Eco-criticism, Techno-Capitalism, and Speculative Fiction: An Analysis of Ray Bradbury's Short Story "A Sound of Thunder"

Meher Nandrajog

Abstract

The current experience of the pandemic has raised questions about the planetary shifts that have been brought about. Rather than assess the pandemic as a medical crisis, critical assessments have sought to examine it as a consequence of structural inequalities and degradation of nature that the technocratic-capitalist nexus has resulted in. To make sense of this experience, people have sought to connect with past narratives of trauma and critiques of technocratic systems in genres such as speculative fiction. This paper uses a comparative framework to politically engage with the present through the analysis of Ray Bradbury's short story "A Sound of Thunder". This story is a piece of speculative fiction that examines the social, political, and environmental (ill)effects of technology on the natural and social world of a civilisation and its people. Set in the year 2055, a future in which 'Time Safari, Inc.' can provide its customers the opportunity to travel back in time to hunt dinosaurs, it signals the horrors that the use and misuse of technology that meddles with, and causes the destruction of, nature can unleash on the world. The paper examines this short story through the perspective of literary ecocriticism, for its humanitarian and conservationist themes, as Bradbury's critique of the capitalist American society that wishes to conquer all. It then establishes connections with the reading of the pandemic through 'conjoined histories' of nature and capital.

Keywords: Capitalocene, Ecocriticism, Nature, Ray Bradbury, Speculative Fiction.

1. Introduction

The relentless battering of the world by the Covid pandemic has produced a range of affective responses as well as some serious methodological rethink about the ways in which we understand our geological epoch and the planetary shifts that have occurred in recent times. The pandemic itself has been interpreted as a failure of the Capitalocene, and as requiring an understanding of the disease through the "conjoined histories" of climate and capital (Chakrabarty, 2014). Capitalocene, a conceptual category and methodological formulation, made famous by Jason Moore, is "understood as a system of power, profit and re/production in the web of life" (Moore, 2017, p. 594). In other words, it understands capitalism not merely as an economic system but also as implicated in power, hierarchy, and control of resources. It is in the very way of organising relationships between humans and nature that profit making and capital accumulation is done at tremendous ecological cost. Capitalist ideology mediates cultural habits, patterns of consumption, and the idea of well-being and prosperity in a society. Thus, the idea of Capitalocene seeks to establish a link between planetary degradation and capitalist machinery, and holds it responsible for environmental destruction and consequent crises for humanity.

Significantly, the concept of Capitalocene contests the framework of Anthropocene, which holds an abstract humanity - the Anthropos - as responsible for the contemporary planetary crisis. Such an idea of Anthropocene is explicated, for example, in the statement made by Dipesh Chakrabarty (2014) about climate change: "the poor participate in that shared history of human evolution just as much as the rich do" (p.14). The term Anthropocene, in its earliest usage, referred to a geological epoch in which human actions had led to biophysical changes on the planet (Crutzen, 2002; Steffen *et al*, 2011). It has become a metaphor for changes on the planet that are of human origin. The discourse of the Anthropocene has been critiqued on grounds of it being apolitical and ahistorical, since it refers to an undifferentiated and abstract humanity, thus papering over class struggle and oppression. Moreover, its technologically deterministic model holds technology as responsible for humanity's changed relationship with nature, rather than seeing technology as shot through with unequal social relations. Capitalocene, on the other hand, argues that environmental destruction is not a product of the totality of human action, but a result of actions by those who control means of production and make decisions about energy usage for their ultimate goal of capital accumulation. Thus, we cannot understand the full impact of environmental changes without going into a historical analysis of the problem.

The Covid 19 pandemic and its consequences can be better understood through the framework of the Capitalocene. The images of half-burnt bodies buoying up and migrant populations walking long-distances on highways have become part of the repertoire of Covid memories. These indicate to us that disease is not simply a medical/pathological problem to be surmounted through medical innovations, but is embedded in the material and cultural practices of our time that are highly exclusionary. The pandemic is a manifestation of systemic and structural inequalities in techno-capitalist societies, and conflict between humans who assume to be powerful, and nature.

One of the ways in which people have tried to make sense of their pandemic experiences is to read continuities between historical experiences of trauma and the present, thus establishing a temporal connect. 'Pandemic Literature', such as that arising from the grim experiences of disease in the Roman and Byzantine empire, the fourteenth century 'Black Death' in England, early-twentieth century Spanish flu in Europe, and cholera and plague pandemics in colonial India, has found much currency in the present times. This vast literature helps reveal the emotional and affective experiences of people who otherwise become part of cold statistics in official histories. Attention has also been drawn to speculative fiction from across literatures of the world that had warned human beings about the arrogant blindness of excessively technocratic societies and their desire to conquer time and space. It is this manner that a link can be forged between speculative fiction written in the past and our present pandemic experiences.

Such an exercise of bringing together literatures across time and space under the rubric of 'Pandemic Literature' may invite the critique of being ahistorical and universalist in its analytical methodology. However, it may be useful to compare not only accounts of people's sufferings across time-periods but also the politics of epidemics and pandemics throughout world history. Epidemics and pandemics usually become convenient occasions for authoritarian regimes and techno-capitalist interests to increase surveillance and tighten their control over the vulnerable. They are, in any case, a result of the over-reach of human power over nature.

Material experiences of people and social and political critiques of historically specific dominant interests and institutions thus provide multiple lenses through which one can compare literatures and experiences of the past and the present. Ray Bradbury's short stories, for example, written in the context of a capitalist, technocratic, mid-twentieth century America, strike a chord in the present times for their warning about the disastrous consequences of the technocratic desire to overpower nature. This paper analyses one of Ray Bradbury's short

stories, "A Sound of Thunder", to look at the connections and critiques that reflect in our contemporary experiences. The paper uses a comparative framework to reflect upon the relevance of Bradbury's speculative fiction to our social and political concerns today in the wake of the pandemic.

First published in 1952 in *Collier's* magazine, and then in his 1953 publication *Golden Apples of the Sun*, Ray Bradbury's "A Sound of Thunder" is a science fiction short story that examines the social, political, and environmental (ill)effects of technology on the natural and social world of a civilisation and its people. Set in the year 2055, a future in which 'Time Safari, Inc.' can provide its customers the opportunity to travel back in time to hunt dinosaurs, it signals, through the story of the hunter-adventurer Eckles and his tour-guide, Travis, the horrors that the use and misuse of technology can unleash on the world.

After an American presidential election in which a national favourite candidate has won, an excited Eckles fulfill his dream of going back in time to hunt a dinosaur, a feat made possible by the existence of time-machine technology and companies that make sport of such possibilities. Though equipped with a strict set of company rules and regulations, and with much hunting experience under his belt, Eckles, in a moment of blunder, strays from the set of instructions that he has been given by his guide, Travis, and ends up killing a pre-historic butterfly, thus altering the course of many centuries of history, which culminates in a changed political order for his present-day 2055 America, which lapses, then, into a dictatorship.

Thus, technology that meddles with and enables/causes the destruction of nature leads, in turn, to unpredictable and unfathomable crises for humanity in the future. Bradbury's short story may then be examined through the perspective of literary ecocriticism - in the way in which it represents nature and illustrates environmental concerns — for its humanitarian and conservationist themes, as a critique of Bradbury's capitalist American society that wishes to conquer all. "Simply defined, ecocriticism is the study of the relationship between literature and the physical environment" (Cheryll Glotfelty, as qtd in Barry, 2018, p. 248). This mode of analysis is what the paper seeks to adopt.

2. The Frontier Myth as Human Arrogance

Though set in the future, the story "A Sound of Thunder" roots itself in a twentieth century Cold War context, and uses the American literary idea of the 'Frontier Myth' (Turner, 1920)[1] to present this critique. The Frontier Myth, in the context of European settlers coming to North America, was the cultural idea of the endless bounty of wilderness and nature as being available to the self-reliant individual to conquer, tame, claim, and own. This ideology of romanticisation and idealisation of the sublime quality of nature, and the capability of the rational human being to conquer it, was reflected in literature and art of the seventeenth through twentieth centuries in America. The heroic notion of the taming of wild, unexplored, unchartered territories, however, expanded from the conquering of physical frontiers to "figurative frontiers" of new "unwon fields of science" that remained, yet, to be mastered (Turner, as qtd in Sen and Dasgupta, 2017, p. 23). "A Sound of Thunder" presents this idea in its narration of the tale of the character Eckels, a man who goes to explore the 'wild' of pre-historic times, which is made possible as a result of human mastery over the frontiers of time and space so that technology can be used to manipulate them according to will. The 'heroism' of this exploration is, however, undercut by the arrogance of the claim that human beings can completely control nature through technology, when nature retaliates in the face of that technology.

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[1] American historian Frederick Jackson Turner laid out the "Frontier Thesis" in his 1893 speech at the Conference of the American Historical Association, in which he glorified the "taming" of the western frontier as an example of the glorious qualities of the American people. He also turned the argument to include "figurative" frontiers since the white races had already reached the end of the western frontier till the Pacific. These new frontiers to be conquered were in the fields of science, technology, and development. These arguments were presented in his book *The Frontier in American History* (1920).
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3. An Ecocritical Analysis of "A Sound of Thunder"

The story "A Sound of Thunder" focuses not on the brilliance of technology or of the mind that created it, but on the potentially dangerous effects that such an interference with nature can have. It foregrounds the limitations of the rational human mind that does not perceive the warning signs that nature itself provides as 'thunderous' wake-up calls for human beings to be mindful of the consequences of their actions. Thunder often serves as a fantastical element in representing the awe and wonder that nature inspires. In fact, the short story "Ylla" that is part of Ray Bradbury's *The Martian Chronicles* (which also deals with the Frontier myth and colonial theme of Martian natives whose land is being intruded upon), is also one that presents a "romantic, mystical vision of historic experience", particularly that of wilderness (Wolfe, 2000, p. 104). The acoustic sound of thunder thus becomes a trope that encompasses the sublime quality of nature as both awe-inspiring and terrorising, and as that which forebodes the happening of something terrible as a consequence of human action that has intruded into the space of nature. The story "A Sound of Thunder" similarly employs this trope to predict the chaos that is to occur, and the sound of thunder is heard thrice in the story, in the moments that are to inspire awe and terror — first, at the appearance of the Tyrannosaurus Rex, next, when the Rex is killed, and finally, at the end of the story, when the force of nature finds its revenge.

The concept of the sublime in nature was 'enquired' into by Edmund Burke in 1757, in his *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful*.[2] The sublime refers to the innate capacity of an object to invoke not just awe and beauty, but to profoundly move, perhaps decimate, or create a feeling of complete surrender of the self to the object which inspires the sublime. Nature, as an aspect of God's creation, was attributed this quality in Romantic thought (and also that which followed), and the 'limitedness' of human beings was highlighted in such encounters with the larger order of things that were incomprehensible to human understanding. Such an understanding of nature as awe-inspiring is inherent in the story "A Sound of Thunder."

The story "A Sound of Thunder" presents a picture of the altered future that Eckels creates when he accidentally strays from the path that he has been strictly instructed to stay on, having already been warned by his tour guide, Travis, of the grave consequences that may result from a deviation of it:

> Stay on the Path. Don't go off it. I repeat. Don't go off. For any reason! … We don't want to change the Future. We don't belong here in the Past…Not knowing it, we might kill an important animal…Step on a mouse and you leave your print, like a Grand Canyon, across Eternity. Queen Elizabeth might never be born, Washington might not cross the Delaware, there might never be a United States at all. So be careful. Stay on the Path. Never step off! (Bradbury, 1984, p. 44-45)

The problem arises when Eckels, the trained and experienced hunter that he is, is so struck by the tremendous sight of the Tyrannosaurus Rex, which he has excitedly been waiting to add to his list of animals hunted, that he, entranced, steps off the anti-gravity path above the ground onto "the jungle of sixty million two thousand and fifty five years before" (p. 44), and accidentally kills a butterfly, thus setting forth the series of changes that alter time and history.

Another concept that may be deployed to understand how human beings disturb the delicate balance of nature is that of the 'butterfly effect'. In 1963, meteorologist Dr. Edward Lorenz put forth the principle of the 'butterfly effect'[3], the impossibility of knowing the

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[2] Edmund Burke's systematic theoretical analysis of the sublime formed the basis of the heightened awareness of the world that undergirds the poetic expression of the (British) Romantics. Burke prioritised passion, imagination, and sensory experience over the rational, and launched a scientific investigation into the same in his *Enquiry*. The sublime is that heightened sense of awe in which the mind is so full with an object that it cannot contemplate another.

[3] Dr. Edward Lorenz was a Professor of Meteorology at the Massachusetts Institute of Technology, who conducted groundbreaking research on chaos. The 'butterfly effect' is a powerful insight into the workings of nature, whereby

outcome of any small action that may have a major impact far into the future. Such is the eponymous effect seen in "A Sound of Thunder", so that the accidental killing of a small butterfly alters greatly the outcome of a presidential election, and, perhaps, the ideologies of a society in which tyranny, violence, and killing becomes the norm. In fact, the incident in the story predates the theorisation of the 'butterfly effect', which was only later put forward by Dr. Edward Lorenz. Thus comes the understanding that small disturbances made to nature by human beings may have massive consequences for the future.

On their return from the past, a terrified Eckels, who has been stripped of his pride in the face of a creature of nature so grand that he could not possibly but "miscalculate" (p. 47), discovers the changed language and ideology of the land — the sign board at the entry of the office of the time travel company had changed, as had the result of the presidential election, so that a man who was earlier called "an anti-everything man" (p. 43) was now ruler of the changed America. It is, perhaps, this changed ideology of tyranny and "anti-human"ism (p. 43) that enables Travis to kill Eckles in this new America they now inhabit. It is this context of elections and opposed ideologies of Keith versus Deutscher[4] that place the story in the Cold War context of America. This historical rooting enables a critique of American society, and the story highlights the impact of science and technology on society rather than focusing on the inventive aspect of it. In fact, Turner claimed in his *The Frontier* that democracy developed because of the existence of free land, and that increasing industrial and government bureaucracies would infringe those values. The story also echoes this theme in its showing of a future in which a 'democratically' elected autocratic ruler comes into power, which particularly gives it a polemical immediacy in today's context. What it then highlights is the wonder and power of the socio-ecological balance of nature, so that a dis-balance in one affects the other in ways that the human mind that knows it all cannot even comprehend. This is a fact that Travis calls attention to in his instructions to Eckles before the beginning of their hunt:

> Crushing certain plants could add up infinitesimally… Perhaps only a soft breath, a whisper, a hair, pollen on the air, such a slight, slight change that unless you looked close you wouldn't see it. Who knows? Who really can say he knows? We don't know. We're guessing. But until we do know for certain whether our messing around in Time can make a big roar or a little rustle in history, we're being careful. (Bradbury, 1984, p. 45)

However, the way in which they are 'careful' is that the traveller is instructed to not "shoot any animal we don't okay…We don't want to change the Future. We don't belong here in the Past. The government doesn't like us here. We have to pay big graft to keep our franchise. A Time Machine is finicky business" (Bradbury, 1984, p. 45). The primary concern reflected in Travis's words, therefore, is not the horror from the harm that will come to nature, but the horror of the losses that the business of Time Safari Inc. will face.

The rampant commercialisation of nature and dehumanisation of society thus take precedence over the preservation of nature and its beings. In such a case, it is nature itself that rebels and shows to human beings their infinitesimal place and insignificance in the universe, as we are witnessing even in the present. It is in this way that Bradbury uses the medium of literature to raise concerns about the environment and the damage that human beings are causing to it. The experience of the pandemic brings us into a similar awareness of the sovereignty and unpredictability of nature despite human claims of taming and harnessing it for 'development'.

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small changes can result in large consequences. His theory turned around the idea of nature as a predictable mechanical system, the "clockwork universe". Any imprecise human measurement of natural phenomena could get magnified into completely incorrect forecasts. This unpredictability in nature was the basis of his chaos theory.

[4] The two presidential candidates in the story, with opposing ideologies. While Deutscher is characterised as "a militarist, anti-Christ, anti-human, anti-intellectual" (Bradbury, 1984, p. 43), in whose hands the nation would run as a dictatorship, it is proclaimed of the liberal candidate Keith, who has won the election, and will allow capitalist ventures like the 'Time Safari, Inc.' to run, that "[h]e'll make a fine President" (p. 43). After his return from the past, Eckles discovers that the outcome of the election has been altered, and it is the dictator Deutscher who is in power.

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4. Results and Discussion

In Ray Bradbury's story "A Sound of Thunder", it is the 'social frontier' of technology that stands to be examined in the presentation of a time machine that endangers the present of the story. The concern of the story seems to be of that which is lost in the face of technological expansion rather than the power gained from it. Here, the technological frontier is paradoxically presented in that "we cannot enjoy its benefits without also encountering its hazards" (Wolfe, 2000, p. 107). Yet, human societies have refused to learn from the experiences of the past or pay heed to such critiques of technocratic 'development'. It is this faulty notion of development, which is both exclusionary and destructive of nature that has ravaged large human populations in the pandemic. The claims of technological mastery over nature notwithstanding, nature comes back to claim the lost habitats and spaces by decimating human encroachments over it. Bradbury's critique of the technological Frankenstein, and the futility of human efforts to take control over nature, can be read into the experiences of the pandemic that are caused by a similar hazardous 'developmental' expansion.

5. Conclusion

Ray Bradbury's short story "A Sound of Thunder" may be read as a critique of technology that adversely affects both the environmental, and, therefore, the social frontier as a consequence, and serves as Bradbury's call to a society that he hopes would "dare to be human instead of mechanical" (Bradbury, about Robert A. Heinlein, in an interview, as qtd in Aggelis, 2003, p. 110). The experience of the pandemic can be similarly read as a failure of techno-capitalist societies that seek to establish mastery over nature and treat it as an object to be harnessed for 'development'. The comparison may be valuable in establishing experiential connection with the past, as well as probing the social and political dimensions of public crises in the present.

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Bio-note

Meher Nandrajog is a third-year undergraduate student of English at the Lady Shri Ram College for Women, Delhi University, in India.

Email Id: meher27022001@gmail.com

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