

# The Dialectic of De-Holocenation: Waste and Wealth in the Anthropocene\*

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## I. Introduction: The Dynamics of Degradation

A brief 2021 news item provides a curious, but important, point of departure to examine the accelerating pace of environmental degradation associated with rapid climate change. After decades of destructive hurricane landfalls from the 1821 Norfolk and Long Island Hurricane, the 1893 New York, or “Midnight Storm” Hurricane, the 1903 New Jersey, or “Vagabond,” Hurricane, 1938 New England, or “Long Island Express” Hurricane, and then Hurricanes Donna (1960), Floyd (1999), Irene (2011) plus Superstorm Sandy (2012), environmental conditions have changed across New York. In turn, hard new realities hit home for Manhattanites during September 2021 with Hurricane Ida’s damage.

In the aftermath of this devastating hurricane, New York City resolved to hire its own municipal weather forecaster. The job description called for a provider with the capacity to make precise neighborhood-centered weather predictions. These reports are meant to serve as more accurate, focused, and timely “second opinions” to daily National Weather Service forecasts, which have circulated in the New York metropolitan area since the Weather Bureau of the United States was established in 1870 by President Grant. In making the announcement, Mayor Bill De Blasio compared this decision to the city’s establishment of its own counter-terrorism and intelligence unit in the NYPD after the terrorist attacks of 9/11.

Before Hurricane Ida, the Mayor had been advised that the city would get between 3 to 6 inches of rain for the entire day. At its peak, however, 3.15 inches of rain fell in only one hour in Central Park, along with 4 to 8 inches in a few hours at other locations across the city. This unprecedented level and rate of precipitation triggered the first-ever “flash flood emergency” in New York City. Rain rapidly swamped streets, deluged subway stations, stalled trains, flooded basements, trapped hundreds of motorists in their vehicles, and killed 13 people who drowned in basement apartments, unaware such a calamity could ever befall them.

This rainfall also totally overwhelmed the city’s existing storm sewer systems, which have been constructed gradually over nearly 175 years to handle no more than half this volume of rain run-off at the far lower rates that were characteristic of “a whole different reality” before extensive fossil fuel use. With so many impervious urban surfaces, New York City is not designed to deal with intense rains. Yet, this type of rainfall is more frequent and linked to rapid climate change conditions, which follows to a significant extent from fossil capitalism’s (Malm,

2016) machinations in various markets based in New York City for over two centuries [<https://www.youtube.com/watch?v=c1jLBp2RfvI&t=874s>].

On Monday, September 27, 2021, Mayor De Blasio announced at a broadcast news conference, “we learned from Ida that we have to do some very, very different things,” concluding that “this is a brand-new world” (*Roanoke Times*, September 29, 2021: A 10). At the same time, however, New York City and its residents were put on notice about how ill-adapted they and their city are to face current and dynamically worsening environmental conditions. To rebuild New York City’s infrastructure to adapt to such changes, the Mayor estimated would cost \$100 billion.” [<https://www.youtube.com/watch?v=c1jLBp2RfvI&t=874s>]

As a modern state formation, the city responded to this new challenge by *not* “doing some very, very different things.” Rather the Major just put a price tag on how to apply more measures of new technologies to New York’s climate change challenges, trapping the city and its residents in the same one-dimensional ideology of advanced industrial society, causing these clusters of crises. This study looks back to the critical analyses of “technological rationality” by Herbert Marcuse in *One-Dimensional Man: Studies in the Ideology of Advanced Industrial Society* (1964) to puzzle through these developments.

## II. A Brand New World Mixing with a Grand Old World

What is this “brand new world”? To answer the question, one must probe the fuzzy conditions along the boundary layers between the Holocene (today’s recognized geological epoch of approximately the past 12,000 years) and Anthropocene (a concept of a great debate over if and when the Holocene might be understood as ending) in human and natural history (Schwägerl, 2015). As economies and environments now merge in the waste and wealth of planetary urbanization, this analysis considers how conditions of scarcity and abundance intermix in “de-holocentation” and “anthropocentation” and looks to Marcuse’s critique of advanced industrial society for an understanding of how the world has become “brand new” in the 2020s.

After nearly 250 plus years of fossil fuel combustion across Europe, North America, and around the globe, the 2020s are increasingly marred by unprecedented ecological disasters, like Hurricane Ida’s impact on New York, which arguably are attributable to the growing concentration of greenhouse gases, like CO<sub>2</sub> in the atmosphere. The Dutch established a trading post on Governor’s Island in New York Harbor in 1624 and then started building Fort Amsterdam on Manhattan Island in 1625. The colonists then began constructing a larger settlement, New Amsterdam. It pushed north from the south end of Manhattan up today’s Wall Street where they erected a high defensive wall in 1653 to ward off English and Native American raids. Yet, the English soon took control of this small fur trapping and trading city in 1664. It was, in turn, granted as a territorial concession to London after the Second Anglo-Dutch war in 1667 and renamed as New York. The concentration of atmospheric CO<sub>2</sub> over New Amsterdam/New York was at the pre-industrial marker level of 350 ppm (parts per million).

Over the next century, New York expanded in area and population as a major commercial hub for Britain’s North American colonies and an international port for transatlantic slaving since enslaved laborers were used extensively to build out the city as England’s 13 American colonies grew rapidly during the eighteenth century. During these same decades, the industrial era was dawning around today’s metropolitan New York region, including the initial

installations of steam engines in North America. Philip Schuyler ordered a steam engine from Cornwall in 1748 to drain a flooded copper mine close to Newark; Christopher Coles built two steam engines -- the first for a Philadelphia distillery in 1773 and the second for a public water pumping station in New York City in 1776 (Pursell, 1969); and, a third unit was installed in 1780 to drain water from a mine in Cranston, Rhode Island (Pursell, 1969). Before the 1787 Constitution of the United States of America came into force, then, CO<sub>2</sub> and particulate pollution from wood and coal were rising from New York and other nearby states, contributing to today's greenhouse gassing problems.

With nearly 9 million people living compactly today on barely 300 square miles, the heart of this nearly 400-year-old city still is centered on Manhattan Island. From what was created first as a small outpost to support an extractive colonial economy served by European settlers, slave labor, and sailing ships, New York gradually became one of the core nodes for industrial modernity's "urban revolution" (Lefebvre, 2003). It was briefly the center of British military operations during the American Revolution from 1776 to 1783. It also hosted the first capital of the United States' government under the Articles of Confederation and then The Constitution during the 1780s.

Perhaps New York's most significant addition to today's growing disasters of de-holocenation, however, began with the *North River Steamboat* (also known as the *Clermont*). In 1807, this vessel, designed by Robert Fulton, entered service as the world's first steam-powered riverboat, carrying passengers from New York City up the Hudson River to Albany and back. A second vessel, *Car of Neptune*, was put into commission by Fulton in 1809 (Sale, 2001). During 1810, these were the only two steamers in service on Hudson, but by 1840 travelers could book passage on over 100 steamboats running this route. With this technological breakthrough, New Yorkers solidified the city's important role in the fossil-fueled cascades of de-holocenation of the present as newer generations of steamships displaced sail around the world during the nineteenth and early twentieth centuries (Sale, 2001).

One must look at New York City as well as America, then, in terms of abundance, especially the extraordinary cornucopian bounty that coevolves as the waste and wealth of "the American Dream" in the Industrial Revolution. This hybridization of waste and wealth also brought the unified opposites of deformation and formation, closing and opening, cessation, and origination of creative economic destruction, constituting the dialectic of de-holocenation. The complex workings of worldwide industrial production and consumption, first, leave behind massive amounts of noxious by-products, like carbon dioxide, methane, nitrous oxide, and chlorofluorocarbons, or industrial "waste," They have been part and parcel of creating new waves of needed products, or manufactured "wealth," rising with the still increasing consumption of fossil fuels in the Holocene for more than 250 years. Second, the relative environmental stability of the Holocene as "Nature," in turn, suffered concomitant waves of disruptive ecological degradation as the dual development of "waste" and "wealth" spun up together in the detrital wash of the new "Denature" associated with the emergent Anthropocene.

While no one "wants" the abundant toxic effluents of such waste, everyone still "gets" them as embedded and pervasive outcomes of fossil-fueled economic growth. They are inescapable and indivisible in the tremendous output of scarcer pleasing products everyone allegedly "needs" as the wealth sought by the citizens of "carbon democracy" (Mitchell, 2011) as they extract and exploit fossil fuels. While the displeasing by-products and pleasing products share common origins, the maze ways of commodity fetishism in global markets enable the pleasure of products to render the displeasure of their by-products mostly invisible, or at least tolerable externalities. In the immaterial and material flood of goods celebrated with great lust, the issues associated with waste are eclipsed by the ideological

delight of satisfying material stuff, which legitimates contemporary liberal and illiberal institutional arrangements for “industrial democracy.” Celebrating how they “deliver the goods” entails simultaneously how to “downplay the bads.”

This growing abundance of waste, however, promotes, in part, disruptive rapid climate change that now overshadows the pursuit and enjoyment of wealth in the gradual warming of the planet’s entire atmosphere, four oceans, two polar regions, and soil temperatures everywhere. The affluence of industrial wastes from Society is recasting nature in a dangerous dialectic of “de-holocenation.” Even though it is touted as the “advent of affluence,” its ideological distortions and material degradations undercut the enjoyment of industrial wealth. It is these world ecologies of affluence, which occlude the many corrosive effluents such affluence never escapes, also shape the Denatured foundations of the Anthropocene. As the energy regime of urban industrial democracy -- both liberal and illiberal -- plunges deeply into greater fossil fuel use, especially the oil and gas extracted from subterranean rock formations, its sites, spaces, structures, services, and systems become modernity’s forces of petromorphic creation and destruction. Indeed, oil, gas, and coal gradually coat, to some extent, everything produced and consumed, as waste and wealth, for humans and nonhumans alike.

A dialectical appraisal of the entanglements of cityscape with countryside, urban life and rural living, industrial and agricultural existence, mental and manual labor, urban streets, and wild country reveals the perverse dimensions behind the humanization of the Earth, especially how the contradictions of commodities, as waste and wealth, mediate the madness of a human “noosphere” blossoming from hydrocarbonic materials extracted from the natural “biosphere.” The historic shift around the North Atlantic basin towards greater urbanization and fossil fuel use after 1815 infiltrates this waste and wealth -- culturally, economically, and technologically -- through all dimensions of everyday life.

Without oil, gas, and coal, there is little or no food, shelter, water, clothing, transport, information, or order. Ultimately, fossil capitalism (Malm, 2016) and carbon democracy (Mitchell, 2011) are amalgamated elements of the petrocratic order of fossil-fueled existence. As its time, space, and meaning all are reshaped around oil, gas, and coal, they proliferate at petrochronic rates, in petrotopic forms, for petrosemic communities in a world civilization of petrovores whose biopolitics rests upon the petronomic power unleashed by extracting new energy flows long fossilized in the remains of prehistoric life (Luke, 2013: 39-48).

These currents of fluid historical change collide with once far more obdurate biological contingency, as Foucault observed, (1990: 135-159) that reconfigures the contingent possibilities for human freedom as well as the determinate force of nonhuman necessity. Adorno also scans the significance of these transformations in his observations about Nature and Society, namely, by the nineteenth century, “philosophy had succeeded in refining the concept of natural history by taking up this theme of the awakening of an enciphered and petrified object” (Adorno, 1984: 119) in the enduring changes of nature celebrated by philosophers, physicists or poets. Hence, “the deepest point where history and nature converge lies precisely in this element of transience. If Lukács demonstrates the transformation of the historical, as that which has been, into nature, then here is the other side of the phenomenon: nature itself is seen as transitory nature, as history” (Adorno, 1984: 119).

One must track the dialectics of by-products and products, waste and wealth, displeasure and pleasure in these historic climate changes. They are indeed rapid, profound, and fundamental shifts in the turbulent boundary layers

separating two geological epochs. The whirling chaos spinning up from this new unwanted, and yet man-made, global environment, in turn, seems to require a discrete epoch for its critical interpretation. The terms of a climatological conception of history, due to the immanent catastrophic consequences of unremitting by-production and production of waste and wealth by petrocratic powers, increasingly lead many now to regard this epoch as “the Anthropocene.”

With rapidly rising levels of industrial by-products and waste, Humanity, Society, and Technology are “processing Nature” of the Holocene into more unpredictable and uncertain forms of “Denature,” leading to quantitatively rising tides of degrading de-holocenation. In the work of established anthropological, biological, and climatological science, today’s rapid climate changes are confounding human responses to halting or reversing them due to their remarkable unpredictability, scope, and rapidity. In this “anthropocentration,” the waste and wealth of contemporary global capitalism’s degraded life amalgamate as disaster and delight in the “damaged life” (Adorno, 2005) left to the planet, given the qualitatively emerging attributes of the Anthropocene.

### III. One-Dimensionality and Overdevelopment

After nearly 250 plus years of fossil fuel burning across Europe, North America, and around the globe, their meaning in the 2020s is being recast as the prelude to clusters of major ecological disasters worsened by rising concentration of CO<sub>2</sub> and other greenhouse gases in the atmosphere. The grand old world in which much of New York City was built basically assumed the conditions of “a world” at the 293 ppm of CO<sub>2</sub> prevailing in 1900 (NOAA, 2021) would persist, even though the banks and corporations of Manhattan were nurturing more than one brand new world defined by the widely-celebrated powers of “technological rationality” described by Marcuse in *One-Dimensional Man*. In this work of highly critical *Studies in the Ideology of Advanced Industrial Society*, he expressed severe frustration. The tremendous material and intellectual potential of “the affluent society” of the post-1945 Western world was largely misspent on the containment of its opponents -- foreign and domestic -- through “the sheer quantity of goods, services, work, and recreation” (Marcuse, 1964: 242).

A once potentially liberating “alternative future” for humanity has become lost to a failed “*reduction of overdevelopment*” in the irresponsible “atrocious present” of petrocratic one-dimensionality. Rooted in “moronization, the perpetuation of toil, and the promotion of frustration”, it continues by thoroughly repressing a qualitative transformation of the individual and society “in the cult of fitness, strength, and regularity” (Marcuse, 1964: 242) celebrated by fossil capitalists and carbon democrats. Rather than attaining truly tangible levels of collective liberation and individual autonomy, “the apparatus” of contemporary advanced industrial society “imposes its economic and political requirements for defense and expansion on labor time and free time, on material and intellectual culture” from its base in a manner that “tends to be totalitarian” (Marcuse, 1964: 3) in accord with its energetic petronomic logic.

Marcuse’s critical exploration of “alternative futures” for humanity recounts how these unique new forms of oppressive totalitarianism were not “a terroristic political coordination of society” but rather, ironically, “a non-terroristic economic-technical coordination which operates through the manipulation of needs by vested interests,” precluding at the same time “the emergence of an effective political opposition against the whole” (1964: 3). Whether it was clocked in the hours of his own atrocious present in which the Goldwaterite “conscience of conservatism” assailed “the Great Society” of LBJ that had declared “the war on crime” at home and “the war against Communism” in Indochina; or, instead, our own atrocious present of Bidenite dreams for “Building Back Better” against the

insurrections for Trumpification by “the MAGA movement,” the outcomes are plain. The oppressive totalitarian order of “a specific system of production and distribution” in carbon democracy continues to prove itself in the US to be quite “compatible with a ‘pluralism’ of parties, newspapers, “countervailing powers, etc.” (Marcuse, 1964: 3).

The paralysis of an effective political opposition ready to fight for authentic liberation for now over 55 years undoubtedly solidified during the neoliberal turns of the 1970s and 1980s. These potent counterrevolutionary energies, as Marcuse (1964: 4) might observe, continue “implanting of material and intellectual needs that perpetuate obsolete forms of the struggle for existence.” Today, they prize atomized, hypercompetitive “winner takes all” markets, which fundamentally operate even more perversely through the non-stop manipulation of needs in “the surveillance capitalism” of newer vested interests, like Amazon, Alphabet, Apple, Facebook, and Microsoft. The most distinctive mark of “advanced industrial society is its effective suffocation of those needs that demand liberation -- liberation also from that which is tolerable and rewarding and comfortable -- while it sustains and dissolves the destructive power and repressive function of the affluent society. . . .the social controls exact the overwhelming need for the production and consumption of waste” (Marcuse, 1964: 7).

Marcuse (1964: 16) highlighted these contradictions in the conventional faith in “Progress,” because “advanced industrial society is approaching the stage where continued progress would demand the radical subversion of the prevailing direction and organization of progress.” Yet, is another radical twist needed here today? In one sense, “all freedom depends on the conquest of alien necessity and the realization of freedom depends on the *techniques* of this conquest” (Marcuse, 1964: 18). Then as now, however, advanced industrial society rests upon the techniques of “fossil capital” (Malm, 2016). Despite the din raised by Bill McKibben and 350.org, Greta Thunberg and Fridays for the Future or even the United Nations Framework Convention on Climate Change (UNFCCC) with its Process and Meetings from the Kyoto Protocol (1997), the Paris Agreement (2015) as well 2021’s COP 26 session in Glasgow, the prodigious consumption of oil, gas, and coal continues to increase (United Nations Climate Change, 2022). It still powers “the highest productivity of labor,” “the most efficient industrialization,” and the fullest “restriction and manipulation of needs” (Marcuse, 1964: 18) in today’s dialectic of waste and wealth.

To shine another light on the one-dimensionality of de-holocenation, “technological rationality” has become the greatest vehicle of “sustainable degradation” (Luke, 2006) in the illiberal and liberal forms of today’s “carbon democracy.” This greatly deformed political regime continues to be “a truly totalitarian universe in which society and nature, mind and body are kept in a state of permanent mobilization for the defense of this universe” (Marcuse, 1964: 18), but it increasingly administers the degradations of technological rationality in restricting *abundance* for the few, while rapidly worsening scarcity for the many. An adaptative spin is put on ecological degradation, “in the guise of affluence and liberty -- extends to all spheres of private and public existence, integrates all authentic opposition, absorbs all alternatives” (Marcuse, 1964: 18) by promising techno-fix after techno-fix to suffuse, soften and slow the ill-effects of rapid climate change.

The current means of production “in the struggle for the pacification of nature and society” (Marcuse, 1964: 16) rest upon sustained systemic waste, which is both invasive and invidious. It promotes, in part, rapid climate change that attends this pursuit and enjoyment of wealth with the widening wrath of global warming -- prolonged drought, more frequent hurricanes, sea rise, fiercer forest fires, incredible flooding, devastating widespread desertification, and lost glaciers. Marcuse believed the “pacification of existence” could lead to “conditions where the competing needs,

desires, and aspirations are no longer organized by vested interests in domination and scarcity,” but this hope is much weaker in the de-holocenating decades of the Anthropocene as the alliance of fossil capital and carbon democracy persists as “an organization which perpetuates the destructive forms of struggle” (Marcuse, 1964: 16).

Decades of avoidance have preceded facing these realities. NASA scientists briefed President Johnson about these trends in November 1965 (President’s Science Advisory Committee (1965). Exxon Mobil, Royal Dutch Shell, and British Petroleum anticipated these degrading developments after conducting extensive internal research during the 1970s and 1980s (Banerjee, 2015; and Hall, 2015). The National Academy of Sciences, Engineering and Medicine published a report on Energy and Climate in 1977 (National Academy of Science, 1977), tying coal consumption to the greenhouse effect. Furthermore, James Hansen testified to the US Senate in 1988 that he was 99 percent certain that increasing levels of human industrial pollution were the cause of rising global temperature trends (Revkin, 1988: 51-61).

In another register, Marcuse captured the psychosocial implications of how “as beneficial products become more available to more individuals in more social classes, the indoctrination they carry ceases to be publicity; it becomes a way of life. . . and militates against qualitative change. Thus, emerges a pattern of *one-dimensional thought and behavior* in which ideas, aspirations, and objectives that, by their content, transcend the established universe of discourse and action are either repelled or reduced to the terms of this universe” (Marcuse, 1964: 12). Amid the intense floods of industrial wastes from society in nature, carbon democracies continue to thrive as fossil capitalism invents new pricing points, robust markets, and rising demands to truck, barter, exchange, and trade noxious by-products along with neat products for those who can afford them.

Indeed, “validated by the accomplishments of science and technology, justified by its growing productivity, the status quo defies all transcendence. . . Operationalism, in theory and practice, becomes the theory and practice of *containment*” (Marcuse, 1964: 17). Such strategies for reshaping, reformulating and recasting nature in perniciously enduring ways, therefore, embrace, on the one hand, the ardent pleas of climate change denialism certain that the devastation of the Anthropocene is a hoax as well as, on the other hand, the smug confidence of climate change managerialism positive that it can steer the side-effects of accelerating de-holocenation away from alarming endangerment toward a new enlightenment to be found in a “good Anthropocene”(Shellenberger, 2020).

“The Great Acceleration” (McNeill and Engelke, 2014) of the Anthropocene began speeding up after V-J Day, and the causes and effects at play in the Anthropocene’s advent were already apparent in the 1950s and 1960s: a degraded environment, a significant wealth gap, uneven development, and depleted fossil fuels. As these negative trends built upon each other over the decades, the political response today at international climate change conferences staged by the UNFCCC is largely, as it has been since the 1990s, more promises to do too little, too late to do anything more than guarantee their acceleration.

#### IV. Destroying Nature to Save Society

By the time Marcuse was working with the Institute for Social Research’s offices in exile at Columbia University in 1940, then, the first stirrings of the Anthropocene were surfacing from nature. Human technological powers and economic activities were already becoming terraformative forces. They were eclipsing the autogenesis of cosmic chance in nature’s material metabolisms and displacing the theogenesis of divine design in human social imaginaries.

Between 1940 and 1945,

Human beings had already violated the Earth's 'natural laws' by staging a controlled nuclear chain reaction. By 1945, with the machining of rare natural elements, like uranium, into explosive devices, human beings began to warp nature by accelerating matter into new artificial realms of transuranic denature, introducing into the environment many new materials, like neptunium and plutonium that hitherto did not exist in nature as it had been known. . . Nature now becomes in many respects truly anthropogenic, not autogenic or theogenic, and the powers causing its anthropogenesis also arguably begin to implode many existing cultural, political, and social systems predicated upon stable natural realisms (Luke, 1996: 499).

The nuclear revolution is the anthropogenic core of the Anthropocene, which brought the physics of "the stars down to Earth." It was followed by cascades of long-lived super-toxic chemicals, plumes from petrochemically-contrived plastics, and floods of noxious fossil fuel greenhouse gases. From this fusion of cosmic energy and telluric matter, the Great Acceleration has devastated the existing conditions of human beings' long-lived cultural, economic, political, and social practices (McNeil and Engelke, 2014).

Does a new biopolitical nexus, then, take hold after 1945 with the Great Acceleration's continuous technological, social, and cultural remix of the natural as the historical as the valorizing cycles of M-C-M' accelerate in carbon capitalist forms of life? Ecological degradation coevolves in parallel with greenhouse gases. Carbon dioxide as parts per million in the atmosphere rose from around 280 ppm in 1700, as New York City came under British control, to only 293 ppm by 1900 -- even after coal-fired steamships crowded most sailing ships out of global trade lanes and steam-powered locomotives still dominated the world's railways. By 1940, however, CO<sub>2</sub> levels had jumped to 307 ppm. And by 1970, when Marcuse still was teaching at the University of California-San Diego, CO<sub>2</sub> had reached 325 ppm. Despite three years of COVID-19 buffered economic growth, this main greenhouse gas is hovering today around 420 ppm, or 50 percent higher than in 1700 (NOAA, 2021).

Pulling the planet into this increasingly destabilized chemical crucible, multiple crises are mounting from the conditions Marcuse identified as "the pacification of nature and existence" (1964: 16). Life on planet Earth has become a "one-dimensional" as greater levels of by-productive and productive "artificiality" soak into the natural facticity of the planet's diverse environments with de-holocenation. Nature under the gas greenhouse still can be imagined, especially by die-hard environmentalists, to be raw, untamed, or wild. Yet, these attributes now are virtually ideological relics, scattered around the world in isolated wilderness reserves or long-abandoned ruins, while being honored continuously in BBC, CNN, or PBS televisual tributes to the planet's last wildernesses.

"In an era of industrial culture," as Buck-Morss (1989: x) has suggested, "consciousness exists in a mythic, dream state, against which historical knowledge is the only antidote. But the particular kind of historical knowledge that is needed to free the present from myth is not easily uncovered. Discarded and forgotten, it lies buried within surviving culture. . . ." What is buried, how it is forgotten, and why it is discarded are challenging questions. Such pieces of knowledge often are regarded as neglected, invisible or buried due to their uselessness to anyone in power." Ecological knowledge about these trends is mostly discarded because those in power have little use for popularizing lost alternative ways of life that are no longer viable in the changing conditions of human and nonhuman life across the planet.



## V. Conclusion: The Workings of Vested Interests

Marcuse lends significant added texture to the dialectic of de-holocenation and anthropocenation. Once the allure of hydrocarbon energy, high productivity, and holistic efficiency dominate advanced industrial society with its abundance of waste and wealth, “the concept of alienation seems to become questionable” inasmuch as individuals completely “identify themselves the existence which is imposed upon them and have in their own development and satisfaction. . . .the subject which is alienated is swallowed up by its alienated existence. There is only one dimension, and it is everywhere and in all forms” (Marcuse, 1964: 11). The petropolitics of vested economic interests in advanced industrial society consequently fuel the biopolitics of de-holocenation and anthropocenation.

The concept of the Anthropocene thrives as another polysemic expression, which closely tracks, “the prevailing technological reality” tagged by the climatological conception of history. Despite decades of hand-wringing and proclamations about the imperatives of decarbonization, degrowth, and decommodification, “the productive apparatus and the goods and services it produces ‘sell’ or impose the social system as a whole” (Marcuse, 1964; 11). Waste and wealth are totally conflated in “the so-called consumer economy and the politics of corporate capitalism have created a second nature of man which ties him libidinally and aggressively to the commodity form” (Marcuse, 1969, 14). Not surprisingly, then, the sunset of fossil-fueled capitalism continues to be postponed from 1990 to 2010, 2030, or 2050. Despite the by-products of waste and its displeasure, the products of wealth and their pleasures “indoctrinate and manipulate,” which undergirds this “pattern of *one-dimensional thought and behavior* in which ideas, aspirations and objectives that, by their content transcend the established universe of discourse and action are either repelled or reduced to the terms of this universe” (Marcuse, 1964: 11, 12).

The disruptions of rapid climate change are becoming more pervasive; but, at the same time, Marcuse would observe it is the ordinary everyday work behind “taking care of business” that still stands behind the dialectic of waste and wealth:

the need for possessing, consuming, handling, and constantly renewing the gadgets, devices, instruments, engines, offered to and imposed upon the people, for using these wares even at the danger of one’s own destruction has become a “biological” need in the sense just defined. The second nature of man thus militates against any change that would disrupt and perhaps even abolish this dependence of man on a market ever more densely filled with merchandise -- abolish his existence as a consumer consuming himself in buying and selling (Marcuse, 1969, 14).

Basic bureaucratic banalities then rest at the core of this looming catastrophe (Luke, 2009). Marcuse simply anticipates how the age of de-holocenating anthropocenation manifests itself as green aluminum water bottles, plug-in Priuses, carpets made from recycled soda bottles and carbon off-sets for vacations to the Seychelles.

As Marcuse maintains, these symbolic circuits of wasteful wealthy activity reveal how ecological endangerment is carried by economic empowerment since government works “only when it succeeds in mobilizing, organizing and exploiting the technical, scientific, and mechanical productivity available to industrial civilization” (1964: 3). Having made this move, advanced industrial society attains the “effective suffocation of those needs which demand liberation” to let “social controls exact the overwhelming need for the production and consumption of waste” (Marcuse, 1964: 7). Ensnared in the given naturalization of alienation, the green state in the Anthropocene morphs into “the rule of a repressive whole” in which “liberty can be made into a powerful instrument of domination” (Marcuse, 1964: 7).

Empowered with liberal responsibilities to protect against endangering emergencies, governance itself becomes a service for “the more rational, productive, technical, and total” administrative repression of society {Marcuse, 1964: 6) by linking in the US, for example, controlling authority vested in the “Environmental Protection Agency” plus continual assignments for the “Federal Emergency Management Agency.” EPA and FEMA policies shield the givenness of the existing alienated social order, which the academic sustainability studies curricula have constructed as “the environment,” as it comes under the sustainable management of these “epafemarchs.” The dialectic of wealth and waste pulls for, on the one hand, more resources for industrial production, while its pernicious by-products, on the other hand, push forth climate change, severe drought, massive fires, and super storms. When and where “environmental protection agents” cannot contain or prevent natural disasters threatening the producing and consuming public, then the public may apply for material relief from “emergency management agents.”

Policing ecological crises in the Anthropocene now is the mission of a green governance-services complex built upon the well-meaning mainstream labor of academic sustainability programs/third sector organizations/international climate conferences. This fully emergent “epafemarchy” of experts, on the one hand, “protects environments” as sites for resource preservation, extraction, and consumption against more severe natural hazards. And, on the other hand, its “emergency managers” guard the apparatuses generating the by-products and products, waste and wealth, displeasure and pleasure of one-dimensional anthropogenic life when natural disasters trigger social catastrophes. Meanwhile, this order sustainably degrades the Earth before our eyes all around us (Luke, 2006: 99-112).

This “natural history” is petrified today in the multiple layers of “ecological modernization” developed under the guidance of fossil capitalists and carbon democrats. In such sustainable development schemas, the Anthropocene enables the replication of alienation as liberation. Even New York City has been caught between the vested interests as Washington’s epafemarchs work elsewhere around the US.

Given Mayor De Blasio’s shock and awe after Hurricane Ida in 2021, why did he overlook Mayor Michael Bloomberg’s “NYC Green Infrastructure Plan” from 2010? It was celebrated heartily at the time by Marcia Bystryn, the president of the New York League of Conservation Voters, who claimed “the NYC Green Infrastructure Plan is a comprehensive response that will reduce pollution, protect critical habitat and make investments where they will have the greatest impact. We applaud Mayor Bloomberg, Commissioner Holloway, Deputy Commissioner Strickland and everyone involved for this important step toward a more sustainable city” (Surfrider Foundation, 2022).

Leveraging the best green technological rationality of that moment, its layered ecological modernization program proposed that “a mix of technologies and solutions will be implemented to not only reduce water contamination so that more waterways can be made available for recreation, but also green and cool the city and improve air quality,” since the design for “green infrastructure uses vegetation, soils, and other structural elements to mimic natural hydrologic cycles by slowing down, absorbing, and evaporating stormwater. The new plan is estimated to reduce the city’s long-term sewer management costs by \$2.4 billion over the next 20 years, helping to hold down future water bills” (Surfrider Foundation, 2022). Many “green roofs” were planted on high-rises all over Manhattan, but those efforts neither anticipated nor avoided the brand new world from which Hurricane Ida came to New Yorkers and the city a decade later.

The ongoing entanglements of overdevelopment with one-dimensionality continue to overlook the chaotic shift along the boundaries of advanced industrial society's de-holocenating and anthropocenating disruptions. Therefore, epafemarchs at the national, state, and local levels of government plainly have their work cut out for them in the next eight to ten years as global greenhouse gas emissions threaten to make it impossible to keep global warming under 2 degrees Centigrade for decades to come. All of the science asserts that time is very tight. As the co-chair of Working Group III of the Intergovernmental Panel on Climate Change (IPCC), Jim Skea, declares, "it's now or never, if we want to limit global warming to 1.5C (2.7F); without immediate and deep emissions reductions across all sectors, it will be impossible. This assessment shows that limiting warming to around 2C (3.6F) still requires global greenhouse gas emissions to peak before 2025 at the latest, and be reduced by a quarter by 2030" (United Nations, 2022).

Meanwhile, such guidance is ignored. The daily drift of industrial materiel available to one-dimensional men and women makes their meaning. The weekly whirl of destructive commercial exchange is their environmental order. The monthly calculus of industrial commerce constitutes their basic services, but the yearly accounting of the Earth's ecological "overshoot" in greenhouse gassing concentrations, marked mainly by atmospheric CO<sub>2</sub> in ppm, documents the ecological ruination that is becoming their most emblematic artifact.

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## Endnotes

\*Different versions of this paper were presented at the annual meeting of the American Political Science Association, Seattle, WA, September 30-October 3, 2021; and, the International Herbert Marcuse Conference, "Alternative Futures: Marcuse's Dialectic of Technology," Arizona State University, Tempe, AZ, October 7-9, 2021.

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