

Mapping the Contours of the Future: An Ecosophical Explication of the Elements of Good and Bad Anthropocene in Kim Stanley Robinson's *The Ministry for the Future*

Dr. Indrajit Patra

An Independent Researcher, PhD from NIT Durgapur.

ipmagnetron0@gmail.com

Abstract

The study attempts to analyse Kim Stanley Robinson's *The Ministry for the Future* (2020) in order to show how carefully detailing the elements of good and bad Anthropocene from an ecosophical perspective can inspire us to connect human and nature in a most harmonious manner. The study attempts to show from a multi-theoretical perspective how the author seems to equate the evils of ecological exploitation of nature and economic exploitation of the poor and the hapless and proposes for the need of adopting an alternative financial, political, and social system where man and nature will be seen as parts of a singular, gigantic, planetary family. The study will analyse how the novel describes the bad Anthropocene to be both caused by and in turn causing an inequality regime to operate and thrive while a desirable future within the Anthropocene can emerge if we adopt an ecosophical and ecocentric outlook.

Keywords: Ecosophy; Anthropocene; Climate Fiction; Kim Stanley Robinson; Eco-fiction; Ecocriticism; Speculative Fiction

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Introduction

Kim Stanley Robinson's *The Ministry for the Future* presents before us a picture of a world in the 2030s during when in 2023, a heatwave sweeps across the Indian state of Lucknow to kill millions of people, and in 2025, the eponymous governmental organization is formed headed by an Irish ex-diplomat Mary Murphy. The story takes place over the course of the next 20 years since the 2023 event took place and traces the paths of Mary Murphy and the sole survivor of the heatwave, Frank May, who works as an aid worker in the subcontinent. Now, Frank immediately becomes a center of widespread global attraction for his epic survival, but the incident leaves a permanent scar on his psyche, and he becomes a victim of PTSD. He also becomes radicalized and tries to join an eco-terrorist organization named the Children of Kali. After abducting May, Frank even convinces her that her organization is bound to remain a failure despite all its good intentions unless it forms a Black Wing. Frank even manages later to find Mary a partner named Arthur. The novel is full of big technological, organizational, and economic ideas which range from the various kinds of proposed geo-engineering projects to descriptions of alternative economic models. Some of the strongest and most captivating aspects of the narrative are its emphatic insistence on the need to control and regulate the exploitative aspect of capitalism and championing of socialism in a broad sense, its repeated appeals for the reduction of the use of fossil fuels, its insistence on a proper understanding of the potential dangers of and the need to adapt to the climate change, focusing on the need of resettling the immigrants, —etc. to name a few. The novel calls for a massive paradigm shift in our outlook towards nature and human life in general through which we can identify and eliminate networks and relations based on predation, exploitation, mindless consumption, and domination of one power over another. In its portrayal of such phenomena as anti-fossil fuel terrorism, violent attitude towards medical workers wearing masks during a pandemic, attempts by ultra-conservative alliances to prevent an addressing of the challenge of climate change to the masses, resurgence of highly reactionary, right-wing and regressive political powers, and finally, in its relentless criticism of capitalism, patriarchy, racism and anthropocentrism, the novel stands out as one of the most influential system novels in our recent times that nonetheless presents ultimately a utopian vision of humanity in the near future. In its ardent advocacy for a systemic, fundamental and structural change to our largely stagnant and moth-eaten economic and political systems, Robinson proposes such measures as building and maintaining an alternative economy and complementary currencies that can help foster in the formation of more open, connected and sustainable societies, development of more open source technologies and social media, making more and more private spaces open for public, formation of renewable energy plants which are largely decentralised, formation of eco-friendly agroecological worker groups and worker cooperative associations, popularization of alternative and community currencies, raising voices and organizing mass protests in support of the rights of the refugees and in condemnation of the colonial power structures that are largely responsible for their present plights, etc. to name a few. The novel seems to attempt to portray what Gerry Canavan refers to as a science-fictional vision of the future “against the “deep time” of the Anthropocene in order to explore the possibilities for utopia that remain in an era that only seems capable of producing necrofuturological dread” (“Science Fiction and Utopia in the Anthropocene”, 1). Derrick O’Keefe sums up the novel as “a speculative history of the next few decades,” that “revolves around an international ministry assembled to help implement the Paris climate agreement”, and its action spanning “the globe, featuring popular uprisings, ecoterrorism, asymmetrical warfare, student debt strikes, and geoengineering” (“Imagining the End of Capitalism”, *Jacobinmag*). Andrew Rose in his article “The Unknowable Now” endeavours to study Robinson’s *Science in the Capital Series* as “a near-future climate crisis that occurs within the framework of early twenty-first-century political, economic, and scientific realities” and proceeds to highlight Robinson’s “critical representation of objectivity and the scientific method” (263) in the exploration of these realities. In the present work too, Robinson delves deep into the description of various realistic details of science and mechanics of climate change, comments extensively on the structural problems rooted deep in our political and economic structures based on asymmetric relations of power and domination and unequal distribution of wealth, and projects his alternative visions and worldviews based on the core tenets of ecosophy or ecological wisdom. The action of the novel mostly takes place

around the 2030s, and situation described here seems to be an extension of the situation of our present-day world when we are struggling with the problems of global warming, rising sea temperatures, melting of Arctic ice caps, etc. to name a few. Although the present novel under discussion is confined very much to our own home planet, Robinson has explored vast stretches of space and ventured into depths of time in many of his past works. In the *Three Californias* trilogy comprising of *The Wild Shore*, *The Gold Coast*, and *Pacific Edge*, he has explored the saga of Orange County, California in an alternative future 21st century, while in the 'Mars Trilogy' comprising of *Red Mars*, *Green Mars*, and *Blue Mars*, he deals with the settlement of the human colonies in the planet Mars over the course of two centuries. In the novel *2312*, he expands his vision from the confines of Mars to the solar system, while in *Aurora*, he moves even further to other star systems. His *New York 2140* imagines the future New York City inundated as a result of two major surges. Andima remarks how Robinson 'humanizes' the problem of climate change "by the abnormality of growth of humans, animals and plants too, as well as their declining health" (Andima, 2).

Since this study will attempt to explicate the elements of good and bad Anthropocene from a primarily ecosophical point of view, we should first familiarize ourselves with these two very important concepts. The term Anthropocene was coined by the Nobel laureate chemist Paul Crutzen (Crutzen & Ramanathan 2000; Falkowski et al. 2000) and has since then become highly popular. In short, it envisages the dawn of an era where humans have collectively become a geologically influential force. Steffen et al. (2007) and Zalasiewicz et al. (2011) have also viewed the anthropocene as a paradigm shifting geological phenomenon where they feel it would replace the preceding epoch of Holocene. Now, the term 'ecosophy' was first coined by Felix Guattari in his article "For an Overhaul of Social Practices" that appeared in *Le Monde Diplomatique* (Oct. 1992). Here, he stresses the need for founding the principle of ecosophy "that would link environmental ecology to social ecology and to mental ecology" (266). Later, this term was expanded by Gregory Bateson in his *Steps to an Ecology of Mind*, and then by Arne Naess. For Naess, ecosophy is simply "a philosophy of ecological harmony or equilibrium" (*The Deep Ecology Movement* 8). Robinson's *Ministry* is basically a climate fiction and these fictions, as Maćzyńska comments, "highlight the challenge of forging new spatial imaginaries for the Anthropocene" (165).

Anthropocene and its Discontents

Extinction and the Anthropocene

One of the primary points of focus for the novel is to describe as vividly as possible the dangers that the current rate of accelerated mass extinction poses for our future generation. The novel in its attempt to detail the dangers of extinction events in a most directed, clear-sighted, and fiercest manner possible, incorporates an enormous wealth of statistical information and data gleaned from various sources that seem to lend the narrative a scholarly edge. However, even while attempting to describe through raw details and meticulously culled stats the effects of climate change on our life and planetary ecosystem as a whole, the work never loses sight of its primary aim which is to keep the narrative as much connected to the real, human interests and making it as less abstract as possible.

It is now universally acknowledged in the scientific community that the actions of humans are causing irreparable damages to the biodiversity of the planet and the global climate also. Researchers like Dr. Steffen et al. (2007) have already pointed out the fact that we have already entered the Anthropocene epoch where the changes that our actions are causing seem to be leaving an indelible footprint on the geological history of the planet. The enormity of the impact is such that even if we adopt some of the most stringent measures for de-carbonizing and limit the emission of greenhouse gases, as much as 18% of the presently endangered species will be lost by 2050 (Thomas et al. 2004). Therefore, the novel also exhorts us to not become complacent with the decrease in daily global CO₂ emissions in 2020, compared with its mean

2019 levels. Also, in case we fail to curb our present levels of pollution, a situation might arise where as many as 35% of the presently endangered species could go extinct by 2050 (Peterson et al. 2004). Ceballos et al. (2015) also show how humans have induced a global loss of biodiversity, while Newbold et al. (2016) carefully explore the impact that such a loss of biodiversity can have on global sustainability. Robinson's novel is based to a great extent on this picture of bad Anthropocene, and he masterfully keeps switching between the description of the Anthropocene mass extinction as a geologically significant event and its actual effects on the scale of individual nations and continents. McKenzie Wark, in his *Molecular Red: Theory for the Anthropocene* (2015) applies the term 'metabolic rift' to the Anthropocene extinction since according to him, the Anthropocene represents a kind of break or rift in the system of flows where some of the elements which once went into making the flow possible are no longer replenished by the output thus making it impossible for the cycle to renew itself (xiv).

Vision of the Anthropogenic Mass Extinction

The novel extensively employs a rich assortment of carefully analysed facts and well-researched data to strengthen its vision of the Anthropogenic mass extinction event. The age of Holocene or the Anthropocene as we have termed it is one where we, the humans have become geologically significant enough to influence the climate on a planetary scale, and we have used this opportunity to only accelerate the pace at which the species are disappearing as a result of our mindless depredation and exploitation of the natural resources. The novel makes it clear time and again that what we, the humans, as the first sentient species on Earth have achieved has only ushered in an era of unprecedented bio-geological catastrophe. The novel asserts, "... the mass extinction is one of the most obvious examples of things done by humans that cannot be undone" (*The Ministry for the Future* 54-55). It also comments on the intricate interrelationship between the phenomena of ocean acidification and de-oxygenation, in which an increase in one is bound to cause a concomitant increase in another. In his 'Science in the Capital' trilogy, we find mention of oceanic acidification as one of the most persisting problems that is threatening the oceanic ecosystem. Zalasiewicz et al. (2011) have stated how increased carbon emission and the resultant oceanic acidification will "produce a distinctive event in the future fossil record" (836). Also, the present novel keeps adding bits of statistics and data to help us visualize the precariousness of our situation in numerical terms, that however never seems to pose any barrier towards our aesthetic enjoyment of the narrative. Speaking of Robinson's representation of precarity in his works, Bryan Yazell in his Chapter "Finding Time in Common" takes up Robinson's novel *New York 2140*, and analyses how the work offers "insight into not only environmental-related precarity but precarization as it unfolds across traditional class lines in the present" (194). *The Ministry* keeps us thoroughly informed with such facts such as "already more of the sun's energy stays in the Earth system than leaves it by about 0.7 of a watt per square meter of the Earth's surface," and this is contributing towards an inexorable rise in global average temperature (*The Ministry for the Future* 41). Robinson, for a significant part of the narrative, appears to be concerned with depicting the magnitude of the extinction event on a global, geological scale which prompts us to view the effects of the Anthropocene from a god's eye perspective. It pits our age of extinction against the other geological ages like the Permian to emphasize how "in terms of total percentage of species gone from the land", our age seems to be the record-setter. It also warns us of the aftermaths of an actual extinction event when "famine, dislocation, and war—possibly nuclear war" (*The Ministry for the Future* 309) could take place thus leading to the demise of our entire civilization. Towards the end of the novel, we see Mary attends a musical party with her friend Arthur and while gazing upon the statue of Ganymede states that "the only catastrophe that can't be undone is extinction" (*The Ministry for the Future* 584).

In the novel *2312*, we get to see such a dire vision of the future Earth which has been wrecked with the aftermaths of centuries-long climate change, and it is presented in stark contrast to the techno-utopian realm of the 'spacers'. In the Earth of *2312*, we see how man's inability to reverse the degradation of climate has led to the problems of overpopulation, ecological

catastrophes, extreme political instabilities, and unrest, thus forcing the wealthier section of the human population to flee their home planet and reside in the asteroids and moons of Jupiter. These eco-catastrophes remind one of Latour's idea of 'revenge of Gaia' ("An Attempt at a Compositionist Manifesto" 473), where he envisages the environmental problems happening on Earth as reactions from an otherwise stable Gaia. In Robinson's 2002 alternative history novel *The Years of Rice and Salt*, which covers the events in Europe 1451 to 2002, we see the Black Plague killing nearly 99% of the total European population while certain groups of characters are reincarnated each time in each of the ten chapters. In *The Ministry for the Future*, phrases and expressions such as "irreversible and unfixable catastrophe" (310), climate impacts becoming irreversible (185), Earth moving further beyond "an irreversible tipping point" (159), the world getting irrevocably pushed into "jungle planet" mode (341) abound in the novel, all of which put an extra emphasis on the irreversibility of the damage. In its portrayal of the vision of a future troubled by global warming, rising sea temperatures, and melting ice caps in the polar regions, the novel strikes us as an unparalleled work of climate fiction. One may cite here K. Daniel Cho's remarks that he made in the context of his study of Robinson's *Climate Change Trilogy*: "Robinson heightens our attention to the malleability and vulnerability of the biosphere mostly through his meticulous research on the latest science of global warming" ("When a Chance Came", 24). As a work of pure speculative fiction, the primary concern of the novel is with the future. Naturally, we come across such a vision of an imagined future when "The Arctic Ocean's ice cover melted entirely away in the late summer of 2032, and the winter sea ice that formed in the following winter was less than a meter thick, and broken up by winds and currents into jumbled islands of pancake ice..." (*The Ministry for the Future* 159). It imagines how the sea level would rise by 110 meters than what it is at present as the global temperature will continue to soar beyond 5 or 6 degrees Celsius and probably even more thus "rendering great stretches of the Earth uninhabitable by humans" (*The Ministry for the Future* 160). However, it never loses hope even when the picture of such a bleak, barren and post-mass-extinction future is presented. It states how the efforts are underway to "thicken the Arctic sea ice in winter, which would allow it to hold on longer through the summers" (160). Time and again, the novel makes its comparison between man's economic exploitation and depredation of the poor and the same committed on his environment. The inequality in the level of per capita income is one of the most pressing problems that the present age has to address before any progress can be made in terms of human welfare. It presents irrefutable statistics and data to bolster its point-of-view: "The four billion poorest people alive have less wealth than the richest ten people on the planet..." (*The Ministry for the Future* 167). Even when the work focuses primarily on the extinction events, it never fails to connect it with the sufferings of the millions of poor. It describes the problem of the "tragedy of the time horizon" (184, 185), which is based on the assumption that people cannot imagine and successfully relate themselves to the sufferings of the people in the future. It stresses that unless we grow considerate enough of the dangers waiting for us in the future, we should not be able to redress the ecological damages that are being done at present, which as time passes will only become even more irreparable than before: "...many of the worst climate impacts will be irreversible. Extinctions and ocean warming can't be fixed no matter how much money future people have, so economics as practiced misses a fundamental aspect of reality" (*The Ministry for the Future* 185). Wark, in his *Molecular Red: Theory for the Anthropocene* remarks, "The unspeakable secret about climate change is that nobody really wants to think about it for too long. It's just too depressing!" (xvi). Robinson never fails to connect the planetary dimension of the catastrophes it is describing with the individual dimension. The novel advocates the need of connecting the scientific and economic practices to ideology and reality of the actual world and points out that the lack of connection with the reality or concern for the wellbeing of the fellow human beings is one of the major drawbacks of our current phase of mostly unsustainable progress. As part of its series of suggestions for realizing the vision of a sustainable future, the novel calls for an alternative economy chiefly aimed at decarbonizing the world. We also see how a non-gendered cybernetician named Janu Athena proposes to build an alternative, fully open-sourced and

user-owned web where people will be completely in control of their data and would choose whether their personal data would be sold or not for commercial purposes. The work does not content itself with the mere presentation of the big picture of a steadily deteriorating planet, rather it also imagines specific situations where the catastrophes have already occurred and strives to portray them in vivid details. The very first chapter of the novel starts with the description of the fierce power of the Sun and shows how the several days' long heatwave is wreaking untold havoc on the hapless people of the Indian town of Lucknow. It specifically deals with the story of the survival of one Frank May, who is the only other human protagonist besides Mary Murphy who seems to have any significant role in the narrative. However, it is not the protagonists themselves who are dramatic or remarkable but the “events that unfold around them—worldscale in their impact, but most often local and small-scale in their enactment” (Shaviro, 109), which seem to provide the novel with its most dramatic moments. The novel describes the rise of the Sun in the days when the heatwave begins thus: “And then the sun cracked the eastern horizon. It blazed like an atomic bomb...”, (*The Ministry for the Future* 11). Robinson has on many occasions pointed out the danger that countries like India stand to face in the wake of rising global temperature and this colossal heatwave seems to be the fulfilment of the prophecy in his fictional world which is never removed quite far from reality. The holocaust-like heatwave unleashed by the Sun reads like the Sun's revenge against what Margulis terms as “the arrogant habitat-holocaust” (*Dazzle Gradually: Reflections on the Nature of Nature* 86) of the humans. The first chapter is full of harrowing descriptions of the blazing power of the Sun as it describes the helplessness of puny human beings when caught in the fury of an astronomical object. Robinson, in one of his interviews (2019) has remarked that “the things we can do are minuscule on the scale of planetary energy flows” (Robinson), and the description of the haplessness of the people in the wake of such an eco-catastrophe seems to illustrate the point perfectly. Ursula Heise has commented in her *Sense of Place and Sense of Planet* (2008), that both literature and criticism have found it difficult to address the problem of climate change appropriately by carefully maintaining a balance between an engagement with the cultural frameworks of our time, and the impact of the planetary systems, and in case of Anthropocene, the task becomes even harder since no novelist can hope to project a speculative yet credible picture of the environmental conditions of this Anthropocene since Earth has not undergone such a stage even in the last few million years. However, Robinson's *The Ministry for the Future* seems to have accepted the challenge and passed the test with flying colors. When the novel describes the damage that an infuriated nature can inflict on the humans, the humans are portrayed as utterly helpless, and tiny creatures totally detached from the godlike power of an indifferent nature, but when it comes to bringing change into the world, the natural world and human beings are presented as extremely and intimately interrelated. The first chapter depicts the magnitude of the heatwave sweeping across Lucknow through various comparisons. Even when people in the open seek to move into the shades, just being touched with the “sunlight was like getting pushed toward a bonfire” (14), the surfaces of metal objects literally burn in the sun as one could see “heat waves bouncing over them like air over a barbeque” (14), and everything, living and dead, is scorched in the heat of the Sun as the entire town turns into a morgue. When the novel describes the global repercussions of the worsening climatic conditions, it carefully builds its picture based on the well-researched data from our present-day world, and so the world it imagines becomes a world very much recognizable to us. Robinson has viewed science fiction as “the literary realism of our time” (“Science, Justice, Science Fiction” 5), and as such, it is no wonder that his world-building would attempt to connect itself most thoroughly with the experiences of the readers at present. The novel predicts that the next victim of the heatwave will be Europe and it is based on the currently available data which shows that in the span of 15 years Europe has seen the five hottest summers in the last 500 years. Also, in the 2003 heatwave, as many as 70,000 Europeans were killed while in the 2010 heatwave, some 56,000 Russians were killed. The novel always takes care to connect the description of the effects of climate change taking place on a global scale with the experiences of the individual. This is quite in keeping with the spirit of the ecosophy which prompts one to adopt a holistic, integrated, and universal outlook towards the world and all its

entities in general. The novel predicts that with the rising temperatures, as the ice keeps melting and permafrost thaws, very soon, there will be only rivers and no roads for the Siberians to walk on for the greater part of the year. When Tatiana Voznesenskaya, the fictional head of the ministry's legal division, speaks of the need for "a new religion! Some kind of Earth religion, everyone family, universal brotherhood" (49), it clearly calls for an appreciation of the world from an ecosophical point of view.

The novel deals with the events taking place in and around the 2030s and it states, "The thirties were zombie years. Civilization had been killed but it kept walking the Earth, staggering toward some fate even worse than death" (*The Ministry for the Future* 241). The Indian heatwave that killed twenty million people in the opening chapter is now compared to such events as the Holocaust that killed six million people, the Palestinians' Nakba, and the traumatic partition event of India, etc. In fact, the description of the massive heatwave that kills millions in India reminds us of among the two major pulses that inundated New York City in his novel *New York 2140*. In that novel, the first pulse was caused by the collapse of the Antarctic and Greenland ice sheet in the 2050s, as a result of which the global sea-level rose by 10 feet. The Second Pulse was caused by the melting of the Aurora Basin in Antarctica which then triggered a worldwide chain of ice sheet collapses and a consequent rising of the sea-level by 40 feet. This is how the melting of the ice sheets in the glaciers has been depicted as delivering a civilization-scale knock-out blow to mankind in *New York 2140*.

The Nexus of Capitalism, Ideology, Politics, and Hegemony

"But act they must. Because civilization was trembling on the brink. They were going down", writes Robinson in *The Ministry for the Future* (306).

The novel simply does not content itself with employing mere statistics for portraying a most believable and near-apocalyptic picture of the near future, rather it goes beyond the appearance to the analysis of the actual dynamics that makes the existence of such power structures possible that keep on preying on the poor, hapless and unwitting populace and the natural environment through their inhuman, unsustainable and discriminatory practices. It imagines capitalism as a patient waiting on his deathbed for the end; sees science sans ideology as a mere perversion, and warns that all our attempts to structure, systematize, categorize, and regulate our phases of history and culture would be of no avail if there is no civilization to back it, and for the existence of anything that remotely resembles a civilization the existence of the natural world is a must. So, it is for our own sake that we have to save the environment. His vision is essentially an ecosophic one as he constantly emphasizes the need for adopting an interconnected and ecocentric approach. Robinson feels Capitalism has already done irreparable damages to the psyche of the individuals belonging to the less privileged class, and now it is living in a coma, becoming a zombie-like system, that has lost "any hope of returning to health" (342). The novel champions the sustainable development as the panacea for our evils and observes that indulging in an unrestrained hedonistic and consumerist lifestyle will lead us nowhere, rather it will only prolong the game which we are playing against our civilization itself which even if we happen to win there will be no reward waiting for us: "You can short civilization if you want. Not a bad bet really. But no one to pay you if you win. Whereas if you go long on civilization, and civilization (therefore) survives, you win big. So the smart move is to go long" (*The Ministry for the Future* 254). In our quest for furthering our material benefits and increasing the level of comforts and luxury we are waging a war against the environment. It is not just in this novel, but also in the Mars Trilogy novels which are completely set in Mars, where we see Robinson exploring the implications of systems such as cooperative commonwealths and exposing the shortcomings of capitalist economies. Rowcroft (2018) attempts a Marxist critique of Robinson's *Mars Trilogy* and *New York: 2140* and argues that "both Robinson and Marx feature specific kind of speculative problem solving distinct from other traditions of philosophical enquiry

and science-fiction writing" (*Kim Stanley Robinson: revolutions in, against, and beyond capital*, 1). Miller's (2020) observation of *New York 2140* as a challenge to the dominant economic ideology of our times that is largely insensitive toward the deteriorating climatic conditions applies to the present novel as well. Chinchilla Mora's remarks on *New York 2140* also apply to *Ministry*, in which we might argue that Robinson wants his readers to visualize the consequences of an exploitative and simplistic capitalist system that commits "nonstop violations of ecological balance" ("Reformed Capitalism", 10).

Even when Robinson philosophizes, he never loses its touch with the individual, and even when he talks at lengths about the need for adopting an alternate currency, elaborates on decarbonization, and proposes an alternate financial system all geared towards the end of achieving a sustainable future, in a very ecosophical way, he always expresses his concern for the intrinsic and potentially infinite value of the human life and civilization in general which surpasses anything that we might hope to measure with our materialistic measurements. The novel points out that we should not judge the monetary value of nature and human civilization in terms of mere gains or losses, rather we should admit that our "civilization is effectively a fiscal infinity, a human infinity" (*The Ministry for the Future* 279). The over-reliance and overconfidence in our present-day systems have made us only so much incredibly blind towards the aftermaths of an imminent civilizational crash, that we are not ready to give off even an inch of our current level of materialist comfort. Financial systems all over the world have become only better in waging war against the environment and thus deprive the common masses of their due by siphoning off their and also nature's resources to enrich even further the richest few, thereby "making those few so rich that they could imagine surviving the crash of civilization, they and their descendants living on into some poorly imagined gated-community post-apocalypse in which servants and food and fuel and games would still be available to them" (*The Ministry for the Future* 305). Also, the author observes, that we are becoming painfully oblivious to the plain fact that money would be worthless if there is "no civilization to back it" (305). John Cairns Jr. in his "The Human Economy is a Subset of the Biosphere" also advocates for the adoption of an ecocentric approach: "Since the human economy is totally dependent upon the biosphere and humans are dependent on the biospheric life support system, why are [we] tolerant of the type of economic growth that damages the biosphere? ...Humankind should only engage in activities that nurture the biosphere" (269-70).

Just as the work keeps its focus intact on the global view of our planet being adversely affected as a result of the climate changes even when it engages our attention in the imagined circumstances around individual episodes, in a similar manner, even when it strives to present the periodized picture of our civilization's cultural and historical phases from a god's eye perspective, it never forgets to criticize and castigate the individual political powers for their irresponsible attitude towards climate change. At one point, Robinson categorizes various phases of our culture and civilization under the labels of dynastic, hegemonic, economic, and ideational, while reserving the label 'geological' for the ice ages and extinction events, and 'technological' for "the stone age, the bronze age, the agricultural revolution, the industrial revolution" etc. (*The Ministry for the Future* 138). It also envisages the Roman Empire, the Arab Empire, European colonial powers, the post-colonial, and the neo-colonial as forming parts of the hegemonic power structures, while the imperial powers that ruled the ancient and medieval India and China, and also various parts of Medieval Europe, have been tagged as the dynastic powers (138). Also, it blames the neo-fascist and hegemonic power structures for their callousness towards the environmental crisis which often helps the crisis to inflate to catastrophic proportions. For the Indian heatwave crisis, the novel describes how the ruling party BJP lost its power in India which it terms as a "good riddance to their RSS fake-traditional Hinduistic ethnic-nationalist triumphalism" (*The Ministry for the Future* 140). The very phenomenon of the heatwave sweeping across India has been implicitly compared to the hyper-masculine-false-nationalistic sentiments that once swept the entire Indian populace, and as a result of which the tolerant, syncretic way of traditional Indian life fell prey to this ideological heatwave, again quite similar in spirit to how millions of people fell a prey to the onslaught of the actual heatwave. The novel seems to draw interesting parallels between the unsustainable power usage in the energy sector

and the corrupt practices in the fields of political power play through which the parties aim to sustain themselves. Just as our mindless exploitation of energy resources and fossil fuels is harming nature, so are the practices of the corrupt politicians are harming the interests of the masses. In fact, in many of his works we see political unrest and ecological instabilities go hand-in-hand together as is evident in his novel *Red Mars*. In that novel, we see how when the oppressive authoritarian regime has fallen under maximum stress because of a series of ecological disasters, a section of the Martians rises in rebellion against the government in the year 2127 after a failed rebellion in 2061, often paralleling the spirit of the Russian Revolution of 1917.

The novel sarcastically remarks how the poorest are brainwashed and tricked into believing by the political propaganda machinery that they are being patriotic when they vote for some particular parties concerned when in reality, it is those powers which perpetuate the miseries of both the environment and the general populace: "...and indeed many of those harmed often vote for politicians who will increase their relative impoverishment. Thus the power of hegemony: we may be poor but at least we're patriots" (*The Ministry for the Future* 86). The power of the hegemonic discursive practices also makes itself felt in the spheres of economics and framing of policies. The novel states that various indices like Bhutan's Gross National Happiness index, are mere "attempts to portray civilization in our time using the terms of the hegemonic discourse, which is to say economics, often in the attempt to make a judo-like transformation of the discipline of economics itself, altering it to make it more human, more adjusted to the biosphere, and so on" (*The Ministry for the Future* 89). Unless and until we stop ignoring the human and social aspects of the problems and strive to include them without getting trapped in the abstract and inhuman "realm of quantification" (89), no progress towards the realization of a sustainable future can be made. Here one may be tempted to recall the episode from Robinson's *Forty Signs of Rain* (2005) which is the first novel in his 'Science in the Capital' trilogy. In this episode from the novel, we see one Dr. Zacharius Strengloft, the newly appointed scientific advisor to the US President, trying his best to deny the reality of climate change, and berates various indices designed to measure the climate change as inherently unscientific and compares them to unconventional measures of a nation's progress like Bhutan's Gross Domestic Happiness (*Forty Signs of Rain* 161). Now, while the present novel employs extensive amounts of data and statistics to make its point strong, it always remains mindful of not losing track of the humane aspect of its narrative. The ecosophical concern remains palpably present in each of its passages as when the novel states, that the need of the hour is "to acknowledge the reality of other people, and of the planet itself" (*The Ministry for the Future* 89).

For the author, with his one eye forever fixed on the movement of history taking place against the backdrop of a geological scale, the ordering and structuring of our time have already begun to feel "unjust and unsustainable and yet massively entrenched," and now seems to be falling apart before our very eyes (*The Ministry for the Future* 139). In the absence of a sustainable future to look forward to, even mankind's sense of history will no longer be able to support him in the wake of a wholesale dissolution of the environment. It reminds us of Robinson's own words where he states that science fiction works should employ a double vision, "like the lenses of 3D glasses", where one will be fixed on the future and another on the depiction of the present firmly situated in a historical context ("3D glasses on Reality" 330). He borrows such concepts as Raymond Williams' 'structure of feelings' and Freud's theories of repression and suppression to equate and connect the movements taking place in the human psyche with those occurring in the natural world without. In his *New Yorker* essay titled 'Coronavirus and our Future', he uses Williams' 'structure of feelings' to highlight the shifting phase we are currently undergoing. Robinson has always emphasized the need for a coherent historical background for formulating the experiences of the present and for this purpose, the conservation of the natural world is a must. In the novel *Wild Shore*, we see how a teenager fabricates an imaginary past for himself and the survivors of a neutron bomb attack on the United States and intermixes his tales with semi-true historical facts. When there is no actual past available to connect to, we have to construct one and this is how the boy in the novel strives to present a vision of a future to his

fellow survivors by embedding it in a fabricated past. Carl Abbott comments quite aptly, "Robinson is a novelist who takes history seriously" ("Falling into History", 28). Since the inner spirit of man and nature is mutually interlinked, and the history of mankind is but an inscription of his biological, social, and cultural reflections onto the natural, if we really want to save the precious human nature from falling into utter chaos and dissolution, we must find ways to address the problems that are plaguing our nature first. The author then points out the present dissociation between science and ideology and proposes that we must apply our scientific knowledge to not only improve and invent but also "put to use an ideology that explains in a coherent and useful way as much of the blooming buzzing inrush of the world as possible" (*The Ministry for the Future* 53). Even before this novel, in many of his interviews and writings, Robinson has pondered on the problematic relationship between science and ideology, and science and capitalism in particular. Science, Robinson (2010) feels, with its powers and promises of realizing an alternative utopian realm has always acted as an alterity to the hegemonic discursive practices. Also, he has brilliantly pointed out how science and capitalism have from the very beginning been engaged in a "giant struggle" ("Science, Justice, Science Fiction: An Interview with Kim Stanley Robinson"), where science, with its enormous creative potential, has always presented itself as a lucrative option for the capitalism to invest in, while capitalism, in the name of providing funding to the researches, has always sought to own science's creative power, and in the process science itself.

While commenting on the manner in which the state machineries operate, the novel repeatedly emphasizes on the collusion between the rich private players and the state power, and explains how the state depends for its capitalization on the high net worth individuals who in turn receive states' tacit approval for pursuing their inherently unsustainable and materialistic lifestyle: "...the capitalizing of state power now had its roots in private wealth; thus the rich and the state became co-dependents, two aspects of the same power structure" (*The Ministry for the Future* 224). In fact, in this regard, we can recall Piketty's work *Capital and Ideology* (2020), where he states how by through institutional and ideological manipulations, economic inequalities are justified and encouraged to grow in an artificially constructed "inequality regime" where private wealth and state power continue to collude with each other and get mutually benefitted. Piketty also analyses in detail the interrelationship between capital accumulation and modern economic growth and observes, "Capitalism can be seen as a historical movement that seeks constantly to expand the limits of private property and asset accumulation beyond traditional forms of ownership and existing state boundaries" (*Capital and Ideology* 154).

While the novel labels the histories of ancient expansionist powers as imperial and dynastic, at present, too, he opines that imperialism exists and continues to thrive by donning various ideological disguises. One such disguise that the present version of soft imperialism adopts is the notion of globalization. The novel maintains that any vision of a future if driven by the vision of one particular country is bound to fall into just another exercise in perpetuating hegemonic power. At present, the points of contention are no longer the expansive stretches of vast land and neither the battlegrounds are any ocean or land, rather it is the energy resources over which an endless struggle is being waged in which the victims are the poor, the destitute, the wild animals and last but not least, nature herself. The dynamics of the relation between the private individuals and the state powers and their mutually agreed acts of profiteering from the energy resources have been pointed time and again. The compensation that all the countries demand in return for not emitting more greenhouse gasses and thus ruining the environment seems to be a cruel and insensitive joke or even worse, an act of pure extortion. US, China, Russia, Canada, Australia, the Arab states, Venezuela, Mexico, are some of the biggest players in the world, "And they all wanted compensation, even though all of them had agreed in the Paris Agreement to decarbonize. Pay us for not ruining the world! It was extortion" (*The Ministry for the Future* 252). The novel excoriates the people who deny the reality of climate change and insist on following their capitalist, consumerist lifestyle mindlessly even at the expense of putting the lives of the billions of people, and the planet's ecosystem in danger: "But then also there were particular people, many still alive, who had worked all their lives to deny climate change,

to keep burning carbon, to keep wrecking biomes, to keep driving other species extinct. That evil work had been their lives' project, and while pursuing that project they had prospered and lived in luxury. They wrecked the world happily, thinking they were supermen, laughing at the weak, crushing them underfoot" (*The Ministry for the Future* 77). In the novel *Forty Signs of Rain*, we see one Charlie Quibler trying hard to defend the efficacies of the measurements of ecological footprints against the President's scientific advisor, Dr. Zacharius Strengloft. Dr. Strengloft dismisses the statistics regarding the deterioration of climatic conditions as bad science and defends the current system based on the excessive use of Carbon on which the American economy stands. The President, referring to the measurements of environmental degradation even says, "we don't know for sure if any of that is the result of human activity. Isn't that a fact?" (*Forty Signs of Rain* 159), while Strengloft brands "the anticarbon-dioxide crowd" as "a special interest lobby in itself" (*Forty Signs of Rain* 161). *The Ministry for the Future* makes it clear that the rich capitalists with their hedonistic lifestyle are not just polluting the environment but also contributing to the perpetuation of the miseries of millions of people. Bookchin aptly comments, "Any attempt to solve the ecological crisis within a bourgeois framework must be dismissed as chimerical. Capitalism is inherently anti-ecological" (*Post-Scarcity Anarchism* viii). The fate of nature and the people are inextricably interlinked, and any imbalance in one will inexorably cause an imbalance in the other. This is what a true ecosophical vision entails.

The narrative is most powerful and direct when it is sarcastically commenting on the evils of a pure capitalist, consumerist, and materialistic lifestyle where a handful of rich people seem to be accruing all the wealth to themselves while denying the majority of the world's population even the basic amenities: "Possibly some of the richest two percent of the world's population have decided to give up on the pretense that "progress" or "development" or "prosperity" can be achieved for all eight billion of the world's people" (*The Ministry for the Future*. 68). Thomas Piketty in his ground-breaking work *Capital in the Twenty-First Century* (2013) and in his papers titled "Income Inequality in France, 1901–1998" (2003) and "Income Inequality in the United States, 1913–1998" (2003), has shown how income flowed only to the richest 1% of the world's population.

The novel posits an equitable distribution of the world's available resources among the entire population as a cure for the majority of the evils. The author's insistence on the equal distribution of wealth among all calls for recognizing first and foremost the intrinsic value of the human life and the right of each and every individual to have an optimum share in the resources of the world: "To be clear, concluding in brief: there is enough for all. So, there should be no more people living in poverty. And there should be no more billionaires. Enough should be a human right, a floor below which no one can fall..." (*The Ministry for the Future* 70).

Powers and Promises of the Good Anthropocene:

A 'good Anthropocene', in short, believes that the quality of human life can be improved even while maintaining a constructive and cooperative relationship with the nature. In the face of ever increasing social-environmental challenges, certain visions of large-scale transformations can be realized through the collective efforts of the individuals, organizations, political leadership and comprehensive intergovernmental negotiations such as UN Sustainable Development Goals, in which the interlinked and interconnected nature of society, economy and ecology is recognized, integrity of an ecologically diverse world and its environmental quality are promised to be maintained and our choices and actions are oriented to make possible the emergence of a positive future world. In fact, from the novel, we can see that it is towards this aim of inspiring a noble vision of an alternative, positive future that the titular Ministry of the novel is constituted two years after the deadly Indian heatwave.

Post-Anthropocentric Viewpoints

One of the most important aspects of the good Anthropocene is to recognize and respect the agential realism of the non-human objects and phenomenon, and the novel employs it carefully as can be seen in the chapters where inanimate objects like the Sun, the carbon atom, and the

photon seem to be describing the world from their unique perspective. It also becomes clear that the realization of a good Anthropocene and the adoption of an ecosophical approach go hand-in-hand. As Trexler remarks, "Agency allows an environmental critic to describe nonhuman things as actors in ecosystems, politics, and novels, while maintaining panil hybridity" (*Anthropocene Fictions* 23). Lievin Ameal in his study of Robinson's *New York 2140* focuses on the agency of the New York waterfront and shows how "the urban waterfront appears as an arena of transformation, both in material and in allegorical terms" ("Agency at/of the Waterfront", 1328). Rose also suggests how "distributed agency and the situated, decentered human may offer a transformative opportunity for social and environmental justice" ("The Unknowable Now" 263). In *Ministry*, after describing the fury of the Sun in the opening chapter, the novel moves on to describe the godlike majesty of the Sun in the following chapter. This is where the Sun itself assumes the role of a narrator and the passage reminds one of the descriptions of the Sun in his novel *2312* (2012). In the opening chapter of *2312*, we see the "sunwalkers" are avidly waiting to get a glimpse of the sunrise since they worship the Sun as their God (*2312*, 4). The chapter in *The Ministry for the Future* reads, "I am a god and I am not a god. Either way, you are my creatures. I keep you alive. Inside I am hot beyond all telling, and yet my outside is even hotter. At my touch you burn, though I spin outside the sky. As I breathe my big slow breaths, you freeze and burn, freeze and burn. Someday I will eat you. For now, I feed you. Beware my regard. Never look at me" (25). This description affirms the agency of the Sun as the godlike entity capable of sustaining as well as destroying the lives of each and every creature on the planet in no uncertain terms. Besides the narration by the Sun in the second chapter, we see how a Carbon atom is also invested with an agency of its own as it narrates its own history of 'life'. In a similar vein, in Robinson's *Red Mars* novel, we see a character spiritualizes Mars, bestows it with a godlike dimension, and worships it as a god since he feels that Mars demands "fitting into it as it is, and worshipping it with our attention" (*Red Mars* 179). There emerges even a religion called "aerophany" cantered around the godhood of Mars itself. This recognition and appreciation of an innate spiritual agency in every object is one of the most defining features of an ecosophical outlook. As Raimon Panikkar explains, "Much more than a simple ecology, ecosophy is a wisdom-spirituality of the earth" ("Ecosophy: Nature's Guide to a Better World"). The Carbon atom is seen to recall how it was born out of the death throes of its mother, i.e., the dying star as it went supernova: "...when she went supernova the heat of the detonation exceeded a hundred megakelvins and in that pressure three helium nuclei stripped of their two electrons were crushed together and there I was, as elegant as anything in the universe: carbon, the king of the elements..." (*The Ministry for the Future* 347). The Carbon atom recalls the event of the birth of Earth itself, the consequent formation of the land surfaces, and how the photon rain of sunlight that followed had attempted to soften it up, and then in the Jurassic era, how Dinosaurs tried to eat it, and after being knocked by the photons incessantly for millions of years, it was suddenly "caught underwater in a muddy clutch of my fellow carbon atoms, and down we went back into the Earth, crushed there to graphite, in this case a seam of coal, where I spent many millions of years" (*The Ministry for the Future* 348). Also, on another occasion, a photon is seen describing his life and journey. The photon proclaims, "I am visible, I embody light itself..." (ibid., 249), and also states that it is immutable, immortal, massless, mysterious, and powerful and that "there are more of us than there are of anything else" (ibid., 248). These scattered episodes narrated from the perspective of the non-living entities further reaffirm the need for adopting an ecosophical approach towards life and existence in general, and these post-anthropocentric modes of narration become a very powerful tool for entrenching our worldview in an ecosophical outlook. Frame and Flamm (2021) in their review of the novel comment, "Interwoven with the main narrative storylines, are many stronger, shorter chapters introducing ideas such as Modern Monetary Theory (MMT) or the perspective of a carbon atom, the latter describing its birth in the Big Bang and subsequent journey through billions of years in the carbon cycle" (n. pag. Web). Also, on another occasion, a photon is seen describing his life and journey. The photon proclaims, "I am visible, I embody light itself..." (249). These scattered episodes narrated from the perspective of the non-living entities further reaffirm the need for adopting an ecosophical approach towards life and existence in general, and these post-anthropocentric modes of narration become a very powerful tool for entrenching our worldview in an ecosophical outlook. In fact, besides articulating the viewpoints of non-human and non-living entities, the novel also employs various chapters and

portions which do not directly contribute to the development of the plot or the action but act together to challenge and expand the very definition of what a novel can be. The novel is full of passages where some characters appear for a moment to convey certain message such as parallels between environmental degradation and capitalist exploitation and never show up again for the rest of the narrative. Once, we see a sailor describing how he has suffered like a slave under a corporate ship; elsewhere, we find an anonymous character to be describing in details India's plans to combat global warming by injecting Sulphur Dioxide; while on another occasion, a climate refugee can be seen describing his tales of survival whose hometown like many other refugees was ravaged and they are now forced to spend their lives in Switzerland and other European nations. There are also numerous passages which read like pure, historical commentaries, or catalogues of projects and ideas, and one chapter even describes a list of two hundred different projects that different nations have undertaken to combat climate change and ensure sustainable development. Robinson usually employs what Dynes refers to as a "subtle and self-reflective weaving" of alternating strands of narrative thus "bringing together strands of history, literature, psychology, and a wide range of sciences" which allows him to "offer each character his or her own unique identity without sacrificing the authorial perspective through which the novels move from fractious conflict to a guarded yet hopeful unity" ("Multiple Perspectives," 151-52). Adeline Johns-Putra in her study on Robinson's *Science in the Capital Trilogy* also talks about the "large-scale narrative, character ensemble, and interweaving plots" which suggest "a generic mixing...that is provocative and therefore deliberate" ("Ecocriticism", 752). In *Ministry*, Robinson shows how there is never a single solution available for all the problems and neither will any such solution acceptable to all since the psychological demands of the individual vary widely from one another. Some prefer scientific debates based on hard evidence and cold data, while some prefer eco-religion above any such purely scientific considerations, while many engage in bioterrorism against and targeted assassinations of institutions and individuals respectively whom they hold responsible for the environmental degradation, while still many first seeks assurance of long-term profitability in moving towards a sustainable future from the existing capitalist one. Also, besides investing the inanimate objects with agencies of their own, the human characters have been compared with the natural objects and this is especially the case when the author intends to portray them as casting a positive influence on the environment. The female protagonist of the novel and head of the eponymous ministry, Mary Murphy is described as a representation "for these men any kind of stand-in for the Earth mother" (254). Mary is among the handful of such people who are genuinely concerned about the future of our world and so, she has been trying, to create "a way to invest in survival, to go long on civilization, as opposed to the many ingenious ways that finance had found to short civilization..." (*The Ministry for the Future* 304). In fact, we may say that Mary stands for an 'ecocentric' rather than an anthropocentric outlook towards life and nature in general. As Fox explains, "Whereas an anthropocentric orientation considers the nonhuman world as so many "resources" to be used as humans see fit, an ecocentric orientation attempts, within obvious kinds of practical limits, to allow all entities (including humans) the freedom to unfold in their own ways unhindered by the various forms of human domination" ("The meanings of Deep Ecology" 5).

In fact, in many of his other works we see non-human agencies play an even more important role in defining and directing the course of the plot than their human counterparts. In *2312*, we come across the humanoids called Qubes, which are self-aware and super-sentient quantum computers, while in *Aurora*, we see several portions are described from the point of view of one self-aware AI narrator which refers to itself as the ship. The AI's narrative alternates between first and third-person narratives and the ship can gather information from a vast range of scales ranging from the "ever-foaming quantum surf, in which entangled quark-like particles appear and disappear, passing in and out of the ten suspected dimensions" to the level of the "complex manifold of overlapping universes" (*Aurora* 354). The AI even comments that "the self, the so-called I that emerges out of the combination of all the inputs and processing and outputs that we experience in the ship's changing body, is ultimately nothing more or less than this narrative itself" (*Aurora* 379). Everett Hamner studies Robinson's *New York 2140*, *2312*, and *Aurora*, and observes how Robinson's works not only tell tales of unsustainable social structures, economic exploitations,

ecological disasters and large-scale extinction of species, but also feature various “increasingly complex human–animal–A.I. hybrids appearing across his corpus” (Hamner, 449).

Geoengineering and Terraforming

In an interview given to Boom California, Robinson has said, “The idea that we’re living in the Anthropocene is correct. We are the biggest geological impact now; human beings are doing more to change the planet than any other force, from bedrock up to the top of the troposphere” (“Planet of the Future”). One of the most prominent and powerful aspects of Robinson’s climate fiction narratives is the description of the audacious geo-engineering feats and acts of terraforming which also feature prominently in the present novel. These feats of geoengineering and terraforming are the indispensable features of a good Anthropocene literature. Defining these two terms, i.e. ‘terraforming’ and ‘geoengineering’ is a very complex task as no single definition seems to be able enough to resolve all the paradoxical implications that inevitably arise from the use of such terms. Prucher has defined terraforming as our attempt to “modify a world’s environment so that it can support earth life-forms, especially humans” (“Terraform”, 235). Now, commenting on the paradox that is inherent in this definition, the British physicist and geologist Martyn Fogg asks, “how does one make the earth more like itself?” (*Terraforming*, 90). However, as Robinson himself has stated, the terraforming is a practice that is very much situated at present and is happening almost everywhere: “California is a terraformed space. I think we have accidentally become terraformer” (“Kim Stanley Robinson on science fiction and California”).

In his novels, Robinson describes time and again how humans are trying to counter the ice sheet loss in the Greenland ice caps, artificially salinating the Gulf Stream, attempting to convert the dry, shallow basins of the Sahara and Asia into salt seas by pumping more ocean water into them, diverting meltwater from Antarctica to be used as freshwater, genetically modifying photosynthetic bacteria to increase the carbon sequestration potential of plants, raising the State of Florida 30 feet above the sea level to prevent it from going underwater, etc. Pete Griffin, the leading scientist in the novel who seeks to stop the slippage of the glaciers proposes pumping all the melted ice back on to the polar regions. At one point in the novel, we even find the Indian government even decides to inject Sulfur Dioxide in the upper atmosphere to reduce global warming. While the problems and the challenges that Robinson describes here are definitely grounded in realities, an emphasis on the description of the nitty-gritty of the mechanisms seems to lend the work an unmistakable hard science fictional charm. Many researchers all over the world are involved in the research related to finding solutions to such problems as the melting of ice caps, rising seawater levels, global warming, etc to name a few. The novel also contains various geoengineering proposals, the most prominent being the proposal to drain the water from the bottom of the glaciers to stop them from slipping down into the sea. Robinson has always maintained that we indeed live on a terraformed planet, and terraforming should not only refer to the act of making other planets more habitable. A significant portion of the various chapters in the novel deals with the description of the minute details of the process of drilling holes in the glacial ice caps and pumping meltwater out from them. In his other novels, we find even more audacious descriptions of terraforming and geoengineering. In *2312*, we see Venus and Titan are being terraformed, as the human settlements have spread across the entire solar system – on Mercury, on the satellites of Jupiter, and on thousands of asteroids too. Here, the inhabitants of the asteroids are seen breeding endangered species in the caverns of the hollowed-out asteroids known as ‘terraira’, and these asteroids form parts of some greater federation system. In the novels belonging to the ‘Mars Trilogy’, we see the Martian human settlers have performed both geoengineering on massive scales to raise sea temperatures, to bring water to the surface of the lands, to increase atmospheric pressures, and also performed bio-engineering to create new species from existing life-forms.

Proposing Alternate Systems

In one place, the author makes clear the parallel that he has for so long been drawing indirectly between the exploitation of the nature and its resources and the exploitation of the poorer section of our society: "...all the young people on Earth, and all the generations of humans in the centuries to come, and all their cousin creatures on the planet who could never speak for themselves, especially in court—all these living beings added up to something like a poor and vulnerable developing nation, a huge one, appearing inexorably over the horizon of time" (*The Ministry for the Future* 372-373). This is highly ecosophical in its spirit since the philosophy clearly insists on treating the humans and non-humans alike as part of a greater and more inclusive ecosystem. Robinson is primarily known for his ardent optimism and advocacy for a utopian future and this novel is too not an exception in this regard. Gary K. Wolfe in his review for *Locusmag*, observes that this work of Robinson is "a kind of summing-up of the determined if almost perverse optimism of Robinson's last several novels." The author, despite dealing for the greater part of his work with the discontents of our present-day Anthropocene, he portrays a hopeful picture of the future in the end. The novel describes how the people are already beginning to see themselves as part of a great planetary civilization and acting responsibly with their technology: "Already a new internet; now its users may be turning into a new kind of citizen of the world. Gaia citizenship, or what have you. Earth citizen, commons member, world citizen. One Planet. Mother Earth. All these terms used by people who are coming to think of themselves as part of a planetary civilization. Main sense of patriotism now directed to the planet itself" (*The Ministry for the Future* 377). This seems to be the realization of the ecosophical vision projected by Naess (2008): "Every living being is connected intimately, and from this intimacy follows the capacity of identification and as its natural consequences, practice of non-violence" (*The Ecology of Wisdom* 90). Also, Latour, in his 2011 lecture titled *Is it Possible to Get Our Materialism Back?* posits the need for engaging with the environmental discourse in terms of 'Gaia' and 'Terrains'. He builds his theory based on the original 'Gaia Hypothesis' of Lovelock and Margulis but proposes the framework of Anthropocene for reformulating the new theory of Gaia. This also reminds one of Karen Barad's theory of 'intra-acting agencies' in which she envisages all the sentient and non-sentient entities as entangled in a web of interaction and in which no entity can be said to be totally distinct and acting independently on its own, rather each exists only in relation to the others: "The neologism 'intra-action' signifies the mutual constitution of entangled agencies. That is, in contrast to the usual 'interaction,' which assumes that there are separate individual agencies that precede their interaction, the notion of intra-action recognizes that distinct agencies do not precede, but rather emerge through, their intra-action. It is important to note that the 'distinct' agencies are only distinct in a relational, not an absolute, sense, that is, agencies are only distinct in relation to their mutual entanglement; they don't exist as individual elements" (*Meeting the Universe Halfway* 33). Braidotti, too in his works (2006, 2011 and 2013) has put forward her vitalist approach through which she seeks to inspire us into acknowledging the agency of the non-human life, which she terms as *zoe*, along with the human life or 'anthropos' or 'bios'. According to her, "Zoe-centred egalitarianism is...the core of the post-anthropocentric turn" (*The Posthuman* 60).

Recently researchers have also started acknowledging the model of ecology as a dynamic system made of socially interconnected agencies (Bennett et al. 2009; Ellis et al. 2018). This is what the Gaia 2.0 civilization also envisages in which the entire human civilization is posited to be acting as geologically significant and technologically responsible agents to bring positive changes to their environment and ecosystem. Robinson in many of his works, whether they are set in the outer reaches of the solar system or in the imagined, alternative futures of our own planet, has striven to portray the complexities and challenges involved in the process of bringing change to human societies, as is evident from his 'Mars Trilogy'. Coming back to *The Ministry for the Future*, we see how even the power structures and discursive practices are described as undergoing reversals, as the people who for so long have been labelled as terrorists by the system, are now being hailed as resistance warriors who are fighting for the Earth itself: "So now the terrorists involved were perhaps saboteurs, or even resistance warriors, fighting for the Earth itself. Gaia's Shock Troops, Children of Kali, Defenders of Mother Earth, Earth First, and so on" (*The Ministry* 390-391). This again reminds us of the Mars-first ecoterrorists and the highly radical Mars worshippers whom we come across in the novel *Red Mars*. In Michael Crichton's *State of Fear*, we see the trope of ecoterrorism playing a really important role. In the novel, one young lawyer and environment sympathizer

named Nicholas Drake is seen stealthily funding an ecoterrorist organization. Also, one Professor Hoffman, in this novel, exposes how all the political leaders, media houses, and legal institutions conspire together to whip up the fear in the public psyche regarding such terrorist outfits thus increasing their social and ideological hold over the masses. Also, in George Marshall's novel *Earth Party*, we see how the ruling coalition government declares an environment sympathizing party named Earth Party as a terrorist organization thus forcing the latter to change its name to Peoples Earth Party (PEP). In Marshall's work, however, following a large-scale popular uprising, the PEP wrests control from the coalition government and comes to power and then prepares to plan its responses to the eco-catastrophes.

Now, in *The Ministry for the Future*, the financial crisis that ensues as a result of the radical change in the outlook of the people makes it possible for the "people, ordinary people en masse, as the material manifestation of the public," to be in control over a lot of things (402). Mary, first kidnapped by Frank May, the sole survivor of the Indian heatwave, later decides to cooperate with Frank and collaborates with various illegal outfits since she realizes that the current system and its administrative machinery are too short-sighted and under-budgeted, have too many vested interests, and suffer from too much red-tapism to successfully plan and pursue any plan of saving the Earth. Frank actually fails to work with the ecoterrorism organization in India and even joins the team of researchers in Antarctica, but every time he seeks to begin his life anew, details about his medical condition proves to be the greatest hindrance and he is sent back for further treatment. Frank, at one point, moves to Switzerland and buys a rifle and decides to end those whom he feels are responsible for the heatwave attack in India. In Michael Crichton's *State of Fear*, we see the trope of ecoterrorism playing a really important role.

Lenton and Latour have envisaged the Gaia 2.0 framework where through "deliberate self-regulation—from personal action to global geoengineering schemes" (Lenton and Latour), humans seem to constitute a fundamentally different Gaia framework from its predecessor. In the Gaia 2.0, the vision of a good Anthropocene can be realized with the help of responsible use of advanced technologies and the purposeful application of scientific knowledge, and here too, the author seems to advocate for the application of our technological prowess for establishing a framework for effecting a sustainable change. The novel states, that "We are Homo faber, man the maker, and our tools are the only thing that allow us to cope with the world. We even co-evolved with our tools..." (*The Ministry for the Future* 477), and as such it will be our tools that will ultimately help us in upgrading our present state to a whole new system based on deliberate self-regulation and an increased rate of global sustainability. Various researchers have begun to emphasize the need for engaging in the conjoined and collaborative efforts to realize the goal of "good Anthropocene" (Ellis 2011; Bennett et al. 2016; Pereira et al. 2018).

The author even terms the Paris Agreement as "the first big spark of planetary mind. The birth of a good Anthropocene" (*The Ministry for the Future* 494), since it is from this moment onwards that we have pledged to work collectively towards realizing our goal of achieving greater global sustainability. Thus, we see how the optimistic tone of the novel becomes even more prominent as the work draws towards its conclusion: "Ecosystems on every continent were therefore returning to some new kind of health, just as the result of the planetary ecology doing its thing, living and dying under the sun" (*The Ministry for the Future* 496). This picture of everyone coming together to contribute towards the creation of a new ecological practice brings to our mind Guattari's proposition for building assemblages of subjectivities, and "organize new micropolitical and microsocial practices, new solidarities, a new gentleness, together with new aesthetic and new analytic practices regarding the formation of the unconscious" (*The Three Ecologies* 51). Guattari feels we should all be "working for humanity and not simply for a permanent reequilibration of the capitalist semiotic Universe" (52). In Robinson's 'Science in the Capital' trilogy too, we see how scientists, politicians, individual volunteers all join hands together, in the end, to collectively fight the climate change.

Towards the end, we see children reciting the words from a song whose original has been written in Sanskrit and which seems to be articulating the ecosophical vision of a good Anthropocene for the readers which stresses on the need for all the entities of the planet to come together as a single unit: "We are the children of this planet, we are going to sing its praises all together, all at once, now is the time to express our love, to take the responsibilities that come with being stewards of this earth, devotees of this sacred space, one planet, one planet..." (*The Ministry for the*

Future 558). The ecosophical vision that the novel upholds can be realized only if we attempt to join with every sentient being on the planet and found "a new Earth religion" where we, along with every other living being on Earth "that shares a crucial 938 base pairs of DNA" (*The Ministry for the Future* 560), would be seen to be constituting one single, planetary family. As Naess remarks, "Now is the time to share with all life on our maltreated Earth through the deepening identification with life forms and the greater units, the ecosystems, and Gaia, the fabulous, old planet of ours" (*The Ecology of Wisdom* 92).

Conclusion

The study has endeavored to explicate the elements of 'good' and 'bad' Anthropocene in Kim Stanley Robinson's *The Ministry for the Future* (2020) in order to show how the work advocates for the need of an ecosophical framework which might inspire us to see man and nature as forming parts of one singular family, and where the interest of one is always inextricably interlinked with the interest of the other. The novel also exhorts us to acknowledge the agency of the non-human and non-living others and see ourselves as active agents in the act of bringing a revolutionary change in our attitude towards the climate change, environmental degradation and ecological harmony which will help move the society toward a most desirable future within the Anthropocene.

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