Comparing the Ecologial Thinking of Marx and Veblen: Who Had the Better Foresight?

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Abstract

Both Karl Marx and Thorstein Veblen have been analyszed and discussed widely for over a century, and there are also many detailed comparisons of the two economists. The clear links between capitalism and our growing ecological contradictions led some economists to look more carefully at the ecological writings of these two notable critics of capitalism. Veblen received less attention, but he actually wrote more extensively on the natural environment than did Marx. Each developed his own methodology and models, chose very different career paths, and described different societies and times, which complicated comparisons. But, when we account for their differences in writing styles, political perspectives, and analytical methodologies, it is clear that the two agreed that the capitalist system was causing humans to deal with nature in a most destructive and exploitative manner. Whether we call it capitalism or simply American business culture, a system based on private property and endless profit-driven accumulation will cause irreparable damage to nature. However, while the both foresaw the inevitable ecological destruction as a dialectic force for change, Marx and Veblen predicted very different social and political consequences. Marx still expected a socialist revolution, but Veblen feared a more fascistic turn of events. We conclude with a discussion of the relevance of these different evolutionary perspectives for our current political situation.

1. Introduction

In the aftermath of the 2007–2009 global economic recession, there was an active policy debate centered around how to restore economic growth. We are now hearing similar arguments surrounding the COVID-19 crisis: How do we get back to "normal," by which most commentators, and the economists they like to quote, imply a return to a familiar

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path of steady economic growth. If there is any debate, it is about whether the government expand aggregate demand and directly increase employment, or whether it should impose austerity and other neoliberal policies to make economies more "competitive." That is, advocates these opposing policy prescriptions effectively argue about which of two approaches are more likely to restore economic growth.

While there has been some pushback against austerity policies in countries where those policies have been implemented, and the political debates and social conflicts triggered by austerity policies have captured everyone's attention, few people have noticed that even the weak post-2009 economic growth did not stop carbon emissions and environmental degradation from increasing further. The 400 mark in carbon particles per million in the atmosphere was surpassed in 2014, the 415 mark was surpassed in 2020, the year of the sharp COVID-19 economic slowdown. The real policy question we face is not how to retore growth, but how to restructure the economy so that humanity can live in some form of harmony with our evolving natural environment. This is a quetion of human survival, not the survival of capitalism or "normality."

2. The Ecological Consequences of Growth that Economists Ignore

Scientific evidence shows that humanity's footprint on earth is causing rapid climate change, ocean acidification, a mass extinction of living species, disappearing land cover, degradation of freshwater resources, disruption of the nitrogen and phosphorous cycles, and many other material transformations of our ecosystem. A study by Mathis Wackerna-

gel and associates (2002) estimated that humanity's exploitation of the Earth's resources corresponded to 70 percent of capacity in 1961, but grew to 120 percent in 1999. A few years later, the World Wildlife Fund (2008, p. 2) estimated that "humanity's demand on the planet's living resources ... now exceeds the planet's regenerative capacity by about 30 percent." In short, humanity's exploitation of nature began to exceed the capacity of the Earth's ecosystem to replenish itself some time during the 1980s, or nearly 40 years ago.[2]

Humanity's attemots to overcome or compensate for the stress on nature's services and the depletion of non-renewable resources often made things worse. The so-called Green Revolution that increased the amount of food produced per acre during the latter half of the twentieth century has caused numerous stresses in society. The rapid substitution of machines, chemicals, and an industrial-like organization of agriculture has destroyed traditional rural communities and displaced hundreds of millions of people. The consequences show up in the form of growing urban slums, mass illegal immigration, broken family structures, and greater income inequality. Modern agriculture, among all sectors of the economy, is the single largest contributor to global warming, even larger

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[2] The World Wildlife Fund defines humanity's global ecological footprint in terms of global hectares (gha). The latter is the average capacity of one hectare of the Earth's surface to produce services and absorb waste, and the former is the sum of (1) all forest, grazing land, cropland, and fishing grounds required to produce the food, fibre, and timber humanity consumes, (2) all land and water to absorb the wastes emitted when humans uses energy, and (3) all land and water required for humanity's living space, production, transportation, and storage. According to the World Wildlife Fund (2008), the total productive area of the Earth is equal to 13.6 billion gha, or 2.1 gha per person in 2005. In that year, however, the global ecological footprint was estimated to be 17.5 billion gha, or 2.7 gha per person. Hence, the WWF's conclusion that exploitation of the Earth's resources exceeds the planet's regenerative capacity by about 30 percent.

than either the transportation or power generation sectors. Razing the rainforest for cattle grazing and vast tracts of farmland devoted to growing monocrops to feed animals destined for human consumption and to grow sugar cane for manufacturing biofuel are responsible for up to 91 percent of Amazon rainforest destruction since 1970. The Amazon basin is by far the World's largest carbon sink. The loss of forests is one of the single biggest contributors to climate change. Animal agriculture is the leading cause of ocean dead zones. Oceans could be devoid of fish by 2048. The continued destruction of natural habitat, coupled with the vast factory farms which use 80 percent of the antibiotics in the U.S. and incubate drug-resistant pathogens that can, and eventually will, spread to human populations.

Magdoff (2015) explains that the shift to monoculture is motivated by economies of scale, which are derived from the substitution of large equipment for labor, the heavy application of chemical fertilizers and insecticides in place of more labor-intensive and varied exploitation of the land, and industrial food processing operations in which machinery and assembly-line methods require uniform products. Friedman (2015) warns that the rapid development of genetically modified organisms (GMOs) will further upset the natural processes of our ecosystem in ways that cannot be managed with any reasonable degree of accuracy.

The ongoing efforts to exploit new sources of petroleum are increasingly more environmentally damaging. For example, the conversion of tar sands into petroleum requires large amounts of energy to "melt" the tar, and this use of energy to create more energy

not only adds new carbon emissions to the ultimate carbon emissions from using a liter of gasoline, but the processing of the tar sands also pollutes a large area of one of Canada's largest river basins. The environmental consequences of new drilling methods such as "fracking" are still unknown, but we do know that fracking involves a massive use of known dangerous chemicals, the creation of earthquakes, and the likely escape of large amounts of methane into the atmosphere has led some countries to ban the process.[3] Finally, the dirtiest of carbon sources of energy, coal, continues to be exploited because the market price of coal reflects only a small fraction of the total social cost of burning coal for fuel. Under our current "market system," the long-run costs of our current production are much higher than current market prices suggest.[4]

In sum, capitalism has brought about technological changes, as predicted by mainstream standard growth theory.[5] However, this technological "progress" has resulted in a more intense exploitation of the ecosystem rather than a mitigation of the environmental destruction.

3. Dissident Voices

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[3] See Howarth (2019).

[4] See New Economics Foundation (2013). Also, see Wagner and Weitzman (2015) on how to go about calculating the current cost of an uncertain possibility of a catastrophic future event.

[5] See, for example, Solow (1956, 1957), Romer (1990), Grossman and Helpman (1991), and Aghion and Howitt (1992).

Today, few mainstream or heterodox macroeconomists have sought to answer the question of how humanity can reverse its accelerating destruction of an ecosystem that is critical for its very existence and survival. Among the exceptions were Kenneth Boulding (1966), Nicholas Georgescu-Roegen (1971), and Herman Daly (1973, 1980b), E.F. Schumacher (1973), and, more recently, Peter Victor (2008) and a number of French economists that have embraced the decroissance movement. The widely read book warning about the unsustainability of human activity on Earth in the early 1970s, *The Limits to Growth* by Meadows et al. (1972), was not written by economists and generated very little interest among economists. Daly (2014, p. 238) provided some insight into the state of economic science when he described describes the series of conferences that followed the publication of *The Limits to Growth*:

> Somehow by the third conference the theme had mutated from "limits and alternatives to growth" to "management of sustainable growth."..... The new, "more balanced" view was that we really must not limit growth, just focus on good growth rather than bad growth. Growth had somehow become "sustainable", contrary to the main conclusion of The Limits to Growth. The reasoning behind this reversal was kept vague. There was an utter failure of nerve on the part of scientists and especially economists .... Indeed, practically no economists attended the conference. The very idea of limiting growth was too big a pill for economists, politicians, and most scientists to swallow. They coughed it up and silently spit it into their napkin at the conference banquet.

It is troubling that social scientists would so blatantly flout the rules of science and effectively close their eyes to clear scientific evidence, most notably the various reports by the IPCC documenting the state of scientific evidence of environmental destruction.

The current behavior of economists is even less excusable if we look farther back in the history of economic thought. Our current destructive course was already recognized over 100 years ago. In fact, two influential economists provided insightful analysis of the environmental problems that today's economists so consistently ignore: Karl Marx and Thorstein Veblen. These two economists were well known, unlike today's marginalized environmental economists, even if they were were certainly viewed with great suspicion by most mainstream social scientists. So, if environmental problems have become more obvious, and how is it possible that, after more 100 years since environmental issues were brought up by prominent economists, the economics profession has managed to almost completely keep these issues out of mainstream economic analysis? Let us proceed to investigate what they saw.

4. The Ecology of Karl Marx

The key to understanding Karl Marx's ecological thought is ro recognize his concpet of the *materialist dialectic*. Marx's materialist dialectic reveals that not only is the changing reality of human society directly linked to humanity's changing relationsip with nature, but that this close relationsip between human production and nature also brings about changes in the natural environment. According to Marx: "The nature that preceded hu-

man history … no longer exists anywhere (except perhaps on a few Australian coral islands of recent origin)."[6]

Those who are familiar with Marxian thought know how Marx viewed human evolution as a dialectic process within interconnected natural, social, and economics systems. The complex linkages between these systems creates, and causes reactions to, the conflicts, contradictions, and stresses that evolve over time. Marx saw the complex relationship between human beings and nature as a dialectical relationship that evolved within a single totality. Foster, Clark, and York (2010, p. 247) argue that Marx "irrifutably" pointed toward "a single science" in which "the dialectic of change subverts all reductionisms." Or, in the language of mainstream economics, Marx's ecology designates all aspects of human evolution as *endogenous* to an ever-evolving complex economic/social/natural system. Marx argued that mainstream economics' separation of the economy from this complex dialectic system is due to capitalism's alienation of human beings from their basic humanity — as both natural and social beings.

Friedrich Engels further detailed the dialectic process. Engels saw the dialectical process as, first, possessing a an "arrow of time" because it consisted of irreversible transformations.[7] On the other hand, he argued that the underlying uncertainty of the complex evolution of the system rules out a deterministic outlook. In short, we know

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[6] Quoted by Foster et al. (2010), p. 13.

[7] Rachel Carson [*Lost Woods*, Boston, Beacon Press, p. 230], for example, describes the emergence of life on earth as follows: "this single extraordinary act of spontaneous generation could not be repeated."

where we have been and what directed the path of past evolution, but we re not sure where we are headed. In modern terms, we should plan for the future, but with the precautionary principle in mind.

Engels' second characteristic of the dialectic was that these progressive transformations were qualitative and not merely quantitative. The mere growth of things can change the composition and meaning of those things. And, third, these transformations often comprised the complex mixing of opposites that leads to the "emergence" of new phenomena. We can think of developments such as the origin of life, the emergence of human society, and the eergence of capitalism. Human history according to Engels, continually comes up against ecological problems that represent contradictions in the human relation to nature — contradictions in nature introduced by society and undermining its own natural conditions — that cause the emergence of new economic, social, and natural phenomena. Foster et al. (2010, p. 245) describe dialectics as follows: "No other form of thinking about nature and society has so consclusively shown the importance of irreversible change, contingency, coevolution, and contradiction."

The ecological stress that capitalism creates is described by Marx in his *Grundrisse*:

> It is not the *unity* of living and active humanity with the natural, inorganic condition of the metabolic exchange with nature, and hence their appropriation of nature, which requires explanation or is the result of a historic process, but rather the *separation*

> between these inorganic conditions of human existence and this active existence, a separation which is completey posited only in the relation of wage labor and capital.

Note that Marx used the word *metabolism* to describe the complex, dialectical, co-evolutionary scheme that is the total ecological system. We should also note that Marx's ecological thinking in his perceptions of a communist society as the historical resolution of the contradiction between nature and society, as well as of the class contradictions internal to society, "by organizing the human metabolism with nature in a rational way" via unalienated human production.

It is thus clear that Marx's ecological thought is an intrinsic part of his historical and materialist dialectic approach. The dialectical approach has some important ecological implications that make Marx's thought very relevant today. For example, in his *The Dialectics of Nature*, Engels elaborates on Marx's dialectics to argue that humanity's self-confidence in its ability to dominate nature is misplaced:

> Let us not, however, flatter ourselves overmuch on account of our human victories over nature. For each such victory nature takes its revenge on us. Each victory, it is true, in the first place brings about the results we expected , but in the second and third places it has quite different, unforseen effects whch only too often cancel the first….Thus at every step we are reminded that we by no means rule over nature like a conquerer over an foreign people, like someone standing outside nature—but that we, with flesh, blood and brain, belong to nature, and exist in its midst…

The last 200 years of human "progress" are today revealing multiple alarming manifestations of such "second" and "third" places in the dialectic progression of human society. Marx would no doubt agree with the tendency among many scientists to refer to the current era in the evolution of the earth as the *Anthropocene*, in recognition of the huge impact that humanity has come to have on the ecological system.

Marx's primary purpose in his major work, *Capital*, was to describe the capitalist system and the internal contradictions of this system. In so doing, Marx also revealed his ecological bent as he develops a concept that he would refer to as capitalism's ecological *rift*. It is interesting that when he wrote his critique of Thomas Malthus and David Ricardo and their conceptions of land rent, Marx took the scientific approach of actually learning about soil quality before finalizing his critique. Marx linked rent to the variable quality of the soil rather than the given — constant pre-determined — soil qualities across different plots of land, as assumed by Ricardo. Marx was greatly influenced by the scientific work of Germany's leading chemist, Justus von Liebig, who established that soil quality varied from season to season, as the growing of crops extracted nutrients from the soil. Unless these nutrients were somehow replaced, the soil would deteriorate. Liebig advocated positive actions to restore, or even improve, the soils existing in Germany and elsewhere.

Of course, such improvements to the land were costly, and farmers often neglected the need to sustain their land. Based on his extensive chemical analysis of soils in Ger-

many and elsewhere, as well as his interactions with Marx and other social scientists, Liebig characterizes the variable state of Europe's soils with the following comment:

> "Truly, if this soil could cry out like a cow or a horse which was tormented to give the maximum quantity of milk or work with the smallest expenditure of fodder, the earth would become to these agriculturists more intolerable than Dante's infernal regions."[8]

Karl Marx would take the political economy of the soil much further.

Marx's materialist dialectic perspective led him to connect British imperialism to the variable fertility of the soil. As British capitalists embraced the idea that they could alter the quality of the soils they controlled and earn higher rents, either through direct ownership of the land or by means of selling fertilizers, pesticides, and other inputs to farmer, they initiated a frantic search for soil nutrients throughout the world. At first, attention centered on guano deposits in Peru and various other island areas. British corporations primitively accumulated — by the usual forceful and corrupt means — the rights to, in just a few decades, haul off the Peruvian guano deposits that had accumulated naturally from migrating birds for millenia. And, the gruesome work of shoveling the guano was mostly done by Chinese migrants brought to the islands by British recruiters; this work was so unhealthy and living conditions were so bad that only a small minority of the imported labor ever returned home.

Of course, Marx's analysis of the soil could just as easily be applied to the forestry sector, the fisheries industry, and many other form of capitalist exploitation of natural

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[8] Justus van Liebig, Letters on Modern Agriculture (London: Walton & Maberly, 1859, 130-1.

resources. Marx concluded that capitalists generally sought to spend as little as possible for the maintenance of renewable resources, focusing instead on accelerating the exploitation. Capitalism tends to not value the future very highly; there was always another place where resources could be stolen, where labor could be exploited, and markets could be monopolized to sustain the prices of the resources.

The important point Marx made with these descriptions of the imperialistic capitalist exploitation taking shape in the late 1800s was the growing separation between where resources were extracted or grown and where the waste products from these resources' usage were deposited. With the capitalists from Europe and North America searching the world for resources — effectively beginning to build what would become the global supply chains that we observe today — there was a growing *rift* that was not ecologically sustainable. The tobacco, cotton, wheat, and many other cash crops absorbed nutrients from the soil where they were grown, they were then hauled from the countryside to cities within the same countries or, more often, to cities in other countries. There they were consumed, with the result that the waste products ended up in the local sewage systems and the local dumps. Instead of depositing the waste back on the land, Marx noted that it ended up in poluting the Thames River. The normal cycle was broken by the global capitalist system of exploitation.

Humanity was alienated from nature just as it was alienated from human production. And, like the alienation of workers would bring about contradictions and stresses, so would this alienation from nature.

5. Thorstein Veblen

Thorstein Veblen was born in the upper Midwest, one of eight children of Norwegian immigrants. His family managed to purchase enough farming acreage in Minnesota to put all their children, sons and daughters, through college, with two of the sons earning PhDs and becoming noted academics. Thorstein never lost his appreciation for frugality and the penchant for careful management of natural resources.

Veblen's Norwegian culture of moderation and careful nurturing of a hostile natural environment led him to sarcastically label the common practice of "hurried exploitation instead of economical use" as the "American Plan" of business.[9] He described this behavior as wasteful. Veblen's detailed descriptions of the American Plan appeared in his 1922 work, *Absentee Ownership*, but his analysis of *wasteful* — unproductive — economic activity spans his whole professional career.

Overall, Veblen took a historical approach to economics, no doubt influenced by the German historical tradition and by Marx. He saw society as evolutionary, following a trajectory driven by what Marx would describe as a dialectic process. He furthermore fully embraced a materialist perspective of reality, openly clashing with his Lutheran up-

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[9] See pp. 86-88.

bringing.[10] His approach to economics, therefore, was not radically different from Marx's materialist dialectic perspective.

But Veblen never claimed to be a Marxian. This should not be surprising; it would probably be quite accurate to say that Veblen never felt part of any specific school of thought or identifiable group. Yet, he would come to be seen as the founding member of the American school of institutional economics, largely because of his work on the the dialectics of institutional development. In the *Theory of Business Enterprise*, he detailed how the institutional structure of society was being driven by the growth of technical knowhow and the use of ever-larger scale machinery. He was certainly following Marx and other materialists when he described how the methods of production shaped human society, including how large-scale machinery created a class system based on (1) workers with no other means of production and (2) owners of the means of production who employed workers. But Veblen's emphasis on institutions was uniquely his, and his description of the American class system, and how it would dialectically play out over time, was also quite unique.

From his early 20th century perspective, Veblen saw a system consisting, on the one hand, of *productive* people and, at the top, of unproductive thieves. Among the former were the laborers, farmers, engineers, and technicians. These people produced the real wealth in society. Veblen claimed that, of the five main human behavioral tendencies

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[10] On the other hand, Veblen seems to have tolerated, even approciated, his family's Lutheran culture as a reasonable institutional guide to social behavior.

— *the instinct for workmanship, predation, idle curiosity, the parental bent, and emulation of others* — the first was the most important human behavioral tendency for achieving collective macroeconomic well-being.[11] Yet, the fndamental human satisfaction in work — in doing — was being perverted by the rise of predation by an elite class. This elite class was enabled by the growth of machine technology and economies of scale, which obviated the development of impersoanl corporations. Ultimately, Veblen described the economic system as one characterized by absentee ownership. This absentee ownership, in turn, enables modern finance and what were clear separations between basic human well-being and the predatory actions of the corporate elite. First, the advantages of scale separate actual production from the indidual needs of people (As Henry Ford alleged ly said, "you can have any color you want as long as it is black"). Then the quest for profit causes production to be designed to minimize costs and maximize margins — such as programmed obsolescence, poor quality, misleading advertising — rather than to maximize longterm consumer benefits. And, finally, actual production becomes finance-driven — making money from money became the norm under absentee ownership. In short, Veblen explicitly debunked the metaphor of *the invisible hand*.[12]

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[11] Veblen (1912), *The Instinct of Workmanship and the State of the Industrial Arts.*

[12] Other post-Marxians extended Marx's concept of waste. For example, Rosa Luxemburg applied the term to militarism and the constant war mongering by the major capitalist economies in the early 20th century; she saw war as the perfect mechanism to sustain capitalist accumulation because it both increased aggregate demand for output while it either created goods that served no productive purpose or actually used these armaments to destroy earlier investments and create a need for "reconstruction" investment.

Veblen explains the causes and consequences of the rise of absentee ownership (Post Marxians like Baran and Sweezy (1966) refer to this phase of capitalism as *monopoly capitalism*) in *The Theory of Business Enterprise* (1904) and in his last full book, *Absentee Ownership and Business Enterprise in Recent Times: The Case of America* (1923). Under absentee ownership, the "captains of industry" devote much of their effort not to producing useful products, but, rather, to manipulating and exploiting the institutional structure of capitalist society to seize profits from the productive activity of the rest of society. In the process, they routinely diminish the economy's ability to maximize social wealth with programmed obsolecence, manipulative advertising, intentionally creating scarcity to raise prices, and exploitation of labor.

Veblen (1923/1967a) was also one of the first to write on advertising and marketing as fundamental practices of capitalism. Marketing became the "propaganda of the faith," and he described the similarities between religion and salesmanship in Chapter 11 — entitled "Manufactures and Salesmanship" — of *Absentee Ownership*. The end result of the development of new sales techniques was to powerfully encourage consumption and waste. Even the sheer volume of waste of labor and resources being generated by the newspaper industry did not escape Veblen (p. 317):

> It is, accordingly, scarcely an over-statement to say that something like one half of the wood-pulp that goes through the paper mills, together with one-half the man power and mechanical equipment engaged in the paper industry and the printing trades, is consumed in the making of competitive sales, the net effect of which is to raise the prices paid for goods by the consumers….

Veblen descibes “competition” as competition among a few large corporations, not as the neoclassical concept of perfect competition by price takers. In his *Theory of Business Enterprise* (1904), he argues that each monopolistic corporation is engaged in the “sabotage” of production by intentionally limiting output in oreder to push up prices, but each corporation does so because it is also in competition with other large corporations who seek to get a larger share of the monopoly profits. The tools of this “competition” do not include competitive pricing; rather, they include marketing and propaganda, monopolization of distribution channels, and monopolization of critical inputs.

Marketing and advertising were also the institutional mechanisms that connected Veblen's writings on the relationship of the leisure class to the middle classes. IN The Theory of the Leisure Class (1899), Veblen describes culture, and humans’ tendency to *emulate* those they admire or envy as the central mechanism shaping the evolution of human society. The middle classes and working classes thus emulate the “honorific” waste and consumption styles of the upper class become a defining feature of the whole culture of capitalism. Veblen even suggested that emulation was highly effective at keeping the working classes from revolting against the rich, so that state coercion was less necessary. Today, such consumerism still works to dampen social revolt.

6. Veblen’s Ecology

In his first major work, *The Theory of the Leisure Class*, Veblen was not referring to the destruction of the natural environment when he discussed the wastefulness of capitalism.

But, his overall writing makes it clear that the waste of natural resources was a constant concern for him. Veblen's understansing of the natural environment comes out most clearly in his last major work, *Absentee Ownership* (1923). Here Veblen discusses, among other issues, the aprpriation of American farmland by absentee owners (corporations), wasteful resource extraction from both public and private lands, and the tendency for the American owners of farmland and to over-exploit the soil. Veblen severely criticized lumbermen, producers, and other "Captains of Industry" who in accordance with "sound business principles" gain ownership of nature by force and collusion (p. 51). ; in short, by those "who did not rightfully own the land but nonetheless exploited natural, material, and human resources (or land, capital, and labor) for financial gain." Veblen (1923, p. 168) complained that the country's natural and public resources were being deliberately exhausted on the opportunistic principles of "sound business" principles: "This American plan or policy is very simply a settled practice of converting all public wealth to private gain on a plan of legalised seizure."

Veblen (1923) details how the first natural resources to fall under this plan were the fur bearing animals. He described how fur trapping was "now a scarce remembered episode of pioneering enterprise," … ruined by business interests "with exemplary thoroughness and expedition and has left the place of it bare." (p. 168) Interestingly, Veblen (1923, pp. 168-9) further described the fur trade as "an unwritten chapter on the debauchery and manslaughter entailed upon the Indian population of the country," a "rotten business" that produced "the sclerosis of the American soul." (pp. 168-169) He concluded,

however that “Americans have forgiven themselves for the fur trade and its hideous accessories and have nearly forgotten it all.” (p. 169).

Similarly, Veblen (1923) wrote about the “shortsightedness” in timberland management, how lumbermen only transported out the marketable, large diameter pine logs and left less valuable resource behind, noting that often, “by accident or intentionally, the land would catich fire and all remaining timber would be destroyed.” Veblen also noted that “pioneers” would also cut entire stands of hardwood in “half-wild country ... far out of reach of reasonable transportation,” burn the timber, and sell the ash, which was later converted into potash” (p. 188). Veblen clearly understood the nature of pioneer circumstances, describing how ”they took this way out of present [financial] difficulties at the cost of the future; and the future, which has now become the present, is paying the cost in a scarcity of timber.” (p. 188). Hence, Veblen was an early advocate of sound forestry stewardship, a tribute to his small-scale farming and forestry experience.

Veblen (1923, p. 193) described the business practices of the resource extraction industries:

> Under this American plan of expeditious seizure and conversion to private owner ship, the spectacularly wasteful competition among enterprising pioneers has now run its course and has worked out in a system of collusive management in behalf of these larger absentee owners who have acquired title to (virtually) all that is left, (p. 193)

Furthermore, the lumbermen collectively waited for an eventual rise in lumber prices before converting the trees to valuable timber. The inefficient resource use, collusive man-

agement, and tariff protection was intended to keep prices high; this form of economic sabotage "has destroyed appreciably more timber than it has utilised." (p. 190). Veblen showed his deep political economy perspective by concluding the chapter on logging with this additional comment on the exploiters of America's immense lumber resources: "[Many] find their way into the federal senate, sometimes even at a cash outlay ... and have honorably kept faith with all the vested interests." (p. 192)

Veblen (1923) wrote that what transpired with other natural resources did not substantially differ from the case of America's timberlands; "these others, too, show the characteristic traits of the American plan—initial waste and eventual absentee ownership on a large scale and on a quasi-monopolistic footing" (p. 194). Veblen indicated that coal, iron, and waterpower had already reached a reasonably settled state "of collusive management under corporation control on a basis of unqualified absentee ownership," and the extraction of crude oil, "resembling the earlier lumbering enterprise," was already "marked by a headlong competitive rush to disembowel the available resources expeditiously at any cost." (p. 197)

Having been brought up on a Midwestern farm, Veblen had a good sense of how farmers were exploited by the capitalist farm suppliers and grain marketers, what he called the "background vested interests." (p. 133). He described how farmers were caught between monopolisitic merchants, who charged a lot for supplies and equipment, and other monopolistic merchants who paid them little for their agricultural produce but then sold to unwary consumers at inflated prices. According to Veblen (1923, p. 130),

> the margin of benefit that comes to [the modern farmer from his work is commonly at a minimum. He is commonly driven by circumstances over which he has no control, the circumstances being made by that system of absentee ownership.

For Veblen (1923), the only way out for small farmers was to sell or consilidate to where they, too, became like absentee owners. Veblen asserted that farmers tend to acquire more land than they can afford and maintain it poorly, with negative economic, social, and environmental impacts. Traditional values of teamwork, workmanship, and community spirit were being replaced by the "pecuniary interests" inherent to capitalism.

Note that Veblen is 100 years ahead of the curve here. Shamefully, mainstream economists today often still describe farmers as independent businesses operating in a perfectly competitive world, but 100 years ago Veblen clearly saw where farming was heading in the 20th century: A monopolistic corporate enterprise of suppliers and marketers who exploit the farmer in much the same way as labor is exploited, but with the added twist that the farmer is forced to asume business risk, financial burdens, and responsibility for the financial damage his precarious financial state forces him to engage in. As a result, the natural environment is also exploited, as that degree of exploitation is the farmer's only salvation.

In the chapter on "The Technology of Physics and Chemistry" in *Absentee Ownership*, Veblen shows his astute understanding of technology and the application of technological innovations in a capitalist economy. He observed that the scientists, engineers,

and technicians — members of the productive class — had become so competent at increasing the useful supply of resources that they were the real factor of production, not the resources per se. However, unlike many neoclassical economists who describe compititve technological innovation as the great leveler in society, Veblen did not see an invisible hand at work here either. Veblen (1923, 198-9) described how the "wild-cat" enterprises of large absentee corporations were usually ill prepared and undermanned (pp. 198-199) and lacking "competent technical advice and experience" to apply new technologies safely, efficiently, or responsibly. Veblen (p. 277) sarcastically decribes how neither managers nor absentee owners take responsibility "for any derangement, waste or unemployment which this 'safe and sane' business practice entails on the rest of the industrial system." In essence, greedy profiteers distorted the sound application of technology, wasting productive labor and natural resources in the process.

Veblen thus presented a very different take on the so-called "problem of the commons" elaborated by Hardin (1980, p. 124):

> The natural resources of America are, or have been, unexampled in abundance and availability, and they have always been the main factor on which the life and effort of the inhabitants have depended. What stands in the way of this matter of good fortune, immediately and directly, is the absentee ownership of these natural resources….

But, according to Veblen, the problem of the commons is not solved by privatizing commonly-held natural resources. Rather, the vast privatization of the commons under the American plan is itself the source of the problem because the resources end up in the

hands of absentee owners — monopolisitic corporations. It is whithin this American system of monopoly capitalism — absentee capitalism — that most of the exploitation and waste occur.

Conclusions and Final Thoughts

The belief that we can maintain current levels of consumption, capitalist expansion, imperial wars, reliance on fossil fuels, and unfettered corporate power is a dominant American form of self-delusion. Economists have contributed greatly to this national self-delusion. In this paper, we argue that there is no excuse for this professional malfeasance: there have been some very prominent economists who foresaw the ecological consequences of human production that we can now observe first hand. Specifically, Karl Marx and Thorstein Veblen provide as much insight as any thinking person would need to correctly evaluate the environmental problems we face today.

As matters now stand, global atmospheric warming is inevitable. It cannot be stopped or turned around this century. At best, it can be slowed. Over the next 50 years the earth will most likely heat up to levels that will make whole parts of the planet uninhabitable. Tens, perhaps hundreds, of millions of people will be displaced. Millions of species will go extinct. Cities on or near a coast, including New York and London, will be submerged. The absorption of this carbon is rapidly warming and acidifying ocean waters, resulting in the deoxygenation of the oceans. The mass extinction of sea life is already under way, the first in some 55 million years.

Marx's materialist dialectic greatly enhances our understanding of the role of humans in the earth's ecosystem. Not only do human provisioning activities require a great many natural resources, but we must recognize that human beings evolved as group animals within an evolving natural environment. Humans are *part of* nature, they do not merely interact *with* nature. Mainstream economics' rejection of anything relating to Marx means it also rejects such the dialectic perspective that so clearly reveals the true nature of economic evolution. The mainstream of the economics profession has effectively closed its eyes to nature. Economics was not always such an "unnatural" science, however. For example, in the 1700s, the Physiocratic School split society into into three distinct classes of farmers, landowners, and the urban artisans, but it was argued that only the farmers actually produced anything that added to human well-being. This was clearly an exaggeration, but this focus correctly reflected the fact that humans depended on nature for their existence and well-being. But starting with Adam Smith (1776), economists began to focus more on industrial production, investment in capital, and labor markets, that is, production was increasingly described as a function of human activities alone, separate from nature. The separation became complete with Léon Walras' (1874) mathematical model of an economy that consisted entirely of product and factor markets; anything for which there was not a market thus became (in currently popular terms) *non-economic* activity and was not included in the economist's scope of activity. The Walrasian model provided the basis of what became neoclassical economics, in which economic activity is a purely human endeavor.

While we point to both Marx and Veblen for insight, Marx and Veblen did not provide identical perspectives on how our environmental stresses will dialectically reshape human society. To the contrary, Marx foresaw class conflict and a social revolution; Veblen was less certain and much less optimistic about the future course of economic evolution. Other post Marxians are often credited with providing better explanations for how the world has evolved after Marx. For example, Rosa Luxemburg (1915), Lenin (1916), and Baran and Sweezy (1965), among many others, explained how capitalism was able to continue its accumulation of capital by means of imperialism and, today, neoliberal privatizations of the commons. But, note that Marx anticipated this type of analysis when he identified capitalism's exploitation of nature; already in the day of Marx, capitalism was finding new ways to sustain the circuit of capital.

Thorstein Veblen does not fit neatly into the Marxian mould, although he was largely sympathetic to socialism. Veblen effectively followed the materialist dialectic as proposed by Marx. Perhaps Veblen respected the dialectic process even more consistently because he was less ideological and less politically active than Marx. His "distant" perspective enabled him to avoid specific predictions about the future; he merely provided warnings and suggestions, which turned out to be closer to how reality unfolded in the United States and other industrial countries than Marx's prediction of a proletarian uprising.

Both Marx and Veblen wrote about how the capitalist system — the corporate-led "machine system" in Veblen's words — would transform resources into wasteful produc-

tion. Marx focused on the ecological rift, how global capitalism — in the form of imperialism — broke an important natural cycle that sustained the ecosystem. Veblen focused on a much broader conception of waste and showed many ways in which not only technology, but also how human culture manipulated human behavioral tendencies towards wasteful economic activity. Veblen wrote about conspicuous consumption, the short-term bias of absentee ownership, and the capitalist motivation of theft from nature. Most important, Veblen provided the most useful insight for understanding today's continued rejection of ecological thinking; he explained how the accumulation of wealth provides the rich with the means to distort science and bias human knowledge. Veblen suggested that wasteful industrial and civil practices would become "normalized" as the leadership direction of businesse changed under absentee ownership.

As an insitutionalst, Veblen understood that business leadership was an important dimension of social change. He accusing business managers of training their workers to become less capable — what he called "trained incapacity" — in order to better control and exploit workers. Veblen then reasoned that this trained incapacity — embodying the narrow, profit-oriented, and bureaucratic outlook of the corporation — leads managers and absentee owners to carelessly exploit nature as well as workers.

Veblen's concept of "trained incapacity" also came out in his interesting work, Higher Education in America (1918), in which he criticized the U.S. education system. It is not difficult to recognize how accurate was Veblen's analysis if we look at business colleges today: we would find very little, if any, concern for the environment in the busi-

ness college curricula. And, as economists, we should apply the term to our own profession.

So, we see that Veblen has extended the spirit of Marx's materialist dialectic to a level where it brings into its sphere of influence the dialectic evolution of human *perceptions* of what is true — we are back to Hegel's *idealist dialectic,* which Marx rejected in favor of materialist dialectics! Veblen shows that capitalism destroys the real economic, social, and natural systems, and then it obscures this massive destruction by distorting the human understanding of how those real systems are actually evolving. Marx argued that perceptions of reality cannot deviate far from actual reality; so he predicted that the exploitation of the working class would become so obvious that a revolution would become inevitable. Toady, Indeed, while the working class in the United States certainly understands that their incomes have stagnated over the past 50 years while the elites have enjoyed exceptional income growth, there is no prospect of a violent socialist uprising such as Marx predicted.

Veblen, observing the difficulty of mounting a socialist revolution within the institutionsal framework of the United States at the start of the 20th century, suggested that the materialist dialectics of social and natural evolution — most notably the accumulation of wealth — would enable the vested interests to manipulate both formal and informal institutions, and thus human perceptions, in ways that would obscure the true forces of change. Not that people have been deluded into feeling satisfied with their lives, but under the distorted perceptions of reality promoted by capitalist interests — and the news

media, the universities, the entertainment industry, and the culture they control - Veblen reasoned that people would be more likely to support a fascist leader who promised extraneous emotionally-appealing soutions to their discomfort. The U.S. institutions of individualism, pioneer culture, and American exceptionalism, according to Veblen, would make it unlikely that the exploited working class would enthusiastically follow a socialist agitator calling for a proletarian revolution to sieze the means of production from a wealthy class most workers half admired.[13]

We should also note that the capitalist class has directly captured government institutions, as pointed out by Galbraith (2009). The wealthy no longer just exercise disproportionate influence over the state, as Gramsci (1930) described, they have *become* the state.

While Marx certainly predicted capitalists would abuse their economic power, Veblen gave institutions an explicit — and strong — role in shaping the dialectical evolution of human society. For example, in Veblen (1915), he described how German intellectuals implicitly supported the militaristic German leadership during World War I, unlike the more radical Marxist Rosa Luxemburg, who could only torment herself trying to understand how the German socialist party could so quickly become an active supporter of Germany's participation in the war. Veblen (1915) predicted just such an outcome, as he neatly described how Western liberal ideas could be combined with Germany's successful

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[13] Antonio Gramsci would similarly conclude two decades later that the capitalist elites find it relatively easy to continue their economic and social domination in a democratic capitalist system.

adoption of industrial technologies to actually solidify Germany's nationalistic political structure and unify support for war across all classes. Loader and Tilman (1995) argue that "Veblen's concerns over the explosiveness of the mixture of the modern and authoritarian, as well as its fascistic potential," was still relevant at the end of the 20th century. We would suggest that this era of Trump, Modi, Erdogan, Netanyahu, Balsonaro, and many other right-wing leaders, Veblen's insight is more valuable than ever, and institutionally-enhanced forecasting of the dialectics of social change is more necessary than ever.

The observed fascistic tendencies around the world are invariaby tied to the denial of humanity's complex relationship with nature. Fascism is based on "restoring" the nation's "rightful" and traditional position in the world, after all; the rightful position of the United States is its dominant economic system based on exploitation of labor and nature. The relationship constitutes the greatest threat to human social success, even humanity's very existence. It is difficult to see how, within the current "conservative" institutional framework in place in the United States, a dialectic process can bring about the urgent massive economic and social changes necessary to turn around our path to environmental destruction. It was Veblen who pursued Marx's materialist dialectic approach to explain reality, and with his emphasis on institutional change it was Veblen who ultimately provided the more realistic picture of how difficult it would be for humanity to collectively deal with nature in a constructive manner. In short, humanity is in deep trouble.

References

van Bavel, Bas (2019), *The Invisible Hand?: How Market Economies have Emerged and Declined Since AD 500*, Oxford: Oxford University Press.

Boulding, Kenneth E. (1966), "The Economics of the Coming Spaceship Earth," in H. Jarrett (ed.), *Environmental Quality in a Growing Economy*, *Resources for the Future*, Baltimore: Johns Hopkins Press.

Brickman, Philip, and Donald Campbell (1971), "Hedonic Relativism and Planning the Good Society," in M. H. Appley (ed.), *Social Comparison Processes: Theoretical and Empirical Perspectives*, New York: Wiley.

Daly, Herman, ed. (1973), *Toward a Steady-State Economy*, San Francisco: W. H. Freeman and Company.

Daly, Herman, ed. (1980), *Economics, Ecology, Ethics: Essays Toward a Steady-State Economy*, San Francisco: W. H. Freeman and Company.

Daly, Herman (1980), "Introduction" to Herman Daly (1980).

Daly, Herman (2014), *From Uneconomic Growth to a Steady-State Economy*, Northampton, MA: Edward Elgar.

Dewey, John (1897), "My Pedagogical Creed," *School Journal* 54 (January):77-80.

Forstater, Matthew (2004), "Green jobs: addressing the critical issues surrounding the environment, workplace, and employment," *International Journal of Environment, Workplace, and Employment*, 1(1):53-61.

Foster, John Bellamy. 1999. Marx's theory of metabolic rift: Classical foundations for environmental sociology. *The American Journal of Sociology* 105 (2): 366–405

Foster, John Bellamy and Brett Clark (2018), "The robbery of nature: Capitalism and the metabolic rift," *Monthly Review* 70(3):1–20.

Foster, John Bellamy, Brett Clark, and Richard York (2010), *The Ecological Rift,* New York: Monthly Review Press.

Freire, Paulo (1970), *Pedagogy of the Oppressed*, New York: Continuum.

Friedman, Michael (2015), "Capitalism's Distortion of Biological Processes," *Monthly Review* 66(20):19-34.

Galbraith, James (2009), *The Predator State*, New York: Free Press.

Georgescu-Roegen, Nicholas (1971), *The Entropy Law and the Economic Process*, Cambridge, MA: Harvard University Press

GRAIN (2014), "Hungry for Land," report on small farm productivity, GRAIN, May.

Gramsci, Antonio [1930(2011)], *Prison Notebooks*, New York: Columbia University Press.

Grossman, Gene, and Elhanan Helpman (1991), *Innovation and Growth in the Global Economy*, Cambridge, MA: MIT Press.

Harribey, Jean-Marie, Philippe Quiron, et Gilles Rotillon (2012), Les enjeux d'une transformation écologique qui soit sociale, in Les Économistes Atterés (2012), *Changer d'Économie!*, Paris: Babel, pp. 69-100.
Harrod, Roy (1939), "An Essay in Dynamic Theory," *The Economic Journal* 49:14–33.
Howarth, Robert (2019), "Ideas and perspectives: Is shale gas a major driver of recent increase in global atmospheric methane?, *Biogeoscience* 16:3033-3046.
Intergovernmental Panel on Climate Change (2014), *IPCC Report on Global Warming*, New York: United Nations.
Johnson, Simon (2009), "The Quiet Coup," *Atlantic Monthly*, May.
Kempf, Hervé (2007), *The Rich Are Destroying the Earth*, White River Junction, VT: Chesae Green Publishing Company.
Keynes, John Maynard (1936), *The General Theory of Employment, Interest, and Money*, New York: MacMillan.
Klein, Naomi (2014), *This Changes Everything*, New York: Simon & Schuster.
Kuhn, Thomas. (1962) *The structure of scientific revolutions*. Chicago: University of Chicago Press.
Les Économistes Atterés (2012), *Changer d'Économie!*, Paris: Babel.
Loader, Colin, and Rick Tilman (1995), "Thorstein Veblen's Analysis of German Intellectualism: Institutionalism as a Forecasting Method," *The American Journal of Economics and Sociology* 54(3):339-355.
Lenin, V. I. (1917 [1939]). *Imperialism: The Highest Stage of Capitalism.* New York: International Publishers.
Luxemburg, Rosa (1913 [1951]). *The Accumulation of Capital*. London, Routlege & Keegan Paul Limited.
Magdoff, Fred (2015), "A Rational Agriculture Is Incompatible with Capitalism," *Monthly Review* 66(10):1-18.
Malthus, Thomas (1798), *An Essay on the Principle of Population*, London: W. Pickering.
Marx, Karl. 1867. *Das Kapital*, vol. I. Hamburg: Verlag von Otto Meissner.
Marx, Karl. 1981. *Capital*, vol. III. New York: Vintage.
Meadows, Donella, Dennis Meadows, Jorgen Randers, and William Behrens (1972), *The Limits to Growth*, New York: Universe Books
Meadows, Donella, Jorgen Randers, and Dennis Meadows (2004), *The Limits to Growth: The 30-Year Update*, White River Junction, VT: Chelsea Green Publishing Company.
New Economics Foundation (2013), *Unburnable Carbon: Wasted Capital and Stranded Assets*, London: NEF.
Romer, Paul (1990), ""Endogenous Technological Change," *Journal of Political Economy* 98(5):S71-S102.
Popp, David (2002), "Induced Innovation and Energy Prices," *American Economic Review* 92:160–180.
Popp, David (2004), "R&D Subsidies and Climate Policy: Is There a Free Lunch?" NBER Working Paper 10880, October.

Schor, Juliet (2013), "The Triple Dividend," in Coote, Anna, and Jane Franklin, eds. (2013), *Time on Our Side: Why we all need a shorter working week*, London: New Economics Foundation.
Schumacher, E. F. (1973), *Small Is Beautiful, Economics as if People Mattered*, New York: Harper & Row.
Shindell, Drew (2015), "The Social Cost of Atmospheric Release," *Climate Change*
Smith, Adam (1776 [1976]), *An Inquiry into the Nature and Causes of the Wealth of Nations*, Chicago: University of Chicago Press.
Solow, Robert (1956), "A Contribution to the Theory of Economic Growth," *Quarterly Journal of Economics* 70(1):65–94.
Solow, Robert (1957), "Technical Change and the Aggregate Production Function," *Review of Economics and Statistics* 39:312–320.
Romer, Paul (1990), "Endogenous Technological Change," *Journal of Political Economy* 98(5):S71–S102.
Tcherneva, Pavlina (2013), "Reorienting Fiscal Policy: A Critical Assessment of Fiscal Fine-Tuning," Levy Economics Institute of Bard College. August
Veblen, Thorstein (1904), *The Theory of Business Enterprise*, New York: Charles Scribner's Sons; Also at Project Gutenberg
Veblen, Thorstein (1904), *The Theory of Business Enterprise*, New York: Charles Scribner's Sons.
Veblen, Thorstein (1914), *The Instinct of Workmanship and the State of the Industrial Arts*, New York: MacMillan.
Veblen, Thorstein (1915), *Imperial Germany and the Industrial Revolution*, New York: MacMillan.
Veblen, Thorstein (1917), *An Inquiry into the Nature of Peace and the Terms of Its Perpetuation*, New York: MacMillan. Also at Project Gutenberg
Veblen, Thorstein (1918), *The Higher Learning In America: A Memorandum On the Conduct of Universities By Business Men*, New York: B. W. Huebsch.
Veblen, Thorstein (1919), *The Place of Science in Modern Civilisation and Other Essays*, New York: B. W. Huebsch. Also at Project Gutenberg
Veblen, Thorstein (1919), *The Vested Interests and the Common Man*, New York: B. W. Huebsch.
Veblen, Thorstein (1921), *The Engineers and the Price System*, New York: B. W. Huebsch.
Veblen, Thorstein (1923). *Absentee Ownership and Business Enterprise in Recent Times: The Case of America*. New York: B. W. Huebsch.
Victor, Peter (2008), *Managing without Growth: Slower by Design, Not Disaster*, Northampton, MA: Edward Elgar.
Wackernagel, Mathis, et al. (2002), "Tracking the Ecological Overshoot of the Human Economy," *Proceedings of the National Academy of Sciences* 99:9266-9271.
Wackernagel, Mathis, Mathis Wackernagel, Niels B. Schulz, Diana Deumling, Alejandro Callejas Linares, Martin Jenkins, Valerie Kapos, Chad Monfreda, Jonathan Loh, Norman Myers, Richard Norgaard, and Jørgen Randerset. 2002. Tracking the ecological overshoot of the human economy. *Proceedings of the National Academy of Sciences* 99: 9266–71.
Walras, Léon (1874), *Éléments d'économie politique pure, ou théorie de la richesse social*.

Wisman, Jon (2013), “Government Is Whose Problem?” *Journal of Economic Issues* 47(4): *911-937*.
World Wildlife Fund (2008), *Living Planet Report 2008*, Gland, Switzerland: World Wildlife Fund for Nature.