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‘Marx, Lemkin and the Genocide – Ecocide Nexus’

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A number of studies have shown that ecocide can be a method of genocide if, for example, environmental destruction results in conditions of life that fundamentally threaten a social group's cultural and/or physical existence.¹ With the ever-increasing rise of such cases of ecological destruction brought on by the extractive industries, or indirectly induced by anthropogenic climate change, we argue that the field of genocide studies should draw from the rich scholarly tradition of *political ecology* and *environmental sociology*. Indeed, it is the contention of the authors that, given the looming threat of runaway climate change in the 21st century, the advent of the geological phase classified by geologists and earth scientists as anthropocene² and the attendant rapid extinction of species, destruction of habitats, ecological collapse and the self-evident dependency of the human race on our bio-sphere, ecocide (both 'natural' and 'manmade') will become a primary driver of genocide. It is therefore incumbent upon genocide scholars to attempt a paradigm shift in the greatest traditions of science³ and cohere a synthesis of the sociology of genocide and environmental sociology into a theoretical apparatus that can illuminate the links between, and uncover the drivers of, ecocide and genocidal social death.⁴ Following a discussion of both the conceptual and legal nexus between ecocide and genocide, we further contend that capitalist ‘land grabs’ - carried out by extractive industries, industrial farms and the like - are, through the annexation of indigenous land and the associated ‘externalities’, the principal vectors of ecologically induced genocide when the *genos* in question is an indigenous people.

Keywords: Marx, Capitalism, Extreme Energy, Ecocide, Genocide, Indigenous peoples

‘Ecological’ Genocide & the Capitalist Instrument

Ecology is the scientific study of organisms, the communities they collectively comprise and their interactions with their abiotic environment: *ecosystems*. Political ecology has many definitions⁵ but the one with greatest utility for the purposes of this paper is that furnished by Blaikie and Brookfield:

“The phrase “political ecology” combines the concerns of ecology and a broadly defined political economy. Together this encompasses the constantly shifting dialectic between society and land-based resources, and also within classes and groups within society itself.⁶

In other words, political ecology is the study of the community of organisms and their environments which critically includes humans or social collectives. Consistent with an ontological approach that argues it is not necessarily the intention of any particular actor that is to blame for genocide but the effect of what Barta calls “remorseless pressures of destruction inherent in the very nature of the society”⁷ that is of importance, the argument put forward in the following section of the paper is that one can best explain the driving force behind ecologically induced genocide by examining the structural forces that underpin the aforementioned industrial mining and farming industries: namely the political economy of capitalism and the capitalist mode of production (MOP)⁸. Indeed, it will be argued that only by employing Karl Marx’s critique of the political economy of capitalism combined with the sadly overlooked theory of ecology found principally in *Capital* vol 1 and 3, the *Grundrisse* and *Theories of Surplus Value* can the drivers behind ecological destruction as a genocidal technique be explained. Ecocide will be understood as a function of capital, with its remorseless drive to accumulate damaging and collapsing natural cycles and turning them into “broken linear processes”,⁹ exceeding the constraints and boundaries of nature and causing what Marx described as a ‘metabolic rift’ between humankind and nature. Together with Marx’s critiques of capital and in particular his analysis of the value form under generalised commodity production for the market, Marx’s method serves as an invaluable tool kit to critique ecocide and its necessary corollary, genocide.¹⁰ Furthermore, the drivers in the capitalist MOP that lead to ecological destruction are the very same drivers that have triggered climate change and the anthropocene. The ceaseless drive to accumulate capital and the resultant environmental degradation (what Marx called the metabolic rift) are subjecting the biosphere itself to ecological stresses that could cause the ecological collapse of human civilisation and perhaps trigger an auto-species extinction event.

Marx’s Ecology

As early as the German Ideology, Marx recognised the co-evolution of human and natural history:

“We know only one science, the science of history. History can be viewed from two sides: it can be divided into the history of nature and that of man. The two sides, however, are not to be seen as independent entities. As long as man has existed, nature and man have affected each other.”¹¹

Marx analyzes human history from the standpoint of the *social* production of wealth or what he calls *use values*, which includes basic requirements of food, shelter and clothing, as well cultural and aesthetic needs:

“The first premise of all human history is, of course, the existence of living human individuals. Thus the first fact to be established is the physical organisation of these individuals and their consequent *relation to the rest of nature*.”(Emphasis added)¹²

It is clear from this and other passages that Marx sought to develop a theory of society and history that was materialist on both a *social* and *ecological* level. Therefore, when seeking to uncover the social forces that drive and shape society, the social facts that must be established are both the prevailing material conditions in the sense of what Marx called the forces of production – labour power, the tools, infrastructure, instruments, techniques inherited from the past – but also the *natural conditions* that must be appropriated to reproduce labour itself¹³ and provide the natural resources and raw materials in the social production of wealth.

These natural conditions Marx defined as a form of *primary* appropriation of use values, use values spontaneously given by nature.¹⁴ Once these social facts have been empirically verified, one can infer the corresponding social relations. Marx understood, as ecologists today do, that natural systems have a metabolism that governs the exchange of matter and energy. The primary focus of the science of ecology is illuminating the nexus of processes, (such as primary production, pedogenesis or soil formation, nutrient cycling etc.) that are responsible for regulating the exchange of energy and matter (metabolism) in ecosystems. These processes allow for the regeneration and continuation of the ecosystems and the communities of organisms they contain.

Marx averred that humankind depends on these natural metabolic processes for its reproduction and continuance as well and so he extended the ecological focus to include human societies in the web of ecosystems. The critical lynchpin in our nexus with the ecosystems that act as our natural incubators is, Marx identified, *labour*.¹⁵ Labour is the principal mechanism that regulates humankind’s metabolic relationship with the rest of nature: it is labour that mediates the exchange of materials and energy between humans and nature, but in turn this *metabolic* interaction is itself socially mediated by the historically structured social relations between producers and between producers and appropriators of the surplus product.¹⁶ In other words, Marx recognised that human production or appropriation of

wealth is mutually constituted by social relations *and* the contents and constraints of natural conditions.¹⁷ So although there are what Marx called ‘nature-imposed conditions’ that regulate the metabolic process that supports all life on earth, they are also affected by human agency according to the particular forms of social interaction or social relations that were imposed on nature.¹⁸ Marx’s methodology is neither *anthropocentric* nor is it *nature-centred*, rather it is a dialectical unity of the two.¹⁹

The Metabolic Rift

Thus Marx ecologically embeds all societies. The social metabolic order imposed by capitalism however, according to Marx, leads to a ‘metabolic rift’ and the forcible historical divergence of human production from the evolving natural world precisely because of the form of social mediation of the metabolic process under the capitalist economy.

It is here that Marx’s critique of political economy illuminates the mechanisms at play that explains the rift in the social metabolic order. Capitalism’s central motor force is the drive to accumulate capital and thus in the process all other social and natural relationships are subordinated to this primary goal. As Paul Sweezy argued, it is “both the subjective goal and the motor force of the entire economic system”.²⁰ Once generalised commodity production is established, capital accumulation becomes, through the force of competition, a ceaseless and remorseless process, a kind of ‘treadmill of accumulation’ that respects no other cycles other than the business cycle.²¹ Consequently, the insatiable drive to accumulate capital and thus reap profits tramples all over natural cycles and processes and is no respecter of the natural rhythms of regeneration and recycling, as this imperative to accumulate on an ever expanding scale requires more and more of what ecologists terms ‘throughput of materials and energy’.²²

The iron law of exponential growth under capitalism exacerbates the social metabolism of the capitalist system and places an ever greater strain on nature, eventually leading to metabolic rift. One feature of a system of universal commodity production for the market is that exchange values regulate the production of social wealth and validates particular labours as what Marx described as ‘socially necessary labour time.’ In other words, the intrinsic ‘value’ of a commodity, at least according to

capitalism, is the amount of socially average labour that must go into its production. Critically, a market economy based on the organising principle of exchange value presupposes that all producers cannot reproduce themselves independently of the market nexus and thus it assumes the social separation from the natural conditions of productions.²³ The social separation of the producers from the natural conditions of production makes possible a compulsion to perform surplus labour beyond immediate needs and ignore natural limits. It also rather palpably demonstrates one of the many ways that capitalism affects our alienation from nature and violates the nature–imposed conditions of social metabolism.

Marx first developed his concept of the metabolic rift in the midst of crisis of soil erosion in England in the 19th century.²⁴ Marx understood that soil requires nutrients such as phosphorous, nitrogen and potassium to facilitate the growth of crops. But due to the prioritisation of accumulation of capital and the subsumption of all natural and social relations, the over-exploitation of the soil led to its terminal erosion, triggering an agricultural crisis. This crisis exemplified the tendency of capitalism to violate natural limits and natural rhythms and fundamentally violate the nature imposed conditions of social production. One marked feature of this transgression was the rise and exacerbation of the division between town and country, first begun by the enclosure movement, itself a function of the need for capital to not only alienate the producers from their natural conditions of production and thus secure the pre-eminence of exchange value, but also create a home market for its goods.²⁵

This led to the ecologically disruptive concentration of the population in ever-increasing urban centres and the movement of large quantities of food and fibre into the cities. Consequently, nutrients that would normally be recycled back into the soil were now accumulating as waste in the cities. It was this kind of ceaseless production of vendible exchange values that led to the severing of the metabolic cord between human civilisation and nature. The industrial sprawls themselves would be damaging to the local environment and health of the urban population and in turn would supply agriculture with the technical means via industrial agriculture to further increase the material throughput and inflict still more damage on the local ecosystems. In the limitless appropriation of the social and natural environment for the exploitation of labour in the form of growing industrial throughput and materially dense populations, capitalism threatened to break down the ecological and biospheric web in its corrosive transmission of matter and energy between and within town and country.²⁶

This analysis of environmental crisis under capitalism has the potential to be extrapolated on the *macro* or *global* biospheric scale and explain the advent of *ecological imperialism*. Marx continually stressed that capital, in its remorseless pursuit of value, would span the globe.²⁷ This geographic expansion is a natural function of the rise of the world market, the international division of labour and the drive to expand industrial production in the pursuit of capital accumulation. With this analysis it is possible to envisage the division of the world between industrialised nations and those countries and regions, such as the territories of the indigenous peoples in Northern Alberta Canada, which supply materials and resources, shrouded in an ecological pall. Moreover, it is possible to explain the advent of climate change as the expression of a political economy that is structurally compelled to transgress what the Club of Rome called in their report *The Limits to Growth*²⁸ or what Marx called the natural limits of production.²⁹

Now we can turn to Marx's analysis of the value form under capitalism to explain these structural features and why, as we shall see in the final section of this paper, they lead to the sorts of episodes of ecocide and genocide currently being experienced by the indigenous peoples of Northern Alberta and of the Northern Territory in Australia.³⁰

The Anti-Ecological Reign of Exchange Value

As alluded to already, under capitalism a distinction is made within the category of 'value' between the *use-value* of an article, the actual utility or usefulness it has for humanity and the *exchange value*, which is a signifier for abstract social labour time, of an article which equates with the socially necessary labour time that was invested in the making of the product. It is the latter that exchanges for money in the process of accumulation, what Burkett calls vendible commodities that 'objectify' abstract social labour.³¹

This has a number of ecological implications. Firstly, as wealth, or value, is made up of both use value and exchange value, capitalism undervalues the contribution of nature to the social production of wealth. Wealth is in fact in reality made up of "myriad use values produced by materially variegated forms of labor and nature" and thus the contribution of nature to the production of wealth is rendered invisible by the formal abstraction of abstract social labour time.³² Thus the political economists before

Marx did not acknowledging the vital contribution nature makes to the production of wealth.³³ Burkett succinctly summarized the value-nature contradiction:

“Capitalism only validates human and extra-human nature as necessary parts of human production insofar as they can be profitably objectified in vendible use values.”³⁴

Secondly, this obliteration of qualitative differences through the aforementioned formal abstraction in commodities for the purposes of exchange, also ‘abstracts’ from the complex, delicate and intricate web of ecological interconnections and diversities, to the extent that these qualities are not captured by the category of social labour time. When you valorise a commodity: “Its natural properties are extinguished; it no longer takes up a special, qualitative relationship towards the other commodities”.³⁵ The formal abstraction under exchange value therefore tends towards the *simplification* and *homogenisation* of nature as well as its artificial *divisibility* or *fragmentation* into either elements of the natural conditions of production or as commodities themselves: “as a value, every commodity is equally divisible; in its natural existence this is not the case.”³⁶ Climate change and the excessive emissions of greenhouse gases into the atmosphere is therefore understood as the violation of the ecological principle of sustainability and the intricate interconnectivity of the various parts of ecosystems and the biosphere more generally. In other words, capitalism is blind-sided by the tendency to fragment, homogenise and divide nature and is thus incapable of grasping the drivers of ecocide and climate change or structurally accommodating systemic solutions and remedies to ecological meltdown and global warming.

Extreme Energy: A Nadir of the Anti-ecological Dysfunction of Exchange Value

Thus we see how Marx’s critique of political economy, and his value analysis more specifically, can help explain the ecologically destructive forces unleashed by the capitalist extractive and farming industries. The capitalist MOP implicated in said industries is structurally geared towards the social production of commodities in a manner in harmony not with nature’s laws of conservation, sustainability and the natural metabolic cycles but in step with the imperatives of capital accumulation and exchange value. Thus the Athabasca ‘tar sands’³⁷ stands as an example of the artificial division and fragmentation of the local ecosystem in an attempt to extract oil, with no regard for the anti-ecological effects this unnatural throughput and transfer of energy and materials has on the local environment and critically the local population.

Of course, this value analysis is perfectly capable of accounting for all forms of what have become known as ‘extreme energy’³⁸, a particularly virulent form of ecologically unsound industrial energy extraction. For instance: mountain-top removal; deep-water drilling; and hydraulic ‘fracking’. But what exactly constitutes or qualifies as a form of extreme energy. A commonly held definition is a ‘more intensive and environmentally destructive method of energy extraction than conventional sources of fossil fuels.’³⁹ But as Lloyd-Davies argues, this definition still leaves nebulous the issue of just how ‘extreme’ a form of energy has to be to be included in this category; thus the definition is light on predictive or explanatory power. Instead, an understanding of extreme energy *as a process* is proffered, where the easiest to extract resources are targeted first. Once depleted, increasingly more difficult to extract resources follow, resulting in an ever more complex and energy intensive extraction effort.⁴⁰

The extreme energy process can be explained by Marx’s political economic analysis. As explained above, one of the central ecological contradictions of the capitalist MOP is that between the exponential increase in the throughput of materials and energy associated with the treadmill of accumulation, and the natural limits of production. Given the disequilibrium between capitals’ ferocious pace in the throughput of energy and materials and nature’s laws and temporal rhythms and metabolic cycles, eventually capital provokes what Marx described as ‘materials-supplies disturbances’. This results in an inevitable shortage of materials and an accumulation crisis.⁴¹

The result, as dictated by the operation of the law of value, is that the price of the relevant raw material will go up as the amount of socially necessary labour time objectified in each individual product or use value rises in relative terms. Marx, analyzing this phenomenon through the prism of an agricultural crisis explained:

“a *crisis* can arise: 1. in the course of the *reconversion* [of money] *into productive capital*; 2. through *changes in the value* of the elements of productive capital, particularly of *raw material*, for example when there is a decrease in the quantity of cotton harvested. Its *value* will thus rise.”⁴²

This rise in the value of constant capital, as opposed to labour, could become so costly it starts to disrupt the process of the reproduction of capital, as the profit realised in the sale of a whole plethora of commodities, of which the various raw materials are a constituent part, no longer covers the costs of the elements of production.

This process is exemplified by extreme energy as the supply of fossil fuels begins to run up against natural limits, thus raising the relative amount of objectified labour in a given quantity of fossil fuel, leading, in the medium to long term, to a rise in the average price of fossil fuels. Indeed, within the process of extreme energy, where more complex and costly techniques are required for the extraction of ever scarcer sources, the very same process unfolds. This is precisely what Marx spoke of in his analysis of materials-supply disturbances as a form of accumulation crisis. Furthermore, Marx argued that the resulting rise in the price of raw materials engenders, under conditions of competitive accumulation, a number of competitive responses. These include increased production from suppliers (therefore accelerating and intensifying the metabolic strain on the environment and exacerbating the aforementioned contradiction) and the use *of previously unused substitutes*.⁴³ So extreme energy ‘as a process’ can be seen as both an expression of material shortages engendered by the contradiction between what Burkett calls nature’s time and capital’s time and a competitive response, through the operations of the market, to correct the imbalance through the extraction of ever more extreme substitutes. The net metabolic effect on the social metabolism is to put further pressure both on local ecosystems and the biosphere more generally.

One remarkable feature of extreme energy is the amount of energy needed to obtain the scarce resource in the first place, with a marked drop in what is known as the ‘energy return on investment’ (EROI)⁴⁴ Thus, as increasingly more difficult to extract resources are sought after, as predicted by the theory of extreme energy as a process, the less net energy is acquired. This manifestly irrational feature of EE is also explained by Marx’s value analysis; the only value that really counts in a capitalist economy is exchange value or abstract labour value, with nature, and any regard to the ecological imperatives of sustainability, conservation and energy efficiency not being considered, with one qualifier being, that the latter is considered only in terms of reducing costs of production in order to gain a competitive advantage and thus *sell even more*. The end aggregate result, when all capitals are taken together, is still a process that demands ever expanding production of saleable use values with its attendant exponential increase in material throughput.

Marx’s value analysis and the reign of exchange value under conditions of competitive accumulation, and his ecological concept of the metabolic rift, illuminate both the mechanisms that lead to ecological destruction under capitalism and the consequences on humanity’s ecological relationship with the planet. In the case of the former, the hegemony of exchange value renders invisible nature’s

contribution to the social production of use value. Exchange value also eliminates all qualitative differences in nature and abstracts from the complex and intricate web of connections that make up ecosystems. Furthermore the quantitative formal abstraction of socially necessary labour time tends towards the homogenization of nature and facilitates its artificial division and fragmentation in the form of discrete commodities or factors of production, with all the devastating ecological consequences this implies.

This sets in motion a rampant process of accumulation which carves up nature and increases the material throughput of production to ecologically unsustainable levels, disturbing the social metabolism of human civilization and leading to a metabolic rift of man from nature. One extreme and virulent expression of this rift is of course global warming. The extractive industries in general and extreme energy more specifically, are manifestations of the anti-ecological imperatives of capital accumulation of value. Extreme energy as a process is one particularly virulent expression of this metabolic rift and the anti-ecological nature of the value-nature contradiction. The resort to more costly and more environmentally destructive forms of energy extraction exemplified by extreme energy signify a particular form of environmental crisis under capitalism caused by material shortages and the natural limits of production.

Thus we have illuminated the nexus between the capitalist MOP and ecological destruction. What remains to be explained is how this nexus can be seen as a structural technique of genocide. To this end it necessary to first outline an understanding of genocide and second, of ecocide as a key 'method' of genocide. It is to this task that we now turn.

Genocide and Ecocide: the legal and conceptual nexus

In 1933 the Polish jurist, Raphael Lemkin, spoke at the *International Conference for Unification of Criminal Law* in Madrid. Invoking the linked concepts of 'barbarity' and 'vandalism', Lemkin urged the international community to ban both the physical and cultural destruction of human social groups. In his subsequent seminal text *Axis Rule in Occupied Europe* Lemkin combined barbarity and vandalism, to form a new master concept – *genocide*, with the Greek word *genos* meaning tribe or race and the Latin *cide* meaning killing/destruction.⁴⁵ In a now famous passage from that text Lemkin wrote:

Genocide has two phases: one, destruction of the national pattern of the oppressed group; the other, the imposition of the national pattern of the oppressor. This imposition, in turn, may be

made upon the oppressed population which is allowed to remain, or upon the territory alone, after removal of the population and the colonization of the area by the oppressor's own nationals.⁴⁶

The second element of Lemkin's prior formulation, vandalism — the destruction of culture — was thus a *method* or *technique* of group destruction.⁴⁷ The central ontological assertion for Lemkin was that culture integrates human societies and is a necessary pre-condition for the realization of individual material needs. In Lemkin's view culture is key to collective memory and each unique and distinctive cultural group is a *genos* deserving protection. Thus, for Lemkin it is culture that animates the *genos* in genocide and not the civilian character of victims as Martin Shaw⁴⁸ seems to suggest (which would not distinguish the concept from crimes against humanity) or the arbitrary categorisation of a perpetrator as some scholars argue.⁴⁹ For Lemkin, a nation's culture was an essential element of world culture and nations possess a life of their own comparable to the life of individual:

The world represents only so much culture and intellectual vigour as are created by its component national groups. The destruction of a nation, therefore, results in the loss of its future contributions to the world.⁵⁰

After *Axis Rule* Lemkin began research on a comprehensive multivolume 'History of Genocide', covering ancient, medieval, and modern time periods. Lemkin's notes for this project outline key "methods and techniques of genocide", which include:

physical—massacre and mutilation, deprivation of livelihood (starvation, exposure, etc. often by deportation), slavery—exposure to death; biological—separation of families, sterilization, destruction of foetus; cultural—desecration and destruction of cultural symbols (books, objects of art, loot, religious relics, etc.), destruction of cultural leadership, destruction of cultural centres (cities, churches, monasteries, schools, libraries), prohibition of cultural activities or codes of behaviour, forceful conversion, demoralization.⁵¹

The range of the methods and techniques of genocide are all too often ignored when a conceptual centrality is afforded to *physical* killing. As Dirk Moses argues, the extraordinary implication of such thinking is 'that Lemkin did not properly understand genocide, despite the fact that he invented the term and went to great trouble to explain its meaning. Instead, most scholars presume to instruct Lemkin, retrospectively, about his concept, although they are in fact proposing a different concept, usually mass murder'.⁵² In those cases where the centrality of culture to Lemkin's concept is argued out, it would be better if such authors' simply chose another concept e.g. mass murder or crimes against humanity.

Even so, Lemkin's largely nationalistic understanding of the *genos* has led sociologist Christopher Powell to 'update' his theorising by invoking a somewhat less structurally bound appreciation of the social group by invoking Norbert Elias' notion of a 'social figuration' – a more fluid notion which nonetheless has an identifiable form.⁵³ But as philosopher Mohammed Abed, argues, even a more fluid collective object (*genos*) must still display certain features if it is to be logically and ethically susceptible to the harm of genocide.⁵⁴ Indeed, being mindful of etymology and the social collectives that Lemkin was trying to protect (and their 'future contributions' to the world he spoke of), not just any social figuration is capable of being the victim of genocide. As Abed suggests, its members must consent to a life in common, *its culture must be comprehensive* and its membership should not be easily renounced. Under these conditions, the flourishing of the group's culture and social ethos will have profound and far-reaching effects on the well-being of its individual members such that the destruction of its cultural and social institutions will eventuate in the individuals suffering the harms and deprivations peculiar to the crime of genocide.⁵⁵ Indeed, for Lemkin the social group (*genos*) 'exists by virtue of its common culture'. Accordingly during the process of construction of the draft United Nations Convention on Genocide, Lemkin argued that 'Cultural Genocide is the most important part of the Convention'.⁵⁶ In his 1958 autobiography 'Totally Unofficial Man' Lemkin subsequently wrote:

I defended it successfully through two drafts. It meant the destruction of the cultural pattern of a group, such as the language, the traditions, the monuments, archives, libraries, churches. In brief: the shrines of the soul of a nation. But there was not enough support for this idea in the Committee...So with a heavy heart I decided not to press for it'.⁵⁷

And so he agreed to drop the cultural method from the law and with it lost something that, in Lemkin's words, 'was very dear to me'.⁵⁸ The removal of this method seems to have contributed to a perverse preoccupation, in legal and scholarly realms, with perpetrator intention rather than the genocidal impacts on victims, and to the popular (mis)understanding of the crime of genocide as simply racially-motivated mass killing.

In the years following the implementation of the 1948 United Nations' Convention on the Prevention and Punishment of the Crime of Genocide (hereafter Genocide Convention) many governments began to voice their concerns about its effectiveness. Genocide was still a reality in many parts of the world and seemed to offer little to those groups it was designed to protect. This was, in part, due to the narrow

interpretation of what constituted genocide described above and the omission of much of the cultural method in the Genocide Convention. Concern at the lack of utility eventually led to an extensive United Nations' (hereafter UN) inquiry into the effectiveness of the Genocide Convention and it was in just such a review that we find the first attempt to criminalise environmental destruction in international law.⁵⁹ UN papers demonstrate that members and delegates of several UN institutions, including the Sub-Commission on Prevention of Discrimination and Protection of Minorities,⁶⁰ the Legal Committee of the General Assembly and the International Law Commission discussed, at different times over a forty year period, how to define and criminalise severe environmental destruction. These institutions met frequently to discuss the elements and issues involved in formulating such an international crime, including the level of intent required for an offence to constitute 'ecocide' or 'severe damage to the environment'.⁶¹

Early discussions of ecocide were triggered by extreme environmental damage that was being inflicted on Vietnam, Cambodia and Laos through the use of chemical warfare as part of the US campaign there. Because this was the context in which discussions of ecocide began, and because of the urgency and extremity of the harm being done, early definitions of ecocide tended to be restricted to wartime situations in which intent to cause environmental destruction was present and central. The term ecocide was used as early as 1970, when it was first recorded at the Conference on War and National Responsibility in Washington, where Professor Arthur W. Galston 'proposed a new international agreement to ban ecocide'.⁶² Galston argued that if

'(genocide) could be perpetuated against humankind...then an attempt to destroy a natural environment qualified as equally disturbing. Such an atrocity required a similar concept – ecocide, or an attempt to wipe out a specific environment.'⁶³

In making a link with genocide Galston was suggesting that environmental destruction can have a genocidal impact but also that the environment can be seen as a victim of ecocide in the same way a social group of people can with genocide. In 1972, at the UN Stockholm Conference on the Human Environment, Mr Olaf Palme, then Prime Minister of Sweden, spoke explicitly in his opening speech of the Vietnam War as an 'ecocide'.⁶⁴ The Stockholm Conference focused international attention on environmental issues perhaps for the first time, especially in relation to environmental degradation and trans-boundary pollution. Other Heads of State, including Ms Indira Gandhi from India and the leader

of the Chinese delegation, Mr Tang Ke, also denounced the Vietnam War on human and environmental terms.⁶⁵ While there was no reference to ecocide in the official outcome document of the Stockholm conference, the potential for a law criminalising ecocide was widely discussed in the unofficial events running parallel to the official UN Stockholm Conference, including at the 'Folkets Forum' – the People's Summit – where a working group on the Law of Genocide and Ecocide was established.⁶⁶ 'Almost every popular movement and group of NGOs addressed the issue. A demonstration with 7,000 participants was held.'⁶⁷ Dai Dong, a branch of the International Fellowship of Reconciliation,⁶⁸ sponsored a 'Convention on Ecocidal War' (CEW) which took place in Stockholm, Sweden.⁶⁹ The CEW brought together many people including Professor Richard A. Falk, expert on the international law of war crimes and Dr Arthur H. Westing and Dr Egbert L Pfeiffer who were both biologists and was coordinated by John Lewallen.⁷⁰ The CEW called for a UN working group on Ecocidal Warfare, which would, amongst other matters, seek to define and condemn ecocide as an international crime of war.⁷¹ A draft International Convention on the Crime of Ecocide was prepared for UN consideration by Falk and reproduced in a journal article he published in 1973.⁷² It recognised that the Genocide Convention was deficient and that there was a need for another international law that could address ecological crimes. Falk's draft convention, though, primarily envisaged ecocide as a military offence which could be committed in times of war or peace provided the requisite intent was present.

As with the crime of genocide there was much academic debate over what would constitute the crime and, in particular, whether intent to commit destruction of ecosystems was a necessary element of the crime. John H.E. Fried, a specialist in international law and member of the Lawyers' Committee on Nuclear Policy, believed ecocide to denote 'various measures of devastation and destruction which... aim at damaging or destroying the ecology of geographic areas to the detriment of human life, animal life, and plant life'.⁷³ Even so, it was recognised by others, such as Falk, that ecocide often occurs simply as a consequence of human economic activity rather than being a result of a predetermined, intended direct attack on the environment. Indeed, even though Falk's draft (1973) Ecocide Convention constructed a primarily military offence he explicitly acknowledged at the outset that 'man has consciously and unconsciously inflicted irreparable damage to the environment in times of war and peace.'⁷⁴ While Westing stated that, 'intent may not only be impossible to establish without admission but, I believe, it is essentially irrelevant.'⁷⁵

Even though Falk's draft was never adopted it was considered by the Sub-Commission on Prevention of Discrimination and Protection of Minorities (Sub-Commission) when it prepared a study (referred to earlier) for the UN's Human Rights Commission into the effectiveness of the Genocide Convention. The Sub-Commission was asked to consider the addition of ecocide as well as the possible reintroduction of the cultural method into the Genocide Convention. The study was prepared by the Special Rapporteur Mr Nicodème Ruhashyankiko, with the final draft published in 1978. At this time many Sub-Commission members were supportive of the idea that additional instruments be adopted.⁷⁶ Within the Sub-Commission Mr Abdelwahab Bouhdiba voiced support for criminalising ecocide; 'any interference with the natural surroundings or environment in which ethnic groups lived was, in effect, a kind of ethnic genocide because such interference could prevent the people involved from following their own traditional way of life'.⁷⁷ However, Ruhashyankiko concluded:

'from the review of the problem of ecocide regarded as a war crime, in chapter IV of the present study, it follows that the question of ecocide has been placed by States in a context other than that of genocide. The Special Rapporteur believes that an exaggerated extension of the idea of genocide to cases of ecocide which have only a, *very* distant connexion with that idea is liable to prejudice the effectiveness of the Genocide Convention.'⁷⁸

Nevertheless, in a follow up to the Ruhashyankiko report, the concept of ecocide surfaced again when the Sub-Commission considered the same basic issue in 1985 – weather or not to expand the Genocide Convention. This time the Special Rapporteur was Mr Benjamin Whitaker.⁷⁹ The report stressed the opinion of the members of the Sub-Commission who were vocal in their support for the inclusion of a crime of ecocide.⁸⁰ Even so, in a non-committal conclusion, Whitaker recommended that 'further consideration should be given to this question'.⁸¹ In subsequent discussions in the Sub-Commission, once again members spoke out in favour of the creation of a law criminalising ecocide within the Genocide Convention. A draft resolution, prepared for the Commission on Human Rights, submitted, as part of the review, recommended that Whitaker expand and deepen the study of the notions of 'cultural genocide', 'ethnocide' and 'ecocide'. In addition, a draft article on cultural genocide had also been prepared⁸² although not adopted. Ultimately, in the Sub-Commission's final report on its 38th session,⁸³ it was recommended that Special Rapporteur Whitaker further investigate the expansion of the Genocide convention to include the cultural and ecocidal methods of genocide and report back in its 40th Session, which did not happen. It is unclear from UN records why the review of the Genocide Convention went no further.⁸⁴

In recent years the campaign to criminalise ecological destruction in its own right, and as a strict liability offence,⁸⁵ has been taken up by Polly Higgins' *Eradicating Ecocide* network which draws attention to the numerous examples of ecocide and its human consequences worldwide, at a time when preventing further ecological destruction couldn't be more pressing.⁸⁶ *Eradicating Ecocide* is one of a number of campaigns⁸⁷ that highlights the particularly devastating impact environmental destruction has on indigenous peoples who depend on the health of their local environment not only for their own physical well-being but also for their spiritual and cultural health. Indeed for those indigenous peoples who still retain a cultural attachment to land, environmental destruction can have a genocidal impact.

Indigenous peoples at the ecocide genocide nexus

For indigenous peoples worldwide the 'logic of elimination'⁸⁸ that informed frontier massacres in places like Australia and North America, and the assimilationist agendas that followed, now underpins expansionist land grabs driven by the logic of global capitalism⁸⁹. In numerous colonial contexts in the years after 1945 the traditional forms of colonial terror transformed into a 'genocide machine' as the nature of capitalist domination became less overtly racist and more attuned to corporate imperatives.⁹⁰ Nowadays governments frequently dispossess indigenous groups through industrial mining and farming, but also through military operations and national park schemes – all of which routinely take no account of core indigenous rights.⁹¹ It is precisely these industries and their attendant capitalist MOPs that are implicated by the above Marxian value and ecological analysis.⁹² As Short has argued in the Australian context, the 2007 *Northern Territory National Emergency Response Act* (often referred to as the Intervention) in Australia introduced by the Government of John Howard contained discriminatory compulsory land acquisition measures that were designed it seems with an eye to opening up indigenous lands for mineral exploration and development. Indeed, the Intervention's compulsory acquisition of townships has created a dangerous precedent for other Aboriginal lands.⁹³ In late 2007 the Howard Government signed up to the US led Global Nuclear Energy Partnership initiative (GNEP)⁹⁴, which committed Australia to mine and enrich its uranium, export it to other countries, then re-import the resultant radioactive waste to be stored for ever more in the Australian desert. Approximately 30% of the world's currently identified uranium reserves are to be found on NT indigenous lands and since last year the number of exploration licences for uranium in the NT has doubled, with nearly 80 companies either actively exploring or having applied to explore. With the

ALRA amendments and the Intervention's compulsory acquisition measures Indigenous peoples will have no effective means to resist the now 'inevitable' increase in uranium mining in Australia,⁹⁵ resulting in yet further culturally genocidal pressures on some indigenous groups. As Aboriginal MP John Ah Kit put it at the start of the Intervention, 'this is about the beginning of the end of Aboriginal culture; it is in some ways genocide.'⁹⁶

Of course such treatment of indigenous peoples and their lands is nothing new, nor is it something peculiar to the Australian settler colonial context. Up until the end of the frontier era in the late 19th century, genocidal processes in North America were largely geared toward, and derived from, expansionist policies opening up Indian land for a seemingly limitless influx of settlers. In the post-frontier period, settlement has unquestionably continued to be a pressing factor – however, following the industrial revolution, the Euro-North American genocidal logic became increasingly focused on the elimination of Indian peoples in order to gain access to their territory for purpose of *resource extraction*. In recent years, the demand for plentiful and 'secure' energy resources has resulted in "the single largest energy policy shift in North America since...production peaked in 1971".⁹⁷ As Macdonald Stainsby writes:

Having failed to pacify Iraq and having engendered new regional opposition in Africa, South America, and the Middle East, the U.S. empire has driven oil prices up to new heights – a trend which will continue into the future. Though peak oil has profound implications for the U.S. dollar and the militarized global economy, these prices have, in the short-term, been masterfully recast as U.S. imperialism's latest and greatest asset: *the creation of massive new oil 'reserves' in a politically friendly region which can feed the U.S. domestic oil market.*⁹⁸

Namely, the tar sands⁹⁹ in Northern Alberta, Canada¹⁰⁰; which is widely considered to be the most destructive industrial project on earth by environmental, human rights, and indigenous activists alike.¹⁰¹ 'Tar sands' is a colloquial term used to describe sands that constitute a naturally occurring mixture of sand, clay, water, and bitumen - an exceptionally viscous and dense form of petroleum - which has, since the late 19th and early 20th century, been referred to as 'tar' due to its similar viscosity, odour, and colour. Once again, this desired energy resource lies almost entirely within the traditional territories of Native North Americans and as such is another example of the acute threat to indigenous peoples

posed by the process of extreme energy, which brings with it large scale dispossession and the ‘externalities’ of pollution and environmental degradation.

Canada initiated oil production in the tar sands in 1967 – “after decades of research and development that began in the early 1900s”¹⁰² – with *Suncor Energy Inc.* generating roughly 12,000 barrels per day. Even so, the tar sands were not regarded as a significant player in North America’s bid to prolong the life of its petroleum-based economy until 2003 – around the time of the American invasion of Iraq.

Prior to this period the extremely difficult extraction and production processes of tar sands development was considered too expensive to be economically viable, but with oil prices heading toward \$150 per barrel, the tar sands not only became viable but the basis for a shift to American reliance on North American petroleum as a source of fuel,¹⁰³ and yet again the lives and lands of Native peoples would be sacrificed to the ‘needs’ of the dominant Euro-North American capitalist society.¹⁰⁴ The tar sands have not only seriously affected indigenous lands but are producing horrendous environmental destruction which is impacting indigenous physical and cultural health.¹⁰⁵ Indeed, environmental pollution from the tar sands¹⁰⁶ has been linked to high levels of deadly diseases such as leukaemia, lymphoma and colon cancer¹⁰⁷, in indigenous communities.¹⁰⁸ For George Poitras, a Mikisew Cree First Nation member affected by tar sands mining in Fort Chipewyan Alberta, the battle with industrial mining over land and resources comes down to the fundamental right to exist:

‘if we don't have land and we don't have anywhere to carry out our traditional lifestyle, we lose who we are as a people. So if there's no land, then it's equivalent in our estimation to genocide of a people.’¹⁰⁹

And as Chief Roxanne Marcel (Mikisew Cree First Nation) states:

“Our message to both levels of government, to Albertans, to Canadians and to the world who may depend on oil sands for their energy solutions, is that we can no longer be sacrificed”

The nexus between ecocide and genocide as a lived experience, while far from a recent development for many indigenous peoples around the world, will likely become a far more frequent occurrence if we take the warnings of climate scientists seriously. Indeed, the survival of many non-indigenous minorities and discrete cultural groups, and with it their 'future contributions to the world' that Lemkin

spoke of, will be threatened by current levels of climate change as they are often the most vulnerable within vulnerable states. Furthermore, while other creatures responded to harsh or varied conditions with biological change over time, humans have generally relied upon their ingenuity to survive by creating innovative ways to live and communicate, and pass down knowledge to children – for the human species, culture is our primary adaptive mechanism.¹¹⁰ But with the culturally genocidal tendencies of global capitalism and its path of accumulation we are losing our adaptive edge in the midst of not only a climate crisis but, as Joel Kovel argues, a world-wide ‘ecological crisis’ generated by, and extending deeply into, ‘an ecologically pathological society’ and capitalist economy.¹¹¹

Marx’s ecological analysis that we have drawn on reveals the structural features of capitalism, in particular its tendency to span the globe and impose a world market and world division of labour, and in this sense is best understood as a form of *ecological imperialism*. Capitalism is the first economic structure in human history that not only has the potential to destroy ecosystems and local environments but, through the process of the metabolic rift, imperil the very biosphere itself and potentially induce forms of *pan-global ecological genocides and auto-genocides*.¹¹² Anthropogenic climate change is perhaps the most vivid and stark expression of the ruination of the biosphere, and the most devastating and ominous symptom of the metabolic rift.

The process of extreme energy will exacerbate the ecological crisis and if it is not halted will condemn whole human societies and ecosystems to the effects of runaway climate change as known *conventional fossil fuel reserves contain twice* the amount of CO₂ it would take to ensure this outcome. If we are to avoid such a scenario, and a potential extinction event for mankind, then, as leading climate scientist James Hansen puts it, ‘we must rapidly phase out coal emissions, leave unconventional fossil fuels in the ground, and not go after the last drops of oil and gas. In other words, we must move as quickly as possible to the post-fossil fuel era of clean energies.’¹¹³ Tyndall Centre climate scientist Kevin Anderson concurs, ‘the only responsible action with regard to shale gas, or any “new” unconventional fossil fuel, is to keep it in the ground.’¹¹⁴

The imbroglio of Intent and Agency

When invoking the types of arguments above one is often met with the objection: but what of the question of perpetrator genocidal intent? This is of course unsurprising as the issue has mercilessly

dogged the field of genocide studies. Given the fissure in the field conditioned by what Schaller called the constellation of cold war politics and the consequent bowdlerization of the UN convention of Genocide, there are differing opinions on how genocidal intent can be established.¹¹⁵ The proceeding analysis is consistent with an approach and ontology that understands genocide as a process, as a structure or architecture of occupation, not one which can be easily attributed to individuals qua the demands of law or what Tony Barta described as ‘black –letter intention’.¹¹⁶ Accordingly, genocide is seen as a structural process which does not depend on an exterminatory, intending agent such as the state, but is more willing to contemplate the “social forces extant in all modernizing and colonizing societies that seek to sequester indigenous land and kill its owners if they are resisted”.¹¹⁷ Thus intent is invested in the structures themselves.

However, despite this paper’s ‘Post liberal’ sensibilities, it does not abandon the proposition that intent can be attributed to individuals entirely. Even though genocidal social death can be produced without specific ‘intent to destroy’ it can be argued that there is what can be formulated as reasonably foreseeable intent. Whatever the underlying motives, certainly the forcible dispossessions are intentional, the exertion of forcible control over peoples’ lives is intentional, and the moves to forcibly coerce people off their sacred lands are intentional. Although the resulting physical, cultural and mental harm may be the opposite of the alleged motivation and hence not prima facie intentional as such, in traditional British legal parlance ‘foresight and recklessness’ as to the consequences of action are ‘evidence from which intent may be inferred’.¹¹⁸

Furthermore a Marxist ontology, not to be confused with the dogmatic, mechanical and ossified Stalinist counterpart, has always been sensitive to the role of agency and thus does not reduce everything to structure. Therefore, a Marxist method can potentially accommodate cries for corroborating criminal intent and responsibility, of either executives or senior level managers of corporations complicit in ecological destruction, or senior level state officials and government ministers who aid and abet said corporations. The dialectical interplay between structure and agency is best encapsulated in this famous aphorism “Men make their own history, but they do not make it just as they please in circumstances they choose for themselves; rather they make it in present circumstances, given and inherited”¹¹⁹

But this has left subsequent social scientists precious little to develop and formulate a correct balance between structure and agency. There have been some insightful developments in this regard in the last few years by both Marxist and non Marxist sociologists and social scientists. Bob Jessop, in a grand distillation of decades of work on the Marxist theory of the state, produced a sophisticated engagement with the structure-agency debate. Jessop argues that just as capital is not a thing but a social relation, so is the state. Combining the non-dialectical structuralism of the ‘capital-logic school’ which argued that the state automatically supports capital accumulation and the reproduction of the MOP with the ‘class-theoretical approach’ which conceived that state as the ever changing and ever contested product and outcome of the balance of social or class forces in a given historical juncture, Jessop sought to recognise both the importance of agency and intention of social actors.

For Jessop structural constraints are not absolute and do not foreclose choices but act strategically and selectively, privileging certain strategies among actors who sought to transform change or preserve them.¹²⁰ Crucially, social actors act reflexively to push against the structures they operate within, giving the latter a degree of flexibility. The ‘strategic relational’ approach in essence posits structures - in the case of the capitalist MOP this means the relations of production - as simultaneously setting limits and enabling strategies of social actors. In other words, neither structure nor agency can be reducible to the other. Taking his lead from Roy Bhaskar’s realist social ontology and similar in essence to Anthony Giddens’s ‘structuration theory’,¹²¹ Alex Callinicos employed just such a formulation in his defence of the historical materialist method.¹²² So one can envisage the controlling minds of corporations operating in Alberta’s tar sands or in Australian Northern Territory uranium mining, as social actors with intentions and interests working within structures that privilege certain strategies and actors, whilst excluding others (such as indigenous peoples) and which in turn can be stretched within certain limits.¹²³

Conclusion

In this paper we have discussed how Marx’s value analysis, and the reign of exchange value under conditions of competitive accumulation, coupled with the ecologically grounded concept of the metabolic rift, illuminate the mechanisms driving ecological destruction under capitalism and the consequences on humanity’s ecological relationship with the planet. We have also discussed how the process of extreme energy is a manifestation of the anti-ecological imperatives of capital accumulation of value. Indeed, the process of extreme energy is a particularly virulent expression of the metabolic rift

and the anti-ecological nature of the value-nature contradiction. The more costly and environmentally destructive extreme energy production methods signify a particular form of environmental crisis under capitalism caused by material shortages and the natural limits of production.

Following the illumination of the nexus between the capitalist MOP and ecological destruction we then moved on to argue that this nexus can be experienced by some social groups as a structural technique of genocide. Beginning with a run through of Lemkin's cultural understanding of genocide we showed how the, at the time, ineffectual narrowed down version of the Genocide Convention ultimately led to UN level discussions about how best to deal with the growing cultural and ecological threats to the survival of distinct human social groups within the framework of an amended Genocide Convention. As we have seen, it was within such discussions that the concept of ecocide was first used in the UN system. Finally, we moved on to argue that while the Genocide Convention was not ultimately amended, the ecological and cultural threats to discrete social groups and indigenous peoples in particular, posed by the machinery of global capitalism and the process of extreme energy, require us to take seriously their predicament and their description of their situation as genocidal.

Indeed, for those indigenous peoples fighting to retain or regain their lands they are fighting for their *life as distinct peoples* since, for them, their spirituality and cultural vitality is based in and on and with their lands. If we take this point seriously when this relationship is *forcibly* interrupted and breaks down due to expansionist land grabs driven by global capitalism, the genocide lens becomes appropriate. When indigenous peoples, who have a physical, cultural and spiritual connection to their land, are *forcibly* dispossessed and estranged from their lands they invariably experience 'social death' and thus genocide. Furthermore, when indigenous lands are used by extractive industries the inherent corporate preference for externalising environmental costs can lead to physical, as well as cultural destruction.

What is needed from sociologists in the field of genocide studies is more research into the *context and manner* in which distinct social figurations' cultural and physical health is threatened by expansionist land grabs and ecological destruction driven by global capitalism. Such research should utilise a synthesis of the sociology of genocide and environmental sociology to produce a theoretical apparatus that can illuminate the links between, and uncover the drivers of, ecocide and genocidal social death. Indeed, such an approach should unashamedly utilise the analytical lens of *genocide* as assaults on the

‘essential foundations of life of national groups’ (and ecosystems are perhaps the most important of all such foundations) is what the concept was designed to highlight and prohibit.¹²⁴

- ¹ See Short, D Australia: A Continuing Genocide? *Journal of Genocide Research*, and Huseman, J and Short, D, 'A slow industrial genocide': tar sands and the indigenous peoples of northern Alberta, *International Journal of human Rights*, Volume 16, Number 1, 1 January 2012, pp. 216-237(22).
- ² Zalasiewicz, J. et al. (2008). "Are we now living in the Anthropocene". *GSA Today* 18 (2): 4–8
- ³ Thomas. S. Kuhn, *Structure of Scientific Revolutions* (Chicago: Chicago University Press, 2012)
- ⁴ Claudia Card, 'Genocide and Social Death', *Hypatia* 18, no. 1 (2003) 63–79.
- ⁵ For instance, Bruce. M. Russett, *International Regions and the International System: a Study in Political Ecology*, (Chicago: Rand McNally, 1967), vii: "the relation of organisms or groups of organisms to their environment, I have attempted to explore some of the relations between political systems and their social and physical environment." ; Leslie Anderson, *The Political Ecology of the Modern Peasant: Calculation and Community* (Baltimore: Johns Hopkins University Press, 1994), 6.
- ⁶ Piers Blaikie and Harold Brookfield, ed, *Land Degradation and Society* (London: Methuen, 1987)
- ⁷ Tony Barta, 'Relations of Genocide: Land and Lives in the Colonization of Australia', in *Genocide and the Modern Age*, ed. Isidor Wallimann and Michael N. Dobkowski, 2nd ed. (Syracuse, NY: Syracuse University Press, 2000), 239.
- ⁸ A similar argument linking the structural features of the capitalist MOP and genocide in Martin Crook, 'The Mau Mau Genocide: A Neo-Lemkinian Analysis', *Journal of Human Rights in the Commonwealth* 1, no.1, (2013). available at <http://journals.sas.ac.uk/jhrc/article/view/1697/0>
- ⁹ Brett Clark and John. B. Foster, 'Marx's Ecology in the 21st Century', *World Review of Political Economy* 1, no. 1 (2010):142–56.
- ¹⁰ The paper is not claiming that the Marx's canon is sufficient to explain all the complex ecological and environmental problems in the 21st century. The disputation is that without an appreciation of the structural role of the capitalist MOP in environmental degradation, ecocide cannot be addressed or adequately explained.
- ¹¹ Quoted in Clark and Foster 'Marx's Ecology in the 21st Century', 144.
- ¹² Karl Marx and Frederick Engels, *The German Ideology* (London: Lawrence & Wishart, 1999), 42. Indeed Marx repeatedly stressed both nature's and labour's contribution to the production of use values or wealth. For instance Karl Marx and Frederick Engels, "Economic Manuscript of 1861–63, Third Chapter" In *Collected Works* (New York: International Publishers, 1988), Vol. 30, 9–346: the creation of use values necessarily involves "appropriation of the natural world for human needs, whether these needs are needs of production or individual consumption"; Karl Marx and Frederick Engels *Capital*, Vol. I, (New York: International Publishers, 1967), 183-84, 43: "the worker can create nothing without nature, without the sensuous external world"; "We see then that labour is not the only source of material wealth, of use-values produced by labour. As William Petty puts it, labour is its father and the earth is its mother".
- ¹³ Karl Marx and Frederick Engels *Capital*, Vol. I, 177: Marx states that labour is "a process in which man and nature participate".
- ¹⁴ *Ibid*, 178.
- ¹⁵ For instance Karl Marx, *Theories of Surplus Value*, vol. 3 (Moscow: Progress Publishers, 1971), 34: "Labour is, first of all, a process between man and nature, a process by which man, through his own actions, mediates, regulates and controls the metabolism between himself and nature. He confronts the materials of nature as a force of nature. He sets in motion the natural forces which belong to his own body, his arms, legs, head and hands, in order to appropriate the materials of nature in a form adapted to his own needs. Through this movement he acts upon external nature and changes it, and in this way he simultaneously changes his own nature".
- ¹⁶ The latter being a feature of class exploitation. Surplus labour once realised in the form of saleable commodities under capitalism is transformed into profit or capital, to be invested once more in production.
- ¹⁷ Marx therefore avoided the trap of reducing the determination of human evolution and production solely to historically determined social structures, recognising that human development occurred in and through nature, but recognised also that ecological crises are historically determined and bear the mark of particular social forms of production. This can be described as a *dialectical metabolic-materialist* analysis.
- ¹⁸ John Bellamy Foster 'Marx's Theory of Metabolic Rift: Classical Foundations for Environmental Sociology', *The American Journal of Sociology* 105, no. 2 (1999): 381.
- ¹⁹ Thus any notions that Marx and Engels advocated 'mastery of nature' are categorically refuted by the above analysis and a passage Engels wrote in Frederick Engels, "The part played by labour in the transition from ape to man" In *Marx and Engels Collected Works* (Beijing: People's Press, 1972), Vol. 3, 9–346: "We by no means rule over nature like a conqueror over a foreign people, like someone standing outside nature – but that we, with flesh, blood and brain, belong to nature, and exist in its midst, and that all our mastery of it consists in the fact that we have the advantage over all other creatures of being able to learn its laws and apply them correctly."
- ²⁰ Paul Sweezy, 'Capitalism and the Environment,' *Monthly Review* 41, no. 2 (1989): 1–10.
- ²¹ John Bellamy Foster, "The Treadmill of Accumulation," *Organization & Environment* 18, 1 (2005).
- ²² See Burkett, *Marx and Nature* (New York: St. Martin's Press, 1999), 112.

- ²³ Ibid, 58.
- ²⁴ For a detailed exposition of soil erosion crisis and Marx's analysis see John Bellmay Foster, *Marx's Ecology: Materialism and Nature* (New York: Monthly Review Press), Ch.5.
- ²⁵ Marx and Frederick Engels *Capital*, Vol. I, 747.
- ²⁶ Burkett, *Marx and Nature*, 125, 129.
- ²⁷ Karl Marx and Frederick Engels, *The Communist Manifesto* (London: Bookmarks Publications, 2010), 12: "The need of a constantly expanding market for its products chases the bourgeoisie over the whole surface of the globe. It must nestle everywhere, settle everywhere, establish connections everywhere... All old-established national industries have been destroyed or are daily being destroyed. They are dislodged by new industries, whose introduction becomes life and death question for all civilised nations, by industries that no longer work up indigenous raw material, but raw material drawn from the remotest zones."
- ²⁸ D. H. Meadows et al. *The Limits to Growth* (New York : Universe Books, 1972).
- ²⁹ For the nexus between what Joel Kovel calls the enmity between capital and nature and the broader climate change implications See Joel Kovel, *The Enemy of Nature : The end of Capitalism or the end of the world?*(Lonsdon: Zed Books).
- ³⁰ See J. Huseman and D.Short 'A slow industrial genocide': tar sands and the indigenous peoples of northern Alberta' *The International Journal of Human Rights*, Vol. 16, No. 1, January 2012, 216–237 and Short, D (2010) 'Australia: a continuing genocide?' *Journal of Genocide Research*, 12(1–2) March–June, 45–68
- ³¹ Burkett, *Marx and Nature*.
- ³² Ibid, 81
- ³³ According to Marx, free appropriation of natural conditions takes place whenever those conditions aid in the production of use-value but do not add 'value', in the sense or representing abstract labour time. See Karl Marx and Frederick Engels *Capital*, Vol. I, 204.
- ³⁴ Burkett, *Marx and Nature*, 83.
- ³⁵ Karl Marx, *Grundrisse* (New York:Vintage, 1973), 141.
- ³⁶ Ibid. Marx describes this as the "dissolving effect of money."
- ³⁷ See Huseman and Short 2010 for a full definition of this extraction process.
- ³⁸ The term was first coined by Michael T Klare in Klare, M. The Relentless Pursuit of Extreme Energy: A New Oil Rush Endangers the Gulf of Mexico and the Planet, available at <http://extremeenergy.org/2013/03/12/the-relentless-pursuit-of-extreme-energy-a-new-oil-rush-endangers-the-gulf-of-mexico-and-the-planet/>
- ³⁹ E. Lloyd-Davies 'Extreme Energy: A process not a Category', available at <http://extremeenergy.org/2013/07/25/defining-extreme-energy-a-process-not-a-category/>
- ⁴⁰ Ibid.
- ⁴¹ Marx's analysis of accumulation crisis brought on by materials-supplies disturbances operates on two levels: first, focuses on the conditions of crisis caused by fluctuations in the value of the materials in question brought on by shortages, and the second, which relates to the indirect fluctuations in 'prices' brought on by the resultant competition, speculation and the credit system. See Marx, *Theories of Surplus Value*, vol. 2 (Moscow: Progress Publishers, 1968), 515. For further elaboration of the contradiction between 'nature's time' and 'labour's time' see Karl Marx and Frederick Engels *Capital*, Vol. III, (New York: International Publishers, 1967), 118.
- ⁴² Marx, *Theories of Surplus Value*, vol. 2, 515.
- ⁴³ Karl Marx and Frederick Engels *Capital*, Vol. III, 118-119.
- ⁴⁴ Lloyd-Davies, 'Extreme Energy...'
- ⁴⁵ Raphael Lemkin, (1944) *Axis Rule in Occupied Europe: Laws of Occupation - Analysis of Government - Proposals for Redress*, (Washington, D.C.: Carnegie Endowment for International Peace, p. 79 - 95. For further discussion on this see Dirk Moses, (2010) 'Raphael Lemkin, Culture, and the Concept of Genocide' in Donald Bloxham and A. Dirk Moses (eds) *Oxford Handbook of Genocide Studies* Oxford University Press.
- ⁴⁶ Lemkin, R (1944) *Axis* P. 79
- ⁴⁷ See Dirk Moses (2010) 'Raphael Lemkin...' p.33.
- ⁴⁸ Shaw, M, (2007) *What is Genocide?* Oxford: Polity.
- ⁴⁹ For more on this point see Short, D, 'Cultural genocide and indigenous peoples: a sociological approach', *The International Journal of Human Rights* Vol. 14, No. 6, November 2010, p.836-7
- ⁵⁰ Lemkin, R (1944: 91). Op cit.
- ⁵¹ McDonnell, M.A and Moses, A.D, (2005) "Raphael Lemkin as historian of genocide in the Americas," *Journal of Genocide Research*, Vol 7, No 4. pp 504–505. And also in Schaller, Dominik J.; Zimmerer, Jürgen *The Origins of Genocide : Raphael Lemkin as a Historian of Mass Violence*, Routledge: London
- ⁵² Dirk Moses (2010), p.3 Note 33.

- ⁵³ See Christopher Powell, 'What Do Genocides Kill? A Relational Conception of Genocide', *Journal of Genocide Research* 9, no. 4 (December 2007): 527–47.
- ⁵⁴ See Abed, M. (2006) 'Clarifying the Concept of Genocide', *Metaphilosophy* Vol. 37, Nos. 3–4, pp 308-330.
- ⁵⁵ Ibid.
- ⁵⁶ Dirk Moses (2008) 'Empire, Colony, Genocide: Keywords and the Philosophy of History' in Moses, D. (ed.) *Empire, Colony, Genocide: Conquest, Occupation, and Subaltern Resistance in World History* (Oxford: Berghahn Books) pp. 3 – 54, p.12-13.
- ⁵⁷ in Docker, J. (2004) 'Raphael Lemkin's History of Genocide and Colonialism', Contribution for United States Holocaust Memorial Museum, Center for Advanced Holocaust Studies, Washington DC, 26 February 2004, at <http://www.ushmm.org/genocide/analysis/details/2004-02-26/docker.pdf>, P. 3
- ⁵⁸ Ibid
- ⁵⁹ Sub-Commission on Prevention of Discrimination and Protection of Minorities. Study of the Question of the Prevention and Punishment of the Crime of Genocide. Prepared by Mr. Nicodème Ruhashyankiko. 4 July 1978. E/CN.4/Sub.2/416.
- ⁶⁰ The Sub-Commission on Prevention of Discrimination and Protection of Minorities undertakes studies and makes recommendations to the Commission concerning the prevention of discrimination against racial, religious and linguistic minorities. Composed of 26 experts, the Sub-Commission meets each year for four weeks. It has working groups and established Special Rapporteurs to assist it with certain tasks. <http://www.un.org/rights/dpi1774e.htm> last accessed 16/07/12.
- ⁶¹ In international forums the UN Sub-Commission on Prevention of Discrimination and Protection of Minorities used the term 'ecocide' to describe a potential crime prohibiting environmental destruction, while in later years the International Law Commission preferred narrower formulations based around the notion of 'severe damage to the environment'.
- ⁶² New York Times, 26 February 1970; quote in Weisberg, Barry (1970). *Ecocide in Indochina*. Canfield Press, San Francisco
- ⁶³ Amy M. Hay, University of Texas—Pan-American, in H:Environment Roundtable Reviews, Vol. 2, No. 1 (2012) pp.15-19. <https://www.h-net.org/~environ/roundtables/env-roundtable-2-1.pdf>
- ⁶⁴ Tord Björk, *The emergence of popular participation in world politics: United Nations Conference on Human Environment 1972* (1996) Department of Political Science, University of Stockholm. <http://www.folkrorelser.org/johannesburg/stockholm72.pdf> p.15 last accessed 16/07/12.
- ⁶⁵ Ibid.
- ⁶⁶ Ibid.
- ⁶⁷ Ibid.
- ⁶⁸ An independent organisation (1970–1976) which built awareness among governments and society on damage to nature by human misuse of technology and chemical products.
- ⁶⁹ The purpose of the Convention was to describe the destruction of the Indochinese peoples and environments by the United States Government; and to call for a United Nations Convention on Ecocidal Warfare, which would receive evidence of the devastation of the human ecology of Indochina caused by the Indochina War, determine which belligerent caused that devastation, request reparations from the responsible belligerent or belligerents, and seek to define and proscribe "Ecocide" as an international crime of war. <http://www.aktivism.info/rapporteur/ChallengingUN72.pdf> last accessed 16/07/12.
- ⁷⁰ Ibid.
- ⁷¹ Ibid.
- ⁷² Richard A. Falk (1973): Environmental Warfare and Ecocide – Facts, Appraisal, and Proposals. In: Thee, Marek, *Bulletin of Peace Proposals 1973*, Vol. 1. Universitetsforlaget, Oslo, Bergen, Tromsø; pp.80–96.
- ⁷³ Fried, John H.E. (1972): 'War by Ecocide'. In: Thee, Marek (ed.) (1973). *Bulletin of Peace Proposals*. 1973, Vol.1. Universitetsforlaget, Oslo, Bergen, Tromsø.
- ⁷⁴ *Supra* Note 1.
- ⁷⁵ Westing, Arthur H. (1974): 'Proscription of Ecocide'. In: *Science and Public Affairs*, January 1974.
- ⁷⁶ Austria, Holy See, Poland, Romania, Rwanda, Congo and Oman; see E/CN.4/Sub.2/416, pp. 11–117.
- ⁷⁷ E/CN.4/Sub.2/SR.658, p.53.
- ⁷⁸ E/CIT.4/Sub.2/416, p.185
- ⁷⁹ E/CN.4/Sub.2/1985/6.
- ⁸⁰ E/CN.4/Sub.2/1985/6, para.33.
- ⁸¹ Ibid
- ⁸² Ibid. p. 124. Supportive governments: Austria, Holy See, Ecuador, Israel, Oman, and Romania.

⁸³ Report of the Sub-Commission on Prevention of Discrimination and Protection of Minorities on its 38th session, Geneva, 5-30 August 1985 E/CN.4/Sub.2/1985/57

⁸⁴ The authors are currently researching why the review process stopped here.

⁸⁵ On this see Higgins, P, Short, D and South, N (2013) 'Protecting the planet: a proposal for a law of ecocide', *Crime, Law and Social Change* April 2013, Volume 59, Issue 3, pp 251-266

⁸⁶ This proposition for a the law of ecocide ties in with Marxian ecological analysis even though the preceding analysis may seem out of step with the initial location of ecologically induced genocide in the capitalist MOP a la Marx. After all, Marxism is an emancipatory project with revolutionary implications and is not best known for advocating legal and social *reform*. But to conflate reforms won through struggle with the essential and ultimate reformability of the capitalist system would be a mistake. In fact, the history of struggle for social justice under capitalism attests to the fact that social reforms wrested from the system, although perhaps not always the best long-term solution, can limit and curb the excesses of the capitalist MOP. In particular, Marx's analysis of the legal restraints introduced in 19th century England on work-time in factories is instructive in this case. He argued that the over extension of the working day, caused by the treadmill of accumulation, was equivalent to the over-exploitation and degradation of the soil. In the former, the recuperative powers of what he called the 'life force of the nation' were threatened and in the latter it was the regenerative powers of the land which were endangered. Thus the ability of capitalism *to reproduce itself* in the long-term was threatened by short term monetary gain. It is here that he argues that only with *general political* working class pressure and state interference, and not on the level of private economic negotiation between labour and capital, what he recognises as a public good - the common societal pool of labour power - can and must be protected – see Karl Marx, *Value, Price and Profit*. New York: International Publishers, 1976), 59. Furthermore, it is in the interest of capital to reproduce itself and ensure its long term survival, see Karl Marx and Frederick Engels *Capital*, Vol. I, 266.

⁸⁷ E.g Survival International, Forest Peoples' Alliance, Raven Trust, Cultural Survival and many more.

⁸⁸ Wolfe, P 2008

⁸⁹ Again Crook offers a similar analysis where the capitalist MOP is identified as the principle mechanism responsible for 'land grabs' and thus genocide for territorially bounded peoples. Crook, 2013. Op Cit.

⁹⁰ Davis and Zannis in Dirk Moses, (2002) 'Conceptual blockages and definitional dilemmas in the 'racial century': genocides of indigenous peoples and the Holocaust'. *Patterns of Prejudice*, 36(4), (2002) pp.7-36.p24.

⁹¹ In particular the right to 'free prior and informed consent' of those indigenous peoples affected by them – now an established international core principle most recently enshrined in Article 19 of the United Nations Declaration on the Rights of Indigenous Peoples – available at <http://www.un.org/esa/socdev/unpfii/en/drip.html> .

⁹² A full and exhaustive political economic analysis in the vein of a Marxian focus on the totality of a social formation would require an integration of an analysis of the role of the state and other political and ideological forces in dialectically constituting particular historical junctures. Unfortunately this is beyond the scope of this paper.

⁹³ Altman, 2007: 9. Op Cit.

⁹⁴ See <http://www.gneppartnership.org/>

⁹⁵ See comments by Resources Minister Martin Ferguson who recently stated 'there's going to be uranium mining on an increasing basis in Western Australia, South Australia and the Northern Territory, we'll see uranium mining in Queensland in due course.' Available at <http://www.abc.net.au/news/stories/2009/07/21/2631570.htm>

⁹⁶ 'Indigenous intervention 'genocide'', AAP, August 07, 2007 at

<http://www.news.com.au/story/0,23599,22202385-29277,00.html>

⁹⁷ Ibid; p.89

⁹⁸ Ibid; p.89. Here, with peak oil and the creation of massive new oil reserves, we see again the operation of the law of value as delineated By Marx. The former being an expression of materials-supplies disturbances and the latter the utilization *of previously unused substitutes*. See Karl Marx and Frederick Engels *Capital*, Vol. III, 118-119.

⁹⁹ For a discussion of the term 'tar sands' versus 'oil sands' see Huseman, J and Short, D. 'A slow industrial genocide': tar sands and the indigenous peoples of northern Alberta The International Journal of Human Rights, Vol. 16, No. 1, January 2012, 216–237.

¹⁰⁰ "The recoverable oil reserves in Alberta's tar sands are so bountiful that they vie with oil reserves in Saudi Arabia and Venezuela for top status" (Peterson, K. (2007) Oil Versus Water: Toxic Water Poses Threat to Alberta's Indigenous Communities. *The Dominion: A Grassroots News Cooperative*, Tar Sands Issue - Issue #48, Autumn 2007, pp.12 & 31.; p.12)

¹⁰¹ The 'United Nations Environment Program', for example, has identified the tar sands "as one of the world's top 100 hotspots of environmental degradation" International Boreal Conservation Campaign (2008) *Canada's Tar Sands: America's #1 Source of Oil Has Dangerous Global Consequences*. [Online] (IBBC). Available at:

<http://www.borealbirds.org/resources/factsheet-ibcc-tarsands.pdf>] IBBC homepage, 'Resources' [Retrieved January 2010]; p.1.

- ¹⁰² Humphries, M., Congressional Research Service (2008) *North American Oil Sands: History of Development, Prospects for the Future* (Order Code RL34258) [Online] USA: CRS (Updated 17th January 2008) Available at: <http://www.fas.org/sgp/crs/misc/RL34258.pdf>. [Retrieved September 2011].
- ¹⁰³ Black, E., The Cutting Edge News (2008) *America With No Plan for Oil Interruption: Ironically, As Price Per Barrel Drops, American Oil Supply From Canada Imperiled* [Online] (Posted 3rd November 2008) Available at: <http://www.thecuttingedgenews.com/index.php?article=896>. [Retrieved: September 2011].
- ¹⁰⁴ Peak oil and the attendant rise in the price of oil is here understood as an expression of the contradiction between the natural limits of production and the treadmill of accumulation, what Marx called materials-supplies shortages, as argued above.
- ¹⁰⁵ Huseman and Short, 'A slow industrial genocide pp:216–237.
- ¹⁰⁶ A damning report on waterway pollution, highlighting arsenic amongst other highly toxic substances: Kevin P. Timoney, 'A Study of Water and Sediment Quality as Related to Public Health Issues', *Treeline Ecological Research*, Sherwood Park, AB. 2007).
- ¹⁰⁷ Kim Petersen, (2007) 'Oil Versus Water: Toxic water poses threat to Alberta's Indigenous communities', *The Dominion*, Issue 48 October.
- ¹⁰⁸ For example, the Dene, Cree and Metis communities in Treaty 8 and Treaty 11 Territories.
- ¹⁰⁹ Interviewed in Kim Petersen, 'Oil Versus Water: Toxic water poses threat to Alberta's Indigenous communities', *The Dominion*, Issue 48 October 15, (2007).
- ¹¹⁰ Johnston, B.R. (2000) 'Human Environmental Rights', in Pollis, A and Schwab B, *Human Rights: New Perspectives, New Realities*, London: Lynne Rienner Publishers. pp.95-113, p96
- ¹¹¹ See Kovel, J (2007) *The Enemy of Nature: The End of Capitalism or the End of the World?*, Second Edition, London: Zed Books, p xiii.
- ¹¹² The term 'auto-genocide' is used because some genocides would arguably be the consequence of conscious and unconscious self-destructive actions, within the capitalist system, of members of the victim social figurations themselves. The plural 'genocides' is also used here because, despite global capitalism's culturally genocidal tendencies, there are still many thousands of distinct social figurations -'geni' - around the world today.
- ¹¹³ Hansen, J, (2009) *Storms of my Grandchildren: the truth about the coming climate catastrophe and our last chance to save humanity*, Bloomsbury: London, p.289.
- ¹¹⁴ See *Yale Environment*, 360 Forum: Just How Safe Is 'Fracking' of Natural Gas?, Opinion 20th June 2011
- ¹¹⁵ Schaller, D. (2008) Colonialism and Genocide – Raphael Lemkin's Concept of Genocide and its Application to European Rule in Africa. *Development Dialogue*, 50, P. 75-93.
- ¹¹⁶ Barta, T. (2008) Three Responses to 'Can There Be Genocide Without the Intent to Commit Genocide?' *Journal of Genocide Research*, 10(1), p. 111 — 118.
- ¹¹⁷ Moses, D. (2002) Conceptual Blockages. *Patterns of Prejudice*, 36(4), 22.
- ¹¹⁸ The words 'as such' (interestingly absent from the draft Lemkin penned) in the UN Genocide Convention require groups be intentionally targeted because of who they are and not for any other reason such as economic gain or self-defence. Given that perpetrators may well have multiple reasons for genocidal action it is not surprising that Helen Fein for one has advocated a more sociologically realistic approach – 'sustained purposeful action': see H. Fein *Genocide: A Sociological Perspective* (London: Sage, 1993), p 24. Under such a formula intent can also be inferred from action, which is entirely consistent with a long established principle in British common law—in British common law 'foresight and recklessness are evidence from which intent may be inferred', see Wien J. in *R v Belfon* (1976) 3 All ER 46.
- ¹¹⁹ Marx, K. The eighteenth Brumaire of Louis Bonaparte, in Cowling, M. and Martin, J. (ed.) (2002) *Marx's 'Eighteenth Brumaire': (post)modern interpretations*. London, Pluto Press.
- ¹²⁰ Bob Jessop, (2008) *State Power: A Strategic-Relational Approach* (Cambridge, Polity), 46.
- ¹²¹ Anthony Giddens, (1984). *The constitution of society: Outline of the theory of structuration*, (Cambridge: Polity Press)
- ¹²² The one caveat being that the capitalist MOP - and the key role of changes in production - is the ultimately determining structure in any given social formation in the last instance, given the underpinning role of economic production to the non-productive relations (the state, religion, judicial relations) in what Marx labelled the superstructure and the accumulative effect of advances in productive forces over large stretches of history. See Chris Harman (1998) *Marxism and History: Two Essays*, (London: Bookmarks), 22-30.
- ¹²³ This formulation also dialectically posits a role for the other subjects through struggle: namely the indigenous peoples as well as the workers who work for the aforementioned corporations. Thus Indigenous peoples are conceived as not just objects but subjects of history.
- ¹²⁴ Short, D. 'Cultural genocide and indigenous peoples: a sociological approach', *The International Journal of Human Rights* Vol. 14, Nos. 6–7, November–December 2010, 831–846