



Karl Marx's Eco-Socialism and Vision of Post-Capitalist Society

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Abstract: Environmental degradation and climate change are serious global issues that threaten human life both today and in the future. In response to these crises, Kohei Saito seeks to investigate the idea of Marx's eco socialism as a potential alternative. Marx's ecological thinking is rooted in a critique of the capitalist mode of production, as the fundamental cause of environmental destruction. His criticism of capitalism centers on the idea of a "metabolic rift" between humans and nature. For Marx, the universal metabolism between humanity and the natural world takes place through the labour process. Through labour, humans strive to fulfil their needs by extracting natural materials. However, under capitalism, labour has been reengineered and monopolized solely to serve the purposes of increased production and the commodification of goods for profit. Kohei Saito undertakes a comprehensive investigation into Marx's ecological ideas as a concrete response to environmental crises and the injustices rooted in capitalism. For Saito, the degradation of the environment can no longer be addressed merely through well-intentioned ecological attitudes or "green" ecological efforts that often conceal new forms of commodification and continue to uphold production processes even in the face of environmental decline. Through his reading of Marx's ecological critique, Saito uncovers the vision of a post-capitalist society grounded in the concept of degrowth communism. Degrowth communism is Kohei Saito's interpretation of Karl Marx's ecological vision, namely a sustainable social order grounded in the principle of the metabolic relationship between human beings and nature. He argues that such a society represents a crucial and timely alternative one that is capable of responding meaningfully to the challenges of climate change and environmental degradation.

Keywords: Ecology, Socialism, Metabolism, Capitalism, Degrowth Communism.

Introduction

This paper seeks to explore the ecological thought of Karl Marx and his vision of a post-capitalist society, which is considered highly relevant to the environmental crisis. To unpack this theme, the paper draws extensively on the works of Kohei Saito, a Japanese-born Marxist. Karl Marx's ecological thought has gained renewed relevance as a potential alternative for addressing the escalating ecological crisis. Marx's critique of capitalism, along with Kohei Saito's reinterpretation of Marx's ecological vision, provides a new conceptual framework for understanding the structural roots of environmental degradation and for formulating meaningful responses to contemporary ecological challenges. Today, environmental issues are a crucial global concern. Thinkers from various disciplines and global efforts—evident in numerous countries' environmental policies—have attempted to review and devise a range of solutions to address environmental problems faced by societies around the world. In addition, numerous grassroots social

movements have emerged to tackle these issues. These range from efforts to reduce plastic use, promote electric vehicles, implement educational initiatives, and develop policies from local to national levels, including global agreements on environmental matters. However, the impact of these efforts appears to be insignificant. Extreme climate change remains a pressing issue across many countries, global temperatures continue to rise, waste management problems persist, agricultural manipulation through pesticides, deforestation, food insecurity, and numerous other challenges continue to pose serious threats to current and future human generations, as well as to the sustainability of the natural world.

For Kohei Saito, such movements that address environmental issues are merely the opiate of the masses. These well-intentioned actions may ultimately prove futile. This includes the Sustainable Development Goals (SDGs), which he regards as a new opiate, more popular than religion, which Karl Marx once described as the opiate of the people. The SDGs' environmental programs are not aligned with the ongoing atmospheric climate crisis and the continuous rise in global temperatures. Inspired by Karl Marx, Kohei Saito identifies capitalism as the root of the ecological problem. Capitalism's principle of continuous production growth to increase commodity value and create new needs for profit—derived from natural resources—has led to environmental degradation.¹ From this diagnosis, Kohei Saito attempts to revive Marx's ecological thought. This approach is deemed urgent as capitalism increasingly threatens the environment, endangers human life, and jeopardizes future generations.

Capitalism, with its unrelenting drive for increased production and profit, exploits nature. Nature, however, has its own rhythms of growth and transformation. With the aid of science, capitalism accelerates and manipulates natural processes to obtain raw materials more quickly. In doing so, capitalism disregards justice for future generations, leaving behind a damaged and artificially altered natural world. The large-scale use of fossil fuels for production also contributes to climate change. The environmental damage and rising global temperatures may not destroy everything immediately but will have long-term impacts—both now and for generations to come.² Capitalist economic activity pushes for constant change and increased production through technological innovation. In the name of prosperity, technology is continually advanced to improve human well-being. This has even led to the creation of artificial needs—products people may not require, yet are compelled to purchase. Production and demand are forced to increase continuously, encouraging excessive consumerism. Eventually, this breeds a materialistic mindset focused on acquiring as many possessions as possible. Additionally, capitalist economic dynamics are marked by intense competition. Numerous brands are created to meet human needs. For capitalism, brand competition is acceptable—even when the products are essentially identical. In this race, quality is engineered, and goods are modified to appear superior and increase sales. This trend fosters a throwaway mentality or constant obsolescence. The rapid pace of innovation and product development keeps consumers chasing the latest trends under the guise of modernization. One brand after another appears, signifying ongoing innovation in quality. All of this demands the relentless extraction of natural resources to sustain production.

¹ Kohei Saito, *Slow Down: The Degrowth Manifesto* (New York: Astra House, 2020).

² Saito, 16.

The pursuit of innovation and progress in capitalist economies has left behind an environmental crisis. Ongoing development projects have reduced available land; when space is limited, construction expands vertically. Farmlands are converted into urban areas, and forests are cleared in the name of progress. In transportation, continual advancements result in more sophisticated and numerous modes of transit, which in turn contribute to pollution and deteriorate air quality, affecting public health. In agriculture, soil exhaustion from chemical manipulation to boost production becomes a slow-moving problem. Many other issues are also emerging gradually. So how can these problems be addressed from a philosophical perspective inspired by Karl Marx and Kohei Saito? These two thinkers offer a new direction for approaching environmental issues caused by capitalism. This study employs a literature-based approach by collecting relevant references on the topic and systematically developing the analysis. The following section will briefly explain the development of Karl Marx's ecological thought, beginning with his critique of capitalism's limitless mode of production. The discussion then proceeds by elaborating on Karl Marx's ecological thought through the concept of metabolism and examining Kohei Saito's interpretation of the vision of a post-capitalist society within Marx's ecological thought.

Karl Marx Ecosocialism

Marx's views on ecology have been the subject of much debate, including among those who call themselves Marxist scholars. One important reason for the rejection of the interpretation of Marx's ecological views is that Marxist socialism is accused of being categorized as 'Prometheanism'³ (Pro-technology-Anti-ecology) which also focuses on the domination of nature. Added to this is the bad stigma of socialism, which causes significant harm to society and the environment due to revolution and violence over class struggle that tends to harm the oppressed and also the environment. This situation makes socialism to be regarded as unaccountable for the sustainability of society instead of the environment.⁴ Eco-socialism is a combination of the words socialism and ecology. Socialism and ecology are two separate concepts, but have a strong connection, especially as a critique of industrial capitalism in the late 18th and 19th centuries. The word 'Socialism' first appeared in England and France in 1820 and was associated with class struggle against the oppression of the lower classes and labourers. Meanwhile, the word 'Ecology' was first initiated by Ernest Haeckel in 1866 (One year before Karl Marx's *Capital* was published) which

³ Prometheanism has two historical meanings, the first derives from Lucretius, an ancient Roman poet and philosopher of 99-55 BCE who referred to the myth of Prometheus, the Greek mythological god who brought the torch of fire to earth. In a philosophical context, Prometheus mythology is also a symbol of the Enlightenment and the science and scientific revolution of the 17th century. The second meaning refers to the understanding of extreme productivism and industrialisation as a form of human domination of nature. See John Bellamy Foster, *Marx's Ecology: Materialism and Nature* (New York: Monthly Review, 2000), 10, 59, 126. Prometheanism is also popularly referred to as an ideology that believes that the earth is a perpetual source to fulfil human needs and that environmental problems can only arise from human innovation. See John Dryzek, *The Politics of the Earth: Environmental Discourses* (Oxford: Oxford University Press, 2013). In the context of Marx's eco-socialism views, it tends to be accused of Prometheanism which encourages the celebration of human domination of nature as a source of human needs, especially seen from the existence of socialism which tends to try to answer problems with revolutions that tend to harm society and the environment, for example the fall of the USSR (Union of Soviets of Socialist Republic) which actually makes a lot of harm to society and the environment, so Marx's socialism is seen as having no ecological basis at all.

⁴ Kohei Saito, *Marx in the Anthropocene: Towards the Idea of Degrowth Communism* (United Kingdom: Cambridge University Press, 2022), 13.

refers to Charles Darwin's idea of the 'Economy of Nature' or the natural system as the home of living things which a few decades later was referred to as ecology. Since then, the word ecology has been widely used in science as an academic notion of nature or the environment.⁵ From this background, the word eco-socialism refers to an intellectual endeavour to answer environmental problems within the ideological paradigm of Karl Marx's socialism.

One of the important themes in the development of Marxist thought after the collapse of socialism in Eastern Europe is the study of Karl Marx's ecological critique of capitalism. This theme was initiated by Paul Burkett in his book *Marx and Nature: A Red and Green Perspective* (1999) and also by John Bellamy Foster in his book *Marx's Ecology: Materialism and Nature* (2000). This new discourse is motivated by a Marxist approach to critically and comprehensively examine the problem of ecological crisis which is manifested in a systematic critique of the capitalist mode of production which is considered the root cause of the ecological crisis. However, several other figures have argued against ecological critique through the Marxist approach, centred on the notion that the Marxist approach is irrelevant to the ecological crisis. Anthony Giddens criticises that Marx's approach is only orientated toward transforming the social relations of exploited people and has nothing to do with the destruction of nature. Moreover, for Giddens, the tendency of Prometheism is apparent in Marx's approach, which strongly encourages human domination of nature to fulfil needs. In the book *Contemporary Critique of Historical Materialism* (1981), Anthony Giddens said 'Marx's concern with transforming the exploitative human relations expressed in the class system does not extend to the exploitation of nature'.⁶ Criticism from sociologist in the field of ecological studies John Clark also emerged and said that due to the tendency of Prometheism, in the Marxist approach, for humans nature and the environment do not seem like home for them and even humans tend not to see the earth as an ecological home for them. From Marx's approach, it appears that humans tend to see nature from the perspective of themselves as subjects with a spirit of self-realization to meet needs and even foster threats to the environment and efforts to continue to subjugate it. According to Clark, Marxism embodies a Promethean conception of humanity that views nature primarily as an object of domination. He writes:

Marx promethean Man "is a being who is not at home in nature, who does not see the earth as a 'household' of ecology. He is an indomitable spirit who must subject nature in his quest for self-realisation... for such a being, the forces of nature, whether in the form of his own, unmastered internal nature or the menacing powers of external nature, must be subdued".⁷

The image of the Marxist approach is also considered to be thick with a tendency towards productivism, which is paradoxical to the problem of ecological crisis. Frederic Jameson, for example, states that Marx's views actually support the efficiency of future technological growth to answer the class divide of society.⁸ Axel Honneth also criticised that one of the limitations of the Marxist approach to

⁵ John Bellamy Foster, *The Return of Nature: Socialism and Ecology* (New York: Monthly Review Press, 2020), 19.

⁶ Anthony Giddens, *Contemporary Critique of Historical Materialism* (Berkeley: University of California Press, 1981), 60.

⁷ John Clark, *The Anarchist Moment Reflections on Culture, Nature and Power* (Montreal: Black Rose Books, 1984), 27.

⁸ Fredric Jameson, "Dresden's Clocks," *New Left Review* 71 (September/October, 2011): 141-52, 150.

environmental problems appears in the deterministic idea of technology that encourages the progress of production for the sake of domination over nature (*Naturbeherrschung*).⁹ Nancy Fraser also criticised Marx's approach as unsuccessful in the context of gender, political economy and even ecology.¹⁰ Likewise, Sven-Eric Liedman firmly said that Karl Marx was not an ecological thinker in the modern era.¹¹

However, Foster and Burkhet try to re-examine Marx's thought, especially to answer today's environmental problems that threaten nature, human life and also future generations. They try to show that Marx is a modern figure who also has views to answer environmental problems. Carefully and systematically, Foster and Burkhet try to re-read Marx's views and research in the field of natural science, especially through a careful re-examination of Marx's acceptance of Justus Von Liebig's theory of the capitalist robbery system of agriculture. In relation to Justus Von Liebig's views, Foster and Burkhet see that an important point as the basis of Marx's ecological views lies in the theoretical concept of metabolism (*Stoffwechsel*). The idea of metabolism by Marx is also used to explain the relationship between humans and nature through work.¹² Foster explains that Karl Marx's thinking about metabolism not only views the metabolic rift by capitalism as an unavoidable consequence and causes fatal distortions to human relations with nature, but also continues to create a gulf between the universal metabolism of nature in relation to other entities. Since then, Foster and Burkhet have tried to trace how Marx had a great vision of ecological problems. Then, slowly, Marx's ecological views were considered to have an integral unity with his political economic views based on criticism of the capitalist mode of production. Studies related to this ecological vision reveals his vision of a post-capitalist society which is then interpreted as eco-socialism.¹³

Environmental issues began to receive serious attention around the 1950s, marked by Rachel Carson's critique of the chemical industry's development in the U.S. and the use of pesticides to accelerate plant growth and yield. In modern agricultural industrialization, the drive to multiply production to meet increasing demand has led to the use of chemicals that, as Carson observed, harm ecosystems, degrade soil quality, and exhaust land that is chemically manipulated for production. These chemicals also pose risks to public health. As an environmental activist, Carson saw how pesticide use threatened the habitats of flora and fauna in the name of rapid growth and fertility. From her perspective, the development of the chemical industry—driven by capitalist economic motives—has had negative environmental consequences, causing anxiety not only for ecosystems but also for humanity, both in her time and for the future.¹⁴

⁹ Axel Honneth, *The Idea of Socialism: Towards a Renewal* (Cambridge: Polity Press, 2017), 45.

¹⁰ Nancy Fraser, "Beyond Marx's Abode: For an Expanded Conception of Capitalism," *New Left Review* 86 (March/April, 2014): 55-72.

¹¹ Sven Eric Liedman, *A World to Win: The Life of Works Karl Marx* (London: Verso, 2017), 480.

¹² John Bellamy Foster, *Marx's Ecology: Materialism and Nature*, 2000, 157.

¹³ Saito, *Marx in the Anthropocene*, 15.

¹⁴ In her book *Silent Spring*, Rachel Carson offers a strong critique of the development of the chemical industry and the massive use of pesticides in agriculture, which she believes could lead to disasters for both humans and the natural environment by destabilizing ecosystems. Carson also criticizes the advancement of science and technology in the chemical industry, which she argues can harm the environment. Moreover, she points out that the U.S. government at the time, instead of implementing policies to protect the habitats of animals, plants, and humans, actively promoted the use of pesticides in agriculture. Carson further criticized the capitalist economic industry, which she believes supports the use of pesticides in order to accelerate production. Her work can be seen as one of the most significant critiques of the development of capitalist economic ideology and its potential to cause environmental destruction. See Rachel Carson, *Silent Spring* (United States of America: Rachel L. Carson, 1962), xi-xix.

However, long before the 1950s, environmental problems have been examined by Marx in the 19th century, which had an impact on the social life of society, whose roots are none other than economic exploitation through the fact of capitalist industrialisation and the phenomenon of urbanisation.¹⁵ Johnston in his book entitled *Environmental Problems: Nature, Economy and State* (1989) provides a view of the current global situation which is characterised by the permeation of the capitalist system into various aspects. For Johnston, to understand Marx's views on ecology, it is necessary to first understand this capitalist system.¹⁶ Grundmann also provides a correction to the view that Marx's views have no correlation with ecological issues. For Grundmann, Marx's views have ecological implications even though they are not a priority. Marx is widely considered to be more likely to concentrate on the problem of extortion or exploitation of humans and workers in the capitalist industrialisation system compared to focusing on non-human entities. In the idea of metabolism, Marx's view is interpreted as having the view that nature has instrumental value for humans, not only in the sense of economic and material value, but also views nature as having beauty value, knowledge value and even moral value.¹⁷ The concept of metabolism in Marx's thought is considered the basis and root of Marx's ecological ideas. Especially as the basis and pillar of ecological criticism of capitalism is rooted in the theory of metabolism.

One of the influential Marxist thinkers from Hungary, István Mészáros, played a significant role in developing Marx's views on the theory of metabolism as a foundational concept for political economy within the ecological sphere. Mészáros argued that a real existential crisis could occur and be experienced by all living beings, especially after he came across Isaac Deutscher's warning about the potential threat of nuclear war, which could lead to fatal ecological destruction under capitalism. In his book *Philosophy, Ideology and Social Science*, Mészáros raised concerns about the destruction and degradation of the environment caused by capitalism through the lens of natural metabolism. According to him, capitalism fails to distinguish clearly between the demands of capital production and the natural needs of the environment to undergo its own metabolic processes. The drive for increased production and higher market value leads capitalist industrialization to ignore the slower, more organic pace required by nature's metabolism. Moreover, science and technology are increasingly used to engineer and subjugate natural metabolic systems for the sake of production, consumer demand, and profit maximization. For Mészáros, such a condition deepens the chasm of ecological degradation and poses a severe threat to all living beings, including future generations.¹⁸ His critical reading of this situation marks an important step toward bridging the connection between ecology and socialism.

Mészáros then sought to reinterpret Karl Marx's thought, particularly concerning the idea of social metabolism. From this investigation, he attempted to reconstruct the concept of social metabolism as an antithesis to the conventional Marxist perspective that focuses primarily on the theory of surplus value and production as the root of capitalist exploitation of the working class. Mészáros aimed to extend the critique

¹⁵ David Pepper, *Eco-Socialism: From Deep Ecology to Social Justice* (London: Routledge, 2002), 63.

¹⁶ Pepper, 64-65.

¹⁷ Reiner Grundmann, *Marxism and Ecology* (Oxford: Clarendon Press, 1991), 80.

¹⁸ Istvan Meszaros, *Philosophy, Ideology and Social Science: Essays in Negations and Affirmation* (Brighton: Wheatsheaf Books, 1986), 183.

beyond the confines of factory industry, examining instead the transhistorical relationship between humanity and the universe.¹⁹ The idea of metabolism in Karl Marx's *Capital* is one of its essential themes. In *Capital*, Marx describes labor as one of the fundamental categories in his thinking, especially in the context of the metabolic relationship between humans and nature. Marx also states that labor is a metabolic process between humans and nature. Through labor, humans, by means of their actions, mediate, regulate, and control the metabolism between themselves and nature.²⁰ This metabolic process is deeply rooted in the relationship between humans and nature—in other words, the metabolic relation expressed through labor is a natural ecological process. Various historical stages illustrate that humans and nature are continually engaged in a metabolic relationship through work. Marx argues that the universal condition of human life is grounded in the fact that in order to live, humans must enter into a metabolic relationship with nature through labor. This universal condition is one in which both humans and nature exist independently yet interdependently, and this condition applies to every form of social life wherever it exists.²¹ Here it is affirmed that, in essence, humans cannot deny that they are part of the universal metabolism of the cosmos. This also underlines that humans cannot produce from nothing (*ex nihilo*), but only through matter (*ex materia*). Everything that humans obtain for their survival, without exception, derives from their metabolic relationship with nature.

In Karl Marx's view, the metabolic relationship between humans and nature is a natural necessity that cannot be denied. For Marx, human labor is grounded in material that exists independently of human intervention. Within this relationship, humans work and attempt to transform nature, but they can only modify the form of existing material in order to live.²² Thus, human beings are entities whose existence depends on nature. In this context, labor is not the sole source of material value in increasing the exchange value of production. Quoting William Petty in *Capital*, Marx presents the analogy that labor is the father of material wealth, and the earth is its mother.²³ In this sense, although humans work, consume, and may even discard what they acquire, human action always exists within the universal metabolic relationship between humans and nature—a relationship woven through the laws of nature and various biophysical processes.

The Theory of Metabolism in Capital

Criticism and doubts about the ecological perspective in Karl Marx's thought mainly revolve around the question of whether Marx's ideas can genuinely be used as an approach to environmental issues. Even if there are interpretations that suggest an ecological approach within Marx's work, these insights appear sporadically and are not systematically developed throughout his writings. This background has led to the assumption that Marx's ecological approach is not a serious or sufficient framework for addressing environmental problems.²⁴ Another important question is whether the historical context of Karl Marx allows

¹⁹ Saito, *Marx in the Anthropocene*, 18.

²⁰ Karl Marx, *Capital Vol. I* (London: Penguin Books, 1976), 283.

²¹ Marx, 290.

²² Marx, 133.

²³ Marx, 134.

²⁴ Kohei Saito, *Karl Marx Eco-Socialism: Capital, Nature and the Unfinished Critique of Political Economy* (New York: Monthly Review Press, 2017), 98.

his well-known view of class struggle as a critique of capitalism to be extended adequately to ecological concerns. As an academic discipline, ecology itself only emerged later, initiated by Ernst Haeckel, who drew on Charles Darwin's notion of "oecology"—understood as the economy of nature, or the Earth as the living space for all existing organisms. Before the term *ecology* came into use, the concept of a living organism's habitat or environment was often discussed in terms of *metabolic processes*.²⁵

The idea of metabolism is seen as a foundational concept that drove Marx to shape his entire political-economic outlook within a comprehensive understanding of the dynamic interaction between humans and nature, mediated through labor. Like all other organisms that exist on Earth, humans are also organic entities whose lives are determined by natural laws—psychological subjects whose living dynamics, such as breathing, eating, and excreting waste, depend on and exist in relation to nature. However, for Marx, humans possess a unique characteristic that distinguishes them from other organisms: this uniqueness is revealed in their productive activity through labor. Labor presupposes consciousness and purpose within the relationship to the sensory world that appears to human beings. Through labor, humans are able to transform nature freely, although in doing so they remain dependent on it, and indeed, humans cannot produce anything without drawing from nature.²⁶

Marx's theory of metabolism in *Capital* is closely related to his views on the reification of commodity production by capitalism. Marx's ecological approach within the theory of metabolism is rooted in his critique of capitalism, which, in its drive to increase the sale value of goods and consumer demand, continually ramps up production, thereby damaging the metabolic relationship between humans and nature. Labor, at its core, is the universal metabolic relationship of humans to fulfill their needs from nature. However, capitalism disrupts this relationship in its relentless pursuit of production, continuously extracting from nature and re-engineering the meaning of labor to reduce it merely to work to meet the demands of production for commodity sales. Marx observed that metabolism is engineered for the sake of commodities and their exchange value, such that labor comes to be understood solely in terms of the goal of production, which ultimately contributes to the degradation of metabolism. The theory of metabolism, initially proposed by Marx and later developed by John Bellamy Foster and Paul Burkett, builds upon this. Foster and Burkett carefully reexamine Marx's ideas and closely scrutinize the meaning of the term metabolism. From this observation, Foster and Burkett developed the concept of the *metabolic rift*²⁷. Their thesis is relatively simple: it emphasizes that the metabolic interaction between humans and nature is fundamental to life and determines the existence of both. However, capitalism threatens the existence of both humans and non-

²⁵ Robert P. McIntosh, *The Background of Ecology: Concept and Theory* (Cambridge: Cambridge University Press, 1985), 29.

²⁶ Saito, *Karl Marx Eco-Socialism*, 63.

²⁷ *Metabolic rift*, according to the author, can be translated as "rift" or "damage," but it is also possible to translate it as "gap." The author observes that in several dimensions, the *metabolic rift* (e.g., the first being material rift or material damage, which refers to the exhaustion of the soil, especially in agriculture); the second is spatial rift, where "rift" can indeed be interpreted as "gap," especially since spatial rift focuses on the gap between urban and rural life due to the capitalist mode of production; and the third is temporal rift, where "rift" could also be interpreted as "gap," because this third dimension specifically looks at the gap or distance in time, in relation to the capitalist view of natural processes. Humbly, readers may offer critiques of this translation or perhaps suggest a more accurate translation or use alternative translations that stay within the ecological meaning.

humans, creating a deep rift between them, driven by the capitalist system used to organize production.²⁸ While it is acknowledged that Marx did not systematically address the rift in metabolism within *Capital*, he did issue an important warning regarding the concept of an irreparable rift in social interactions and the metabolic relationship between humans and nature.²⁹ From this, Kohei Saito attempts to interpret Marx's ecological vision within the societal framework.

From a transhistorical perspective, Marx categorizes labor as the metabolic process between humans and nature (the labor process), but the meaning and form of labor subsequently change under capitalism into a process of increasing the sale value of commodities (valorization process). As a consequence, the metabolic relationship between humans and nature in the labor process transforms into a process aimed at increasing commodities, sale value, and the worth of goods. Here, workers become mere laborers to increase surplus and profits from the sale of goods production (abstract labor). Karl Marx observes that this shift in perspective toward the meaning of labor in the context of increased production and the sale value of goods results in destructive consequences for the metabolic relationship between humans and nature. The damaged metabolic relationship between humans and nature caused by capitalism led Marx to consistently critique two fundamental models of capitalist production: the exploitation of labor (English: labor power, German: *Arbeitskraft*) and the exploitation of nature (English: nature forces, German: *Naturkräfte*). In such a situation, humans and nature become alienated from one another, estranged, and tend to lack a metabolic relationship through the meaning of the labor process. In other words, Marx's critique demonstrates that capitalism not only creates alienation and a rift in the metabolism between humans and nature, but also generates the phenomenon of exploitation of both labor and nature, which has an impact in both spatial and temporal scales. This means that capitalism, in its efforts to increase production and the sale value of goods, continuously creates problems that are unlimited in space and time, which cannot be predicted.³⁰

In relation to the metabolic relationship, Marx identified at least three levels of metabolic rift. The first and most fundamental is the disruption of material metabolism within the natural cycle under the capitalist regime. The fact and example used by Karl Marx is the problem of soil exhaustion and degradation caused by modern agriculture. Industrial agriculture, which is forcibly expanded on a large scale, also forces crops to absorb soil nutrients as much and as quickly as possible in order to meet the demands of increasingly widespread consumers—even on a global scale. In this idea, Karl Marx was influenced by Justus von Liebig's book *Agricultural Chemistry* (1862), which essentially discusses the plundering and brutal exploitation of the soil through modern agriculture under capitalism. It appears that Marx sought to integrate Liebig's perspective into *Capital*.³¹

Influenced by Liebig—who sharply criticized capitalism for its relentless pursuit of quick and short-term profits from modern agricultural practices while neglecting soil quality and making no effort to restore its fertility—Karl Marx paid close attention to environmental concerns. In the early 19th century,

²⁸ Saito, *Marx in the Anthropocene*, 23.

²⁹ Karl Marx, *Capital Vol. 3* (London: Penguin Books, 1981), 949.

³⁰ Saito, *Marx in the Anthropocene*, 24.

³¹ Saito.

anxieties about soil exhaustion and degradation, coupled with rapid human population growth and the rise of modern agricultural engineering aimed at accelerating crop yields, were increasingly seen as causes of environmental decline.³² Around 1860, when Marx was writing *Capital*, he was particularly focused on Liebig's analysis of the concept of capitalist extraction from the soil (the "robbery of the soil"). From there, Marx sought to systematically develop the idea of soil exploitation by capitalism in the name of maximizing and continuously increasing production.³³ In *Capital*, Marx aimed to integrate Liebig's insights and show his concern for environmental issues—particularly the rupture in the metabolic relationship between humans and nature. In *Capital* Volume I, Marx writes:

The capitalist mode of production completes the disintegration of the primitive familial union which bound agriculture and manufacture together when they were both at an undeveloped and childlike stage. But at the same time it creates the material conditions for a new and higher synthesis, a union of agriculture and industry on the basis of the forms that have developed during the period of their antagonistic isolation. Capitalist production collects the population together in great centres, and causes the urban population to achieve an ever-growing preponderance. This has two results. On the one hand it concentrates the historical motive power of society; on the other hand, it disturbs the metabolic interaction between man and the earth, i.e. it prevents the return to the soil of its constituent elements consumed by man in the form of food and clothing; hence it hinders the operation of the eternal natural condition for the lasting fertility of the soil. Thus, it destroys at the same time the physical health of the urban worker, and the intellectual life of the rural worker.³⁴

Marx seriously examined the exploitative impact of capitalism, which is strongly focused on the mode of production aimed at increasing the exchange value of commodities in pursuit of profit. He also highlighted that this tendency creates a disintegration between agriculture and manufacturing—something earlier societies had not experienced. The phenomenon of a growing human population further deepens the issue of soil degradation and the alienation caused by the metabolic rift between humans and the Earth. Soil that is continuously forced to meet the ever-expanding needs of humanity on a global scale is at high risk of losing its fertility, which in turn can have consequences for public health. In short, Marx emphasized that the damage to the metabolic relationship—specifically the material degradation of soil—can lead to long-term and irreparable harm, resulting from the engineered model of increasing agricultural production.

The second stage of the metabolic rift in Marx's view relates to spatial rift or spatial disruption. This rift is marked by the antagonistic relationship between urban and rural areas. As a consequence of capitalism creating a working class within the social order—particularly through industrialization—urban populations have grown rapidly, prompting large migrations from rural areas to cities. This situation is characterized by the decline in the number of people working as farmers, and even an inability to meet basic needs through farming (depeasantization), which contributes to the food supply for society at large. On the other hand, the land is continuously forced to produce, engineered and manipulated to meet demands and compete in the market. Furthermore, this spatial separation increases production costs due to rising

³² Saito; John Bellamy Foster, *Marx's Ecology: Materialism and Nature*, 149.

³³ Bellamy Foster.

³⁴ Marx, *Capital* Vol. I., 637.

transportation expenses. This phenomenon is also reflected in the significantly increasing demand for production to meet the needs of densely populated urban areas. This exploitation of land and the rupture in the spatial relationship between city and countryside would not occur if capitalism had not created a concentrated urban working class that constantly demands goods and services sourced from rural areas.³⁵

In relation to this issue, Marx observed the sanitation problems in London, which produced foul odors during his stay there. The emergence of cholera, caused by waste generated through the capitalist mode of production, was even considered commonplace. The spatial gap between urban and rural areas became evident through the degradation of environmental quality, as urbanization led to poor living conditions for the working class. This problem was also accompanied by the exhaustion of rural soil, which was forced to keep producing to meet growing demands. As a result, the suffering of farmers clearly reflected the antagonistic differences between urban and rural living conditions. Inspired by Liebig, Marx recognized that capitalism causes irreparable rifts in the metabolic relationship between humans and nature on a large scale.³⁶

The third dimension of the metabolic rift is the damage or disruption of temporal rhythm in nature's metabolism—the temporal rift. The capitalist mode of production and the natural processes of growth, especially in agriculture, possess fundamentally different characteristics. Agriculture requires a relatively long period for growing and harvesting, whereas the capitalist mode of production focuses on acceleration to meet ever-increasing and expanding demands. Capitalism constantly seeks to shorten production time through various agricultural manipulations in order to meet demand, raise the selling price of goods, and gain larger profits. It relentlessly pursues innovation to accelerate production and employs various methods to quickly generate products for profit, in contrast to pre-capitalist agricultural societies, which tended to respect and adhere to natural processes. Capitalist production acceleration can be two to three times faster with the use of technology and agricultural engineering. However, nature—particularly farmland and natural resources as raw materials—cannot match this speed. Nature undergoes a metabolic process that is relatively slow compared to the capitalist drive for production. The time gap between nature and capitalism continues to widen, potentially leading to severe environmental degradation. Marx explored this phenomenon through the example of deforestation. Forests are one of the crucial sources of raw materials for production and are viewed under capitalism merely in terms of accelerating production and increasing commodity value. The natural metabolic growth process of forests, which takes a long time, is seen as incompatible with capitalist principles of speed. This time gap is continuously addressed by capitalism through technological advancements to meet production demands, yet it perpetuates problems like deforestation. Although there are attempts at conservation, they tend to be insignificant in comparison.³⁷ Here, Marx highlights the destructive potential of the temporal gap between the natural rhythms of the environment and the capitalist principle of acceleration—an imbalance that ultimately harms nature and impacts human quality of life.

³⁵ Saito, *Marx in the Anthropocene*, 25-26.

³⁶ Saito, 26-27.

³⁷ Karl Marx, *Capital Vol. 2* (London: Penguin Books, 1978), 321-322.

The Vision of Post-Capitalist Society

Several thinkers have sought to explore Marx's thought as a framework for addressing environmental issues. One such figure is István Mészáros, who elaborated on the concept of the metabolic rift, identifying it as one of Marx's crucial insights in his critique of capitalism. Another significant contributor to the development of ecological approaches through a Marxist lens is American sociologist John Bellamy Foster, whose work has become a vital reference. Similarly, Paul Burkett, a scholar in the field of economic philosophy, has produced numerous writings on eco-socialism inspired by Marx. In addition, Japanese philosopher Kohei Saito, a professor at the University of Tokyo, has also produced extensive work on environmental issues from a Marxian perspective. These thinkers' reinterpretations of Marx's ideas as a response to ecological problems are fundamentally rooted in their critique of capitalism's boundless mode of production, which they identify as a key driver of environmental degradation.³⁸ A central feature in these reinterpretations is the concept of the metabolic rift between humans and nature, mediated through labor. Their critiques of capitalism's progressive and expansive model of production—which relentlessly extracts raw materials from nature—seek to offer alternative frameworks inspired by Marx, presenting them as potential solutions to today's ecological crisis.

The core of Marx's thought is commonly understood as a critique of the forced increase in production and commodification under capitalism, aimed at extracting maximum profit through extended labor hours. Influenced by Hegelian dialectics, Marx viewed historical materialism as a dialectical process in which human history is marked by the struggle of the lower classes to free themselves from the shackles of capitalist exploitation. In the modern era, many of these class-related issues have to some extent been addressed, with many workers now able to attain decent living conditions. However, in more recent developments—particularly in the present day—Marx's thought must be reinterpreted, especially in response to ecological crises. Here, capitalism is identified as the root cause of environmental degradation, as it relentlessly compels nature to supply raw materials for ever-expanding production and commodification in the pursuit of profit.

Marx's approach to environmental issues can be understood through the lens of the deterministic economic phenomenon characteristic of capitalism, which has an orientation towards productivism and Eurocentrism. This productivity character is evident in the continuous effort to increase production and generate commodities through the latest advancements in science and technology. This direction is seen as a beneficial effort to create a prosperous life for workers, as it is believed that increased production and high sales value will improve living standards. The Eurocentric character is centered on the Western world, which is viewed as the region capable of combining science and technology to enhance production and sales value. As a result, Western capitalism, particularly Europe, is considered superior as a region with a high standard of living through vigorous economic production, and non-Western regions are seen as expecting to follow its model. This backdrop is what led Marx to re-examine the phenomenon of

³⁸ Several other scholars have also produced works that attempt to reinterpret Marx's thought in order to address ecological issues, particularly within an anthropocentric context. However, due to the limitations of the author, this discussion does not encompass all of these thinkers, who may approach Marx's ideas from different perspectives in translating them into responses to environmental problems.

eurocentrism of his time, as discussed by Avineri in his book *Karl Marx on Colonialism and Modernization* (1969).³⁹

Several Marxist thinkers perceive an ecological vision in Marx's thought, particularly during his later years. Signs of this vision are evident in Marx's study of Liebig's critique in agriculture regarding the continuous efforts by capitalism to force the soil to work and produce the desired output. Additionally, Marx is said to have studied the work of Carl Fraas, a German agronomist from 1868, who sharply criticized Liebig's view of soil exhaustion as the root cause of the degradation of human civilization. Fraas' work is considered to have paid more attention to issues such as deforestation and the technological problems of transportation, which also had adverse environmental impacts—all initiated by capitalism. In his later years, Marx is also believed to have taken serious concern regarding environmental issues. This is evident in notes he wrote in 1869, later published by his Marxist followers in MEGA (Karl Marx and Friedrich Engels, Marx-Engels-Gesamtausgabe, 1975). In these notes, Marx paid attention to William Stanley Jevons' concerns about climate warming and the issue of coal extraction. Marx read and documented Jevons' critique in his notes.⁴⁰ In the same notes, Marx also addressed issues related to food production, water pollution, soil exhaustion, and epidemic viruses. These concerns emerged after Marx read an article in *The Economist* showing data on the rapid development of livestock to meet the demand for meat. In response, Marx studied the views of Leonce de Lavergne and Wilhelm Hamm from 1864, who observed that modern animal husbandry was vulnerable to disease because it was engineered for rapid fattening to meet the continually increasing demand.⁴¹

Marx's ecological investigation did not stop with the influence of Liebig. For Marx, Liebig's view of soil exhaustion through modern agricultural engineering was insufficient as a critique of capitalism. In 1868, a shift in Marx's views is evident in his intensive study of natural sciences, which extended beyond Liebig's perspective. Marx also delved into geology, chemistry, and botany. Marx went beyond Liebig, who focused solely on agricultural exploitation, by exploring criticisms of capitalism that affected various other environmental areas, such as deforestation, cruel treatment of livestock, species extinction, and the wasteful use of fossil fuels.⁴² From several of his notes, Marx is considered to have undergone a change in vision, particularly in ecological matters in his later years, and this ecological vision became unavoidable. The ecological approach through Marx's lens is primarily seen in the shift in Marx's vision in his final notes, especially the shift from an optimistic effort to fight capitalist exploitation to the recognition that capitalism's continuous and unsustainable drive for increased production would exacerbate the exploitation of both humans and nature. In this shift of perspective, Marx's critique moved toward the broader and more enduring ecological issues created by capitalism. The restoration of the broken metabolism between humans and nature necessitated the change of the economic system. This forms the basis of Marx's eco-socialism of the 1860s.⁴³

³⁹ Shlomo Avineri, *Karl Marx on Colonialism and Modernization: His Despatches and Other Writings on China, India, Mexico, The Middle East and North Africa* (New York: Anchor Books, 1968), 29.

⁴⁰ Saito, *Marx in the Anthropocene*, 179.

⁴¹ Saito, 180-181.

⁴² Saito, 179.

⁴³ Saito, 181-182.

Before arriving at the final reconstruction of Marx's vision in a post-capitalist society, it is also important to examine how Marx critiqued the tendency of Eurocentrism. As mentioned earlier, Europe was regarded as the center of a decent life, especially due to the successful marriage of science and capitalist principles. However, for Marx, such a tendency could have detrimental effects on non-Western countries, particularly in pre-capitalist societies, which were seemingly required to adopt Europe as the standard of life and ideology. Eurocentrism was closely associated with colonialism at that time, and Marx was a staunch critic of colonialism. Marx observed how Britain brutally colonized India, which was seen as having a destructive mission and aimed at transforming Asian ways of life into capitalist forms. There was a visible shift in Indian society, where land and fields, once considered communal property, were transformed into private ownership with the advent of colonialism. The basis for this was that the Indian society at that time was unable to effectively utilize land to produce commodities and meet needs, and was also considered to have failed to adapt to technological progress.⁴⁴ Eurocentrism, marked by colonialism, brought with it a strong capitalist vision that sought to change ways of life and even the worldview of colonized regions, especially in Asia, which may have had communal ways of life in terms of property and land ownership. With the fundamental assumption that capitalism is the source of metabolic rift, environmental degradation began to spread more widely, as capitalism expanded through colonialism and globalization. In this context, Marx's eco-socialist perspective on environmental issues becomes undeniable in its urgency as an alternative solution to these problems.

In his later years, Marx is considered to have shifted his critique of capitalism by focusing on its destructive potential to the environment, which causes a metabolic rift due to the coercion of production by capitalism. Marx sought to understand this issue comprehensively by examining it from various fields, even comparing the lifestyles of pre-capitalist societies and non-Western societies to delve into the theory of metabolic rift. Marx's investigation into the social organization of pre-capitalist and non-Western societies was not merely a critique of the breakdown of communal environmental ownership, which was prevalent in these societies due to colonialism. The end result of this investigation and critique had ecological implications. Marx saw the increasing environmental damage caused by capitalist production, which was also imposed by colonialism in the colonized regions. Therefore, it was important for him to study alternative social organizations that demonstrated the metabolism between humanity and nature in pre-capitalist and non-Western societies from an ecological perspective.⁴⁵

Some of Marx's followers, especially those who attempt to highlight Marx's concern for the environment, observe that toward the end of his life, Marx explored the lifestyles of pre-capitalist and non-Western societies.⁴⁶ What is significant is that there may exist ways of life that have principles of communal ownership, particularly concerning the environment, such as land, water, forests, and even other elements. A model of social organization with communal ownership of the environment is also found in some regions of Indonesia, for example, communal ownership of water managed through simple technology to channel

⁴⁴ Saito, 183.

⁴⁵ Saito, 200.

⁴⁶ Saito, 190-196.

water from its source to meet the community's water needs, or land and plots of land owned collectively by certain community groups.⁴⁷ In the author's view, the exploration of Marxist thinkers, especially in ecological approaches, reveals that the way of life of rural communities, which holds communal values toward nature, is a model of social organization that can create a balance in the metabolism between nature and society. Capitalism, which later aligns with colonialism and even science, promotes strict private property rights, posing a threat that could disrupt the metabolic order existing in pre-capitalist and non-Western societies.

Marx's investigation into the way of life of pre-capitalist and non-Western societies was criticized by Stedman Jones. According to Stedman Jones, Marx's observations merely reflect his romanticism and are nothing more than utopian fantasies stemming from the failure of societal structures in his imagination. For Stedman Jones, the communal lifestyle of rural societies that Marx highlighted is no longer relevant today, as it is merely a nostalgic, orientalist fantasy that failed in the 19th century.⁴⁸ Kohei Saito, however, argues that Stedman Jones's critique has far-reaching consequences, as it only demonstrates an inability to understand the grand vision of capitalism in its brutal mode of production, which leads to environmental destruction and, specifically, damages the metabolism between humans and the environment. For Kohei Saito, the urgent discussion today is to explore the relevance of Marx's ecological approach for the contemporary era.⁴⁹

In Marx's investigation of pre-capitalist and non-Western societies, he not only identified tendencies towards socialism in managing the balance between the metabolism of nature and humans, but also recognized the reality of metabolism that should have already existed and been lived in the way of life of these societies. In other words, Marx's vision saw the social organization of pre-capitalist and non-Western societies, reflected in cooperative production and the principle of communal ownership, as having a strong correlation in maintaining the sustainability of the interaction between human metabolism and nature. In the *MECW* (Marx and Engels Collected Works, 1975-2004), it is written that Marx found these socialist tendencies in the work of Maurer on radical egalitarianism in *The Teutonic Commune*. Marx traced the way of life of the Teutonic people through Maurer's ideas. The Teutonic tribe exhibited a communal and cooperative way of life in managing nature to meet the community's needs, while also taking responsibility for the preservation of nature, not simply taking from it. It is recorded in *MEGA* (Marx-Engels-Gesamtausgabe, 1975) that the Teutonic community, with their potential land resources such as gardens, meadows, and forests, was managed cooperatively by a united community. All members of the community received the fruits of the earth, and they were distributed equally and sufficiently. In principle, the resources available in nature that could be utilized for the community's livelihood were managed in a relationship that maintained metabolism and upheld equality for each member to obtain sustenance.⁵⁰ The socialist tendencies in the way of life of pre-capitalist and non-Western societies offer a new direction for

⁴⁷ Some regions in Indonesia, such as Papua and Sumatra, have areas that are distinctive to certain fam or marga, which indicates that this is where they originate, grow, and live from the geographical natural environment of the area.

⁴⁸ Gareth Stedman Jones, *Karl Marx: Greatness and Illusion* (Cambridge, MA: Belknap Press, 2016), 568.

⁴⁹ Saito, *Marx in the Anthropocene*, 198.

⁵⁰ Saito, 201.

the correlation and relevance of Marx's eco-socialism in addressing the increasingly threatening environmental issues.

For Kohei Saito, Marx's investigation into the socialist tendencies in the way of life of pre-capitalist and non-Western societies—as found in the writings of Fraas and Maurer—played a crucial role in shaping Marx's socialist perspective. Marx identified elements of social equity and sustainability in the ways these societies organized their lives, which in turn influenced his paradigm of socialism.⁵¹ Marx also affirmed this in *Capital*, where he referred to pre-capitalist and non-Western societies as examples of authentic or original communism—also known as *indigenous communism*.⁵² Based on the ecological approach through Marx's perspective, it becomes evident that capitalism has a destructive impact on the environment, driven by the principles of increasing production, market value, and profit. The consequences of this were already identified during Marx's time and are documented in *Capital* as well as in his later notes, which have been interpreted by several Marxist scholars as reflecting a shift in his thinking—particularly a deeper and more serious concern for environmental degradation. To this day, the global environmental crisis remains undeniable and can be seen as a consequence of a consumerist mentality that relentlessly seeks to fulfill needs and expand production. In *Capital*, Volume III, Marx addresses this issue by calling on all sectors of society to reflect and participate—especially producers—in regulating the metabolism between humans and nature through rational consideration, rather than through unchecked desire guided by principles of domination. He emphasizes that the regulation of this metabolism should aim to minimize environmental energy expenditure as much as possible, ultimately fostering a condition that is beneficial both for humanity and for the natural world.

This realm of natural necessity expands with his development, because his needs do too; but the productive forces to satisfy these expand at the same time. Freedom, in this sphere, can consist only in this, that socialized man, the associated producers, govern the human metabolism with nature in a rational way, bringing it under their collective control instead of being dominated by it as a blind power; accomplishing it with the least expenditure of energy and in conditions most worthy and appropriate for their human nature.⁵³

In the face of the ongoing ecological crisis and the limitations of capitalist responses to environmental problems, can Marx's ecological thought offer an alternative vision for society, and how does Kohei Saito reinterpret this vision through the concept of degrowth communism? For Marx, the solution to economic crises and class struggles caused by the capitalist mode of production is the abolition of capitalism and the elimination of class society: “The only possible remedy for economic crises of over-production and social crises of class struggle is the elimination of capitalism and class society.”⁵⁴ Kohei Saito refers to *Late Marx and the Russian Road* (1984), Marx argue the crisis of capitalism “will end through its own elimination, through the return of modern societies to a higher form of an ‘archaic’ type of collective ownership and

⁵¹ Saito, 203.

⁵² Marx, *Capital Vol. 3*, 970.

⁵³ Marx, *Capital Vol. 3*, 959.

⁵⁴ Marx, *Capital Vol. 2*, 79.

production.”⁵⁵ According to Kohei Saito, Marx did not suggest that communism would naturally evolve as an alternative merely by rejecting capitalism as far as possible. Instead, he argues that Marx's proposal might be that Western Europe should return to the way of life practiced by pre-capitalist societies.⁵⁶

To strengthen this argument, Teodor Shanin points out in his book that Marx may have viewed agrarian communal societies as possessing a kind of natural vitality that enabled them to withstand various forms of invasion, change, and even war. According to Shanin, this can be seen in the third draft of Marx's letter to Zasulich in 1868, where Marx observed that agrarian communal societies appeared resilient in the face of many challenges in Germany, particularly in Russia. This model of society was solid and potentially had a strong foundation for a socialist revolution.⁵⁷ Marx's investigation into pre-capitalist and non-Western ways of life shows that he was attempting to assert the thesis that the enduring stability of communities without economic growth could serve as the foundation for sustainable and balanced metabolic interaction between humans and nature. It is true that this thesis contrasts with his earlier negative view of the stagnant and unchanging condition of Asian communes expressed in the 1850s and also in *Capital Volume I*. These two positions appear contradictory and irrelevant when compared with Marx's later observations of natural science and archaic societies. However, this paradox can be taken as a strong basis for the argument that there was a shift in Marx's later years—a shift in his ecological approach that appears to abandon strict historical materialism. After approximately 14 years of comprehensive observation, Marx, as interpreted by Kohei Saito, concluded that sustainability and equality based on economic stability are sources of power to resist capitalism. This model of sustainability and equality rooted in economic stability should, according to Saito, serve as a reference point for Western societies. With full awareness, they must return to the communal lifestyle of archaic societies as a solution to the crisis of capitalism. In other words, in Kohei Saito's interpretation, the vision of the late Marx is that the post-capitalist society is a degrowth communism.⁵⁸

Degrowth communism is Kohei Saito's interpretation of the ideas of the late Marx, who underwent a shift in his approach to the issue of environmental disruption caused by the capitalist mode of production aimed at increasing the exchange value of goods. Degrowth originates from the French word “décroissance”, which means reduction. The term emerged in the early 21st century as part of a social movement calling for the voluntary downscaling of consumption and production for the sake of social and ecological sustainability. Over time, the word degrowth has become a slogan in opposition to economic growth. In the field of environmentalism, degrowth refers to a movement focused on caring for nature by resisting overconsumption and excessive human extraction from the environment, as well as challenging attempts to separate ecological impact from production processes that are deemed non-correlative. As an ecological movement, degrowth promotes a communal approach to environmental management—one based on care, sharing, and preservation—while rejecting individualistic tendencies in environmental

⁵⁵ Saito, *Marx in the Anthropocene*, 205.

⁵⁶ Saito, 205-206.

⁵⁷ Shanin Teodor, *Late Marx and the Russian Road: Marx and the Peripheries of Capitalism* (New York: Monthly Review Press, 1984), 118.

⁵⁸ Saito, *Marx in the Anthropocene*, 208.

governance. Thus, degrowth is a radical rejection and reduction of the tendency toward economic growth that has led to environmental degradation. Meanwhile, the word communism used by Kohei Saito in the term degrowth communism clearly refers to Marx's ideas, especially the shift in his later worldview inspired by the way of life of archaic societies. Thus, degrowth communism can be interpreted as the effort to build a stable economy through a pre-capitalist communal societal model aimed at ensuring sustainability and a balanced metabolic interaction between humans and nature.

It appears that Marx's eco-socialism is an approach to ecological problems that calls for a return to non-capitalist models of social organization—particularly for Western societies—to relearn from non-Western communities and integrate those lessons with a strict model of economic stability. This call to revisit is not simply an appeal to imitate rural lifestyles or revert to village-based societies. According to Kohei Saito, the critique of forced production under capitalism does not equate to a total rejection of all forms of technology. Saito continues by stating that Western Europe does not necessarily need to abandon its previous advancements; rather, it can begin combining them with the strict model of economic stability found in archaic societies. This idea could, in fact, lead to a way of life that even transcends traditional communism. The revival of communism in the form of *degrowth communism* is fundamentally different from the productivity-focused Marxism of the 20th century, yet it remains consistent with Marx's recognition of the destructive tendency of capitalism's forced production, which ultimately fails to lead to a truly post-capitalist society.⁵⁹

The idea of *degrowth communism* stands in opposition to the prometheanism of the young Marx, and is also not identical to the form of eco-socialism implicitly found in *Capital*, which was inspired by Liebig's critique of modern agriculture. Eco-socialism does not rule out the pursuit of economic growth when capitalist production can be controlled. In contrast, *degrowth communism* is based on the principle that growth is neither necessarily sustainable nor essential. According to Kohei Saito, this interpretation is not an exaggeration, although some thinkers still find it hard to believe that Marx ever promoted a *degrowth* model in his ecological approach. This skepticism arises from the perception that Marx's thought depended on growth to improve the living standards of the working class. Furthermore, even some ecological Marxist thinkers remain hesitant or even reject the idea of *degrowth*. John Bellamy Foster, for instance, has previously affirmed the proposal of *degrowth*, emphasizing the need for a cautious transition for high-income countries to stabilize their economies in order to anticipate ecological disruption. Foster argues that rich countries in particular must move toward economic stability and abandon capitalist growth for the sake of humanity's development, aligned with the original socialist thought of Karl Marx. While Foster appears consistent in viewing Marx's ideas as an answer to ecological crises, Kohei Saito contends that Foster's interpretation is not necessarily aligned with Marx's vision of post-capitalist economic stability.⁶⁰ For Saito, Marx's vision of a post-capitalist society is *degrowth communism*—a model that controls growth with principles of sustainability and a balanced metabolic interaction between humans and nature.

⁵⁹ Saito.

⁶⁰ Saito.

In this article, degrowth communism is understood as a vision of a communal society that seeks to move beyond the capitalist imperative of continuous economic growth. Based on an examination of Kohei Saito's reinterpretation of Karl Marx's ecological thought, this study argues that the concept of degrowth communism offers a promising philosophical framework for addressing the contemporary ecological crisis. Nevertheless, the concept also faces significant conceptual and practical challenges, particularly in societies that remain strongly committed to growth-oriented models of development. Consequently, further theoretical and empirical research is needed to assess the viability of degrowth communism as an alternative framework for responding to ecological problems, especially in regions where economic growth continues to serve as the dominant measure of social progress and public policy.

Conclusion

This study finds that Karl Marx's thought possesses significant ecological relevance for explaining the roots of the contemporary environmental crisis. Through the concept of metabolism (*Stoffwechsel*), Marx understood labour not merely as an economic activity but as a metabolic relation between humans and nature. This relation constitutes a universal condition of human existence, as human life fundamentally depends upon material interactions with nature. However, under capitalism, this metabolic relation undergoes a fundamental transformation. Labour is no longer oriented toward fulfilling human needs within the metabolic interaction with nature; instead, it becomes directed toward increasing production, commodification, and capital accumulation. This transformation generates a *metabolic rift* between humans and nature. Capitalism, through its principle of unlimited production expansion, produces ecological destruction in multiple dimensions, ranging from material degradation such as soil exhaustion, spatial ruptures between urban and rural areas, to temporal gaps between the rhythm of capitalist production and the natural metabolism of ecological systems. Accordingly, the ecological crisis cannot be understood merely as a technical environmental issue, but rather as a consequence of the logic of capitalist production that disregards the ecological limits of nature.

This study further reveals that the view of Karl Marx as a purely productivist and Promethean thinker is no longer entirely adequate. Through Kohei Saito's analysis of Marx's ecological notebooks and his later writings, a profound concern for environmental issues becomes evident. Marx paid serious attention to problems such as deforestation, soil exploitation, ecosystem degradation, and food production systems. Moreover, he examined the destructive impacts of colonialism on social structures and ecological balance in non-Western societies, indicating a transition in his thought toward a broader ecological critique of capitalism.

Within this context, Saito interprets Marx's vision of a post-capitalist society as no longer oriented toward productivism but toward a social order that sustains the metabolism between humans and nature. Marx's investigations of pre-capitalist and non-Western societies are understood as attempts to identify forms of social organization characterized by common ownership, sustainability, and ecological balance. From this perspective, Saito formulates the concept of *degrowth communism* as an alternative to the paradigm of unlimited economic growth, which he interprets as the ecological vision embedded within Marx's later thought. Therefore, Marx's eco-socialism should not be understood as a call to revive the

productivist socialism of the twentieth century. Rather, it represents a critique of the destructive mode of capitalist production while simultaneously offering an effort to reconstruct a rational, sustainable, and just metabolic relation between humans and nature.

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