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After Neoliberalism: From Eco-Marxism to Ecological Civilization, Part 1

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Abstract

This is Part 1 of an article aimed at defending Marx against orthodox Marxists to reveal the possibilities for overcoming capitalism. It is argued that Marx's general theory of history as technological determinism along with his call for the dictatorship of the proletariat is inconsistent with his profound insights into alienation and commodity fetishism as the foundations of capitalism. Humanist Marxists focused on the latter in opposition to Orthodox Marxists, but without fully acknowledging this inconsistency and its implications, failed to realize the full potential of Marx's work. The outcome has been the triumph of "neoliberalism," effectively a synthesis of the worst aspects of capitalism with Soviet managerialism. Here I argue that eco-Marxists should combine humanistic Marxism with the defence of genuine science to revive a tradition of thought going back to Aleksander Bogdanov and Ernst Bloch, and to Marx himself. However, traditional Marxists' lack of appreciation of the importance of the "superstructure" has hindered even eco-Marxists from developing the culture required to replace capitalism. In Part 2 I will argue that the call for an "ecological civilization" brings into focus what is required: a realistic vision of the future based on ecological concepts.

Keywords Marx; Eco-Marxism; Schelling; Eco-socialism; Eco-civilisation

Introduction

As a global ecological crisis looms more ominously, it would seem that the work of Marx has never been more relevant. Building on the work of Sismondi and other critics of the new socio-economic formation that emerged in the Seventeenth and Eighteenth Centuries, what Marx called the bourgeois mode of production (or capitalism), no-one more clearly grasped the nature, uniqueness, internal dynamics and trajectory of this formation than Marx. It is a formation that while appearing to advance humanity's quest for control over its own destiny and to free people from subjugation, fragments social relations and creates a pernicious new form of slavery more insidious, extensive and ultimately, more destructive than the formations that preceded it. It enslaves not only wage (and salary) earners who no longer have access to the means of production except by selling their labour power as a commodity, but owners of the means of

production (and managers), forcing them to compete with each other in order to survive as members of the ruling class by revolutionizing the means of production to create new products and to reduce the need for workers. It is inherently unstable and dynamic and has to grow, extending commodification both extensively and intensively. It had to expand until it dominated the globe and subsumed everything possible under it as exchangeable commodities in the service of the endless accumulation of "capital." The growth of European imperialism resulted in the subjugation and destruction of all societies unable themselves to embrace and impose this formation (or formations equally oppressive) upon themselves as a means of resisting domination. Capitalism has reproduced and extended a one-sided, distorted understanding of human relations, blinding people to their enslavement and to the destructive effects this formation has had on other people, other societies, and nature. It has blinded people also to the true nature of not only this formation which they have been compelled to serve, but to human nature and to nature generally which have made this formation possible, but also which, if properly understood, could reveal the possibilities for creating a different socio-economic formation that would liberate people to augment the life of ecosystems.

Marx was optimistic at least in his younger days that capitalism would develop an educated, disciplined work force that, in response to inevitable economic crises generated by this formation, could seize the means of production and genuinely liberate humanity from servitude. At one stage this did appear to be a real possibility. However, Marx's faith in this possibility appeared to wane as he got older. Now, with the collapse of the Soviet Union and its allies, the globalization of the market, the growth of the global corporatocracy and the commodification of every facet of life, the grounds for such optimism have been undermined, at least in the core zones of the world economy. And the conditions of the existence of the bourgeois mode of production that now are being destroyed are its ecological conditions, the conditions not only for this formation, but for civilisation and for humanity, along with most species of life with which humans have co-evolved in the current regime of the global ecosystem. To avoid this catastrophe it will still be necessary to overcome the enslavement of people to the global market that Marx analysed so brilliantly, but the path to achieving this transcendence of capitalism will have to be very different than orthodox Marxists proposed. To understand all this, and to reveal what prospects there might be for avoiding ecocide, it is necessary to turn again to Marx and those who have further developed his ideas.

Orthodox Marxism and its Problems

However, this presents a major problem; understanding Marx. Those claiming allegiance to Marx's ideas characterize themselves as Marxists. The orthodox reading of Marx's work focused on his "base-superstructure" model of society according to which the driving force of humanity through history has been the development of the forces of production, with these determining the relations of production. Together, these are taken to form the base on which are erected an ideological superstructure of political, legal and religious institutions and forms of consciousness, changes in which will be driven by the economic base. From this perspective, the sole source of value is labour-power, and raw materials available in nature are treated as free gifts to humanity to exploit. Marx was unimpressed by most of his followers. As he famously used to say to Engels: "All that I know I am not a Marxist" (Engels [1890] 1962a). Clearly, Marx thought these "followers" had not understood his work, and he made this explicit, criticizing those who embraced the labour theory of value. In his *Critique of the Gotha Program*, Marx asserted: "Labour is not the source of all wealth. Nature is just as much the source of use

values... as labour, which itself is only the manifestation of a force of nature, human labour power" (1978, 525).

In his middle period, Marx did defend the base-superstructure model of society, expounded in *The Communist Manifesto* and *The German Ideology* and proclaimed most forcefully (and for the last time) in the "Preface" to *A Contribution to the Critique of Political Economy*. Here he wrote:

In the social production of their existence, men inevitably enter into definite relations, which are independent of their will, namely relations of production appropriate to a given stage in the development of their material forces of production. The totality of these relations of production constitutes the economic structure of society, the real foundation on which arises a legal and political superstructure and to which corresponds definite forms of social consciousness. The mode of production of material life conditions the general process of social, political and intellectual life. It is not the consciousness of men that determines their existence, but their social existence that determines their consciousness. At a certain stage of development, the material productive forces of society come into conflict with the existing relations of production or - this merely expresses the same thing in legal terms - with the property relations within the framework of which they have operated hitherto. From forms of development of the productive forces these relations turn into their fetters. Then begins an era of social revolution. The changes in the economic foundations lead sooner or later to the transformation of the whole immense superstructure. (1977a, 21f.)

This essentially is an elaboration of the doctrine of Henri Saint-Simon who characterized industrial society as the final stage of history, in which fostering industrial production takes the place of relying on the bounty of nature or plundering others to satisfying human needs. As an admirer of Adam Smith, Saint-Simon was skeptical of governments, and conceived the final stage of human development as a well-ordered industrial society in which the administration of industry will have taken the place of government (Saint-Simon 1975, 207ff.). The whole of humanity will be administered by the "Council of Newton" (78). The old classes, including the bourgeoisie, will be disempowered. "The bourgeoisie has certainly rendered services to the industrials" he wrote, "but today the bourgeoisie and noble classes both burden the industrial class" (251). "[T]he industrial class must be made the first class, with the other classes subordinate to it" (252). The proletariat are capable of administering property, he argued, and claimed that as far as warfare is concerned, this is no longer dependent upon a military class, but industry (262ff.).

However, a careful reading of *A Contribution to the Critique of Political Economy* shows the problematic nature of abstracting forces, relations of production and the superstructure from each other. Social existence conditions consciousness, but social existence already implies consciousness. And in the same work, Marx warned against taking current categories at face value as the basis for studying society, arguing that these categories "express forms of existence and conditions of existence – and sometimes separate aspects – of this particular society" (1977a, 212). He observed:

What is called historical evolution depends in general on the fact that the latest form regards earlier ones as stages in the development of itself, and conceives them always in a one-sided manner, since only rarely and under quite special conditions is a society able to adopt a critical attitude towards itself... (1977a, 211).

This suggests that the focus on the development of the forces of production as the driving force of history was itself a projection of present categories onto past societies, and even in the case of

capitalism, is one-sided. Even Engels recognized this to some extent, acknowledging that the superstructure could act back on the base; however, Marx rejected this model entirely as too simplistic. In a letter to the editor of a Petersburg journal penned at the end of his life, Marx dismissed such a notion as "a universal key to a general historical-philosophical theory, whose greatest advantage lies in its being beyond history" (1979a, 322). It says everything, and nothing and ignores the specificity of each place and time.

The people proclaiming themselves Marxists that Marx objected to were French Marxists who embraced the base/superstructure model. However, Marx's writings and most of Engels' work were the source of their ideas. The problem is that, as James White (1996, 106) has shown, when Marx published his mature work, the intellectual environment he had assumed when he was young, had disintegrated and been replaced by a mixture of positivism (strongly influenced by Saint-Simon) and materialism. Marx was interpreted from this perspective, identifying him as a Ricardian socialist complaining about the expropriation of surplus value from the working class. After Marx's death in 1883, Engels edited and published Marx's manuscripts and reinforced this interpretation of his work, characterizing Marxism as "historical materialism." As he proclaimed in "Socialism: Utopian and Scientific" (1962b, 136), "The materialist conception of history starts with the proposition that the production of the means to support human life and next to production, the exchange of things produced, is the basis of all social structure..." and in his "Speech at the Graveside of Karl Marx" (1962c, 167) that "Just as Darwin discovered the law of development of organic nature, so Marx discovered the law of development of human history."

While Karl Kautsky inherited the mantle of Marxist orthodoxy after the death of Engels, Marx's ideas were increasingly influential in Russia. Plekhanov, who characterized Marxism as "dialectical materialism" and who claimed this was just a development of Eighteenth Century French materialism, became a leading interpreter of Marx and defender of orthodox Marxism. This is the doctrine that was initially embraced by Lenin and came to dominate the Soviet Union. As George Lichtheim (1964, 245 & 246) summed this up:

Instead of the 'realization' of philosophy through action which transforms the world that has philosophy as its necessary complement, we have here a differentiation of philosophy into 'the positive sciences ... There is no mistaking the line of descent which runs from Engels, via Plekhanov and Kautsky, to Lenin and Bukharin. They all, whatever their differences, share the common faith in 'dialectical materialism' as a universal 'science' of the 'laws' of nature and history ... The 'union of theory and practice' having fallen apart, the new 'scientific' doctrine arose to take its place, determinism in thought making for dogmatism in action.

The problems with orthodox Marxism were manifest in the failures of the Soviet Union and Eastern Europe. Replacing the bourgeoisie by the administrators of industry, as Saint-Simon had called for, created a new managerial class that was just as oppressive as the bourgeoisie, and less efficient, as Alexandr Bogdanov had predicted in 1917 (Gare 2000, 342). The Soviet Union lost out in competition with the capitalist West. Furthermore, despite claims that Soviet planning could deal with environmental destruction better than capitalist countries, the reality was very different. Enormous environmental problems were generated by Soviet industrialization (Pryde 1991; Gare 1996, ch.8).

It was not only in practice that orthodox Marxism was problematic. It largely failed as a theory, as Marx was aware. In his letter to the editor of the St Petersburg newspaper, he pointed out that ancient Rome had produced a situation very similar to that of late feudal Europe: that peasants were expropriated from the means of production and subsistence in an economic formation consisting of large landownership. But instead of the dispossessed selling their labour-

power they became an idle mob, and instead of a capitalist production system, a system developed based on slave labour (Marx 1979a, 322). In fact the base/superstructure model breaks down at every level. It has been noted by a number of critics of orthodox Marxism that technologies were developed in Ancient Rome that, far from changing the relations of production, were simply suppressed. Conversely, in Britain it was not the new technologies that changed the relations of production, but changes in relations of production that paved the way for industrialization. Originally, workers dispossessed of land were employed to spin and weave at home, but to maintain quality control, they were brought into factories. It was only then that the new technologies could be and were introduced. More broadly, throughout history, new modes of production have not been determined by technology but by the superstructure. It has been political decisions driven by the quest to defend and expand empires that have determined the base. Feudalism originated in Europe in the Eighth Century when Charles Martel appropriated land from the monasteries to create a feudal structure in order to support a standing army to fight the Saracens. The end of feudalism in Britain began when Henry VII, putting an end to the War of the Roses, removed the right of feudal lords to maintain their own armies. He began the enclosure of commons and privatisation of land, restricted exports of wool and imposed tariffs to foster the weaving of cloth in order to develop an economy able to provide the tax revenues required to maintain his power without the armies of feudal lords.

The greater complexity of history in Russia was evident to some of the leading Russian Marxists. Both Plekhanov and Trotsky explained the development of the strong State in Russia as a response to Tartars and other nomadic, warlike people, and used this to explain the preservation of ancient forms of social organization, including its peasant communes. Orthodox Marxists such as Mikhail Pokrovsky, at one time aligned with Bogdanov and then Trotsky, and later Deputy Commissar of Education, saw this as un-Marxist. He attempted to explain Russia's political form through Russia's economic organization. (White 2019, 135f.). It is not only clear that Plekhanov and Trotsky were right on this issue, but the whole history of the Russian State and its relation to the economy can only be understood in relation to power struggles between Russia and other imperial powers. The fostering of Cossacks along with feudalization were a continuation of the efforts of the Russian Tsars to defend Russia and augment Russia's military power. The efforts to end feudalism and promote capitalist relations occurred after the Crimean War had revealed the weakness of Russia relative to France and Britain.

More significantly, the rise of what was called communism itself was an outcome of the failure of Russia in its war with Japan in 1905 and then defeats at the beginning of World War I. What was created under Stalin was what Bogdanov had called "war communism," the form of government developed in Germany during World War I, whatever the Bolsheviks thought they were creating. Lenin himself in 1922 at the end of his life was beginning to appreciate this in the context of the "Georgian affair" in which the quest for Georgian communists for recognition of their autonomy within the Soviet Union was denied by Stalin and Grigol Ordzhonikidze. Lenin saw this as a manifestation of Great Russian chauvinism which "we took over from tsarism and slightly anointed with Soviet oil" (Lenin 1975a, 720). With Stalin and Ordzhonikidze in his sights, he noted that "people of other nationalities who have become Russified overdo it on the side of true-Russianism" (721). He predicted that "the infinitesimal percentage of Soviet and sovietised workers will drown in that tide of chauvinistic Great-Russian riffraff like a fly in milk" (720).

While in 1914 Lenin in "The Rights of Nations to Self-Determination" (1975b, 153ff.) defended the nationalism of small and oppressed nations as opposed to the nationalism of large,

oppressor nations, Stalin's most famous work *Marxism and the National Question* (2013) was an attack on the quest for national autonomy by smaller nations. When in power, he defended the nationalism of Great-Russians. Pokrovsky died in 1932 and in 1934 Stalin forcefully attacked Pokrovsky's history of Russia for being overly abstract and "anti-Marxist, anti-Leninist, essentially liquidatorist and anti-scientific" (Brandenberger 2006, 207) for ignoring the heroes of history. Under Stalin's direction, Pokrovsky's criticism of the Tsarist old regime as a "prison of peoples" was deemed anti-patriotic "national nihilism" (207f.) and a new Russian nationalist historical orthodoxy was established, celebrating such figures as Ivan the Terrible and Peter the Great. This new orthodoxy involved "the glorification of grand princes, tsars, and generals who had served as the leaders of successful military campaigns" (150) Lenin's fears were vindicated. "Communism" as "Marxist-Leninism" had become a front for Great-Russian imperialism, and presaged the invasion of eastern Poland and Finland in 1939 and the Baltic states in 1940. When this "war communism" failed in the arms race with the capitalist West, Russians embraced capitalism.

None of this could be explained through orthodox Marxism.

Rescuing Marx from Orthodox Marxism

Since Marx, many interpreters of Marx have agreed with Marx's assessment of his followers and challenged orthodox Marxism by reinterpreting the whole thrust of Marx's work. These are what Maurice Merleau-Ponty characterized as "Western Marxists," although there were opponents of orthodox Marxism in the Soviet Union such as Alexander Bogdanov and Anatolii Lunacharski, and Lenin changed his views radically before he died after having studied the work of Hegel. For this reason, it is more appropriate to characterize these Marxists as neo-Marxists or humanist Marxists rather than Western Marxists. It was Marxists who had studied Hegel or Hegelian philosophers, notably Karl Korsch, Antonio Gramsci and above all, George Lukács, who dominated the challenge to orthodox Marxism and attempted to recover the radical implications of Marx's work. Their claims that Marx had been misunderstood were vindicated with the publication of Marx's unpublished manuscripts, most importantly, the 1844 Economic and Philosophical Manuscripts which were published in 1925, the first draft of Capital, the Grundrisse in 1953, and then more recently, two other drafts of Capital commented upon extensively by Enrique Dussel in Towards an Unknown Marx (2001a) and in a number of papers (2001b; 2006). Dussel showed Marx's indebtedness to and the continuing influence on him of not only Hegel, but also of Schelling, concurring with Manfred Frank, James White and Tom Rockmore on this.

For Marx as interpreted by the neo-Marxists, the most important thing to grasp is that the bourgeois mode of production is not natural, but emerged as a unique phenomenon at a particular time in history, and there is reason to believe it will be transient. It is not simply explicable in terms of general laws of history. Living in a capitalist society, the significance of this is difficult to comprehend. The Swiss economist, J.C.L. Simonde de Sismondi (1773-1842), one of the major influences on Marx, wrote in his *New Principles of Political Economy* published in 1819 of this emerging formation as a horrifying new development (translated by Alonzo Smith 1980, 217):

We are, and this point cannot be sufficiently stressed, in an altogether new state of society, of which we have absolutely no experience. We tend to separate completely all sorts of ownership

from all sorts of work, to break all connections between man and matter, to deprive the former of all associations with the profits of the latter.

Sismondi noted that the separation of ownership and work leads to taking the increase of economic goods as the end of society rather that the means. In such a society, "One obtains more of production but such production is paid for dearly by the misery of the masses." This creates insatiable demand as "the needs of the labourer who works in an industrial society appear to be infinite ... No matter how many riches he has massed, there is no point at which he will say: 'that is enough.'' (218 & 219).

Marx's complaint about Sismondi was that he failed to see the inseparability of production and distribution, treating them as two separate processes. This revealed a deeper problem, that Sismondi could not transcend the categories of a capitalist society to fully grasp its immanent dynamics. Consequently, he could only envisage a return to pre-capitalist forms of life to solve the problems engendered by capitalism. To overcome this deficiency it was necessary to embrace and advance Hegel's dialectical form of thinking, radicalizing it to reveal the relationship between categories, not only contemplatively, but as these operate in practice so as to inspire revolutionary practice to overcome these categories. It is necessary to appreciate, for instance, as Marx put it in *Economic and Philosophical Manuscripts* (1976, 336), that "Production does not produce man only as a commodity, man in the form of a commodity; it also produces him as a mentally and physically dehumanized being." This was explained in 1923 by Lukács in the first chapter of *History and Class Consciousness*.

From this perspective, orthodox Marxists are those who did not read the subtitle of *Capital*, that is, *A Critique of Political Economy*, or read mistranslations of it. They did not recognize *Capital* as a critique of political economy. They took it to be a work of economics, not as a work condemning the science of economics for assuming fundamentally deficient categories – categories that initially had been expounded by Hobbes and Locke, but now, as Marx pointed out in the *Grundrisse*, were embodied in the bourgeois mode of production and presupposed in political economy through which society represented itself to itself (Marx 1973, 106). Consequently, they continued to understand the world through these categories, the "forms of being" as Marx characterized them in the *Grundrisse* (1973, 106 & 108), the first set of notebooks in which Marx developed his ideas to write *Capital*. These are the forms of being that, Marx showed, were the core of the capitalist socio-economic formation.

The first chapter of *Capital*, largely ignored by orthodox Marxists, examines the commodity as the most basic category and the most basic form of being in a capitalist economy, a category so taken for granted that it appears perverse to question it; but as taken for granted it hides the true relationships between people and disguises exploitation. Something has become a commodity when it has an exchange value; that is, something that has a price and can be exchanged for money. There was money before capitalism, and products of labour were treated as commodities, but the most important feature of a capitalist society is not only that far more aspects of reality are commodified than ever before, beginning with land, labour and capital, but that this category has engendered a fetish that articulates a self-reproducing and expanding system that appears to be all encompassing and beyond control. What is not exchangeable for money is generally devalued. In the late Middle Ages of Europe, land became a commodity and as such, as something that could be alienated from its traditional owners. The breakdown of feudalism and enclosure movement in Britain, depriving people of access to any means of production, forced people to sell their capacity for work over long periods of time as a commodity, receiving in return wages, alienating them from their own activity of producing, the

products of their work and from their humanity as social beings within nature, with the dynamics of the market driven by the quest for capital accumulation but ultimately based on their work, confronting them as an alien force and producing the worker as expendable. What is more important, through the fetishism of commodities, this exchange appears as a free exchange between free individuals while the more this commodity form is imposed, the more people are dependent upon and enslaved to the dynamics of the market, and the more deluded they are about the ends of life and their supposed freedom. Money has become a universal symbol of value, and to accumulate "value," or what can be exchanged for money or which can generate more "value," is taken as the ultimate end of life.

As Marx predicted, all facets of life are now being swallowed up and transformed by the global market, leaving very few vantage points to understand, let alone oppose it. As Mauritzo Lazzarato succinctly characterized the current world-order:

We are ... faced with a form of capitalist accumulation that is no longer only based on the exploitation of labour in the industrial sense, but also on that of knowledge, life, health, leisure, culture etc. What organizations produce and sell not only includes material or immaterial goods, but also forms of communication, standards of socialization, perception, education, housing, transportation etc. The explosion of services is directly linked to this evolution; and this does not only involve industrial services but also the mechanisms that organize and control ways of life. The globalization that we are currently living is not only extensive (delocalization, global market) but also intensive; it involves cognitive, cultural, affective and communicative resources (the life of individuals) as much as territories, genetic heritage (plants, animals and humans), the resources necessary to the survival of the species and the planet (water, air, etc.). (2004, 205).

Even people's lives are now estimated to have a monetary value, with people in less developed countries deemed to have far less monetary value than the lives of people in affluent Western countries. And with automation, humans are now being rendered superfluous to the economy and to society and so devalued.

Orthodox "Marxists" have been prone not only to accepting these categories, but assisting in extending them to new domains of social existence, and to advancing the goal of reducing everything to predictable instruments of production even further than had the bourgeoisie. They were also prone to developing institutions to achieve such domination rather than constructing institutions that would enable people to control their own destinies. This has become evident in recent decades in the European Union where, as documented by Alain Supiot (2012), former communists from Eastern Europe and purported Marxists from Western Europe. They have happily imposed neoliberal economic policies on the whole of Europe, aligning themselves with Stalin's view of nations against Lenin's, using the authoritarian institutions of the European Union in order to advance the logic of capitalism. This has undermined democratic socialism and the institutions of the nation-state on which it depended, dismantling the achievements of over a century of struggle by the working class to subordinate markets to democratically organized communities.

With the new public management philosophy, all public institutions are now being transformed into business enterprises evaluated in terms of their profitability, and democracy is being neutralized by imposing market relations everywhere, with national governments ceding power to global institutions to regulate their economies. With the commodification of education and research, along with the transformation in advanced capitalist societies of educational and research institutions into business organizations run by managers, those struggling to alert humanity to the threats we are facing from ecological destruction (including climate scientists)

have faced losing their jobs and their livelihoods. As Quinn Slobodian (2018, 9f.) has argued, this transformation realizes the goal of the Austrian founders of neoliberalism, Ludwig von Mises and Friedrich von Hayek, to subvert the ideals proclaimed by Woodrow Wilson in setting up the League of Nations after World War I. Based on the principle that nations should have a right to self-determination, this resulted in the dismemberment of the Austro-Hungarian Empire. As the German sociologist, Wolfgang Streeck observed, "the fiscal supervision and regulation of national governments threatens to end the conflict between capitalism and democracy for a long time to come, if not forever: that is, to settle it in favour of capitalism" (Streeck 2014, 91). This social order is maintained throughout the world not only by military force but by an immensely complex structure of surveillance and domination, along with the mind control industries of advertising and public relations. It would be more accurate to call it "Stalinist capitalism" than neoliberalism. These permeate social life and are eliminating the conditions where this order could be challenged and alternative forms of social and economic life envisaged and developed.

In this new order, the only way people can make a living is by participating in the economic machine that is driving humanity to self-destruction. But despite all this commodification and the enormous power of the mind control industries, it is becoming increasingly evident even to ruling elites that this whole system is ecologically unsustainable.

From Neo-Marxism to Eco-Marxism

Neo-Marxists did appreciate the significance of commodification. However, following the early work of Lukács, 'nature' was treated by many neo-Marxists as a social category, and it was still accepted that the progress of humanity is based on reducing nature to nothing but an instrument of the economy with the ultimate goal to dominate it completely. In the new edition of *History and Class Consciousness* published in 1967, Lukács acknowledged that he had not sufficiently acknowledged that humans are part of nature, which has its own dynamics. However, even the later Lukács did not do justice to Marx's later insights about the relationship between categories and the world defined through them. In the *Economic and Philosophical Manuscripts* (1975, 357) nature was still deemed to be Man's inorganic body made comprehensible through being humanized, and Lukács did not really advance beyond this.

There were neo-Marxists who did appreciate not only Marx's radically different understanding of humanity, but also his later view of nature, however. Generally, these were Marxists hostile to scientific materialism and its further developments, including Darwinism and social Darwinism. Aleksandr Bogdanov in Russia, biologists and ecologists influenced by Bogdanov and Friedrich Engels in the Soviet Union, Ernst Bloch who was directly influenced by Friedrich Schelling, Marxist biologists such as C.H. Waddington, Richard Lewontin and Richard Levins in the West, and those studying the history and philosophy of science under the influence of Marx, Bogdanov and Alfred North Whitehead such as Joseph Needham and Robert Young. These are the Marxists who were the precursors to and sometimes contemporaries of the eco-Marxists such as André Gorz, James O'Connor, Joel Kovel, Ted Benton, Enrique Leff and Saral Sarkar, and more recently, Salvatore Engel-Dimauro, John Bellamy Foster, Brett Clark and Kohei Saito. However, as Hornborg (2019) has shown, eco-Marxists often have difficulty freeing themselves from the influence of orthodox Marxism, manifest in their confused efforts to define use-value and to find a common metric between the natural and social features of value, as though life and liberty could be quantifiable values.

To overcome this confusion it is necessary to appreciate Schelling's influence on Marx. Enrique Dussel has shown the importance of Schelling's argument presented in the Berlin lectures of 1841 opposing Hegel's Absolute Idealism, that there is a pre-Being or an unprethinkable Being (Unvordenkliche Sein) prior to and presupposed by and always to some extent beyond the categories through which we struggle to comprehend it, both in practice and in theory (Dussel 2000a, xvii & 190). Being does not pass into Essence as a result of its own selfdevelopment, as in Hegel's philosophy, but is driven by a creative source. While Marx's examination of the relation between the categories of economics utilized Hegel's logic, this is modified to allow "living labour" to be seen as this "creative source" which exists prior to and outside capital. This explains the possibility of surplus value being generated, that is the nonidentity of value in the exchange of labour (Dussel 2006). Consequently, for Marx labour is never entirely subsumed by the categories of economics. Recognizing a reality beyond what could be acknowledged by these categories allowed him to appreciate the greater complexity of the world where capitalist social relations never completely dominate and the economy are dependent on "living labour," and beyond that, a dynamic nature. For the later Marx, nature was appreciated as far more significant and dynamic than could be understood from the perspective of either the market economy and the scientific world-view it generated, or from the perspective of a radicalized Hegelianism. At the same time, this Schellingian insight revealed how the categories of political economy might be overcome (Dussel 2001b, 14).

Whether they were aware of it or not, all the early eco-Marxists were at least indirectly influenced by Schelling through his seminal influence on post-reductionist science. Although Kohei Saito did not refer to the influence of Schelling's thought on Marx, it was this that made Marx in his later years receptive to advances in science revealing the ecologically destructive nature of capitalism, and as Saito put it, led Marx "to consciously abandon any reductionistic Promethean model of social development and to establish a critical theory that converges with his vision of sustainable human development." Saito continued: "As a result, Marx started to analyse the contradictions of capitalist production as a global disturbance of natural and social metabolism" (Saito 2018, 19). Saito also showed that Marx's concern for nature extended beyond the metabolic rift. As with Schelling and those he influenced, Marx in his later years was deeply concerned with capitalism's destruction of nature as such.

The full recovery of Marx's thought from both orthodox Marxists and Hegelian Marxists is of the utmost importance. Eco-Marxists have realized not only the threat posed by capitalism to nature, but through recovering Marx's insights, have understood the dynamics driving this threat. Marx observed in the *Grundrisse* (1973, 409f.):

Thus, just as production founded on capital creates universal industriousness on one side - i.e. surplus labour, value-creating labour - so does it create on the other side a system of general exploitation of the natural and human qualities, while there appears nothing *higher in itself*, nothing legitimate for itself, outside the circle of social production and exchange. Thus capital creates the bourgeois society, and the universal appropriation of nature as well as of the social bond itself by the members of society. ... For the first time, nature becomes purely an object for humankind, purely a matter of utility; ceases to be recognized as a power for itself; and the theoretical discovery of its autonomous laws appears merely as a ruse so as to subjugate it under human needs, whether as an object of consumption or as a means of production. In accord with this tendency, capital drives beyond national barriers and prejudices as much as beyond nature worship, as well as all traditional, confined, complacent, encrusted satisfactions of present needs, and reproductions of old ways of life. It is destructive towards all this, and constantly revolutionizes it, tearing down all the barriers which hem in the development of the forces of production, and the exploitation and exchange of natural and mental forces.

Perhaps the most important eco-Marxists have been Stephen Bunker and Alf Hornborg who have seen this process as inseparable from the domination of peripheral regions of the world economy by the core zones, and the enslavement of humanity into a global force of environmental destruction, with the greatest destruction occurring in the peripheries, although as they have pointed out, the core zones will also face destruction in the long-term.

Such ecological destruction is channeled by the quest for surplus value in the form of rent, interest or profit. As Dussel has interpreted Marx, the quest for "value," in becoming the driving force of civilisation, has taken the place of Hegel's "Spirit" (Dussel 2001b). Just as Hegel's Spirit uses humans as instruments in its self-creation to achieve full self-consciousness, the quest for "value" reduces people and nature to mere instruments in the economic quest for surplus value. It has become a global force which demands ever greater sacrifices of the living. Viewing the value of nature only in terms of what can generate surplus value gives a fundamentally distorted view not only of human relationships, but also the relationship of humans to the rest of nature, and of nature itself and its significance. The market does not and cannot provide the feedback mechanisms required to recognize and avert environmental destruction, or deal with the destruction that has been caused by the quest for surplus value. Not only can it pay companies to maximize profitability in the short term at the expense of the health of ecosystems, but it can actually be more profitable to destroy the ecosystems that supply people with their most important needs. Just as the greatest profits to oil companies occurred as oil approached the limits of what could be produced, the destruction of arable land, water supplies or breathable air will open the way for far greater profits in the future. And then the very nature of a capitalist economy is such that it has to grow. There is an imperative to reduce labour costs through technology, and then to re-employ such labour it is necessary for the economy to expand. It is this has that led to the industrialization of agriculture and the concentration of humanity in larger and larger cities, creating as Marx pointed out (Capital 1977b, 813), but in a much expanded form, not only a "metabolic rift" between the city and the countryside, but on a global scale.

To ensure that this expansion continues, corporations continually develop new kinds of products, designed to wear out quickly, and devote more and more resources to advertising to promote them while controlling the media and debasing science into techno-science, treating it as an economic instrument. The quest for truth is ignored and obsolete, reductionist forms of science are cemented in place. As the complexity theorists James Coffman and Donald Mikulecky began their book *Global Insanity: How Homo Sapiens Lost Touch with Reality While Transforming the World* (2012, 1): "The thesis of this essay is that Western science has misconceived life. As a consequence, civilized humanity, by way of its scientifically informed industrial economy cum existential nihilism cum retreat into fantasy, is destroying the biosphere – and hence itself." In a later essay, they summarized their argument:

[T]he Western world model and consumer economy works as a complex system to thwart, neutralize, or co-opt for its own ends any effort to bring about the kind of radical change that is needed to avert global ecological catastrophe and societal collapse. This resistance to change stems from the need, inherent in the Western model, to continually grow the consumer economy. The media's continued portrayal of consumptive economic growth as a good thing, the widely held belief that the Economy is paramount, and current political and technological trends all manifest the system's active resistance to change. From the perspective of the mature economic system, any work that does not serve to grow the Economy is counterproductive, and viewed as unnecessary, a luxury, or subversive. (Coffman & Mikulecky 2014, 1)

Exporting this model around the world along with transnational corporations and the elimination of barriers to trade and movement of capital, we have created a world order where, as the Japanese ecological economist Kozo Mayumi (2001, 125) put it, economic enterprises that are ecologically sustainable are not economically viable, those economic enterprises that are economically viable are ecologically unsustainable.

With the advance of technology there often are improvements in the efficiency with which materials are used. It had been observed that for each percentage increase in national income there was a two-thirds percentage increase in the use of materials, including energy, and a similar increase in the production of polluting wastes, and it was hoped that eventually technological advances would improve this ratio. However, the ratio has since worsened and is now close to being equal. Improving efficiency in the uses of resources is no panacea for this problem. With such improvements, more of the material will be used, whether coal, oil, water or anything else. This is the Jevons Paradox, noted by William Stanley Jevons in 1865 (Olimeni, Mayumi, Giampietro and Blake 2008). As Michael and Joyce Huesemann have cogently argued in *Technofix: Why Technology Won't Save Us or the Environment* (2011), faith in technological solutions to the global ecological crisis is misplaced.

These problems are evident when economies are considered in the context of international relations and the global economic system. With international markets and free trade, countries compete with each other for capital investment by holding down wages and relaxing legislation designed to serve the common good in order to reduce costs of business enterprises. Since it is virtually inevitable that capitalist economies will require inputs of raw materials unavailable in the territory of any country, capitalist economies enter into conflict over access to raw materials. All the major wars of the Twentieth Century were ultimately over competition for resources, and this is also true of the recent Iraq wars. This means that increasing amounts of resources are devoted to competition for military dominance, and since the birth of capitalism, increasing amounts of environmental damage have been caused by military conflicts. Such military conflicts and associated environmental destruction are set to accelerate with further resource shortages, the effects of climate destabilization on ecosystems and ecosystem destruction reducing the capacity to grow food (Dyer 2010).

Conclusion

To sum up, the neo-Marxists, re-examining Marx's work, came to appreciate the profundity of Marx's critique of commodity fetishism and how fundamentally people are deluded by it, while eco-Marxists have shown how this delusion extends to our understanding of nature. Following Sismondi, Marx and the neo-Marxists were concerned to show that capitalism is unique. It is not natural; it has been imposed. Politics is therefore more fundamental than economics in understanding how this formation emerged and how it has expanded. One of the most important aspects of this is the struggle of States for survival and then dominance. However, what is imposed above all is a particular way of conceptualizing the relations between people and between people and nature, both in theory, and more importantly, in practice. Culture is more fundamental than politics (Bergeson 1990). Overcoming capitalism will involve a radical transformation of culture. Together with Hegel's insights, the recovery of the Schellingian tradition of thought and its role in Marx's work have not only clarified Marx's insights into the ecologically destructive nature of capitalism, but also the nature and extent of the cultural transformation which will be required to overcome it. In Part 2 I will show what this will involve.

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