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## **‘To Learn from Nature, not to Exploit Her’: Discerning Postcolonial Green Speculations in Vandana Singh’s *Indira’s Web and Widdam***

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### **Abstract**

As a new generation of writers and artists from the Global South deal with the effects of human-caused environmental damage and climate change, they rely heavily on science fiction and fantasy as a genre to show the most important parts of the Anthropocene. Due to the geographical peculiarity and history of the colonial past, the Global South experiences inequitable effects of the Anthropocene as compared to the Global North. Therefore, speculative climate fiction from the Global South demands a critical interpretation contextualized in the geopolitics of the Global North and the Global South. The paper discusses the manner in which science fiction anchors ecological consciousness in the narratives from the Global South and further strives to depict the specific traits of Global South SF that make it different from Global North SF. This study intends to investigate two short stories, *Indira’s Web* and *Widdam*, by an Anglophone science fiction writer, Vandana Singh. The paper demonstrates how Singh’s stories, firstly, subvert the hegemony of western sciences by legitimizing indigenous knowledge systems as scientific, rational, and eco-friendly, and, secondly, criticize the need for technological and neo-colonial advancements at the cost of our environment. With the analysis of these stories, it would be argued that postcolonial futuristic fiction not only acts as a tool to question anthropocentrism but also functions as an appropriate literary form for enunciating environmental crises and climate change affecting the Global South.

**Keywords:** Science fiction; climate change; climate fiction; the Anthropocene; the Global South; the Global North.

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## Introduction

The term green writer is a common way of referring to writers who cultivate literary and cultural narratives about environmental issues and ecology in general. Since we live in the Anthropocene, a geological epoch of rapid climate change caused by exploitative human activities, literary narratives can no longer be centered just around humans. Timothy Morton, in *Hyperobjects*, says that history can no longer be traced exclusively as the story of humans; it intersects with environmental transformations throughout the human timescale (2013, p. 2). By integrating the anthropogenic crisis into literary works, green writers attempt to investigate how environmental degradation, climate change, and global warming affect landscapes, humans, non-human nature, and their ecosystems. Adam Trexler, in *Anthropocene Fictions* (2015), argues that the conventional climate change narratives are restricted by the parameters of the existing story telling template, which finally calls for an innovation in the form (p. 14). Mainstream literary realism concerns itself mainly with the everyday dimensions of individual affairs and the politics of the nation. It cannot scale up the boundaries of human imagination and, therefore, remains disabled to engage with the extraordinary effects of the Anthropocene (Ghosh, 2016, p. 59). Science fiction contrarily scales up human imagination by actively engaging with extraordinary and revolutionary episodes of tracing new planets, meeting strange aliens, and various technological advancements. It focuses on human entanglement with not only the technological but also the environmental others. Ursula K. Heise, in her work, *Science Fiction and the Time Scales of the Anthropocene*, how science fiction can be seen as effectively engaging with the climate change motifs. She says:

[...] in a certain sense, the Anthropocene idea itself relies on a science fiction conceit by inviting us to look at our present through the eyes of a future geologist studying the Earth's strata millions of years hence. This anterior future, now standard in narratives about the future of the planet, has always been the purview of science fiction as a genre. (Heise, 2019, p. 301)

The narratives depicting the socio-cultural aspect of the Anthropocene need to confront its current challenges and simultaneously look at its potential future dimensions and its effects on ecosystems and humans. Science fiction's innovative authorial imagination can accommodate the detrimental effects of the Anthropocene that we are currently facing, and at the same time, the genre's elevated timescale effectively holds the future dimensions of climate change. Through speculative science fiction, we get a futuristic preview of how and to what extent ecology can be disrupted due to human exploitation. Therefore, green writers across the world consider speculative science fiction as a genre more effective in addressing the effects of the Anthropocene than mainstream realist fiction. However, the narratives of science fiction from different parts of the world are not similar because the effects of climate change vary across the globe.

## Postcolonial Green Speculations

This paper, in particular, focuses on climate science fiction from the Global South because the effects of climate change and environmental degradation are not equitable across the world. Owing to its geographical location, colonial history, and geopolitics of nations, the Global South experiences far more extreme effects of the Anthropocene than the Global North. Therefore, climate science fiction from the Global North differs widely from the

science fiction asserting ecological concerns from the Global South. Postcolonial critics, like, Upamanyu Pablo Mukherjee, Rob Nixon, and Dipesh Chakrabarty have contended that analyzing climate change as a transnational and transcultural issue expunges the geographical differences and power structures that continue to shape who suffers from environmental crises (Mukherjee, 2010; Nixon, 2011; Chakrabarty, 2012). The marginalized poor population and dispossessed communities have the least contribution to the ecological crisis, yet they are the most vulnerable to climate change. Gore states that:

the poorest half of the global population—around 3.5 billion people—are responsible for only around 10% of total global emissions attributed to individual consumption, yet live overwhelmingly in the countries most vulnerable to climate change. Around 50% of these emissions meanwhile can be attributed to the richest 10% of people around the world [...]. (2015, p. 1)

There is an evident impact that the Global North is having on the Global South's environment. The Global South has been encountering a major human susceptibility to climate change, which includes rising sea levels, frequent floods, cyclones, heat waves, and other natural disasters. The Anthropogenic crisis has been acting out in specifically biased ways because the region's history of colonialism and industrialism intersect with the human and non-human environment. Jason Hickel, an anthropologist and a lecturer at the University of London, in an empirical study, *Quantifying national responsibility for climate breakdown* (2020), exhibits that the Global North generated 92% of the carbon emissions. Contrarily, the Global South was within the limiting boundary of their "fair shares" (2020, p. 399). He further states how the results of his study demonstrate "atmospheric colonization":

A small number of high-income countries have appropriated substantially more than their fair share of the atmospheric commons. Just as many of these countries have relied on the appropriation of labour and resources from the Global South for their own economic growth, they have also relied on the appropriation of global atmospheric commons, with consequences that harm the Global South disproportionately. (2020, p. 403)

By expanding its neocolonial power structures in the developing countries, the Global North jeopardizes the ecological balance and socio-economic sustainability of these societies. The expansion of neocolonial and capitalist structures at the expense of the environment of the colonized societies has established an ecological and economic rift between the imperial powers and the postcolonial countries. Due to this rift, the "effects of climate change are mediated by the global inequities we already have" (Chakrabarty, 2012, p. 9). Thus, when we talk of the Global ecology and environmental issues, the narratives from postcolonial countries need to be mentioned with more emphasis on their inequitable encounters with the Anthropocene.

The 1990s peddled an age of rapid industrialization and capitalism in the Global South, directing the region's gaze towards a technologically advanced future. Seeking capitalist modernity, societies from the Global South moved relentlessly towards the excessive misuse of environmental resources and ecological degradation, the consequences of which were depicted in "Anthropocene Fiction" (Trexler, 2015), set in a futuristic context. These speculative narratives from the Global South are inevitably conscious of the aftermath of exploitative colonial rule and simultaneously possess a critical awareness of the ecological

and social crises afoot in the region. Postcolonial writers, therefore, increasingly turned to science fiction and fantasy as a genre to “express opposition to the political, military, economic, environmental, and cultural imperialisms that the world currently faces” (Leggatt, 2010, p. 127). As discussed above, the effect of the Anthropocene is unequivocal for the two economically divided parts of the globe, therefore, the science fiction depicting the effect also differs widely. Science fictions from the Global North represent technology in the form of computer algorithms, artificial intelligence, robotics, etc., to serve humanity on a planet wrecked by environmental degradation. The legitimacy of the western sciences and technoculture has been established on the basis of geopolitical power dynamics. Therefore, early science fiction from the Global North has frequently been recognized as affiliating with imperialist ideology, which discredits non-European traditional sciences. Contrarily, the narratives from the Global South consider the western idea of capitalist techno-modernity as exploitative and depict scientific technology in ways that differ from those of the Global North. Due to the history of colonization, the local sciences and knowledge systems were considered inferior and unscientific. However, it finds revival in the ectopic science fiction of the Global South. By bringing in indigenous practices that were not ecologically exploitative, postcolonial science fiction decolonizes the way colonial knowledge systems were perceived and destabilizes the institutional prejudice attributed to them. According to Karmakar and Ghosh, “Postcolonial SF is distinguished by the polyphonic coexistence of diverse indigenous epistemic traditions that counter the monolithic rhetoric of the western techno-scientific approach” (2022, p. 9). Thus, in a world where environmental crises impact marginalized nations and communities inequitably, envisioning the potential future through science fiction turns out to be an act of resistance for postcolonial green writers.

There exists a rich and vast corpus of postcolonial science fiction assessing the region’s unattended environmental issues. There are several science fiction writers from the Global South, like Anil Menon, Manjula Padmanabhan, S. B. Divya, Samit Basu, Usman T. Malik, Bina Shah, Haris Durrani, Saad Z. Hossain, Vajra Chandrasekera, etc., who investigate the effects of the Anthropocene on the contemporary postcolonial countries. This paper will be exploring the futuristic works of Vandana Singh, a widely acknowledged contemporary Anglophone science fiction writer from South Asia. Her narratives, being rooted in a distinct cultural and colonial past, undertake the task of articulating a more nuanced representation of climate change and environmental depredation. Vandana Singh herself comprehends postcolonial science fiction as a “process of personal and collective discovery, an ability to apply, transform, and invent new tools from the ruins of empire and the long arc of history [...]” (Baishya, 2021, p. 8). This study intends to investigate two of Vandana Singh’s short stories, *Indira’s Web* and *Widdam*. *Indira’s Web* is ecotopic in character and postulates the grisly realities of the cross-border movement of poverty-stricken refugees from Bangladesh, submerged due to environmental catastrophe, to India’s capital city, Delhi. The sudden gush of refugees made the overburdened city deliberate on substituting energy production in the form of “Suryanet,” which attempts to endow the posthuman subjects with a revolutionary energy grid and a fully globalized Indian subcontinent. At the same time, *Widdam* foretells the future of climate change in South Asia in an eco-dystopian way. The major part of the story is based in an Indian city, Delhi. The city is revealed to be a part of the world that is hit hardest by the heatwaves and intoxicating pollution caused by global climate breakdown. The rampant industrialization and capitalism in Delhi signify contemporary neocolonial practices of exploiting and extracting natural resources from postcolonial countries, consequently amplifying the intensity of ecological disasters. The environmental injustice in postcolonial society due to unequal distribution of

resources revives potential dissenters like Dinesh, Val, and Jan. By attempting to rig the governmental system with cybernetic and robotic technologies, these revolutionaries attempt to fight the oppressive system, sustained by a ruthlessly proficient machine called, WDWM (World Destroying World Machine), also called Widdam.

The paper proposes to read the above-mentioned postcolonial speculative narratives from an ecocritical perspective and would argue that the emerging science fiction serves as an inventive literary alternative for articulating environmental crises and climate change affecting the Global South.

### **Deep Ecology and Indigenous Ecotopia in Vandana Singh's *Indira's Web***

Vandana Singh's *Indira's Web* reflects the primary perspectives of deep ecology. Bill Devall defines deep ecology as "a way of developing a new balance and harmony between individuals, communities and all of Nature" (1985, p. 7). The transformative environmentalism of deep ecology essentially advocates reducing human impact on Earth, preserving biodiversity, residing in small, self-reliant communities, and substituting sustainable modes of economic and energy production. The major principles of deep ecology resonate highly with the values of indigenous approaches and traditions rooted in postcolonial cultures. In *Indira's Web*, while establishing an entanglement of ecology and postcolonial cultures, Singh emphasizes the retrieval of indigenous knowledge and traditional sciences. She reflects all the ideals of deep ecology in her futuristic work, *Indira's Web*. The short story is an ecotopian work of science fiction that depicts the harmonious co-existence of nature and technology as a potent tool to revive an ecologically conscious way of being in the modern world. Ecotopian fiction holds an efficiency in not only articulating the principles of deep ecology but also creating a desire for its values. Eric. C. Otto, in *Green Speculations*, discusses the importance of ecotopian science fiction in propagating deep ecological values:

Telling influences on deep ecology exist [...] in utopian science fiction literature that attends to the illusory divide between humans and other-than-human nature. The societies imagined in these ecotopias avow both the intrinsic value of non-human nature—its value apart from its utility for humans—and the importance for humans to act within, not outside of, natural dictates. (2012, p. 48)

The utopian ecologies are a radical break from the prevailing capitalist and anti-ecological ways of the modern world. Ecotopia, therefore, actively emphasizes the prospect of living with indigenous scientific practices that are ecologically sustainable. On similar lines, deep ecology asks for "significant ethical, epistemological, and ontological reorientations in a modern world" (Otto, 2012, p. 48). Singh's story envisions an ecotopian habitat called Ashapur, located at the edge of Delhi. The fictive place was formerly a slum, but after a consistent effort of 10 years, it was transformed into an ecological and technological revolution. The city was primarily inhabited by climate refugees from Bangladesh and had been entirely remodeled using dignified methods and technologically advanced approaches. Here, Singh paints the city as deeply ecological yet technologically advanced:

[...] an uneven carpet of green and silver- roof top gardens broken by the gleam of solar panels, and corridors of native trees, neem, khejri, gulmohar, running down the hills from her forest like green arteries through the settlement. (Singh, 2011, p. 10)

Deep ecologists identify “anthropocentric instrumental rationality as the driver of dominant, anti-ecological socio-economic and cultural ways of thinking and being” (Otto, 2012, p. 45). This explains that the anthropogenic nature of colonial modernity has washed away the local idea of an indigenous city where the architecture was dependent on the regional knowledge of climate, culture, and history. The postcolonial ecotopian science fiction explores the futuristic potential of indigenous epistemological systems and destabilizes the hierarchy of modern Western sciences. Sandra Harding, in *Sciences from Below* (2008), asserts the value of “traditional environmental knowledge” and “indigenous knowledge” and identifies it as a counter-narrative to the Western sciences and colonial modernity (2008, p. 138). *Indira’s Web* features diverse epistemological practices and indigenous beliefs that are rendered as scientific and logical as their Western equivalents. Singh offers a charming interplay of techno-science and local lifestyle. For instance, the roads across Ashapur followed a technically enhanced version of the age-old slum pattern. “The narrow roads were not built on a rectangular pattern but instead were curving, moving obligingly around an ancient peepul tree or dwelling” (Singh, 2011, p. 10). This pattern of roads moving along trees not only allowed room for people to gather over discussions but also provided shade for wandering animals, like cows and dogs, to rest. The city roads simultaneously sanctioned space for technological advancements in the form of internet cafes and agricultural research centers.

Ecotopian fiction energizes deep ecology’s notion of ecological equilibrium, which encompasses a harmonic balance of human and non-human nature. (Otto, 2008, pp. 58–59) Just like, the indigenized architecture of Ashapur had:

Large, coarse, fewer pathways for cars; smaller, more dense ones for people. And for other animals as well as people, the green corridors that branched into the city, maintaining biodiversity and the psychological benefits of closeness to nature, while providing Ashapur with cooler summers, seasonal supplies of fruit and nuts, and raw material for a new cottage industry in crafts. (Singh, 2011, pp. 10–11)

The colonizers imposed western sciences on the colonized societies with the belief that they would bring social and economic enlightenment to these countries. This colonialist ideology undermined the diverse traditional sciences and sustainable indigenous approaches. Gayatri Chakravorty Spivak refers to this subjugation as “epistemic violence” on the natives by the settlers. She describes it as the subjugation of ‘set of knowledges’ as inadequate and unscientific (Spivak, 2005, p. 76). *Indira’s web* projects how this sort of cultural violence eclipsed the local indigenous architecture of cities, which accommodated the human and non-human environment equally rather than constructing it just for cars, buildings, and other signifiers of colonial capitalist modernity. In the story, one of the potential foreign funders for the Ashapur project asks, “Why this town so untidy? There is no order, no proper grid for the streets. It looks very inefficient. And the roads are too narrow for the traffic flow! Where are your cars?” (Singh, 2011, p. 10). The colonial mindset of rejecting any structure that doesn’t conform to the European idea of a city as inefficient is subverted in this story, which successfully exhibits the efficiency of indigenous architecture. Arne Naess, the ecologist who coined the term deep ecology, sponsors the idea of reinforcing bioregional sovereignty in the form of “local autonomy” and “decentralization” (1995, pp. 153–4). Deep ecology, thus, encourages establishing self-governing democratic communities, harvesting local resources, and reforming local economies. Singh’s ecotopian city is also painted as self-reliant and autonomous with respect to food and energy:

Four solar plants making hydrogen from the breakdown of water; sewage-fed biogas plants; enormous energy savings from building construction and layout—none of the buildings needed air conditioning; numerous roof tops with solar panels; even greater energy savings from the fact that these former villagers were traditionally energy efficient, living in clusters, throwing away nothing, reusing almost everything. (Singh, 2011, p. 10)

The plot clearly reflects on the potencies of forming local communities and bioregional autonomies. In Ashapur, food, energy, and building materials are sourced locally, producing healthier indigenous systems. Practices like building houses by the dwellers themselves with the traditional material—“a hard mixture of mud, straw, rice husk, surfaced with a lime-based plaster” (Singh, 2011, p. 10)—made the city even more optimal for living. This provincial method was used by generations of indigenous people, but later, with the arrival of colonial capitalism, it was forgotten. These environmentally sustainable houses in Ashapur “survived nearly ten years of baking heat and monsoon rains” (Singh, 2011, p. 10). Like the traditional houses, there were indigenous simmer-pots made of mud and straw mixed in different proportions. These pots were good insulators and kept the cooking going for hours after a little simmer of 2 minutes on the stove. The traditional method was used for centuries by the local indigenous people, and it was revived with Ashapur's transformation. Simmer-pots brought down a considerable level of human energy consumption, making the city energy efficient. These local traditional practices can be read as what Grace L. Dillon calls “Indigenous scientific literacies” Dillon defines it as techniques “used by indigenous native people to manipulate the natural environment in order to improve existence in areas including medicine, agriculture, and sustainability” (2007, p. 25).

On the contrary to an anthropocentric perspective, deep ecology postulates “the fundamental interdependence of all phenomena and the fact that, as individuals and societies, we are all embedded [dependent] in the cyclical processes of nature” (Capra, 1996, p. 6). David Landis Barnhill and Roger S. Gottlieb state:

the anthropocentric view that human beings are (because of intelligence, technology, science, political life, language, the soul, etc.) categorically different from their surroundings; or the individualist view that sees people essentially as individuals, who form relationships with other beings but are not constituted by those relationships. Thus, for deep ecology, our kinship with nature penetrates deeply into the essences of who we are. (2001, p. 7).

Singh aligns with the idea of interdependence between human and non-human nature rather than advocating individualism. The protagonist of the plot, Mahua, is a scientist who is working on substituting energy production through a grid named Suryanet, which is based on a real environmental phenomenon known as the Mycorrhizal Network (myconet). It is an underground fungal network through which plants communicate and exchange nutrition.

There is a fungal network, a myconet, a secret connection between the plants of the forest. They talk to each other, the acacia and the shisham and the gulmohar tree, in a chemical tongue. They communicate about pests, food sources, the weather, all through the flow of biomolecules through the fungal hyphae. (Singh, 2011, p. 9)

Singh's speculative extension of it employs this real biological concept of networking within plants to build a fictive, revolutionary energy grid for human energy consumption. Mahua's scientific invention is representative of scientific development in a postcolonial society. This grid is not only a technological achievement; it is also suspected of having its own forms of agency. Mahua detects that Suryanet has been generating decisions on its own, coercing her to suspect, "Does a sufficiently complex network give rise to its own wisdom?" (Singh, 2011, p. 13). By illustrating that technical advancements can be inspired by ecological phenomena, the plot blurs the boundaries between humans and the natural world. Deep ecology locates a profoundly spiritual bond among all forms of life and endorses ecological equilibrium and egalitarianism rather than beholding "nature" as a mere environmental object in the backdrop of human existence. For Mahua, "forest was where she got her best ideas; it was an eternal source of inspiration" (Singh, 2011, p. 9). As a kid, she was diagnosed with apophenia, a psychological disorder of perceiving networks and connections. Soon Mahua realized that nature has an abundance of secret communication channels and that energy is the key currency of all these communications. Later, she herself becomes a part of a "revolution that might just save our earth from the climate crisis. One that comes up with not just new technologies, but new ways to live that are more whole, deep, and satisfying than anything you've known" (Singh, 2011, p. 11). The revolutionary invention was a utopian energy grid, Suryanet, which would donate power to the Delhi grid, making the whole country energy efficient. Mahua, with this revolution, aims to create an alternative modernity that is counter narrative to the European concept of enlightenment and modernity. Singh incorporates elements from the alternative sciences of the Global South to prove that the local knowledge systems are not only viable and scientifically correct but ecologically sustainable as well. The story ends with the depiction of the experiment as a deeply ecological revolution that would bring hope to a world wrecked by the climate crisis. Mahua, thus, "loves this marriage of the traditional and the new, the forest and the city, this great experiment, this marvel that is Ashapur, City of Hope" (Singh, 2011, p. 13).

### **Deep Ecology and Eco-dystopia in Vandana Singh's *Widdam***

This section of the paper would be reading Singh's eco-dystopia, *Widdam*, in dialogue with the doctrines of deep ecology. Reading ecotopian discourses alongside the visions of deep ecology is more about highlighting and manifesting the potential of an ecologically sustainable mode of life, while eco-dystopian narratives facilitate in correcting and motivating the society towards the fundamentals of deep ecology. Eco-dystopia explicitly reflects the harrowing effects of not altering our exploitative modes of production and consumption. By doing so, it tries to criticize and modify anthropocentrism. With its dystopic and vexing accounts of ecological and social collapse, Singh's *Widdam* makes it evident that the anthropocentric and anti-ecological way of life may lead us to a destructive future. According to Eric C. Otto, eco-dystopias are corrective in nature. He says, "by extrapolating atrocious global futures from some very present and real situations, they not only concentrate our attention on the most critical matters but also question the viability of the ways we choose to act going forward" (2012, p. 61). Thus, Singh's dystopic discourse has an implicit utopic drive to better a world struggling with contemporary Anthropogenic crises. Ulrich Beck, in *World at Risk*, claims that catastrophic narratives are important to mobilize readers' attention and concern because "this constant danger shapes our expectations, lodges in our heads and guides our actions, it becomes a political force that transforms the world" (Beck, 2007, pp. 9–10).



Over the past decade, several postcolonial science fiction writers have tried to caution the readers about the risks involved in Anthropocentrism, through eco-dystopic narratives. The apocalyptic tone of dystopia predicts a potential doom and gives readers a sense of urgency that actions must be taken to avert the disastrous consequences of the Anthropocene. However, the apocalyptic narratives from the Global South differ from the western narratives, which speculate on the future from a privileged position in the Global North. While depicting the ecocritical perspectives from the Global South, dystopic narratives indicate how countries of the Global South are closer to the potential future climate catastrophe than the Global North. In the story, there are three main dissenters, Dinesh, Val, and Jan, each from a different part of the earth, who are hopelessly struggling to save a world frenzied with the dire consequences of global warming, climate change, and ecological destruction. However, Delhi, out of the other locations, is depicted as a city that is hit the hardest by climate change. Vandana Singh speculates that Delhi, a South Asian city, is drowning in heatwaves and intoxicating pollution:

[...] the water smells metallic and slightly foul, comforting in its familiarity...the walls and steps are grimy with soot and other pollutants, but the city itself is an impressionistic painting, all clean lines smudged by the brown air, the sun orange and blurry as a child's water-color painting...The pollution has fingers — he can see them reaching out between the buildings, around the choked trees. (Singh, 2018, p. 7)

Apocalyptic narratives are, therefore, different in the Global South, where life may entail more struggles than in the Global North. The author envisages splendidly polluted panoramas and destructive machines wandering the wasteland throughout the description of Delhi. Dinesh aims to hunt the monstrous beast behind the socio-ecological devastation of Delhi. This monstrous beast is the WDWM (World Destroying World Machine), also known as Widdam. Widdam is a network of artificially intelligent mega-machines, saurs, and rigmothers based on the cybernetic codes of technologically advanced robotics. Dinesh describes the megamachine as monsters as having “a great serpentine body segmented like a worm but more massive than any worm that's lived on this Earth. Its face is in the shape of a star, its mouth hole protrudes like a hollow tongue, enormous and prehensile when it is feeding, delicate as a mosquito's proboscis when it is searching for food. The monster's eyes, atop the stalks on its head, are many-faceted, swiveling continuously in all directions as it surveys the scene” (Singh, 2018, p. 11). The other ones are “Saur” and their mother, “Rigmother”. Saur is a robot developed to detect the rich hydrocarbons on the sea floors, while Rigmother stores the found hydrocarbon until the sea bed is emptied of it and left with nothing but floating dead fish bodies. The plot clearly reflects deep ecology's contempt for the prevailing western technological worldview, which has the essential goal of unmitigated invasion and control over ‘Nature’ and natural phenomena. Singh's approach towards technology is marked by her stance against Newtonian determinism, which treats the Earth and its environment as a Newtonian machine that sustains life and not like a complex system that needs to be preserved. Therefore, the potential alternative future depicted by Singh is devoid of any natural atmospheric conditions; rather, it is full of man-made machinery. The megamachines represent the exploitative advancement in technology that dominates the present industrial civilization. Singh, in her postcolonial eco-dystopia, breaks away from the hegemony of this Newtonian paradigm by speculating on the potential mayhem megamachines could create in the near future. The capitalistic need for technological and scientific development surfaces in the third world countries under the shade of modernity in

its colonial guise. Thus, this narrative is a criticism of the neo-colonial and neoliberal economic power structure through which the capitalists retain their parasitic relationship with not only the marginalized people but the ecology as well.

The plot exposes Carl Johansson as the creator/writer of the ‘Wendigo code,’ a code on which WDWM operates. This cybernetic code works on the motto of capitalistic consumerism. It “devours to increase its hunger, not to satisfy it” (Singh, 2018, p. 11). Johansson developed this code for a power-hungry dictator of his nation state who started the destruction of the world. These destructive technological machines were developed in first world countries and were later employed by the exploitative governments of developing countries like India. Such practices can be identified as neo-imperialistic and neoliberal economic trends, which go against the basic fundamentals of deep ecology and wipe out even the slightest prospect of fostering ecologically sustainable and socially just economic modes. Neoliberalism and neo-imperialism are the prevailing economic philosophies, which in a way validate the colonial instinct to expand capitalist economies in developing countries under the guise of modernism and globalization. The globalization drive is accelerated by the abusive technological expansion that strives for global conquest. These technologies are facilitating the liberal movement of goods, ideas, and capital across national boundaries. Deep ecology treats excessive technological and industrial growth and overconsumption at the cost of our environment as necessarily requiring constant critical attention from ecologists. Aligning to this, eco-dystopian science fiction recurrently fosters the criticism of the capitalist economic expansion. Singh’s speculation depicts Delhi as an overriding culture of a globalized capitalist fantasy with giant exploitative Sauras working as “testimony to New India’s technological skill,” and as “a matter of national pride” (Singh, 2018, p. 23). The capitalist greed of the local ministers, who, in the name of social development, encouraged the citizens “to build the new India, to raise, with the Sauras, new towers to the skies” (Singh, 2018, p. 9), Singh creates a postcolonial eco-dystopia, which denotes the economic tendency of elite nations asserting that third world countries contribute to their capitalistic vision of a globalized consumeristic mode of economy. Critics of globalized capitalist ventures insist that they not only result in the accumulation and dispossession of capital but also cause severe ecological deprivation. This results in communities losing access to their resources to the bourgeois. In the text, the author refers to farmers, students, and tribals—the people walking to work—as victims of corporate and political leaders who nurture the monster, *Widdam*, to accumulate power and capital (Singh, 2018, p. 8). According to deep ecology, the uneven distribution of the limited resource base would result in an inequitable society and ecological havoc. Dinesh points out how, “infected men and women who might have once been kind, or had a sense of humor, or the ability to reason, turn into bitter, angry, heartless, sullen creatures who might hurt or kill at the slightest provocation” (Singh, 2018, p. 10). Along with the three revolutionaries of the plot, Jharoowala’s character also had green sensibilities, which were quelled by the dominant anti-ecological mode of living. His actual name remains unknown and he is conjectured to be the victim of the ruling party’s “cleansing”—the wrong religion, cast, or class (Singh, 2018, p. 22). The marginalization of Jharoowala signifies the subdued ecological consciousness in the modern world. Discriminatory systems like capitalism are integrally pyramidal in their power structure. This pyramid has the corporate elites and political leaders occupying the apex at the expense of “Nature” and marginalized people. Jharoowala strangely knew about trees: “the neem and the jacaranda and the dhak and the amaltash” (Singh, 2018, p. 22). But unfortunately, his knowledge was pushed into obscurity, just like the ecology of the city. Those at the lowest rung of the power pyramid are left unheard and unacknowledged until a crisis like climate

change unravels the exploitative side of neoliberal economics. Jharoowala's courtyard was "astonishingly green" with "shrubs and bushes and small trees" (Singh, 2018, p. 35). His small ecological revolution in the form of a "magical garden" (Singh, 2018, p. 37) can be seen as an act of defiance. In an interview with Amit R. Baishya, Vandana Singh says that to envision, pursue, and develop an egalitarian societal set up, we "require a renegotiation of our relationship with the rest of Nature. As a writer I am passionately interested in imagining those possible other worlds, never in isolation but always in dialogue with those at the margins [...]" (Baishya, 2021, p. 16). Environmental science fiction, thus, strives for an egalitarian ecoculture that sustains a harmonious ecosystem of human and non-human Nature.

Western techno-sciences and colonial capitalism are often considered fellow travelers. The destruction of ecology by humans for anthropocentric advancements and economic goals can be seen in parallel with the history of colonization as an act of expansion, advancement, and enlightenment. Thus, many postcolonial critics comprehend the abusive conquest of humans over nature as a colonizing impulse of man. In *Widdam*, the capitalistic mission of mining the moon for elements called, rare earths, is a representation of man's colonial instincts. The mining mission is to "pillage the moon [...] for the ores that fuel the windmills and batteries of the green energy revolution" (Singh, 2018, p. 37). Manu, a character we see through Dinesh's eyes, is part of the mining mission as a volunteer miner. Disillusioned by the promising ambition of the globalized capitalist regime, Manu signed up for the project to "bring back clean air, to stop destruction of the world" (Singh, 2018, p. 37). But he lost hope when he got acquainted with the reality of it. "Manu found the Widdam there, on the moon" (Singh, 2018, p. 37). Widdam is, then, a metaphor for human greed, that initiates the destruction of the world. Dinesh opines:

The Widdam is a chimera that bridges metal and flesh; it spans matter and metaphor, mind and materiality, and now it has jumped the gap between Earth and Moon. To see it, sense it in its fullness, is to lose all hope before the enormity of its desire for annihilation. (Singh, 2018, p. 37).

Though the plot conveys angst about the loss of community, and the scarcity of ecological knowledge in contemporary society, Dinesh still has hope at the end of the story. He believes that widdam "carries the seed of its own destruction" (Singh, 2018, p. 37). Singh validates dissent in the form of three minor characters: a penitent roboticist who codes the disastrous Wendigo code and then also writes a cure to it as Martina; a rogue Saur attaining sainthood and leading a water revolution; and a lower-class working-class man with a garden full of greenery. Though eco-dystopic narratives produce a harrowing prediction of the future and evoke a sense of uncertainty and danger among readers. However, the tone of such narratives is didactic, with a hint of hope. As Heise points out, "utter destruction lies ahead but can be averted" (2008, p. 142). Therefore, by re-envisioning the future in dystopic ways, science fiction produces potentially subversive narratives that most consistently engage with the region's environmental issues.

## **Conclusion**

For many marginalized communities across the globe, dystopia is not an imaginative future but an ongoing reality with a long and devastating colonial history. As Ursula K. Le Guin famously asserts, "science fiction is not predictive; it is descriptive" (1969, p. 7). The

postcolonial environmental science fiction from the Global South bears the scars of the catastrophic past of colonial domination. In *Postcolonial Ecologies*, Elizabeth DeLoughrey and George B. Handley claim, “since the environment stands as a nonhuman witness to the violent process of colonialism, an engagement with alterity is a constitutive aspect of postcoloniality” (2011, p. 8). This study discussed anglophone South Asian writer, Vandana Singh, who depicts the otherwise marginalized eco-critical perspectives of the Global South. The paper offers an in-depth analysis of two of Singh’s short stories, *Indira’s Web* and *Widdam*. Both the narratives employ advanced scientific technologies differently, yet both align with the values of deep ecology. *Indira’s Web* foregrounds the value of indigenous sciences and local knowledge systems as ecotopian, while *Widdam* asserts the eco-dystopic effects of employing colonial modernity in the form of capitalistic megamachines and artificial intelligence. In *Indira’s Web*, the ecological sustainability of indigenous sciences intends to endorse a biocentric culture and disrupt the imperialist labeling of local knowledges as non-scientific and exotic. *Widdam*, at the same time, speculates on the mayhem and destruction that the neocolonial and technological encroachments may bring along. Both the stories question anthropocentrism and condemn the anti-ecological desire for globalized technological advancements. This article navigates the urgent need to abandon the anti-ecological, materialistic modes of living and rather propagate an eco-culture of alliance and co-habitation among humans and non-human nature. Therefore, it can be concluded that by envisioning alternative realities, postcolonial science fiction acts on finding alternative modes of living that are socially and ecologically sustainable.

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### References

- Baishya, A. R. (2021). “Because we are not apart, we are a part”: An Interview with Vandana Singh. *Postcolonial Studies*, 1–19. <https://doi.org/10.1080/13688790.2021.1957200>
- Beck, U. (2007). *World at Risk*. Polity Press.
- Capra, F. (1996). *The Web of Life: A New Scientific Understanding of Living Systems*. Anchor.
- Chakrabarty, D. (2012). Postcolonial Studies and the Challenge of Climate Change. *New Literary History*, 43(1), 1–18. <https://doi.org/10.1353/nlh.2012.0007>
- David L. B. (2001). *Deep ecology and World Religions: New Essays on Sacred Ground*. New York: State University of New York Press.
- Devall, B., & Sessions, G. (1985). *Deep Ecology*. Peregrine Books.

- Dillon, G. L. (2007). Indigenous Scientific Literacies in Nalo Hopkinson's Ceremonial Worlds. *Journal of the Fantastic in the Arts*, 18(9), 23–41.
- Deloughrey, E. M., & Handley, G. B. (2011). *Postcolonial Ecologies: Literatures of the Environment*. Oxford University Press.
- Ghosh, A. (2017). *The Great Derangement: Climate Change and The Unthinkable*. The University of Chicago Press.
- Gore, T. (2015, December 2). Extreme Carbon Inequality. *Oxfam Policy and Practice*. <https://policy-practice.oxfam.org/resources/extreme-carbon-inequality-why-the-paris-climate-deal-must-put-the-poorest-lowes-582545/>
- Harding, S. G. (2008). *Sciences from Below: Feminisms, Postcolonialities, and Modernities*. Duke University Press.
- Heise, U. K. (2019). Science Fiction and the Time Scales of the Anthropocene. *ELH*, 86(2), 275–304. <https://doi.org/10.1353/elh.2019.0015>
- Heise, U. K. (2008). *Sense of Place and Sense of Planet: The Environmental Imagination of the Global*. Oxford University Press.
- Hickel, J. (2020). Quantifying National Responsibility for Climate Breakdown: An Equality-based Attribution Approach for Carbon dioxide Emissions in excess of the Planetary Boundary. *The Lancet Planetary Health*, 4(9), e399–e404. [https://doi.org/10.1016/S2542-5196\(20\)30196-0](https://doi.org/10.1016/S2542-5196(20)30196-0)
- Karmakar, G., & Ghosh, T. (2022). Identity, Indigeneity and “Mythologerm”: Reading the Stories of Satyajit Ray's Professor Shonku as Postcolonial Science Fiction. *Comparative Literature: East & West*, 6(1), 45–63. <https://doi.org/10.1080/25723618.2022.2081421>
- Le Guin, U. K. (1969). Introduction. *The Left Hand of Darkness*. Ace.
- Morton, T. (2013). *Hyperobjects: Philosophy and Ecology after the End of the World*. University of Minnesota Press.
- Mukherjee, U. P. (2010). *Postcolonial Environments: Nature, Culture and the Contemporary Indian Novel in English*. Palgrave Macmillan.
- Naess, A., & Rothenberg, D. (1989). *Ecology, Community and Lifestyle: Outline of an Ecosophy*. Cambridge University Press.
- Naess, A. (1995). The Shallow and the Deep, Long-Range Ecology Movements: A Summary. In G. Sessions (Ed.), *Deep ecology for the twenty-first century*. Shambhala Publication.
- Naess, A. (1995). The Third World, Wilderness, and Deep Ecology. In G. Sessions (Ed.), *Deep Ecology for the Twenty-first Century*. Shambhala Publication.
- Nixon, R. (2011). *Slow Violence and the Environmentalism of the Poor*. Harvard University Press.
- Otto, E. C. (2012). *Green Speculations: Science Fiction and Transformative Environmentalism*. Ohio State University Press.
- Rieder, J. (2008). *Colonialism and the emergence of science fiction*. Wesleyan University Press.
- Singh, V. (2011). *Indra's Web*. TRSF. special issue *Technology Review* (MIT) 9-13.
- Singh, V. (2018). *Widdam*. *The Magazine of Fantasy and Science Fiction*, 134(1-2), 6-38.
- Spivak, G. (2005). Can the Subaltern Speak? In P. Williams (Ed.), & L. Chrisman (Trans.), *Colonial Discourse and Postcolonial theory*. Columbia University Press.
- Trexler, A. (2015). *Anthropocene fictions: the novel in a time of climate change*. University of Virginia Press.