crisis will continue and, given its progressive nature, worsen . . . It should be stated plainly: It’s *capitalism* that is at fault.

That opinion was by no means an epiphany: Joel Kovel (2007), the coauthor with Michael Löwy of “An Ecosocialist Manifesto” in 2002, posited a decade earlier that an immediate end to capitalism was the only hope of saving the world, its natural systems, and ourselves from over-consumptive tendencies. Robinson (2014: 228) frames the problem thus: “[G]lobal capitalism now couples human and natural history in such a way as to threaten to bring about what would be the sixth mass extinction in the known history of life on earth.”¹³

Sanjeev Ghotge (2018: 12–13) describes Green Keynesianism as “the ‘new’ model of reinvented capitalism that is now under construction . . . under various names: a Green New Deal, a New Energy Economy, a Postcarbon Economy, a Green Economy, etc.” John Bellamy Foster, Clark, and York (2010: 82) flag the contradiction inherent in this model, described generically as green capitalism:

[O]rthodox economics is reputedly being harnessed to an entirely new end: saving the planet from the ecological destruction wrought by capitalist expansion. It promises to accomplish this through the further expansion of capitalism itself,

¹³ See also Smith (2016).

cleared of its excesses and excrescences. A growing army of self-styled “sustainable developers” argues that there is no contradiction between the unlimited accumulation of capital¹⁴ . . . and the preservation of the earth . . . In reality, this vision amounts to little more than a renewed strategy for profiting on planetary destruction.

In current progressive politics, many imagine the burgeoning ideology of green capitalism to be the way out of the climate crisis. Foster (2010: 44) warns, however, “[T]here is no way out of this dilemma within the laws of motion of a capitalist system, in which capital accumulation is the primary goal of society.”

The Green New Deal proposes sweeping economic stimulus programs to tackle climate volatility by reducing greenhouse gas (“GHG”) emissions and driving a shift toward solar and wind power. It also seeks to eliminate poverty in the United States through education, employment, labor, environmental, and health care policies.¹⁵

¹⁴ Marx (1990a: 741–42) describes accumulation of capital—in which the bourgeoisie is encouraged to save surplus-value for reinvestment in further production and capital—thus:

At the historical dawn of the capitalist mode of production . . . avarice, and the drive for self-enrichment, are the passions which are entirely predominant . . . Accumulate, accumulate! That is Moses and the prophets! ‘Industry furnishes the material which saving accumulates’ [per Adam Smith]. Therefore save, save, i.e. reconvert the greatest possible portion of surplus-value or surplus product into capital! Accumulation for the sake of accumulation, production for the sake of production: this was the formula in which classical economics expressed the historical mission of the bourgeoisie in the period of its domination.

¹⁵ The stated goals of the Green New Deal, envisaged through a 10-year national mobilization, include:

- (A) to achieve net-zero greenhouse gas emissions through a fair and just transition for all communities and workers;
- (B) to create millions of good, high-wage jobs and ensure prosperity and economic security for all people of the United States;
- (C) to invest in the infrastructure and industry of the United States to sustainably meet the challenges of the 21st century;
- (D) to secure for all people of the United States for generations to come—
 - (i) clean air and water;
 - (ii) climate and community resiliency;
 - (iii) healthy food;
 - (iv) access to nature; and
 - (v) a sustainable environment; and
- (E) to promote justice and equity by stopping current, preventing future, and repairing historic oppression of indigenous peoples, communities of color, migrant communities,

The Green New Deal was debated among Democratic Party candidates in the 2020 Presidential election cycle within a larger conversation about socialism. In May 2019, for example, former Vice President Joe Biden’s yet-to-be-released climate change policy—characterized by an adviser as “seeking a ‘middle ground’”—sparked prompt criticism from Senator Bernie Sanders, Ocasio-Cortez, and Millennials “who have embraced the Green New Deal” (Friedman 2019). At a Sunrise Movement sponsored rally at Howard University, Ocasio-Cortez (2019a: at 2 hours 14 minutes) said, “I will be damned if the same politicians who refused to act [in 1989 on the threat of climate change] are gonna try to come back today and say we need a middle-of-the-road approach to save our lives.”

According to experts, advancing technology and falling clean energy costs render achievable “many of the environmental goals that underpin the proposed legislation, if not the exact timetable it lays down” (Cassidy 2019).¹⁶ However, many suggest that the Green New Deal, although featuring innovative financing and higher marginal rates on wealthy and corporate taxpayers, is too expensive for implementation.

In a recent interview, Ben Manski (who was the Green Party’s presidential campaign manager from 2011–13) is asked if Democrats stole the idea for the Green New Deal from the Green Party. Manski replies, “The most important question is not who came up with this idea, though the answer is simple: Social movements grappling with capitalism came up with this idea” (Cobb 2019).

Manski describes three different green new deals: liberal, progressive, and the *actual* Green New Deal. The liberal green new deal is focused on a technological shift, and

deindustrialized communities, depopulated rural communities, the poor, low-income workers, women, the elderly, the unhoused, people with disabilities, and youth. (Ocasio-Cortez 2019b: 5–6)

¹⁶ See also Nersisyan and Wray (2019) who argue financial affordability cannot be an issue for the sovereign United States government and conclude the Green New Deal can be phased in without inflation; these authors believe if inflationary pressures *do* appear that deferring a small amount of consumption would be sufficient to attenuate them.

eschews issues such as employment and poverty. The progressive green new deal, although focused on employment and economic justice, ignores the larger context of the military-industrial complex¹⁷ and desirable democratization of the economy. The *Green New Deal* stresses the urgency of the moment, full employment, a ten year conversion of the economy away from fossil fuel extraction, democratization of production and exchange, and demilitarization.¹⁸

Foster is impressed by certain aspects of the Ocasio-Cortez Green New Deal: its call for mass mobilization, innovative forms of financing (including public banks and higher marginal tax rates), shift toward solar and wind power, and connectivity to social issues. He believes, however, it is likely to fail “[i]f it does not spark an ecological revolution.”¹⁹ For elucidation of Foster’s construal of *ecological revolution*—including complementary short-term and long-term social strategies on a world scale “aimed at the creation of a just and sustainable society” such as fossil fuel’s staying in the ground and rapid reduction of carbon emissions through taxation, dividends, and reforestation—see Foster (2010). Foster’s pessimism relates to capitalism as a system:

Capitalism . . . is a system of social relations and socio-metabolic processes, and

¹⁷ Any serious attempt to address the climate crisis must tackle head-on the military-industrial complex. President Dwight Eisenhower named, and warned of, this “new” evil alliance in 1961 (Eisenhower 2015). The military-industrial complex has since evolved into “a globally integrated system of production, powered largely by fossil fuels—even as the American military goes ‘green’ by adopting solar power in its global bases” (Schwartzman 2015).

¹⁸ Manski traces the origins of this version of the Green New Deal to those of Jill Stein’s Presidential candidacies representing the Green Party:

[T]hat’s where both Sunrise and Alexandria Ocasio-Cortez got the platform . . . in that it pays attention, in a substantive way, to environmental racism, to environmental justice, to not just the voices of indigenous communities but also to the need for indigenous sovereignty to be built into the Green New Deal process. (Fisher 2020: 13)

See, eg, Jill Stein for President (2012).

¹⁹ Many Marxists in academia find themselves in the contradictory circumstances announced by fictional spy Roy Bland to his mentor George Smiley in *TINKER, TAILOR, SOLDIER, SPY* (1974):

“An artist is a bloke who can hold two fundamentally opposing views and still function . . . And I’m definitely functioning, George. As a good Socialist, I’m going for the money. As a good capitalist, I’m sticking with the revolution, because if you can’t beat it spy on it . . . It’s the name of the game these days” (le Carré 1990: 152–53).

we have to change many of those relations and processes radically from within and very quickly in order to deal with the current ecological emergency. In the long run . . . we have to have a full ecological and social revolution, transcending existing capitalist relations of production. (Triantafyllou 2019)²⁰

Foster argues that decisions determined by profit and capital accumulation are inherently inconsistent with the principles of sustainability.

While the Green New Deal, by itself, would not be sufficient to resolve the climate crisis, it should nevertheless be perceived as an essential progressive reform of which, the author believes, Marx himself would have approved because of its acknowledgement of internally related parts: climate, economy, infrastructure, food, nature, racism, justice. Although Marx dedicated his life to the critique of capitalism—and espoused revolution of the working class to achieve socialism—he also embraced everyday struggles of workers for reforms *within* the capitalist present.²¹

Climate Social Movements

Ecological consciousness can be traced back five millennia, evidenced by humankind’s reported awareness of “lessons about the sacredness of wilderness, the importance of restraining our power, and our obligation to care for the natural world” (Wyler 2018). Long before the lexicon of ecology became commonplace and modern climate activism emerged, Mother Earth was revered.

In the United States, for example, Ralph Waldo Emerson’s essay *Nature* (published

²⁰ See also Stewart (2008) for the relevance to the political sphere of the work of Nicos Poulantzas—his view of class relations and the role of the state and belief that politics under capitalism has a more independent role—as well as criticisms thereof by, among others, Ralph Miliband, who believes Poulantzas confuses state power and class power: “By establishing whose interest a social force represents its class character can be determined. It could then be established that a specific party’s policies would most benefit monopoly capital even though a large percentage of its vote comes from the working class” (Stewart 2008: 440). In addition, for a recent summary discussion of the relevance to the Green New Deal of the “treadmill of production” theory developed by Allan Schnaiberg, see McCollum (2019).

²¹ See, eg, “The Struggle for a Normal Working Day” (Marx 1990a: 375–416).

originally in 1836) and Henry David Thoreau's book *WALDEN* (first published in 1854) inspired the simple life while maintaining a balance with nature. In 1892, environmentalist John Muir co-founded the Sierra Club that embraced the philosophy of treating wilderness as sacred. This was a time when Europeans emigrating to the United States desired to protect what they believed to be the commons.²² Muir (1981: 1) writes, “[P]eople are beginning to find out that going to the mountains is going home; that wilderness is a necessity; and that mountain parks and reservations are useful not only as fountains of timber and irrigating rivers, but as fountains of life.”

Stacy Silveira (2001: 498) identifies four eras for the American environmental social movement—conservation and preservation beginning in the late nineteenth century,²³ the rise of modern environmentalism in the 1960s, mainstream environmentalism, and grassroots environmentalism, our current moment (having emerged as a backlash to Reagan Administration policies):

[T]he evolution of [American] environmentalism from an ideology into a social movement illuminates the existence of the essential elements of movement formation [including] (1) the growth of preexisting communications networks; (2) co-optable ideas; (3) a series of crises that galvanize individuals into action; and (4) subsequent organizing efforts to weld spontaneous groups into a movement.

Rachel Carson's environmental science book *SILENT SPRING* (1962) jump-started environmental activism. Carson warned about the dangers of pesticides and the fragility of ecological balance. During the protest cycle of the 1960s, according to Suzanne Staggenborg (2016: 112–13), the women's peace movement and traditional environmental organizations such as the Sierra Club spawned new waves of

²² For a description of the *commons*, see note 43 *inferius*.

²³ Such conservation featured, according to Silveira (2001: 499), “a development strategy based on efficiency, scientific management, centralized control, and organized economic development” and emphasized “the balance between immediate and long-term production necessary to sustain a continuous yield.” Silveira (2001: 500–01) discusses the emergence during the Theodore Roosevelt Administration of divisions between conservationists and preservationists: “Preservationists . . . viewed traditional conservationist strategies of ‘right use’ and efficient land management as promoting industry needs.”

environmental activism. Increased access to the courthouse and the rise of class-action lawsuits afforded the movement new tactical repertoires. Groups such as Students for a Democratic Society related environmental ruin to capitalism and the Vietnam War.

The activism of the late 1960s and early 1970s ushered in signature by President Nixon of the National Environmental Policy Act, the first Earth Day (April 22, 1970), and the formation of the Environmental Protection Agency. In response, the environmental movement garnered greater numbers, particularly women, and a broader focus. Efforts began to organize around a new energy future, one centered on renewables as opposed to fossil fuels. Political “green” parties worldwide—allied with labor and other environmental movements—promoted this ideology in pursuit of labor, economic, and environmental justice.

The Rio de Janeiro Earth Summit was held in 1992 and European green parties in the 2000s helped inform the agenda for what evolved, in the United States, into the Green New Deal. The Sierra Club, Greenpeace, Sunrise Movement,²⁴ and other activist movements support the American incarnation of the Green New Deal.

Motivated by the threat of climate change and quest for climate justice, young people have mobilized worldwide. Swedish teenager Greta Thunberg—a global face for this movement—cites the 2018 shootings at Marjory Stoneman Douglas High School in

²⁴ Created in 2017, Sunrise Movement is a youth-led political action organization “building an army of young people to make climate change an urgent priority across America, end the corrupting influence of fossil fuel executives on our politics, and elect leaders who stand up for the health and wellbeing of all people” (Sunrise Movement 2019).

In February 2020, this author attended several Sunrise Movement training workshops in Goleta, California, at which trainers discussed (1) the opportunities created by crises for alternative futures to be expressed and for frontline leaders to emerge, (2) the importance of racial diversity in a movement’s leadership, (3) replicable tactics from previous movements (such as sit-ins during the Civil Rights Movement), (4) the inherent process of participation, disruption, and sacrifices (as exemplified by Standing Rock protests and the UC graduate students’ wildcat strike for COLA), (5) the importance of thinking about climate crisis in an intersectional way, citing the link between the enslavement system in the Americas and capitalism, (6) US exploitation of indigenous peoples through extermination, land re-orientation, and cultivation of ideology, and (7) the Green New Deal’s hopefulness. One trainer observed that 3.5% involvement of a population was sufficient to accomplish radical change.

Parkland, Florida, and related *March for Our Lives* (a student-led demonstration in Washington DC in March 2018 for legislation to prevent gun violence) as her personal catalysts for becoming a climate activist (Goodman 2018). Thunberg began championing climate justice by sitting daily outside the Swedish Parliament. In August 2018, she launched “Fridays for Future”: more than one million students in more than 100 countries boycott school on Fridays to lobby for action to combat climate change. Thunberg attended the 24th United Nations climate summit in Katowice, Poland, in December 2018.

In June 2019, accepting the Ambassador of Conscience Award from Amnesty International, Thunberg (Amnesty International 2019) said:

The blatant injustice we all need to fight against is that people in the global south are the ones who are and will be most affected by climate change while they are the least responsible for causing it . . . Human rights and the climate crisis go hand in hand. We can’t solve one without solving the other.

Ecosocialism

According to Victor Wallis (2018), what is needed to remedy the climate crisis is an ecosocialist society in balance with nature and not predicated on class domination. Central to this project is democratic planning of production, catered to the real needs of people and putting an end to the rampant waste and artificial needs created by capitalism. Wallis insists on the importance of the working class and that ecosocialism is not in conflict with measures required in the short term: each can buttress the other.

Robinson (2016) perceives ecosocialism as an ingredient for climate justice and antidote to transnational capitalist class plunder:²⁵

²⁵ For a discussion of the new technological frontier (especially in the communications domain) “where capitalism can experiment, unimpaird by previous constraints, with new strategies of extraction and accumulation” *see* Mattei and Quarta (2018). For a comprehensive discussion of the unprecedented collection and manipulation of personal data by technology capitalists, *see* Zuboff (2019).

Neo-liberalism has unleashed corporations to plunder the environment the world over. The urgent measures necessary to prevent a catastrophic overheating of the planet require major government intervention to reign *[sic]* in on the corporate free-for-all and to regulate the global economy—precisely the measures that would reverse neo-liberalism and place public restraint on unbridled [transnational capitalist class] profit-making. The “inconvenient truth” is that climate justice and capitalist globalization are not compatible. It is time to talk about ecosocialism.

Löwy (2019: 120) opines that indigenous communities, on the front lines of capitalist extraction, have emerged as the vanguard of a burgeoning ecosocialist movement, as demonstrated by the Dakota Access Pipeline protests at Standing Rock. (In March 2020, for example, a Federal judge ordered a new environmental review of such pipeline, citing three deficiencies in the original work: whether the project’s effects were likely to be “highly controversial,” the impact of a hypothetical oil spill on the plaintiff tribe’s fishing and hunting rights, and the environmental justice effects of the project.²⁶) Löwy—quoting from Wallis (2018: 128)—writes, “[I]n an epoch of environmental breakdown, they express, more completely than any other demographic group, the common survival interest of humanity as a whole.”²⁷

*Law as a Dialectical Lamplight*²⁸

As of 28 May 2020, there were reportedly 370 climate change litigation cases

²⁶ *STANDING ROCK SIOUX TRIBE v. U.S. ARMY CORPS OF ENGINEERS*, No. CV 16-1534 (JEB), 2020 WL 1441923 (D.D.C. Mar. 25, 2020).

²⁷ “The resistance of the indigenous people of the Americas to the continuing privatization of their lands and waters has given the struggle for the commons a new impulse” (Caffentzis and Federici 2014: i95). *See also* Greer (2012) and Foster, Clark, and Holleman (2020: 16) (the latter describing Marx’s identification with the resistance of indigenous societies and “seeing in their past (and present) the possibility of a broader world future”). For a description of how TC Energy, Alberta, South Dakota, United States Department of Health and Human Services, and JP Morgan Chase are exploiting the coronavirus pandemic to push through the Keystone XL pipeline, *see* McKibben (2020).

²⁸ *See, eg.*, Bussani and Mattei (2012) (arguing that any reliable comparative research method on legal phenomena should stay close to what the law is and to how the law lives in different settings, regardless of what one would like the law to be).

around the world (Grantham Research Institute on Climate Change and the Environment 2020), including statutory, constitutional, common law, public trust, and regulatory claims against governments, corporations, and individuals.

In 2015, for example, the environmental group Urgenda Foundation sued the Netherlands government to require it to do more to prevent global climate change.²⁹ The court in The Hague ordered the Dutch state to limit GHG emissions, concluding the state has a duty to take climate change mitigation measures and citing (among other things) the Dutch Constitution; the European Convention on Human Rights (“ECHR”); and the UN Framework Convention on Climate Change. This is the first decision by any court in the world ordering states to limit GHG emissions for reasons other than statutory mandates. On December 20, 2019, the Supreme Court of the Netherlands upheld the decision under Article 2 (right to life) and Article 8 (right to respect for private and family life)³⁰ of the ECHR.³¹

In the human rights case of *Juliana v. United States*,³² plaintiffs—a group of young people then aged between eight and nineteen—asserted there is a very short window in which defendants can act to phase out fossil fuel exploitation and avert environmental catastrophe. Plaintiffs sought (1) a declaration their Constitutional rights to life, liberty, and property and their public trust³³ rights have been violated by the government’s fossil

²⁹ See, eg, ClimateCaseChart.com (2020c).

³⁰ Article 8 evokes the discussion by Marx (1990a: 362) of the organization by journeymen bakers in Ireland in 1858–60 to agitate against night work and Sunday work, in which Marx cites the English government’s remonstrating that “any constant work beyond 12 hours a day encroaches on the domestic and private life of the working man” and so leads to “premature old age and death, to the great injury of families of working men.”

³¹ See European Court of Human Rights (2018: 6, 11); the Supreme Court’s decision built on *Öner Yardız v. Turkey* (European Court of Human Rights 2004) and *Tătar v. Romania* (European Court of Human Rights 2009). See also Nollkaemper and Burgers (2020) (arguing that a significance of *Urgenda* judgment is its demonstration of how a court can determine responsibilities of an individual state for climate change mitigation notwithstanding other actors’ shared responsibility for its harmful effects).

³² 217 F. Supp. 3d 1224 (D. Or. 2016), *reversed and remanded*, 947 F.3d 1159 (9th Cir. 2020). See also Blumm and Wood (2017).

³³ Takacs (2008: 711) states:

fuel policies and (2) an order enjoining defendants from violating those rights and directing defendants to develop a plan to reduce CO₂ emissions. In March 2018, the Ninth Circuit instructed the district court in Oregon to proceed to trial. Oral arguments were made June 4 in Portland, Oregon, on the (1) interlocutory appeal granted to defendants in December 2018 and (2) motion for preliminary injunction filed by plaintiffs in February 2019 to prevent the federal government from issuing leases and mining permits for extracting coal on federal public lands, leases for offshore oil and gas exploration and extraction, and federal approvals for new fossil fuel infrastructure. In her concluding remarks on behalf of plaintiffs, Julia Olson argued:

[W]hen our great grandchildren look back on the 21st century they will see that government sanctioned climate destruction was the Constitutional issue of this century.³⁴ And we must be a nation that applies the rule of law [to] the harmful government conduct that threatens the lives of our children so that they grow up safe and free and pursue their happiness. And that is what the Founders intended. (J. B. Clark and Olson 2019)

In January 2020, a divided panel of the Ninth Circuit Court of Appeals concluded the Plaintiffs’ case in *Juliana* must be made—rather than to federal courts—to the Congress, the President, or to the electorate at large. In March 2020, the Plaintiffs sought *en banc* reconsideration of the Ninth Circuit’s ruling that they did not have standing to pursue their claims against the federal government for alleged violations of their constitutional rights, including a substantive due process right to a “climate system capable of sustaining

[S]ome of Earth’s riches should never be sequestered for private use, must be left for the public’s enjoyment, and must be stewarded by those in power . . . [L]egal scholars labeled this the “Public Trust Doctrine.” The Public Trust Doctrine perseveres as a value system and an ethic as its expression in law mutates and evolves.

See also Sax (1970) (courts have an important and fruitful role to play in helping to promote rational management of natural resources). Sax (1980: 188–89) argues, “The central idea of the public trust is preventing the destabilizing disappointment of expectations held in common but without formal recognition such as title . . . [T]he trust doctrine . . . make[s] clear that the legal system is pursuing a substantive goal identical to that for the management of natural resources.”

³⁴ This evokes David Foster Wallace (2005: at 14 minutes 30 seconds) in his acclaimed commencement address to the graduates of Kenyon College in 2005: “I can think about how our children’s children will despise us for wasting all the future’s fuel and probably screwing up the climate.”

human life” (ClimateCaseChart.com 2020a).

The table on the following page summarizes *Urgenda*, *Juliana*, and variegated other climate-related litigation in international jurisdictions ranked in descending order by GHG emissions.

SELECTED CLIMATE CRISIS CASES³⁵

Jurisdiction	Case	Issue	Status
United States	Juliana v. United States	Violation of constitutional rights by causing dangerous carbon dioxide concentrations	Reversed and remanded
India	Pandey v. India	Inadequacy of climate change mitigation efforts vis-à-vis public trust doctrine and other obligations	Appeal planned
Indonesia	Greenpeace Indonesia and Others v. Bali Provincial Governor	Failure of environmental permits for coal-fired power plant to include analysis of climate change impacts	Filed
Brazil ³⁶	Sao Paulo Public Prosecutor's Office v. United Airlines and Others	Reforestation to offset GHG emissions and other pollutants	Rejected: court lacked jurisdiction
Germany ³⁶	Family Farmers and Greenpeace Germany v. Germany	Violation by government of constitutional rights and EU law due to insufficient action to meet GHG emissions reduction target	Rejected: decision to cut GHG emissions not binding
Canada	La Rose v. Her Majesty the Queen	Violation by government of rights by failing to take sufficient action on climate change	Pending
South Africa	Trustees for the Time Being of the GroundWork Trust v. Minister of Environmental Affairs, KiPower (Pty) Ltd, and Others	Failure of authorization for coal-fired power plant to consider related climate change impacts	Pending
United Kingdom	Plan B Earth and Others v. Secretary of State for Transport	Failure of an airport expansion plan to consider climate change commitments	Won
Netherlands	Urgenda Foundation v. State of the Netherlands	Declaratory judgment and injunction to compel government to reduce GHG emissions	Won
Belgium	VZW Klimaatzaak v. Kingdom of Belgium & Others	Federal and regional governments' reduction of GHG emissions	Pending
Sweden	PUSH Sweden, Nature and Youth Sweden and Others v. Government of Sweden	State firm's sale of coal-burning assets to foreign company a violation of government's duty to protect climate	Rejected: plaintiffs had not experienced injury

³⁵ See Climate Watch (2019), ClimateCaseChart.com (2020b), and related climate discussions within The Common Core of European Law Project and Académie internationale de droit comparé (2020). See also Peel and Lin (2019) and Fermeglia (2020).

³⁶ One of five respondents in petition filed by Greta Thunberg and 15 other children alleging Argentina, Brazil, France, Germany, and Turkey violated their rights under United Nations Convention on the Rights of the Child by making insufficient reductions to GHG emissions and failing to encourage largest emitters to curb carbon pollution, thereby perpetuating climate change. See Hausfeld LLP, Hausfeld UK, and Earthjustice (2019).

In the evolving relationship between justice and ecology, legislative and judicial branches in several international jurisdictions have granted legal voice to nature.³⁷ Variegated grounds have included asserting bio-cultural rights (*eg*, Colombia), seeking protection from ecological damage (*eg*, France, Netherlands, United States), and—the most widespread—arguing personhood for nature, in which nature is recognized as having an objective value, intrinsic and different from any human interest (*e.g.*, Brazil,³⁸ Colombia,³⁹ Ecuador,⁴⁰ India,⁴¹ and New Zealand⁴²).

Notwithstanding Justice Douglas’s prescient dissent, almost one-half century ago, from *Sierra Club v. Morton*, 405 U.S. 727, 741–42, 92 S. Ct. 1361, 1369–70, 31 L. Ed. 2d 636 (1972) (“Contemporary public concern for protecting nature’s ecological equilibrium should lead to the conferral of standing upon environmental objects to sue for their own preservation . . . Inanimate objects are sometimes parties in litigation. A ship has a legal personality . . . The ordinary corporation is a ‘person’ for purposes of the adjudicatory processes”), so-called “rights of nature” is “a concept not recognized in United States jurisprudence” (*Drewes Farms P’ship v. City of Toledo*, No. 3:19 CV 434, 2019 WL 5420587 (N.D. Ohio May 7, 2019)).

³⁷ See, *eg*, United Nations (2020) (including—in addition to court decisions—constitutional, legislative, and regulatory implementations and other official documents), Abate et al. (2016), Boyd (2018), Boyd (2017), Houck (2017), Bustamente et al. (2017), and Stone (1972).

³⁸ See Superior Tribunal de Justiça, MARIA ANGELICA CALDAS ULIANA V FAZENDA DO ESTADO DE SÃO PAULO (2019), (recognizing non-human animals as subject of rights).

³⁹ See *Demanda Generaciones Futuras v Minambiente (Future Generations v Ministry of the Environment and Others)* (2018), (recognizing Amazon River as subject of rights entitled to protection, conservation, maintenance, and restoration).

⁴⁰ See *Richard F Wheeler et al v Director de la Procuraduria General del Estado en Loja et al, CORTE PROVINCIAL DE JUSTICIA DE LOJA* 1–6 (2011), (holding that Constitution requires provincial government to redo road-widening project that was damaging the Vilcabamba River).

⁴¹ See High Court of Uttarakhand, *Salim v State of Uttarakhand*, Writ Petition No. 126 2014 1–12 (2017), (declaring Rivers Ganges and Yamuna as juristic / legal persons /living entities having the status of a legal person with all corresponding rights).

⁴² See *Te Awa Tupua (Whanganui River Claims Settlement) Act 2017*, PARLIAMENTARY COUNSEL OFFICE, NEW ZEALAND 1–89 (2017), (granting legal personhood to Whanganui River).

As discussed below under *Marxian Dialectics: Process of Abstraction*, two main modalities of the process of abstraction are the mode of extension, which underscores the analytical importance of looking into both the past and the future, and the mode of vantage point, which refers to an abstraction’s lens or perspective. Both (i) the public trust doctrine—its origins’ dating back to ancient Roman law (what Marx (1990b: 15) describes as “transmitted from the past”) and its essence’s considering the interests of future generations—and (ii) rights of nature feature dialectical abstraction: the former embraces extension from the past and into the future, and the latter views issues explicitly from the vantage point of non-humans.

Commons

In his article on the Green New Deal, while holding that capitalism as such needs to be transcended, Peter Hudis (2019: 15–16) yearns for a return to the commons:⁴³ “In order to save and preserve what we have in common, the earth, we must transition to a form of society that respects the commons.”⁴⁴ Hudis is correct: the commons *does* provide an elegant epistemological paradigm for addressing the climate crisis.⁴⁵ As Ugo Mattei

⁴³ Mattei, Albanese, and Fisher (2019: 231) describe the *commons* thus:

The term (without recognised legal definition, neither private nor public, and used interchangeably in singular and plural forms) is understood not as territorial organisation(s) but rather as resources and systems possessed by society as a whole; to expand this concept environmentally, Commons are commonly possessed resources and systems that together constitute the ecosystem within which humankind, all other forms of life, and the material world coexist . . . The Commons is a social, political, economic and intellectual concept; it is not about a piece of territory bordered politically or a pasture at the centre of a village, although, historically, it derives from them.

⁴⁴ Similarly, Mattei and Quarta (2018) write, “In little more than a quarter of a century, a world of commons abundance and capital scarcity has been transformed into one of capital abundance (though very badly distributed) and commons scarcity.”

⁴⁵ See also Pope Francis (2015: 18–19) who writes, “The climate is a common good, belonging to all and meant for all . . . Humanity is called to recognize the need for changes of lifestyle, production and consumption, in order to combat [climatic] warming or at least the human causes which produce or aggravate it.”

and Mancall (2019: 737) observe, “The idea of Mother Earth as a commons—the opposite of private property and state sovereignty—is about inclusion and the diffusion of power, which makes it an ideal platform in the environmental struggle.”

We can detect the notion of green capitalism as early as Hardin’s influential polemic *The Tragedy of the Commons*. On Hardin’s imaginary commons, each herder—acting as a rational economic actor—is motivated to maximize the number of cattle grazing in order to receive the full benefit of selling each additional animal while incurring only a fraction of the marginal cost from the resulting harm to the pasture. Hardin concludes, “Freedom in a commons brings ruin to all.” Hardin (1968: 1245) describes each of various pollution problems, including GHG emissions, as a “reverse” tragedy of the commons:

Here it is not a question of taking something out of the commons, but of putting something in . . . The rational man finds that his share of the cost of the wastes he discharges into the commons is less than the cost of purifying his wastes before releasing them. Since this is true for everyone, we are locked into a system of “fouling our own nest,” *so long as we behave only as independent, rational, free-enterprisers* [emphasis added].

The italicized words immediately above evidence three glaring fallacies in Hardin’s pessimistic article, rendering his argument circular. Hardin presupposes “independent,” “rational,” and “free-enterpris[ing]” human behavior on the commons. By “rational,” Hardin invokes Adam Smith’s economic theory—the *invisible hand*—that decisions reached individually will be the best decisions for an entire society. This assumption, however, is inherently contradictory since Hardin argues that each individual herder’s acting “rationally”—*i.e.*, by maximizing the number of her cattle’s grazing on the pasture—will *not* be the best decision for the entire society. By additionally positing “independen[ce]” and “free enterprise [],” Hardin eschews the mitigating alternatives of human coöperation and socialism. As Mattei (2011) writes, “[Individual selfishness] is the central assumption underpinning Hardin’s analysis.” Harvey (2011: 102–03) points to two

additional problems: “[Hardin] uses a small-scale example to explicate a global problem”⁴⁶ and “Not all forms of the commons are open access.” Thus, we have five fallacies in Hardin’s logic, when *one* would suffice to undermine it fatally.

The Tragedy of the Commons presents a mainstream passive anatomy of poverty and inequality. Rather than identifying the capitalist mode of production as the root cause for these problems, Hardin blames population growth. This amounts to blaming the poor for their own condition and exonerating capitalism—what 30 years later Hardin (1998) refers to as “the privatism of free enterprise.”

Fisher (2018) employs Marxian dialectics⁴⁷ to critique *The Tragedy of the Commons*, including the article’s ignoring the possibility of economic coöperation, oversimplification of the herders’ profit-maximizing behavior, narrow and distorted intellectual construct, and impaired modes of abstraction. As Mattei (2011) writes:

Hardin was far from the naïve microbiologist who happened to find applicability for evolutionary theory in the realm of political economy, rather he contributed to a long lineage of economists and lawyers, securing a place for radical individualism and eventual dismantlement of the public domain in favor of private interests.

Hardin’s flawed logic is alive and well in the climate crisis discourse. Legal scholars have applied his argument explicitly to “rational” climate change policy.⁴⁸ It is

⁴⁶ Indeed, as Caffentzis and Federici (2014: i94) write:

[W]hen we speak of the principle of ‘the common’, or of commons . . . we do not only speak of small-scale experiments. We speak of large-scale social formations that in the past were continent-wide, like the networks of communal societies that existed in pre-colonial America, which stretched from present-day Chile to Nicaragua and Texas, connected by a vast array of economic and cultural exchanges. In England, common land remained an important economic factor until the beginning of the twentieth century.

⁴⁷ Hardin was not a fan of Marxist theory: in his metaphorical argument against immigration, which he dubbed *lifeboat ethics*, Hardin (1974: 562) predicts that application of the ideal “to everyone according to his needs!”—articulated by Marx (2005: 31) in his CRITIQUE OF THE GOTHA PROGRAM—would lead to “complete catastrophe.”

⁴⁸ See, eg, Farber and Carlson (2014: 21), who—describing it as a special case of game theory prisoner’s dilemma—extend Hardin’s tragedy of the commons argument from a hypothetical average country to the entire world:

also manifested in efforts to price carbon, whether through carbon taxes or emissions trading known as cap and trade.⁴⁹ These efforts to price carbon have been labeled “Pigouvian taxes”—named after English economist Arthur Cecil Pigou—levied on a market activity that generates negative externalities (*i.e.*, the effects of economic transactions on others). According to Noam Chomsky (2017), a fundamental flaw of market systems is that they *ignore* externalities.⁵⁰ He invokes the example of a new car sale: consideration of the resulting increases in the number of cars, congestion, accidents, and pollution is left out of the calculus. Chomsky (2017: at 22 minutes) observes that climate change is an “externality which is going to destroy us unless something is done.”

Pigouvian taxes are, in theory, intended to internalize externalities (The Economist 2017). Carbon taxes and cap and trade are Pigouvian attempts to internalize the externality of climate change. They do not, however, address the economic system that creates this externality. As Richard Wolff (2016) observes, “[R]ecurring problems of capitalism . . . are built into the system and if you want to solve them, you can’t do that within the framework of the system, you have to face the fact that the system itself is the problem.” They can be analogized to placing a Band-Aid® on a hemophiliac: sooner or later, the Band-Aid will wear off and blood will come spurting out.

This brings us back to the problem of capitalism *per se*, and therefore to Marx, its

If the rest of the world fails to address the greenhouse effect, Freedonia can do little on its own, and therefore shouldn’t bother. If everyone else does take action to control the greenhouse effect, Freedonia can contribute only slight additional help but will have to spend a lot of money to do so. So if everyone else “does the right thing,” Freedonia should take a “free ride” on their efforts rather than wasting its own resources to minimal effect. Thus, no matter what the rest of the world does, Freedonia is better off to do nothing. Reasoning the same way, every country in the world decides to take no action.

⁴⁹ See, *eg.* Latta (2009: 102), who observes, “[E]fforts to extend the discipline of the market to influence individual decisions that affect common resources such as the atmosphere—using such tools as ‘green’ taxes or emissions trading—can also be considered offspring of Hardin’s thesis.”

⁵⁰ See also Mills (1967: 12) for a discussion of how modern society leads us to see social, historical, and structural problems as “internal” problems: “We are frequently told that the problems of our decade, or even the crises of our period, have shifted from the external realm of economics and now have to do with the quality of individual life.”

foremost theorist and critic.

Marx's Ecological Perspective

Marx wrote prolifically on a wide variety of topics, by far the most important of which was the nature of capitalism: What is capitalism?⁵¹ How does it operate? Where did it originate? How did it evolve? Where is it headed? Can it be overcome? If so, how?

Marx sought answers to these questions by trying to understand the social and economic relations that govern people's lives. He demystified capitalism's free market and sometimes democratic façade as a struggle between two main classes: the capitalists (or bourgeoisie), who own the means of production, and the workers (or proletariat), who must sell their labor power in order to survive. Marx's writings can be understood as analyses of the intricate and evolving relations between these two classes.

Capitalism requires an ideology: it lulls us into an acceptance of the contemporaneous economic order, externalizes, and mystifies, making the prospect of a more humane societal organization seem beyond the pale. Among other things, ideology causes people to concentrate on the surface appearances of things and eschews the bigger picture. This leads to the distorted way of thinking that is desirable to the ideology's proponents.

One contradiction of capitalism is that capitalism itself has brought about a rift in the relationship between humankind and nature:

⁵¹ A non-technical answer is provided by fiction writer Donald Barthelme (1970: 45):

Capitalism places every man in competition with his fellows for a share of the available wealth. A few people accumulate big piles, but most do not. The sense of community falls victim to this struggle. Increased abundance and prosperity are tied to growing "productivity." A hierarchy of functionaries interposes itself between the people and the leadership. The good of the private corporation is seen as prior to the public good. The world market system tightens control in the capitalist countries and terrorizes the Third World. All things are manipulated to these ends.

[Capitalist production] disturbs the metabolic interaction between man and the earth, i.e. it prevents the return to the soil of its constituent elements consumed by man in the form of food and clothing; hence it hinders the operation of the eternal natural condition for the lasting fertility of the soil. (Marx 1990a: 637)

Kohei Saito (2017: 197) underscores the need for systemic critique to address the inevitable ecological crisis:

Only a *systematic* analysis of Marx's theory of metabolism as an integral part of his critique of political economy can convincingly demonstrate . . . how the capitalist mode of production brings about various types of ecological problems due to its insatiable desire for capital accumulation. And why radical social change on a global scale, one that consciously constructs a cooperative, non-capitalist economic structure, is indispensable if humanity is to achieve a sustainable regulation of natural and social metabolism.

In the 1844 ECONOMIC AND PHILOSOPHICAL MANUSCRIPTS, Marx (2010a: 276, translation slightly altered) observes: “[The human being] *lives* on nature⁵²—mean[ing] that nature is his *body*, with which he must remain in continuous interchange if he is not to die. That man's physical and spiritual life is linked to nature means simply that nature is linked to itself, for man is a part of nature.”

Even in their formative writings, Marx and Engels develop an *ecological* perspective for humanity's relation to the natural world. In their first joint work published in 1845—the philosophical, sociopolitical, and ironic THE HOLY FAMILY OR CRITIQUE OF CRITICAL CRITIQUE⁵³—Marx and Engels (1956: 201) query, “[P]erhaps Critical Criticism believes that it has got even to a *beginning* of the knowledge of historical reality while it still excludes *from* the historical movement the theoretical and practical relations of man to nature?” Indeed, Foster (2017: 50) opines that for both Marx and Engels “the

⁵² The original German is “Der Mensch *lebt* von der Natur” (Marx 1968: 516). As Anderson (1998: 133 fn7) observes, the contemporary meaning of *Mensch* is “human being” rather than “man.” See also Haug (2017: 60): “Given the attributions to Marx of translated passages that actually diverge from his text, it is indispensable for [Anglophone Marxist scholars] to recognize and as much as possible neutralize the shifts of meaning that have arisen from the English translations.”

⁵³ The continuation of the book's subtitle is “Against Bruno Bauer and Company,” referring to Marx's former mentor and early leader of the Young Hegelians.

key to socialism was the rational regulation of the metabolism of humanity and nature.”

What does this mean under capitalism? In the *MANIFESTO*, Marx and Engels (2010: 489) detail the new world brought about by the capitalist mode of production:

The bourgeoisie, during its rule of scarce one hundred years, has created more massive and more colossal productive forces than have all preceding generations together. Subjection of Nature’s forces to man, machinery, application of chemistry to industry and agriculture, steam-navigation, railways, electric telegraphs, clearing of whole continents for cultivation, canalisation of rivers, whole populations conjured out of the ground—what earlier century had even a presentiment that such productive forces slumbered in the lap of social labour?

In the *GRUNDRISSE*, Marx (1973: 334–35) posits:

[C]apital is the endless and limitless drive to go beyond its limiting barrier . . . The quantitative boundary of the surplus value appears to it as a mere natural barrier, as a necessity which it constantly tries to violate and beyond which it constantly seeks to go.

This limitless drive to expand has profoundly destructive ecological implications.

At the beginning of *CAPITAL*, Marx (1990a: 125) unveils the commodity: “The wealth of society in which the capitalist mode of production prevails appears as an ‘immense collection of commodities.’” Marx highlights the dual character of the commodity: use-value⁵⁴ and exchange-value.⁵⁵ For Marx, use-values are fundamental to human existence and mediate relations between humans and nature:

[Labour] is an eternal natural necessity which mediates the metabolism between

⁵⁴ Marx (1990a: 126) describes *use-value* thus:

The usefulness of a thing makes it a use-value . . . It is therefore the physical body of the commodity itself . . . This property of a commodity is independent of the amount of labour required to appropriate its useful qualities . . . Use-values are only realized [*verwirklicht*] in use or in consumption. They constitute the material content of wealth, whatever its social form may be.

⁵⁵ Marx (1990a: 126) describes *exchange-value* thus:

Exchange-value appears first of all as the quantitative relation, the proportion, in which use-values of one kind exchange for use-values of another kind. This relation changes constantly with time and place. Hence exchange-value appears to be something accidental and purely relative, and consequently an intrinsic value, i.e. an exchange-value that is inseparably connected with the commodity, inherent in it, seems a contradiction in terms.

man and nature, and therefore human life itself . . . When man engages in production, he can only proceed as nature does herself, i.e. he can only change the form of the materials. Furthermore, even in this work of modification he is constantly helped by natural forces. Labour is therefore not the only source of material wealth, i.e. of the use-values it produces. As William Petty says, labour is the father of material wealth, the earth is its mother. (Marx 1990a: 133–34)

Foster and Clark (2009: 12)—reprising an argument supportive of Marx by the 1921 Nobel laureate in chemistry—observe “it was a common error to think that Marx saw the source of all wealth as human labor.” Indeed, in his 1875 *CRITIQUE OF THE GOTHA PROGRAM*, Marx (2005: 19) reaffirms his earlier view: “Labor is *not the source* of all wealth. *Nature* is just as much the source of use-values (and these, certainly, form the material elements of wealth) as labor, which is itself only the expression of a natural force, human labor-power.”

While most of Marx’s analyses deal with the capitalist mode of production, *every* historical mode of production, from preliterate societies through capitalist modernity, has to engage with its metabolic relationship with nature, as discussed above. Marx elaborates:

Labour is, first of all, a process between man and nature, a process by which man, through his own actions, mediates, regulates and controls the metabolism between himself and nature. He confronts the materials of nature as a force of nature. He sets in motion the natural forces which belong to his own body, his arms, legs, head and hands, in order to appropriate the materials of nature in a form adapted to his own needs. Through this movement he acts upon external nature and changes it, and in this way he simultaneously changes his own nature. (Marx, 1990a: 283)⁵⁶

Marx details the relationship between the industrial system and nature. He discusses problems arising from the sharp divide between town and country. This divide destroys the physical health of workers in urban areas and the intellectual life of workers

⁵⁶ For the translation of the immediately following sentence—“He develops the potentialities slumbering within nature, and subjects the play of its forces to his own sovereign power (Marx 1990a: 283)—and its deletion from the subsequent French edition of *CAPITAL* Volume One, *see* the argument, discussed at the end of this section, by Anderson (1998).

in rural areas. Both groups, in effect, have needs in regard to these respective environments. Ollman (1977: 13) describes these needs thus:

People in the country . . . need the city and all that it represents in the way of advanced technology and culture, just as people living in the city need the country, its fresh air, inspiring scenery, and toil on the land itself in order to achieve their full stature as human beings.

Marx posits, “The abolition of the contradiction between town [city] and country is one of the first conditions of communal life” (Marx and Engels 1976: 64). Similarly, the *MANIFESTO* emphasizes the need to suture the town and country divide.⁵⁷

As Marx wrote in *CAPITAL*, the application of science to agriculture compared with less rational predecessor methods can be a fruitful basis for a future more humanist society: “[Capitalism] creates the material conditions for a new and higher synthesis, a union of agriculture and industry on the basis of the forms that have developed during the period of their antagonistic isolation” (Marx 1990a: 637).

This potential, however, cannot be realized *within* capitalism—a socialist society must emerge in order for this to occur—because capitalism deeply disturbs the metabolic relationship between humans and nature: it propels the degradation of both the worker and the environment: “Capitalist production . . . only develops the techniques and the degree of combination of the social process of production by simultaneously undermining the original sources of all wealth—the soil and the worker” (Marx 1990a: 638). Capitalism tends to overwork the worker to the point of physical annihilation, just as it tends to use up and destroy the natural environment, all in the service of the creation of value and, ultimately, profits.

Marx cites the specific example of the contemporaneous relation between England’s industry and Ireland’s agriculture, describing the latter as “at present merely

⁵⁷ “Combination of agriculture with manufacturing industries; gradual abolition of the distinction between town and country, by a more equable distribution of the population over the country” (Marx and Engels 2010: 505).

an agricultural district of England which happens to be divided by a wide stretch of water” (Marx 1990a: 860).⁵⁸ Regarding this case study, Kevin Anderson (2016: 129) observes:

Marx links together the destruction of the Irish people with the destruction of the natural environment. This new stage of Britain’s capitalist penetration into Ireland was wreaking both human and ecological damage. The Irish historians Eamonn Slater and Terrence McDonough argue that this type of discussion . . . “projects Marx not only as an historical analyst of colonialism but also, perhaps, as a theorist of environmental modernity.”⁵⁹

Saito perceives an evolution in Marx’s thinking on ecology. Prior to *CAPITAL*, one can interpret Marx as professing an uncritical evaluation of capitalist development: the *MANIFESTO* arguably celebrates human domination of nature. Marx, through his detailed study in 1865–66 of the works of agricultural chemist Justus Von Liebig (Saito 2016: 26), comes later to a greater understanding of the harms of soil exhaustion and the metabolic rift. As a result, *CAPITAL*—all three volumes—incorporates a more critical evaluation of destruction by capitalist development, notably in agriculture. Marx subsequently embraces broader issues of ecology, such as deforestation, through his extensive notes on the work of German agriculturalist Karl Fraas. According to Saito (2017: 532–33), if Volumes Two and Three of *CAPITAL* had been completed, Marx would have placed a greater emphasis on the ecological crisis of capitalism:

[Marx’s *Capital*] not only provides a solid methodological foundation for the analysis of capital’s historical process of antagonism between humanity and nature, but also enables us to envision a counterstrategy against the reified domination of capital and the alienation of nature, from the standpoint of the

⁵⁸ Marx elaborates in Footnote 23 at 860: “If the product also diminishes relatively, per acre, it must not be forgotten that for a century and a half England has indirectly exported the soil of Ireland, without even allowing its cultivators the means for replacing the constituents of the exhausted soil.”

⁵⁹ See, eg, Slater (2019). See also Foster (2020), who observes:

Marx was among the first to point to how the industrialised nations robbed the resources, land and the fertility of the soil of the colonized nations to support the industrialization of the coloniser nations . . . The metabolic rift between town and country, global north and south, has now escaped geographical boundaries given the inability of governments to decarbonize their economies.

material world itself.

Similarly, Anderson (1998: 133–34) draws particular attention, as set forth in the table below, to Marx’s deletion of the words “and [humankind] subjects the play of [external nature]’s forces to his own sovereign power” between CAPITAL Volume One’s German editions of 1867 and 1872 (*i.e.*, the 1890 one established by Engels)⁶⁰ and the subsequently written 1872–75 French edition:

<u>Fourth German Edition [1890]</u>	<u>French Edition [1872–75]</u>
Through this movement he acts upon external nature and changes it, and in this way he simultaneously changes his own nature. <i>He develops the potentialities slumbering within nature, and subjects the play of its forces to his own sovereign power.</i> We are not dealing here with those instinctive forms of labor which remain on an animal level.	At the same time that through this movement he acts upon external nature and modifies it, he modifies his own nature, and <i>develops the potentialities slumbering within it.</i> We are not dealing here with those instinctive forms of labor which remain on an animal level.

Anderson (1998: 134) argues that Marx has removed language “asserting the necessity of human domination over nature” and replaced it with language “stressing a more interactive relationship with nature.”

Engels, in his DIALECTICS OF NATURE (written during 1878–83 but not published until 1925), also makes explicit the dialectical relationship between humankind and nature:

[W]e by no means rule over nature like a conqueror over a foreign people, like someone standing outside nature— . . . we, with flesh, blood and brain, belong to

⁶⁰ According to Anderson (1998: 132), “In establishing the 1890 fourth German edition . . . Engels claimed to have looked at all three editions developed by Marx and to have incorporated everything of importance from the French version . . . [M]ost scholars, Marxist and non-Marxist alike, have regarded [the 1890 edition] as the definitive text of volume one.”

nature, and exist in its midst, and . . . all our mastery of it consists in the fact that we have the advantage over all other creatures of being able to learn its laws and apply them correctly. (Engels 2012: 183)

Although it does not explain specifically the emergence or the development of social movements, Marxism is a social movement theory that is “relevant to the praxis of social movements from below that seek to make histories beyond neoliberalism and beyond capitalism” (Nilsen 2015: 1); in particular, Marxism “is a body of theory that was developed from and in dialogue with the struggles of social movements . . . marked by an emancipatory orientation” (Nilsen 2015: 2). Examples of Marxist theorists who stress, to varying degrees, the subjective, social movement aspect of his work include Raya Dunayevskaya, C.L.R. James, Harry Cleaver, John Holloway, and Mario Tronti.

For Marx, the alternative to capitalism’s profit maximization for a tiny minority is a democratically planned economy that serves social needs: in another word, socialism: “socialized man . . . govern[ing] the human metabolism with nature in a rational way, bringing it under their collective control instead of being dominated by it as a blind power; accomplishing it with the least expenditure of energy and in conditions most worthy and appropriate for their human nature” (Marx 1991: 959).

Marxian Dialectics

In his study of capitalism, Marx employed the dialectical method he inherited from G.W.F. Hegel.⁶¹ About this method, Wolfgang Fritz Haug (2017: 64) writes, “What

⁶¹ In a letter to Engels dated January 1858, Marx (2010b: 249) discusses utilization of Hegelian dialectics in his ongoing work on the GRUNDRISSE:

What was of great use to me as regards *method* of treatment was Hegel’s *Logic* at which I had taken another look BY MERE ACCIDENT, Freiligrath having found and made me a present of several volumes of Hegel . . . I should very much like to write 2 or 3 sheets making accessible to the common reader the *rational* aspect of the method which Hegel not only discovered but also mystified.

See also Dunayevskaya (1983: 7645): “[T]his chance rereading was a great help to [Marx] in creating a new

Marx calls ‘my dialectical method’ . . . forms indeed . . . the ‘living soul’ of his critique of political economy.” Among other things, dialectics is a way of thinking that addresses the broader context, the *bigger picture*, in order better to understand an object of study: in short, the standpoint of totality. It is a methodology that reflects what Hemingway described as *the principle of the iceberg*. Hemingway said, “I always try to write on the principle of the iceberg. There is seven-eighths of it underwater for every part that shows . . . It is the part that doesn’t show” (Plimpton and Hemingway 1958).

This aspect of Marx’s dialectical method is manifest in his myriad invocations of *Nature* over the span of his writings that constitute metaphorical bookends on ecology. In a marginal note to the manuscript of THE GERMAN IDEOLOGY, Marx wrote, “[T]he identity of nature and man also appears in such a way that the restricted attitude of men to nature determines their restricted relation to one another, and their restricted attitude to one another determines men’s restricted relation to nature” (Marx and Engels 1976: 44). In the published version, Marx writes, “[E]ach stage [of history] contains a material result, a sum of productive forces, a historically created relation to nature and of individuals to one another, which is handed down to each generation from its predecessor” (Marx and Engels 1976: 54).⁶²

According to Ollman (1990: 27), the subject of dialectics is “change, all change, and interaction, all kinds and degrees of interaction” and the key problem addressed by dialectics is how to “think about change and interaction so as not to miss or distort the

form for presenting his economic studies. That ‘new form’ of integrating dialectics and economics led Marx further to reworking the first draft, *Grundrisse*, into the final form, *Capital*.”

For a translation of Hegel’s LOGIC (including an introduction thereto described by its translator as “an even more formidable task than the translation itself”) see Hegel (2010b). For Hegel’s own summary description of dialectics, see §§ 79–82 of Hegel (2010a: 125–33).

⁶² Marx posits a related idea in THE 18TH BRUMAIRE OF LOUIS BONAPARTE (1852): “Men make their own history, but they do not make it just as they please; they do not make it under circumstances chosen by themselves, but under circumstances directly encountered, given and transmitted from the past” (Marx 1990b: 15). These early writings by Marx evoke a description of capitalism by Ollman (1998: 339): “[T]his interaction [among people and their activities] is also evolving, so the system includes the development of this interaction over time, stretching back to its origins and forward to whatever it is becoming.”

real changes and interactions that we know, in a general way at least, are there.” Essentially, Marxian dialectics comprises three dimensions: the philosophy of internal relations, the process of abstraction, and the laws of dialectics. Each dimension is discussed below.

Philosophy of Internal Relations

Italian sociologist and economist Vilfredo Pareto complains of what he sees as Marx’s ambiguity, likening Marx’s words to bats: they appear as both birds and mice.⁶³ Ollman attributes this dilemma to Marx’s philosophy of internal relations, which is the building block of Marx’s dialectic method,⁶⁴ grounded in notions of contradiction⁶⁵ and negation. Concretization of dialectics allowed Marx to understand the complexity and constant change of capitalism and to connect theory with practice.

For Marx, according to Ollman (2015: 22), “in capitalism everything seems and in fact is contradictory”: accordingly, “much more needs to be done to help people, who can only ‘see’ paradoxes, to ‘see’ contradictions, and to grasp in theory and realise in practice what is required to resolve them.”

Ollman (2003: 13) observes, “[R]eality is more than appearances.” Dialectics can be viewed as a critique of the common methodology within academia, as well as in the real world, to break up problems into discrete parts, without giving sufficient thought to

⁶³ Describing many passages of CAPITAL, Pareto (1902: 332) writes: « C’est toujours la fable de la chauve-souris. Si vous adoptez un sens, on vous répond : Je suis oiseau ; voyez mes ailes . . . Et si vous adoptez l’autre, on vous dit : Je suis souris ; vivent les rats. » (This author’s translation: “It’s always the fable of the bat. If you adopt one meaning, you are told: I am a bird; see my wings . . . And if you adopt the other, you are told: I am a mouse; long live the rats.”)

⁶⁴ According to Ollman (2003: 127), “The dialectical method of inquiry is best described as research into the manifold ways in which entities are internally related.”

⁶⁵ Lenin (1976: 359) writes, “The splitting of a single whole and the cognition of its contradictory parts . . . is the *e s s e n c e* . . . of dialectics.” For a definitive depiction of the importance of dialectical thinking to Lenin, see Anderson (1995).

their interconnectedness to the bigger whole: dialectics demands interdisciplinarity.

Dialectics is a methodology suited ideally to a changing, dangerous, and (arguably) desperate world by *elongating* our notion of anything to comprise its process: its origins, possible evolution, and *relation* to other components and to the whole. It is in this manner that the study of phenomena encompasses history and systematic relatedness.

In dialectics, process and relation are intertwined. Process uncovers a thing's history, how it developed, and what its future may be. Marx notes it would behoove us to study history *backwards*: in other words, understanding the present in the context of formative events. Although studying history in reverse may seem peculiar, it provides a lens for examining the following assertion by Faulkner (1975: 80): "The past is never dead. It's not even past." Ollman (2003: 167) believes Marx would have added, "And the future is not unborn—it is not even in the future": this perception of history derives from Marx's philosophy of internal relations.

Things become known and function in relation to other things; this applies to each of us as human beings. The organs of our bodies are internally related and we are also related to others in society. Similarly, all things (including ideas) can be seen as relations depending on other things: "In the history of ideas, where every new thought is invariably an old one warmed over, this view is generally referred to as the philosophy of internal relations" (Ollman 2001a: 27).

The philosophy of internal relations did not originate with Marx; Parmenides formulated it in Ancient Greece. Later dialectical thinkers such as Hegel, Leibniz, and Spinoza also embraced this philosophy. Ollman (2001a: 29–30) identifies the philosophy of internal relations as the basis for Marx's dialectical method. While Marx differed from previous thinkers in his conception of the philosophy of internal relations, he nonetheless saw the *whole* as internally related parts.

Process of Abstraction

Since dialectics is about how properly to understand the *whole*, its changes, and its interaction with internal components, there has to be a way to wrap our minds around this enormous task. The process of abstraction can be understood as breaking up the *whole* into discrete parts.

Because attempting to understand any whole—be it capitalism or climate crisis—is difficult, it is apparent the way to go about studying it necessitates separating out its parts: “Our minds can no more swallow the world whole at one sitting than can our stomachs” (Ollman 2003: 60). This is the first (as well as most important and least discussed) of four ways Marx uses abstraction: what Ollman describes as a mental process of focusing, of setting boundaries.

The second way Marx uses abstraction refers to the *products* of dividing up the whole. Ollman explains this as the result of the activity performed in the previous paragraph: the intellectual *construct* that is created.

Abstraction in the third sense refers to *poor* abstractions, distorted in some way, that don’t contribute to an effective understanding of the whole. Ollman describes this third abstraction as a particular subset of the second: a particular mental construct that—due to its size or its boundary—is too narrow or little. This is the way Marx understands capitalist *ideology*. Distortion (for example, the bourgeois understanding of freedom) results from the phenomenon that the related units of thought do not contain sufficient interconnections or time to develop an understanding. *Paradoxes* also fall into this third abstraction, such as the paradox of poverty in a wealthy country.

Abstraction in the fourth sense refers to a type of organization of components that

cater to capitalism. These are real world abstractions, *not* mental constructs.⁶⁶ They result from connections established over the course of society's life. An example, according to Ollman, is commoditization in a capitalist society: the experience of buying and selling things or the fact that goods have price tags.

The process of abstraction has three main modalities. The first is abstraction of extension, which refers to setting limits upon the abstraction in time and space. In this way, limits are placed on the relative quality of the abstraction and its historical development. The second mode is abstraction of vantage point, which refers to the type of lens or perspective brought into making abstractions: one's vantage point influences the type of abstractions that are made: through one's vantage point, an abstraction can also present multiple points of view. The third mode is abstraction of level of generality,⁶⁷ which deals with the type of whole to be studied. It is in this way an abstraction can be studied in relation to its particular capitalist connotation or to the more general human condition.

Ollman (2012) describes each of these three modes of the process of abstraction:

- *Mode of Extension:* To talk about things as processes, and social factors as processes, is to say too that everything is in the process of becoming . . . [W]e have to always decide how far into the past and how far into the future one has to look and . . . study in order to really understand.
- *Mode of Vantage Point:* Every time you make a study of anything, you're always beginning that study from somewhere and that somewhere—that place where you're starting to investigate—sets up an *order* of whatever it is that you subsequently encounter and with that order you're going to have certain things stand out more . . .

⁶⁶ For a discussion of the differences between abstraction as a mental construct and abstraction as a real capitalist process, see Sayer (1987).

⁶⁷ Marx subdivides problems for investigation into seven major levels of generality, each of which affects the related requisite time period for analysis: (1) unique attributes of a person or situation, (2) activities and related products (*eg.* occupation), (3) capitalism *per se*, including relations with bosses and products, (4) class, based on division of labor, (5) qualities people have in common as the result of their humanity, (6) qualities shared with other animals, and (7) other qualities as a part of nature. See Ollman (2003: 86–99).

- *Mode of Level of Generality*: Each of us, as individuals, have a number of qualities which are unique to us On the other extreme, every individual has qualities which he or she shares with every other human being Marx tries to bring these qualities into focus and to abstract *out*—to leave out—the qualities that we all have as unique individuals and abstract out the qualities we all have as members of the human species to grasp the *dynamics* of the system.

Laws of Dialectics

Dialectics focuses on myriad sorts of relations, several of which are discussed below: contradiction, quantity/quality, essence/appearance, negation of the negation, identity/difference, and interpenetration of opposites. These are referred to as the dialectical laws: movements and changes found on every level of generality.⁶⁸

- *Contradiction* refers to the inharmonious development of differing but dependent components. For Marx, capitalism was replete with contradictions: for example, capitalism’s ability to increase production coexists in contradiction with workers’ inability to consume such production. According to Ollman (2003: 84–85), a contradiction comprises five movements: mutual support, mutual undermining, immanent unfolding, change in form, and resolution.
- *Quantity/quality* delineates the multiple historical changes that take place within a process. Quantity may refer to temporal or physical values. Quality refers to a change in appearance or function: an individual may perceive things differently when aged 65 than when she was 21. Ollman (2003: 17) gives two examples: “Only when money reaches a certain

⁶⁸ Callinicos (1998: 100) describes a dialectical law as the “generalis[ation of] the features common to physical and social processes which are produced by a wide variety of different mechanisms.” Ollman (2015: 18–20) lists these additional dialectical laws: form, mediation, metamorphosis, and precondition/result. In addition, Ollman (2019: 100) describes the *law of motion*: “how [a system] has evolved, is evolving now, and is likely to evolve in the future.” In *THE POVERTY OF PHILOSOPHY* (1847), Marx (1936: 90) writes, “All that exists . . . exists and lives only by some kind of movement.”

amount . . . does it become capital, that is, can it function to buy labor-power and produce value” (citing Marx) and “[T]he cooperation of many people becomes a new productive power that is not only more but qualitatively different than the sum of individual powers that compose it” (citing Engels).

- *Essence/appearance* is described thus by Bill Livant (2008): “[T]he hidden parts of anything are often what is most important for grasping both their systemic and dynamic character. This is at the heart of the distinction [Marx] makes between appearance and essence, and explains the priority he gives to the latter in his studies.” Appearance is what is evident; essence comprises special characteristics, importance, and systemic/historical connections.
- *Negation of the negation* is described by Marx (1990a: 929) as follows:

The capitalist mode of appropriation, which springs from the capitalist mode of production, produces capitalist private property. This is the first negation of individual private property, as founded on the labour of its proprietor. But capitalist production begets, with the inexorability of a natural process, its own negation. This is the negation of the negation. It does not re-establish private property, but it does indeed establish individual property on the basis of the achievements of the capitalist era: namely co-operation and the possession in common of the land and the means of production produced by labour itself.⁶⁹

Applied broadly, negation of the negation is the law applicable to phenomena that have proceeded through three or more phases, *to wit*, the last phase will evidence similarities to the penultimate phase.⁷⁰ As

⁶⁹ For an analysis of this passage, see Arthur (1993). See also Engels (1970) for a defense of the law of negation of the negation—and several of its examples in nature, human society, and thought—and Vorob’ev (1969) for a discussion of the manifestation of negation of the negation in Marx’s logical (as opposed to historical) analysis.

⁷⁰ A concrete example of negation of the negation, in this author’s lifetime, is the US Presidency: George W Bush (2001–09), Barack Obama (2009–17), and Donald Trump (2017–?). For a summary discussion of these presidents’ political strategies on climate change, for example, see Carlarne (2019: 396–402), who describes Obama as “the most climate-friendly president in U.S. history” and Trump as “the most climate-skeptic president in U.S. history.”

Joyce (1961: 113) writes, “As you are now so once were we.” Anderson and Hudis (2019: 1), evoking Hegel, describe double negation thus: “Ideas or social forms face negativity from within. If the process deepens, the old idea or form is overthrown . . . Then the process may resume, with negation growing again within what has been newly created.”⁷¹

- *Identity/difference* refers to the step of understanding the identity of components without concluding something is simply the same as or different from something else. Identity/difference takes into account the complex relations among things while trying to understand their identities.
- *Interpenetration of opposites* means that to understand a component one has to examine its place, time, and surrounding conditions. Changing any one of these may yield an opposite conclusion or effect. Automation, for example, may be negative for workers under capitalism but beneficial for workers under communism.

Praxis

At the instruction of Ollman,⁷² when he was my professor at New York University, I first applied Marxian dialectics five years ago to one of my completed research projects for another undergraduate class. I revisited the context, process, scope, and labor production for a 15-page essay⁷³ to determine how, in hindsight, I might

⁷¹ For a description of the transformation of the concept of negation of the negation between Hegelian and Marxian dialectics, see Callinicos (1998: 97–98).

⁷² In a way, this was like an episode in the mentorship of Stephen Sondheim by Broadway composer and lyricist Oscar Hammerstein II, when the teacher instructed his protégé to innovate, based on strict parameters, four different musicals as a sort of apprenticeship (Sondheim, 2016).

⁷³ This essay—from which a monograph was published (Fisher 2015)—was a research paper on the first Federal litigation on reparations for formerly enslaved African Americans, examining contemporaneous newspaper accounts and the US Supreme Court transcript of record and supporting pleadings, and considering lessons that can inform renewed activism for reparations.

differently have approached, argued, and written it. Among other dialectical shortcomings in my original essay, I observed my three modes of abstraction had been impaired.

Similarly, a major shortcoming of many analyses of the climate crisis resides in their *undialectical*, as contrasted with dialectical, framework:

“Dialectical” thinking . . . is the ongoing effort to grasp things in terms of their interconnections and this includes their ties with their own preconditions and future possibilities as well as with whatever is affecting them (and whatever they are affecting) right now. (Ollman 2001b: 109)

Based on the philosophy of internal relations, climate change is—in the sense Ollman (2019: 99) describes as “singling out, or focusing on, and setting up a provisional boundary around some part(s) of the processes and relations”—a *real world* abstraction from capitalism. Ollman (2001b: 36) writes:

Like Humpty Dumpty, capitalism has been broken into so many pieces that it is almost impossible to see what they are pieces of . . . [W]ithout a fix on the whole . . . it is impossible to grasp the place and function, and with them the greater meaning and importance, of any of the parts.

And from climate change, abstractions include (in addition to the fossil fuels industries) the following: agriculture, food production, deforestation, the military-industrial complex, economics, game theory, smart technology,⁷⁴ international human rights,⁷⁵ international property law,⁷⁶ and international environmental law.⁷⁷

The three modes of abstraction are generally impaired in the analysis of climate crisis by even the most righteous and sophisticated academics, activists, and politicians; such impairments may include any or all of the following:

- *Mode of Extension*: neither going far enough back into history (*eg* to the

⁷⁴ See, *eg*, Mattei (2020).

⁷⁵ See, *eg*, De Schutter (2012) and Alston and Goodman (2013).

⁷⁶ See, *eg*, The Common Core of European Law Project and Académie internationale de droit comparé (2020).

⁷⁷ See, *eg*, Takacs (2009).

Industrial Revolution) nor far enough forward into the future; for example, not studying history in reverse, including the origins of capitalism and its relation to violence,⁷⁸ imperialism,⁷⁹ genocide,⁸⁰ slavery,⁸¹ and gender⁸² and race⁸³ discrimination

- *Mode of Vantage Point*: limiting analysis to only one vantage point (for example, developed countries),⁸⁴ thereby missing special or different perspectives from other sides;⁸⁵ China, for example, merits exploration, particularly in light of its accelerated urbanization construction project, resulting in an uptick in cement, copper, and steel production,⁸⁶ which at least one pundit has credited for saving global capitalism in the 2008 global financial crisis (Ollman, Harvey, and Hudson 2019: at 39 minutes); also, the vantage points of non-humans—*eg*, mammals, birds, fish, insects, trees, flowers, coral, rainforests, oceans, glaciers, rivers⁸⁷—should be considered; the vantage point for climate crisis should be

⁷⁸ See, *eg*, “On Violence” in Fanon (2004: 1–62).

⁷⁹ See, *eg*, Sontag (1967) and Karuka (2019).

⁸⁰ See, *eg*, Crook, Short, and South (2018).

⁸¹ See, *eg*, C. J. Robinson (2000), Clegg (2015), and Clegg and Foley (2019).

⁸² See, *eg*, Federici (2009) and Arruzza, Bhattacharya, and Fraser (2019).

⁸³ See, *eg*, Omi and Winant (2014) and Turner and Wu (2002). In Richmond, CA, for example, 80% of nearby residents to Chevron’s tar sands crude refinery are people of color. Chevron’s plan to expand the refinery prompted environmental justice activists to call for an air pollution cap. Chevron was able to stop the cap in July 2017 by an extension to California’s cap-and-trade Bill AB 398, which prevents local regulatory agencies from placing restrictions on greenhouse gas emissions. The increased pollution that will result is expected to lead to health problems and deaths.

⁸⁴ More than one-half of CO₂ emissions have been made by developed countries accounting for less than one-fifth of the world’s population; it is projected, however, that in the future developing countries will emit more CO₂ than developed countries. See, *eg*, Jones, Thompson, and Ma (2017).

⁸⁵ Ollman (2019: at 58 minutes) identifies the following vantage points as among the most important to a dialectical analysis of climate crisis: production, class, alienation, and value. I would add accumulation to this list.

⁸⁶ See, *eg*, Godin (2019). Since 2005, China has emitted more GHG annually than the United States; after these two countries, the next largest GHG emitters, in 2016, were India, Russia, and Indonesia (Climate Watch 2019).

⁸⁷ See, *eg*, Babcock (2016) and C. Clark et al. (2018).

global, which begs the global coöperation of nations⁸⁸ and institutions (*eg*, United Nations, World Court, Roman Catholic Church)

- *Mode of Level of Generality*: falling victim to a blind spot regarding capitalism—and its dominance of global government, media, education, production, marketing, *et cetera*—which blind spot is consistent with capitalism’s inherent mystification:

The ideology with which capitalism distorts, hides, disguises, exorcizes, trivializes, and denies how it works was also investigated by Marx as a crucial internally related mechanism of that very working, since capitalism could not survive very long without such mystification. (Ollman 2014: 577)

Marxian dialectics would also posit that solving the climate crisis mandates a negation of the negation: a positive, forward movement.⁸⁹ One clear candidate for application of such dialectical law—evoking Marx’s own description thereof—is private property,⁹⁰ and a related international embrace of the commons.⁹¹

Conclusion

In CAPITAL Volume Three, Marx (1991: 911) offers this topical vision for society’s ecological responsibility to the planet: “Even an entire society, a nation, or all simultaneously existing societies taken together, are not the owners of the earth. They are

⁸⁸ Nordhaus (2018: at 28 minutes), for example, believes that a solution for the climate crisis is an international *climate club* featuring membership dues through abatement and tariffs as penalties for non-participation.

⁸⁹ For a discussion of this particular feature of negation of the negation, *see* Anderson (1995: 91–94).

⁹⁰ As Doremus (2011: 1092) writes, “Climate change *should* catalyze significant readjustment . . . toward *weaker*, rather than stronger, individual property rights.”

⁹¹ *See, eg*, Davies (2012: 17)—who embraces the view that private property is a compromise between the perpetually competing interests of individuals and the community—“The strong nexus between persons and property must now be seen as mediated by values associated with the commons, the public domain, and the numerous communities within which we find ourselves” and Arvidsson (2019: 3), who writes, “The growing centrality of the commons to anti-capitalist struggles has inspired a thread of social theory that views the commons as a negation of capitalism and markets.”

simply its possessors, its beneficiaries, and have to bequeath it in an improved state to succeeding generations, as *boni patres familias*.”

That ecological vision—evidencing Marx’s percipience and “prophecy” and presenting itself synchronistically on a page 911—is internally related (*i.e.*, in the sense it is a contradictory idea that is a structurally interdependent part of a *whole*) across time with the public trust doctrine,⁹² as developed by ancient Roman law, the Magna Carta, English common law,⁹³ a thread of US cases over two centuries,⁹⁴ contemporary climate change litigation in India, Pakistan, Kenya, and Uganda,⁹⁵ and constitutional, statutory, or natural law in Brazil, Philippines, Nigeria, and South Africa (Blumm and Guthrie 2012). The principle of intergenerational equity is recognized in the Climate Change Convention—opened for signature at the 1992 Rio Earth Summit—as well as by human

⁹² See, eg, Van der Schyff (2010: 126) and Sand (2017: 9). Marx, who matriculated in law, may have been aware of the similarities in German law to the public trust doctrine:

With the rise of the “Rechtsstaat” (rule of law) in the middle of the 19th century, . . . specific regulatory structures evolved for many natural resources . . . The Prussian General Code of 1794, for example, states that “the roads, the navigable streams, the shores of the sea and the harbors are common property of the state” . . . [T]he concept of “Regalien” [reconciliation of nobility ownership interests with usufructuary interests of citizens] as applied to natural resources was widely sustained. (Kube 1997: 859)

⁹³ See, eg, Sax (1980: 185).

⁹⁴ See, eg, (i) *Arnold v. Mundy*, 6 N.J.L. 1 (1821) (any grant of submerged land by the state is subject to the right of the people to navigate and fish because government holds such land as a trustee); (ii) *Illinois Central Railroad Co. v. Illinois*, 146 U.S. 387 (1892) (a state’s conveyance of land to a private corporation is invalid if it violates the state’s public trust); (iii) *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469 (1988) (states have broad authority to define the scope of their public trust doctrine); and (iv) *Obergefell v. Hodges*, 135 S. Ct. 2584 (2015) (“The generations that wrote and ratified the Bill of Rights and the Fourteenth Amendment . . . entrusted to future generations a charter protecting the right of all persons to enjoy liberty as we learn its meaning. When new insight reveals discord between the Constitution’s central protections and a received legal stricture, a claim to liberty must be addressed”).

⁹⁵ According to Resta (2017: 241):

[T]he public trust doctrine has found the most fertile ground in Southeast Asia and in Africa. There, indeed, some of the most obnoxious forms of predatory capitalism have been taking place, menacing the survival of communities and their traditional way of life . . . [T]he public trust doctrine has been employed by citizens as a tool to subject the decisions of competent public authorities . . . to judicial scrutiny.

rights treaty bodies (Hausfeld LLP, Hausfeld UK, and Earthjustice 2019: 54, 90).⁹⁶

Ollman (2003: 130) describes Marxian dialectics as “the search for internal relations within and between abstracted units”: Marx’s ecological vision, the public trust doctrine, and intergenerational equity are such abstracted units, and they exemplify the Marxian dialectical law of motion.⁹⁷ They are part of what Marx (1936: 93) describes as the “immutable” movement of “formation in ideas.” An idea from ancient Rome or medieval England or nineteenth century Germany can be resurrected and employed in the present and in the future.

It would behoove us to marshal Marxian theory and dialectics—as what Robinson describes as “heuristic tools”—in our response to what David Takacs has designated “the greatest crisis that capitalism has wrought” and “the foremost symptom of its pathology.” Nilsen (2015: 4) posits, for example, that Marxism can contribute to a social movement process “by sharpening its theoretical armoury against the grindstone of the actually existing contradictions of neoliberal capitalism and actually existing popular resistance.”⁹⁸ In such popular resistance, Berger (2009: 32) reminds us to listen to the Earth:

[T]he world’s tyrants . . . operate in cyberspace and they lodge in guarded condominiums. They have no knowledge of the surrounding earth. Furthermore, they dismiss such knowledge as superficial, not profound. Only extracted resources count. They cannot listen to the earth. On the ground they are blind. In the local they are lost . . . Effective acts of sustained resistance will be embedded in the local, near and far. Outback resistance, listening to the earth.

Like Berger, I was born on 5 November—Guy Fawkes Day in England—which conveys

⁹⁶ See also Weiss (1992) (our responsibilities to future generations require adjustments in institutions, economic incentives, legal instruments, public consciousness, and political will).

⁹⁷ See note 68 *supra*. See also Farr (1986) (arguing that Marx was a scientific realist who provided a framework for understanding his own explanatory laws of motion of modern society) and Harvey (2018: 209) (“[Marx] suggest[s] a way to cut through all the confusions of the daily workings of a capitalist mode of production and get to its essence—its inner laws of motion—through the formulation of abstractions woven into some simple (and in the end not-so-simple) theory of endless capital accumulation”).

⁹⁸ For a detailed discussion of the relevance of Marxian dialectics to social movements, see Krinsky (2019).

identification with resistance (Swinton et al. 2016: at 23 minutes).

I submit we should heed the clarion call by Ollman (2019: at 56 minutes) to apply Marxian dialectics to the climate crisis:

If everything in the world is internally related then an approach like *dialectics*, which starts with that assumption, is likely to do a much better job in uncovering the numerous factors that have gone into climate change than any of the alternatives, which tend to focus on only one or a few of the climatic factors that are disrupting our lives . . . What badly needs to happen now is to let dialectics, . . . in all three of [its] dimensions, *loose* on the main problems associated with climate change.

If we fail so to do, the center—in ways draconian and Didionian⁹⁹—cannot hold. By now, those who choose not to bury their heads in the sands of denial should understand that climate change is capitalism, capitalism climate change; unlike the closing line of Keats’s *Ode on a Grecian Urn*, however, that is *not* “all ye need to know” on Earth (Keats 1820). Marxian dialectics can explain the dynamics of globalizing capitalism: where capitalism has taken us since Marx and where it will take us. As Ollman (2019: 100) writes, “[T]o complete the dialectical analysis that Marx began [requires] combin[ing] the more significant changes that have taken place in capitalism since Marx wrote, and the more or less distinctive interaction that has evolved between them.” Among such “significant changes,” the *most* significant is arguably climate change.

There *are* sprouts of hope, each germinating (whether or not knowingly) from the seeds of Marxian dialectics: a 2018 Nobel Prize winner who stresses the need for an interdisciplinary approach to climate change: “Climate change involves many, many sectors or disciplines . . . Climate change is so interconnected—the parts are so interconnected—we need . . . integrated assessment modeling to deal with this problem in a rigorous way” (Nordhaus 2018); the Dutch Supreme Court victory in *Urgenda* for constitutional and human rights as applied to the climate crisis; an international

⁹⁹ The center’s not holding—from *The Second Coming* (Yeats 1920)—is a motif in several writings of Joan Didion. *See, eg.* Geherin (1974: 66–67), Didion (2017), and Didion (2019).

renaissance in the study of the commons; climate crisis social movements such as Sunrise, and doyens such as Thunberg and Ocasio-Cortez; the litigation by an *ad hoc* band of communards and lawyers—from New York, Turin, New Delhi, Santiago, and Santa Barbara—invoking rights of nature to save from capitalist development a community garden in Harlem, two miles from my place of birth.¹⁰⁰

Nordhaus’s call for integrated assessment modeling evokes Marx’s philosophy of internal relations; *Urgenda*, the process of abstraction’s mode of extension; the commons’s renaissance, the dialectical law of negation of the negation; climate crisis social movements, contradiction; and legal invocations of rights of nature, the mode of vantage point. As Ollman (2015: 19) writes, albeit in a slightly different context, “Here, too, the [Marxian dialectical] category of ‘contradiction’ helps us grasp the opposing ways of growing these sprouts [of hope] as a choice and a struggle, whose resolution lies up ahead.”

But, as Thunberg (2018) says—heralding another negation of the negation— “[I]nstead of looking for hope, look for action. Then and *only* then, hope will come . . . Everything needs to change. And it has to start today.”

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¹⁰⁰ See *In the Matter of Rene Calvo & Mandela Garden, Petitioners-Plaintiffs-Appellants, v Bill de Blasio in his capacity as Mayor of the City of New York; Maria Torres-Springer in her capacity as Comm’r of New York City Dep’t of Hous. Pres., Respondents-Defendants-Respondents.*, No. M-2800, 2019 WL 3296155 (N.Y. App. Div. July 23, 2019).

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