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**Hypercapitalism and Ecological Breakdown: An Eco-Marxist Study of Nieva's *Dengue Boy*****Amina Iqbal**

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ABSTRACT

*Environmental breakdown under late capitalism has accelerated the commodification of nature, disease, and human life, yet the interrelationship between environmental degradation, biocapitalism, and capitalist expansion remains under-explored in contemporary literary studies. In dystopian fiction, environmental crises are often analyzed independently, while their structural connection with capitalist modernity receives limited critical attention. Building on the critical framework of Eco-Marxism, particularly Karl Marx's notion of the metabolic rift and its later development by John Bellamy Foster, along with Kaushik Sunder Rajan's concepts about biocapitalism and the political economy of human life and health. This study interrogates how Michel Nieva's novel *Dengue Boy* depicts ecological collapse not as an external ecological catastrophe but as a systemic outcome of global capitalism that turns nature into an asset of economic gain and capitalist accumulation. It further investigates how environmental exploitation, technological developments, and biocapitalist systems support bodily experimentation and the commodification of health and disease, while capitalist ideology hides the material outcomes of ecological devastation. Furthermore, the study demonstrates the uneven division of ecological ruin and climate apartheid, highlighting how elites and privileged groups remain protected while marginalized communities face the burden of climate vulnerability. Thus, the study analyzes that *Dengue Boy* shows a powerful Eco-Marxist critique of capitalism, revealing environmental devastation as an essential condition for the reproduction and expansion of the capitalist structure.*

Keywords: Biocapitalism; Disease Commodification; Eco-Marxism; Environmental Breakdown; Environmental Apartheid Hyper Capitalism.

1. Introduction

This study examines the contemporary crises of ecological collapse, the commodification of nature and disease, biocapitalism, climate injustice, and economic inequality as depicted in Michel Nieva's *Dengue Boy*. These crises are not only speculative problems limited to fiction but highlight urgent global realities that have become destructive challenges of the twenty-first century. Contemporary ecological and health crises are deeply interrelated with the capitalist

mode of production, which emphasizes continuous economic development, resource extraction, and profit accumulation over environmental sustainability and social well-being. Therefore, understanding the deep relationship between capitalism, ecological degradation, disease, and inequality has become important.

Environmental Collapse is deeply connected to capitalist production, which relies on the extreme exploitation of natural resources. According to the IPCC (2023), human activities have clearly caused global warming, with global surface temperatures touching approximately 1.1°C above pre-industrial levels between 2011 and 2020. Unsustainable and market-driven patterns of industrialization, fossil fuel consumption, land-use change, and resource extraction have increased greenhouse gas emissions, biodiversity loss, food insecurity, and water scarcity. Likewise, UNEP (2024) indicates resource extraction on a large scale as the principal factor of the triple planetary crisis of climate change, biodiversity loss, and pollution. These developments and growth highlight that ecological degradation is not a separated environmental issue but a systemic outcome of widespread economic structures.

The ecological crisis can further be understood through the Eco-Marxist idea of metabolic rift, which describes the destabilized relationship between human society and nature triggered by capitalist system. Capitalism divides production from ecological limits by extracting natural resources faster than ecosystems can recreate them, as a result fracturing the natural balance and sustainability between humans and the nature. UNEP (2024) states that resource extraction contributing more than half of global greenhouse gas emissions, while global material use has tripled over the past five decades. Such patterns demonstrate how the continuous pursuit and logic of economic growth degrade ecological sustainability and accelerate planetary exploitation.

The outcomes of this metabolic rupture are clearly visible in prevalent environmental destruction and planetary damage. Climate change, pollution, deforestation, habitat destruction, and declining biodiversity continue to weaken and deepen the Earth's ability to maintain life. Ecological exploitation has surpassed many planetary boundaries, alarming both ecological stability and human well-being. These interrelated crises illustrate that planetary loss has become an identifying characteristic of the contemporary global order, demanding critical and a close look examination of the economic systems that sustain ecological exploitation.

A vital dimension of ecological breakdown is the commodification of nature, whereby forests, land, biodiversity, water, and ecosystems are increasingly treated as marketable commodities rather than shared ecological or natural resources. Smessaert, Missemer, and Levrel (2020) elucidate that processes such as privatization, marketization, and financialization convert nature into an instrument of economic exchange. Similarly, Rossi (2026) posits that market-driven mechanisms, encompassing carbon trading and biodiversity offsetting, often limit nature to economic value while overlooking its ecological, cultural, and ethical importance. Rather than stopping ecological degradation, these approaches frequently allow continued exploitation and degradation as long as economic compensation is provided. Therefore, capitalism expands its drive of accumulation by changing the natural world into an asset of profit.

Capitalist commodification also extends into biological life through biocapitalism, a system in which living organisms, genetic materials, and biological practices become instruments of economic gain. Colombino and Giaccaria (2016) assert that biotechnology, intellectual property rights, and genetic ownership have enabled biological life itself to be commodified. Their study of the commodification of Piedmontese Bull Semen demonstrates how reproductive capacities and genetic materials are converted into exchangeable commodities. Biocapitalism therefore

expands capitalist accumulation beyond labor and natural resources by integrating life itself into global structures of production and exchange.

One of the most vital representations of biocapitalism is the commercialization of disease and health. According to WHO (2023) dominant economic mechanisms frequently more give importance to market interests over human well-being, treating healthcare as an economic asset rather than a social investment. The COVID-19 pandemic revealed deep-rooted inequalities in access to healthcare and vaccines, revealing how life-saving resources are often shared according to purchasing power instead of human requirement. WHO (2023) further focuses on health, climate change, and inequality are interrelated crises determined by economic structures that privilege profit over collective welfare. Ecological degradation contributes to the spread of infectious diseases, while uneven healthcare systems accelerate social unsustainability. Disease must therefore be perceived not merely as a biological phenomenon but also as a political, economic, and ecological dilemmas.

The outcomes of capitalism expand beyond ecological and health crises to include expanding economic inequality and class division. Capitalist globalization has integrated wealth among a small minority while causing large populations subject to poverty, insecurity, and limited access to essential natural and economic resources. World Inequality Lab (2025) states that wealth remains highly concentrated, in spite of, continued global economic development. Similarly, Oxfam International (2026) asserts that continuing concentrations of wealth allow economic elites to exercise uneven influence over political establishments and public policy, while ordinary people continue to face escalating living costs and economic unsustainability. These patterns indicate that inequality is not an accidental or random consequence but a systematic feature of the ongoing form of capitalism.

Economic inequality is deeply connected with climate inequality and climate apartheid, by which the ecological burdens of climate change fall unevenly upon poorer communities. UNDP (2007) argues that developing countries and vulnerable and fragile communities face the most severe consequences of climate change, in spite of, contributing least to global greenhouse gas emissions. Ecological disasters, food insecurity, water scarcity, and declining public health unevenly affect economically marginalized and subjugated populations. UNEP (2024) similarly monitors that high-income countries consume significantly more natural resources and produce greater ecological exploitation, while low-income nations bear the heaviest ecological outcomes. Climate change therefore highlights broader patterns of social and economic inequality deeply-embedded within the global capitalist structure.

In conclusion, environmental breakdown, metabolic rift, planetary loss, the commodification of nature, biocapitalism, the commodification of disease, economic injustice, and climate injustice represent interrelated dimensions of the contemporary global crisis. Determined by capitalist systems of production, resource extraction, and profit accumulation, these crises threaten environmental sustainability, public health, and social justice on a global scale. Within this context, Michel Nieva's *Dengue Boy* offers a significant literary space for analyzing how environmental exploitation, disease commodification, and social inequality intersect under late-stage capitalism. By examining the novel through an Eco-Marxist framework, this study aims to illustrate the complex relationship between capitalism, ecology, disease, and social justice, thus contributing to a deeper understanding of the environmental and socio-economic challenges influencing the twenty-first century.

2. Literature Review

The existing scholarship on Eco-Marxism primarily analyzes the literature through the perspectives of social inequality and ecological devastation driven by capitalist system. But the

existing studies do not highlight how environmental degradation, technological advancement, and the socio-political are the direct consequences of contemporary capitalism. Therefore, this study aims to fill up this gap and explore how the late capitalism undermines and degrades the true value of nature and humanity by using technology, instead of using it to give benefits to humanity.

2.1 *Dengue Boy*

Berry (2025) describes that Michel Nieva's *Dengue Boy* depicts a dystopian Argentina where ecological collapse, virofinance, and integrate greed transform disease and human suffering into profitable commodities under hypercapitalism. Through the mutant protagonist's struggle and transformation, the narrative reveals the interrelated realities of ecological destruction, class struggle, and biocapitalist exploitation, demonstrating how capitalist systems commodify both nature and human life. Berry further argues that the novel shows the psychological and social outcomes of environmental displacement; however, the relationship between environmental collapse, the biocapitalist commodification of disease, and the combined dynamics of climate and social inequality remains underexplored in Eco-Marxist literary criticism. Thus, this study examines this gap by analyzing these interrelated crises through an Eco-Marxist framework.

Pearl (2025) examines *Dengue Boy* as a dark humor and anti-capitalist satire that combines cyberpunk aesthetics with dystopian fiction. He portrays that Nieva imagines a twenty-third-century Argentina destructured by pandemics, climate change, and integrate domination, where corporations profit from environmental collapse and disease. Pearl demonstrates the protagonist's transformation from a bullied mosquito-human hybrid into Dengue Girl as a symbolic act of resistance and revenge against capitalist elites. He further asserts that this transformation reinterprets monstrosity as a form of political resistance against oppression. Through grotesque and striking imagery, body horror, and satire, the novel reveals the interrelatedness of profit, ecological destruction, and human suffering, creating it a powerful critique of contemporary wave of capitalism.

Carroll (2025) interrogates *Dengue Boy* as a dystopian novel set in a flooded Argentina where climate catastrophe and virofinance have reformed society. He states that Nieva combines cyberpunk, body horror, and satire to depict a mosquito-human protagonist whose life of bullying and exclusion lead to a violent transformation. Carroll also underscores the novel's complex narrative structure and changing realities, which emphasize its speculative vision of the future. He demonstrates the novel's critique of ecological collapse, pandemics, corporate exploitation, and class stratification through speculative structures such as the Financial Virus Index. He concludes that the novel works as a powerful satire and allegory of environmental destruction, capitalist logic, and the marginalization of vulnerable populations.

Brookins (2025) examines *Dengue Boy* as a grotesque work of climate fiction that blends cyberpunk, cosmic horror, and eco-dystopian imagination to criticize late capitalism and environmental exploitation. He reinforces the novel's depiction of a future Earth destructured by global warming, where Dengue Girl aims to revenge against human suppression and planetary divide. Brookins further asserts that Nieva's different narrative style combines comic horror with unsettling imagery to escalate the novel's social and environmental critique. He elucidates that the novel uses dark humor, graphic violence, and grotesque imagery to examine ecological exploitation, social inequality, and virofinance, revealing how capitalist structures profit from ecological crises and disease.

Reynolds (2025) elucidates that *Dengue Boy* is a disturbing dystopian novel that weaves together technology, climate catastrophe, economics, and transformation. He demonstrates

the transformation of the mosquito-human protagonist into Dengue Girl as a symbol of resistance against social exclusion and capitalist exploitation. Reynolds also reinforces the protagonist's changing identities as a representation of self-discovery, empowerment, and rebellion against exploitative systems. He describes that the novel critiques ecological devastation, digital escapism, and virofinance through grotesque imagery, dark humor, and satire, thus empowering its criticism of capitalism and ecological breakdown.

Matt (2025) places *Dengue Boy* within speculative fiction, reinforcing its use of dystopian satire and grotesque imagery to critique environmental breakdown, nature commodification, and social injustice. He asserts that the protagonist's transformation from Dengue Boy to Dengue Girl indicates resistance against systemic exploitation and the reclamation of agency. Matt further demonstrates that the novel uses surreal technological elements and over exaggeration to depict violence and the dehumanizing outcomes of capitalist modernity. Thus, he concludes that Nieva effectively uses grotesque imagery, class division, and environmental decay to reveal the deep-embedded inequalities of contemporary society.

2.2 Research Gap

Existing Eco-Marxist studies mainly examine environmental exploitation resulting from capitalist production, resource exploitation, and class inequality. However, they pay less attention to newer ecological crises under ultracapitalism or late-stage capitalism, particularly the biocapitalist commodification of disease, health, and biological life. They also rarely examine the interrelated relationship between ecological collapse, climate vulnerability, and biomedical capitalism. Thus, this study fills this gap by examining *Dengue Boy* through an Eco-Marxist lens, focusing on environmental collapse, the commodification of disease, and the interconnection between social and climate inequality under ongoing capitalism.

3 Theoretical Framework

This theoretical framework analyzes the Eco-Marxist critique of capitalism by inspecting the interconnected concepts of metabolic rift, ecological crises, biocapitalism, and commodification of nature, life and disease, and class disparities under climate apartheid. It argues that capitalism is not merely an economic structure but also a systemic force that reforms relationships between humans, nature, health, and society through the purpose of accumulation and profit. By building on the works of Karl Marx, John Bellamy Foster, Kaushik Sunder Rajan, and others, the framework demonstrates how capitalist production produces environmental exploitation, commodifies biological life, deepens inequalities, and accelerates social and ecological vulnerabilities. Together, these critical concepts offer a critical perspective for understanding the structural links between environmental collapse, human exploitation, and the uneven distribution of environmental and economic ruins in contemporary capitalist societies.

3.1 Environmental Breakdown and Capitalism: Metabolic Rift, Ecological Crises, and Planetary Loss

Environmental breakdown or collapse and capitalism are deep-rooted and interconnected phenomena that show how modern economic structures contribute to ecological destruction at the large scale. Determined by continuous expansion, profit maximization, and resource extraction or depletion, capitalism positions huge pressure on natural processes, leading to climate change, deforestation, pollution, biodiversity loss, and ecological instability. From an Eco-Marxist approach, these crises are not accidental or random but systemic outcomes of capitalism. Marx reinforces unavoidable and inseparable relationship between humans and nature, stating that "Labour is, first of all, a process between man and nature... by which man... mediates, regulates and controls the metabolism between himself and nature" (Marx, 1976, p.

283). He also states that capitalist production destabilizes this relationship by fracturing “the metabolic interaction between man and the earth” and simultaneously degrading “the original sources of all wealth, the soil and the worker” (Marx, 1976, pp. 637-638). Therefore, the idea of metabolic rift contends how capitalism divides production from ecological limits, tiring both natural resources and human labor in the logic of limitless economic development.

Drawing on Marx's ecological perspective, Foster (1999) posits that capitalism generates a material separation of human beings from the natural practices of their existence, while Foster (2005) describes that the alienation of social metabolism from natural metabolism produces metabolic rifts in ecological processes. Similarly, Foster (2020), building on Engels, reinforces that humanity is an essential part of nature rather than its conqueror, although Foster (2022) asserts that capitalism inevitably degrades the ecological groundings upon which it relies. Foster, Clark, and York (2010) further describe that capitalist reliance on fossil fuels, unequal global exchange, and deforestation escalates climate change and planetary exploitation. Together, these arguments reveal that metabolic rift, ecological crises, and planetary damage are integrated outcomes of capitalist expansion, revealing the contradiction between endless economic growth and the Earth's ecological boundaries.

3.2 Capitalization of Nature

The commodification of nature means the capitalist system through which natural resources, ecosystems, and ecological conditions are converted into exchangeable commodities for economic purpose, while their environmental and social importance is marginalized. Under capitalist system, land, water, forests, and other life-giving systems are perceived as economic tools rather than essential processes for human existence. Foster, Clark, and York (2010) contend that capitalist responses to ecological crises often regenerate the same logic that produced them, examining that seeks to save the planet are followed “through the further expansion of capitalism itself... In reality, this vision amounts to little more than a renewed strategy for profiting on planetary destruction” (p. 105). They also argue that capitalism transforms ecological scarcity into new fresh opportunities for privatization and accumulation, especially through the financialization of common resources such as freshwater, this escalating ecological degradation instead of treating it.

Similarly, Foster (1999) states that capitalism weakens both social and ecological connections to monetary exchange, separating natural processes and turning nature into an instrument of endless exploitation. He asserts, “The only lasting connection between things is the cash nexus... under capitalism all social relations between people and all the relationships of humans to nature are reduced to mere money relations” (Foster, 1999, p. 121). This framework indicates that nature is esteemed primarily for its market value rather than its ecological significance, emphasizing ecological exploitation and ecological unsustainability. Hence, the commodification of nature is not an accidental consequence but a systemic feature of capitalism pushed by continuous accumulation, privatization, and profit purpose.

3.3 Biocapitalism and the Commodification of Life and Disease

Biocapitalism refers to a contemporary form of capitalism in which biological life, health, and disease become direct sources of economic gain and accumulation. Deeply embedded in Michel Foucault's concept of biopolitics, it describes a system in which living organisms, biological materials, and life processes are incorporated into market systems and shifted into productive resources. Peters and Venkatesan (2010) depict that capitalism expands beyond the exploitation of labour by converting life itself into a constant source of monetary value. From a materialist perspective, Foster (2000) posits that capitalism weakens both nature and human existence to site of exchange, while Foster, Clark, and York (2010), building on Mészáros, assert

that the biological reproduction of humanity becomes subjugated to the demands of labour, production, and capital accumulation or expansion. These perspectives show how capitalism increasingly expands its control over the very conditions that sustain life. Cooper further interrogates this contradiction by arguing, "As long as life science production is subject to the imperatives of capitalist accumulation, the promise of a surplus of life will be predicated on a corresponding move to devalue life" (Cooper, 2008, p. 49). She further states that the human body, biological reproductive capacities, and biological materials are increasingly changed into exchangeable assets, restructuring biological existence according to the purpose of economic gain and accumulation.

The commodification of life expands beyond biological existence to include health and disease. The commercialization of disease denotes the process through which illnesses, health conditions, and biological sensitivities are transformed into opportunities for economic purpose within capitalist structures. Foster (2022) asserts that ecological disruption driven by capitalist expansion contributes to the emergence of modern pandemics, transforming disease and health risks into new avenues for capital accumulation. Similarly, Rajan (2006) argues that pharmaceutical corporations integrate the flow of capital within the global drug economy, working much like investment banks in the growth and financialization of medicines. He further examines the concept of pharmacocracy, which Rajan (2017) states as a global system in which multinational pharmaceutical corporations shape health governance according to their own economic interests and logic rather than public wellness.

The marketization of disease further reveals how contemporary capitalism produces value from both existing and potential illness. Rajan (2017) argues, "This refers to the market value that pharmaceutical capital gains from the potential for future illness..." (p. 71), reinforcing those pharmaceutical markets profit from the potential of future disease rather than disease alone. He further states that capitalism continually extends the limits of disease itself in order to accelerate therapeutic consumption and market development. Thus, biocapitalism turns life, health, and disease into sites of profit-driven investment, where biological existence is controlled by market logic rather than human requirement, producing new forms of inequality, vulnerability, and exploitation.

3.4 Class Disparities and Environmental Apartheid under Capitalist Structure

Class disparities and climate apartheid illustrate interconnected forms of inequality integrate by capitalist structures. Class disparities denote the uneven distribution of wealth, power, education, and natural or economic resources, which structurally privilege elites while sidelining the working class and vulnerable communities. Silver (2015) says that social exclusion occurs when individuals and groups are not given equal access to opportunities and resources because of injustices related to class, income, gender, race, or region. From a Marxist perspective, these inequalities emerge the means of production in the hands of the bourgeoisie. As Marx and Engels (1992) argue, "The bourgeoisie... has concentrated property in a few hands. The necessary consequence of this was political centralization" (Marx and Engels, 1992, p. 15). They also describe that capitalist production decreases workers to mere objects of production through wage labor and the division of labor, making them economically dependent on capital system. Therefore, poverty, exploitation, and class inequality are not accidental process but systemic outcomes of the capitalist system.

Climate apartheid expands these social and economic inequalities into the ecological sphere by revealing poorer populations to the greatest ecological danger while wealthy elites remain comparatively guarded. Foster (2020) demonstrates that ecological hazards and epidemics are incorporated in poor districts where workers are compelled to live under unhealthy and risky

working conditions, indicating the unequal distribution of ecological burdens. Likewise, Foster, Clark, and York (2010) assert that the wealthiest people are responsible for the majority of global greenhouse gas emissions and extreme weather conditions, while poorer countries suffer the most severe outcomes of climate shift. Foster (1999) further states these inequalities to the historical legacy of colonialism and the international distribution of labor, which continue to convert ecological degradation toward developing and progressing regions. Briefly explaining this condition, Foster, Clark, and York (2010) assert it as “a philosophy of ecological apartheid” (p. 333), reinforcing that capitalist development structurally generates uneven social and ecological vulnerabilities worldwide.

In conclusion, the idea of metabolic rift, environmental collapse, biocapitalism, disease commodification, class division, and climate apartheid as a whole demonstrate the mechanism contradictions of ongoing capitalism. An Eco-Marxist perspective indicates that the capitalist purpose of profit and endless accumulation destabilize the relationship between humans and nature, accelerates ecological exploitation, and turn life, health, and disease into sources of economic gain. Simultaneously, these conditions expand social and ecological inequalities by unequally showing marginalized communities to poverty, ecological exploitation, and climate vulnerability. Therefore, ecological breakdown, biological exploitation, and class injustice should be treated not as separate problems but as interconnected consequences of capitalist growth, revealing the need for more equitable and sustainable social and economic alternatives.

4 Analysis

The analysis and discussion section involve with the Eco-Marxist framework critically analyzes *Dengue Boy* by Michel Nieva that how capitalist modes of production shape ecological exploitation, social inequality, and the commodification of life in the novel. It defines the key theoretical concepts or ideas such as metabolic rift, ecological crisis, biocapitalism, and climate or environmental apartheid in relation to their systemic representation in contemporary society. Building on the works of Marx, Foster, Cooper, and Rajan, this section examines how capitalism expands beyond economic relations to reproduce nature, health, and human existence through mechanisms of accumulation and control. In doing so, it offers a critical discussion of how *Dengue Boy* presents that environmental and social problems are not separated phenomena but interrelated consequences of the same capitalist logic.

Berry (2025) deciphers that Michel Nieva’s *Dengue Boy* is a dystopian, grotesque novel that envision a near-future world destructed by environmental collapse, pandemics, and hyper-capitalist exploitation, where environmental breakdown in flooded Argentina and the geoengineered Antarctic Caribbean is depicted as a direct consequences of capitalism, colonial extraction, and technological control of nature through satire, body horror, and speculative fiction, the novel demonstrates how environmental destruction, disease, economic and social injustices are systematically generated and incorporated into profit-driven mechanisms. Its characters represent this collapse: Dengue Boy later Dengue Girl and Dengue Void is a human-mosquito hybrid whose mutated body demonstrates ecological and capitalist violence and grows from a marginalized child into a troubling, boundary-breaking figure; El Dulce symbolizes the internalization of capitalist cruelty, changing from exploited childhood violence into the integrate identity Noah Nuclopio; René Racedo reflects elite alienation in violent virtual realities, while her father’s virofinance engagements highlight elite profit from crisis; and Dengue Boy’s mother represents working-class precarity and broken family structures under systemic exploitation

4.1 Metabolic Rift: A Process that Leads to Environmental Collapse

Environmental breakdown and capitalism are deeply connected phenomena that reveal how modern economic systems contribute to large-scale ecological devastation. In *Dengue Boy*, Michel Nieva elucidates a dystopian future in which environmental collapse arises as a direct outcome of capitalist accumulation, ecological exploitation, and technological control over nature. The novel presents Karl Marx's concept of the metabolic rift, which describes how capitalism destabilizes the material relationship between humans and nature through constant extraction, commodification, and market-driven production. Expanding Marx's theory, Foster (2005) asserts that capitalism disconnects social metabolism from natural metabolism, generating ecological imbalance and ecological crises. This idea is portrayed in the novel through the complete financialization of ecosystems. As the novel states, "AIS's ultimate mission was to turn ecosystems into merchandise, products reproducible on a huge scale and at a low cost" (Nieva, 2025, p. 64). By changing forests, plants, and ecosystems into exchangeable commodities, capitalism limits nature to exchange value rather than identifying it as the foundation of life. The novel therefore illustrates that capitalist production remnant the relationship between humanity and nature, accelerating ecological exploitation and worsening the metabolic rift.

The novel also connects ecological destruction to the emergence of disease and zoonotic crises, suggesting that environmental breakdown directly produces biological instability. As the writer of the novel states:

Due to the total deforestation of the Amazon and all the forests in China and Africa, hundreds of thousands of previously unrecorded viruses now appeared every year... zoonotic pandemics, which were quickly transformed by the La Pampa Stock Exchange into highly valuable subjects of speculation. (Nieva, 2025, pp. 94-95)

The outcomes of this disrupted relationship become evident through the rise of pandemics and global climate disaster. The novel describes that pervasive deforestation in the Amazon, China, and Africa leads to the appearance of countless new viruses, which are subsequently transformed into objects of financial speculation on the La Pampa Stock Exchange. This illustrates that ecological exploitation not only fractures natural ecosystems but also creates biological problems that capitalism immediately transforms into economic opportunities. Similarly, Nieva says the melting of Antarctic ice and the transformation of Patagonia into scorching islands after rising sea levels, illustrating the planetary outcomes of unchecked and incorporated capitalist expansion. Foster (2022) interrogates that capitalism has expanded the metabolic rift beyond local ecosystems to the planetary level, generating climate change and ecological instability at the global scale. Through ecological devastation, zoonotic disease, and climate collapse, the novel presents ecological crises as systemic outcomes of capitalist expansion rather than accidental natural catastrophe.

Overall, *Dengue Boy* provides a powerful literary representation of Marx's concept of the metabolic rift and Foster's Eco-Marxist critique of capitalism. Through the commercialization of ecosystems, technological domination of nature, the rise of pandemics, and planetary climate collapse, Nieva indicates that environmental crises are structural consequences of a capitalist system that emphasizes limitless accumulation over ecological sustainability.

4.2 Commercialization of Nature

Commercialization of nature refers to the capitalist process through which natural resources, ecosystems, and ecological practices are transformed into exchangeable commodities for economic gain while their ecological significance is overlooked. In *Dengue Boy*, Michel Nieva depicts a world where nature is completely integrated into capitalist systems of production, circulation, and profit, highlighting the Eco-Marxist standpoints of Foster, Clark, and York

(2010) and Moore (2015), who contend that capitalism limits nature to exchange value and integrates ecological processes into limitless accumulation. This financialization is most truly demonstrated when the novel claims, "AIS's ultimate mission was to turn ecosystems into merchandise, products reproducible on a huge scale and at a low cost, like cell phones or laundry machines" (Nieva, 2025, p. 64). This quotation indicates that ecosystems are no longer perceived for sustaining life but are regarded as industrial or material products produced for corporate profit. Furthermore, it also demonstrates that pervasive deforestation in the Amazon, China, and Africa unleashed countless new viruses, which were subsequently transformed by the La Pampa Stock Exchange into highly profitable objects of financial speculation. Through this portrayal, the novel reveals that capitalism not only degrades nature but also produces profit from the ecological crises it generates. Thus, *Dengue Boy* presents a powerful Eco-Marxist critique of the marketization of nature by highlighting how ecosystems, ecological destruction, and planetary crises are turned into commodities for progressing capitalist accumulation.

4.3 Biocapitalism: Commercialization of Body and Disease

Biocapitalism refers to a contemporary form of capitalism in which biological life, health, and disease become direct sources of economic value and profit. In *Dengue Boy*, Michel Nieva depicts a dystopian world where reproduction, disease, and biological existence are fully incorporated into capitalist systems of accumulation or expansion through genetic experimentation, reproductive exploitation, virofinance, and the commercialization of pandemics. This portrayal aligns with the standpoints of Foster, Melinda Cooper, and Kaushik Sunder Rajan, who claim that contemporary capitalism turns life itself into a market commodity. The commodification of life is demonstrated through the Victorica experiment:

An English laboratory had infected the uterus of several Victorica women with doctored larvae in exchange for a paltry sum, with the objective of engendering a new transgenic race, the Great Dengue Mosquito... But the experiment had gone wrong. Or, rather, too well. And the outcome had been Dengue Boy, a mutant, murderous abomination with the capacity to procreate more abominations like him at great speed. (Nieva, 2025, pp. 71-72)

This passage highlights how women's reproductive bodies are degraded to instruments of capitalist production, revealing the exploitation of vulnerable communities for scientific innovation and economic purpose. Similarly, the novel also highlights that Dengue Girl is genetically produced so that the virus within her body escalates corporate share value, illustrating that human life itself is engineered as a profitable economic asset.

The novel further expands this critique through virofinance, where Nieva says specialists recognizing emerging viruses, estimating their economic potential, and changing future pandemics into opportunities for financial speculation. Disease is therefore no longer perceived as a public health crisis but as a commodity capable of producing economic value. This logic touches its extreme when the novel states:

Thus, as the mosquitos proliferated and became an out-of-control, unstoppable plague... the packages put together by AIS Influenza Financial Services-YPF and Ebola Holding Bank... naturally skyrocketed... In this way, the wager made by capitalism on the planet's greatest ever epidemiological catastrophe had become the primary motor of financial speculation. (Nieva, 2025, pp. 111-112)

This quotation highlights how ecological decay, pandemics, and pharmaceuticals become interconnected from financial markets, enabling corporations to get profit directly from pervasive human suffering. Through this dystopian vision, *Dengue Boy* signifies that under biocapitalism, disease itself becomes one of capitalism's most valuable and economic

commodities, revealing the intense ecological, social, and moral outcomes of transforming life into capital for financial gain.

4.4 Class Stratification and Climate Apartheid under Capitalist Structure

Class stratification and environmental apartheid in *Dengue Boy* are presented as inseparable consequences of an oppressive capitalist system that divides wealth, resources, and environmental security unequally across society. The novel depicts a world in which economic power identifies not only living conditions but also access to safe environments, health, and opportunities and conditions. This portrayal aligns with the critiques of Marx and Engels and Foster's Eco-Marxist viewpoints, which argue that capitalism emphasizes wealth and ecological benefits in the hands of a wealthy elite while subjugating marginalized communities to poverty and ecological devastation. The contrast between these unequal realities is evident when the novel describes Dengue Girl living in "the corrugated iron shack she lived in with her mother... having to compare her shabby hut with the opulence of this rich city" (Nieva, 2025, p. 46). This stark comparison identifies that wealth and ecological security are allocated for the privileged, whereas the poor remain trapped in conditions of scarcity and social exclusion. In the same way, the novel posits that Dengue Boy's mother works continuously each day only to support her son, emphasizing Marx's argument that capitalism maintains the working class only as a source of labor while focusing on wealth among those who own the capital system. The novel further uncovers ecological apartheid through the unequal division of ecological spaces. Nieva notes that "the best resorts... were the exclusive property of private hotels... Common folk... only had access to the public beaches... a wretched dumping ground for plastic and other trash" (Nieva, 2025, p. 19). This passage highlights that clean and guarded environments are privately owned by wealthy elites, while polluted and hazardous spaces or regions are left for the poor. The uneven access to ecological resources highlights that ecological protection itself becomes a luxury controlled by economic status rather than a universal right.

Furthermore, the novel also asserts that Dengue Girl's amazement when she faces privileged urban areas filled with parks, trees, and recreational spaces that she had never previously experienced. This narrative further demonstrates how capitalism divides ecological benefits according to class division, generating both economic and ecological injustices. Through these depictions, *Dengue Boy* highlights that class division and environmental or ecological apartheid are mutually emphasizing conditions in which wealth offers protection from ecological problems, while poverty escalates exposure to pollution, disease, and ecological exclusion, providing a powerful Eco-Marxist critique of capitalist inequality.

5 Conclusion

In conclusion, Michel Nieva's *Dengue Boy* displays a powerful Eco-Marxist critique of hypercapitalism by depicting a future in which ecological destruction, biological life, and social existence are fully integrated into capitalist systems of accumulation and domination. The novel describes that environmental exploitation, biocapitalism, the commodification of nature and disease, and class-based climate inequality are interrelated outcomes of capitalist expansion rather than separate crises. Through virofinance, genetic experimentation, and environmental exploitation, Nieva demonstrates how capitalism turns both life and nature into exchangeable commodities while widening social and environmental inequality. Finally, *Dengue Boy* alerts that the unregulated commodification of ecosystems and biological life result in irreversible environment collapse and human exploitation, reinforcing the vital need for more just and ecologically sustainable substitutes. Its critique also resonates with contemporary global inequalities, where economically and politically powerful nations often exercise

dominance over underprivileged nations through the exploitation of natural resources, ecological destruction, and unequal access to wealth and security. From an Eco-Marxist standpoint, such uneven power relations further highlight how capitalist expansion persists to intensify environmental crises and social injustice worldwide.

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