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Climate Crisis and Fiction: a Study based on Amitav Ghosh's *The Great Derangement: the Climate Change and the Unthinkable*

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Abstract:- This paper on "Climate Crisis and Fiction: A Study based on Amitav Ghosh's *The Great Derangement: the Climate Change and the Unthinkable* (2016) attempts to grasp Ghosh's treatment of the complexity and urgency of the subject from the wide corridors of culture, politics and power. This paper brings out a number Ghosh's insights to depict climate crisis in fiction as well as to critically evaluate cli-fi. This could be the first serious reading of the text, which attempts to feature its strengths through textual evidences and analysis. Some of key ideas gleaned from the text and which constitute the main theme are: depiction of the presence of the non-human interlocutors; intervention of the non-human in the thought-process of the humans; the process of the decentring of the human and the re-centring of the non-human; depiction of the sense of the uncanny and the improbable; depiction of the precariousness of human existence; disorientation of the predator consciousness / hubris of European Enlightenment; deconstruction of the uniformitarianism leading to the recognition of the catastrophic; a concern with forms beyond visual metaphors and with thoughts beyond the linguistic expediency to the multiple patterns of non-linguistic communication; distaste for logocentricism and predilection for thinking in images; corrective measures like evacuation, dissemination of disaster-related information, revision in the habits of thought and so on

Key words*: non-human interlocutors - uncanny and the improbable - the predator consciousness - precariousness of human existence- thinking in images*

I. INTRODUCTION

The spectre of climate crisis is hovering over the earth leaving the planet in an emergency mode to save civilization from a complete catastrophe. Climate change is moving quickly toward a tipping point of the incorrigible and life on Earth is slowly dying off. Hundreds of species are going extinct, the oceans are warming, plastic trash is choking wildlife and wars are just imminent in many parts of the world owing to droughts and scarcity of resources. Humanity is careening towards the deaths of billions of people fighting for survival. Yet many insanely self-destructive, greed mongering political power centres prefer to deny climate crisis emergency altogether in order to keep profits high. Their lies about its non-existence are funded by the fossil fuel industrialists in collusion with our major media, which have never reported adequately on the issues.

II. OBJECTIVE

The objective of this paper is to make a detailed study of why fiction, particularly novel, is practically silent about global warming and its impact on the life on the planet. Probably the extreme nature of today's climate events makes them peculiarly resistant to the contemporary imagination. For instance, representing hundred-year storms and freakish tornadoes in fiction may appear too improbable for the novel and are automatically consigned to other genres. It is in this context that Amitav Ghosh's the latest work of non-fiction *The Great Derangement: the Climate Change and the Unthinkable* (2016) is published. The core concern of the work is on Climate change - the upsetting of weather patterns across the world -about which writer marshals such searing insight. In the course of it he also examines our inability—at the level of literature, history, and politics—to grasp the scale and violence of climate change.

III. METHODOLOGY

This paper follows closely the first part of Ghosh's work where he engages on the issues of depicting climate crisis motif in fiction. Amitav's approach to the subject may be summarised under the following heads:

a. Depiction of the presence of the non-human interlocutors like the rising sees, storms etc.

b. Intervention of the non-human in the thought-process of the humans like the renewed interest in the non-human. The process of the decentring of the human and the re-centring of the non-human

d. Depiction of the sense of the uncanny and the improbable -tracing the uncanny intimacy of the humans in the relationship with the non-human
e. Depiction of the precariousness of human existence
f. Disorientation of the predator consciousness / hubris of European Enlightenment
g. Deconstruction of the uniformitarianism leading to the recognition of the catastrophic;
topsy-turvyness of the middle class expectations; and revision in the habits of thoughts
h. Isolation of Nature and Environment through dividing practices
i. Corrective measures like evacuation, dissemination of disaster-related information, revision in the habits of thought and so on
j. Transition from a sense of the individual moral adventures to the collective predicament.
k. A concern with forms beyond visual metaphors and with thoughts beyond the linguistic expediency to the multiple patterns of non-linguistic communication.
l. Distaste for logocentricism and predilection for thinking in images.

IV. AWARENESS OF THE NON-HUMAN PRESENCES

Ghosh begins by examining the transition in our attitude to nature. He asks the readers to recognise the fact that only less than three centuries have elapsed since human kind began believing that planets and asteroids are inert. Here the word 'recognition' (5) harks back to some prior awareness that flashes before us, effecting an instant change in our understanding of that which is beheld, which is "the presence of its lost other" (6).We are forced to awake "to the recognition of a presence" (6) that had moulded our lives and about which we had taken much for granted. We come to recognize "that the energy that surrounds us, flowing under our feet and through wires in our walls, animating our vehicles and illuminating our rooms, is an all-encompassing presence that may have its own purposes about which we know nothing" (6-7). We were forced into an awareness of the urgent proximity of the non-human presences in the face of confrontation with the portents of change witnessed in the dynamics of landscape changeability particularly " in the receding shorelines and a steady intrusion of salt water on lands that had previously been cultivated" (7) or in the " accumulation of carbon in atmosphere was rewriting the destiny of the earth" (8) in the first years of twenty-first century. The landscape is "demonstrably alive" (7) as a protagonist in "a stage for the enactment of human history" (8)

V. LITERARY IMAGINATION AND CLIMATE CHANGE

The challenges that climate change poses for the contemporary writer of fiction are products of something broader and older. These "derive ultimately from the grid of literary forms and conventions that came to shape the narrative imagination…"(9). The subject of climate change takes a very meagre space in the landscape of literary fiction. Even in the highly regarded journals and book reviews, the subject appears in relation to non-fiction. He says," It is as though in the literary imagination climate change were somehow akin to extraterrestrials or interplanetary travel" (9-10).

It is either that the writers are blind to potentially life-changing threats or "the currents of global warming too wild to be navigated in the accustomed barques of narration"(10) In any case the problem does not arise out of a lack of information and Ghosh prefers to link this imaginative and cultural failure with the whole issue of climate change: " But the truth… is that we have entered a time when the wild has become the norm: if certain literary forms are unable to negotiate these torrents, then they will have failed - and their failures will have to be counted as an aspect of the broader imaginative and cultural failure that lies at the heart of the climate change(10).It is also a fact that when novelists writes about climate change it is almost always in the fiction genres. Arundhati Roy, whose writings on the subject are in various forms of non-fiction and Paul Kingsnorth, the author of The Wake who dedicated several years of his life to climate change activism can be cited as typical instances. In Roy's powerful fable The Briefing, the tourist guide says "Trees have unfixed their earthbound roots and are on the move. They're migrating from their devastated homes in the hope of a better life. Like people, Tropical palms are moving up into the Lower Alps. Evergreens are climbing to higher altitudes in search of a colder climate." The Wake is an ageless story of the collapse of certainties and lives. This choice to rely on non-fiction forms is "not the result of personal predilections: it arises out of the peculiar forms of resistance that climate change presents to what is now regarded as serious fiction.

One reason why contemporary culture finds it so hard to deal with climate change is because it is perhaps the most troubling question ever to confront culture in the broadest sense. Ghosh asserts that "climate crisis is also a crisis of culture, and thus of the imagination" (12). This crisis of culture is evident in the type of desire it promotes. It generates desires of various kinds which are among the principal driver of carbon economy. The artefacts and other myriad commodities conjured up for the consumption of these desires are "expressions and concealments of the cultural matrix that brought them into being" (12).

This cultural matrix interacts with various modes of cultural activities like art, architecture, theatre etc.. We also know from history that culture is intimately linked with the wider histories of imperialism and

capitalism that have shaped the world. However, it is hardly possible to be definite about the specific ways in which the cultural matrix interacts. In author's own words, "If contemporary trends in architecture, even in this period of accelerating carbon emissions, favour shiny, glass-and-metal-plated towers, do we not have to ask what are the patterns of desire that are fed by these gestures"? (14) Hence a writer genuinely concerned about the future of our planet has to write not just the politics of the carbon economy but the lager issues relating to our own practices and the ways in which political power make us complicit in the concealments of the broader culture. If the very subject of climate change should lead to banishment from the preserves of serious fiction, then it does tell a lot about the culture writ large and its patterns of evasion. The literature of our time should provide for the traces and portents that led to this altered world of ours. If not, the subsequent generation of truth seekers for the changed world of their inheritance will be forced to "conclude that ours was a time when most forms of art and literature were drawn into modes of concealment that prevented people from recognizing the realities of their plight" (15). If this should possibly happen, "this era, which so congratulates itself on self-awareness, will come to be known as the time of the Great Derangement" (15).

VI. DEPICTION OF THE SENSE OF THE IMPROBABLE

A tornado had hit North Delhi in 1978 when the author was doing his postgraduate programme in the University of Delhi. In probing the vocabulary used by various print media on the day following the tornado disaster, it was evident to him that the disaster was unprecedented. The phenomenon was so unfamiliar that the papers literally did not know what to call it. Only from the report of the calamity in the subsequent days did he "realise that the tornado's eye had passed directly over me. It seemed to me there was something eerily apt about that metaphor: what had happened at that moment was strangely like a species of visual contact, of beholding and being beheld. And in that instant of contact something was planted deep in my mind, something irreducibly mysterious, something quite apart from the danger that I had been in and the destruction that I had witnessed; something that was not the property of the thing itself but the manner in which it had intersected with my life"(18). He considered his encounter with the tornado as "a mother lode, a gift to be mined to the last little nugget" (20).

A novel that would rely on the details of tornado and its impact on the victims would be judged to be one of incredulity and improbability by the readers. The depicted scene would be made out to be "a contrivance of last resort" of a "writer whose imaginative resources were utterly depleted" (21). So "probability" is all that matters in fiction. Ghosh asserts that "Probability and the modern novel are in fact twins, born at about the same time, among the same people, under the shared star that destined them to work as vessels for the containment of the same kind of experience" (22).

At this point the author goes in for an archaeological study of the novel. Before the birth of the modern novel what delighted the story-tellers and their audience was "the unheard and the unlikely" (22). For example, narratives with a blithe disregard for probability like those of The Arabian Nights, The journey to the West and *The Decameron* go on from one exceptional event to another. Novels also proceed linking together moments and scenes. However, what is distinctive concerning the form is that it conceals those exceptional moments which function as the motor of the narrative. This is made possible through the induction of "fillers", a term borrowed from Franco Moretti (372).

VII. THE ROLE OF FILLERS IN THE ACT NARRATION

According to Moretti, 'fillers' serve as mechanisms specially designated to keep the act of "narrativity" under control and also to give it regularity and certain "style. This mechanism conjures up a fairly run-of -the - mill details of everyday, which function " as the opposite of narrative". It is thus that the novel takes its modern form, through "the relocation of the unheard-of toward the background… while the everyday moves into the foreground" (23). The modern novel was thus brought into existence through a deliberate insertion of the everyday and relegation of the improbable. Filers suddenly become so important because they offer the kind of narrative pleasure with the new regularity of bourgeois life. In between the big narrative turning points, the bourgeois novel stuffs in more and more filler, where the background creeps into the foreground and our characters and their actions seem to get lost in a welter of things. “Fillers rationalize the novelistic universe,” Moretti writes in *The Bourgeois: Between History and Literature*, “turning it into a world of few surprises, fewer adventures, and no miracles at all.” Here we may observe that there is planned postponement involved: instead of providing the details what happened, readers are informed about what was observed first. This style of narration was constructed by certain preferences in the depiction of history.

VIII. GRADUALISM AND CATASTROPHISM

Ghosh considers Stephen Jay Gould's brilliant study *Time's Arrow, Time's Cycle: Myth and Metaphor in the Discovery of Geological Time* on the geological theories of gradualism and catastrophism as a study of the narrative in essence. Gould's study closely follows Thomas Burnet's *Sacred Theory of the Earth* (1690), the

catastrophist recounting of the earth's history in which the narrative turns on events of 'unrepeatable uniqueness'. Gould along with Niles Eldredge proposed the theory of punctured equilibrium which stated that "the emergence of new species was not a constant process but moved in fits and starts: it was not gradual but punctured" (Brooke 29). As opposed to this, James Hutton (1726-97) and Charles Lyell (1797-1875), put forward the gradualist approach. They proposed the theory of slow processes that happen over time at predictable rates. The central idea in this doctrine was 'Nature does not make leaps" (Gould 173). However the fact is that we have umpteen instances to show that Nature certainly jumps. The geological history is full of fractures in time. It is believed that the Chicxulub asteroid probably made the mass extinctions of the dinosaurs. Similar instances do show that catastrophes waylay the earth and everything in it in the most improbable ways and at unpredictable intervals. The question, which of these has more primacy than the other in the geological history, isn't an important question here. What is important to note is that the gradualist ('uniformitarian') view on the subject held absolute sway, and catastrophism was considered a primitive, obsolete and insubstantial form of knowledge. If so, how did they account for unpredictable events? "In the early stage of advancement, when a great number of natural occurrences were unintelligible like an eclipse, an earthquake, a flood, or the approach of a comet was regarded as prodigies. The same delusion prevails as to moral phenomena, and many of these are ascribed to the intervention of demons, ghosts, witches, and other immaterial and supernatural agents" (27). The privileging of the gradualist views in science was done by characterising catastrophism as un-modern. In geology " the triumph of gradualist thinking was so complete that Alfred Wegener's theory of continental drift, which posited upheavals of sudden and unimaginable violence, was for decades discounted and derided… their habits of mind held sway…(28) This went on until the last few decades of the twentieth century especially among the general public.

Gradualism "eventually had to be put aside in favour of a view that recognises the twin requirements of uniqueness to mark moments of time as distinctive, and lawfulness to establish a basis of intelligibility" (31). Distinctive moments are as important to modern novels as they are to any other forms of narrative, whether geological or historical. For instance, in Madam Bovary, chance and happenstance are crucial to the narrative. The probability paradigm of the fictional world is not same as that which is outside it. " Within the pages of a novel, an event that is only slightly improbable in real life… may seem widely unlikely"(31). Ghosh illustrates the point by a detail description of the tornado that struck Delhi in 1978. "The only thing it has in common with the freakish weather events of today is its extreme improbability... we are now in an era that will be defined precisely by events that appear , by our current standards of normality, highly improbable: flash floods, hundred year storms, persistent droughts, spells of unprecedented heat, sudden landslides, raging torrents pouring down from breached glacial lakes, and … freakish tornadoes" (32). Hurricane Sandy that struck New York in 2012 was one such highly improbable phenomenon. In these and similar cases human beings were found to be intrinsically unprepared for rare events. It is hard to think that this has really been the case throughout human history. It could be owing to the growing faith in "the regularity of bourgeois life':"… human beings were generally catastrophists at heart until their instinctive awareness of the earth's unpredictability was gradually supplanted by a belief in uniformitarianism - a regime of ideas that was supported by scientific theories … and also by a range of governmental practices that were informed by statistics and probability" (33).

IX. THE UNCANNINESS DEMANDS RECOGNITION

Ghosh cites a number of cases from Adam Sorbel's Our Changing Climate and Extreme Weather of the Past and Future to show how belief in uniformitarianism has made us quite unprepared for nature calamities. Shortly before the earthquake of 2009, people in the Italian town of L'Aquila felt its early tremors. Many townsfolk who lived in earthquake-prone areas moved to open spaces following their instinct. But later owing to the governmental intervention intended to prevent panic, they returned to their homes. As a result, a good number were trapped indoors when earthquake occurred. Similar is the case with the Hurricane Sandy: it was generally believed that losing one's life to a hurricane is something that happens in faraway places. Similarly also in Brazil, when Hurricane Catarina struck the coast in 2004, many people did not take shelter because they refused to believe that hurricanes were possible in Brazil. And here Ghosh presents the ramifications of the issue very succinctly: "But in the era of global warming, nothing is really far away; there is no place where the orderly expectations of bourgeois life hold unchallenged sway. It is as though our earth has become a literary critic and were mocking at Flaubert… and their like, mocking their mockery of the prodigious happenings that occur so often in romances and epic poems" (35). The age of global warming challenges both literary fiction and contemporary common sense. Disdainful of plot and narrative most literary moments of the twentieth century laid greater emphasis on style and observation. Creative writing during the time insisted on 'showing' than 'telling'. Surrealism and magical realism celebrated events of the unheard-of and the improbable. But there is marked difference between the weather events and those fictional events in magical realism and surrealism. In the former case, what we may be inclined to consider the improbable events as "overwhelmingly, urgently, and astoundingly real" (36). From the writer's point of view to treat them as magical or surreal would be to rob them

of the quality of immediacy together with" an irreducible element of mystery **[**or may be] better expressed by a different word… uncanny" (39). Ghosh records his experience of the tornado with uncanny accuracy**:** "'Indeed, as we say, 'one feels something uncanny.' what is this 'something' and this 'one'. We are unable to say what gives 'one' that uncanny feeling" (40). In describing the climatic inconsistencies, the term 'uncanny' has begun to be used with greater frequency. Timothy Morton in his book *Hyperobjects* (2013.) admits that the effect the freakish events and objects of our era evoke in us is "something uncanny". The world as we know it has already come to an end owing to "hyperobjects". These entities are of such vast temporal and spatial dimensions that they defeat traditional ideas about what a thing is in the first place. Morton explains what hyperobjects are and their impact on how we think, how we coexist, and how we experience our politics, ethics, and art.

Similarly George Marshall in his book, *Don't Even Think about it: Why Our Brains are Wired to Ignore Climate Change* (2014.) observes that climate change is inherently uncanny owing to the high carbon lifestyles. Climate crisis confounds this core moral formula: it is a perfect and undetectable crime everyone contributes to but for which no one has a motive. The term 'uncanny' expresses the strangeness of what is happening before our eyes. " For these changes are not merely strange in the sense of being unknown or alien; their uncanniness lies precisely in the fact that in these encounters we recognize something we had turned away from:… the present and proximity of non-human interlocutors" (40).

The improbable and uncanny events of the climate crisis that confront us frequently stir in us " a sense of recognition, an awareness that humans were never alone, that we have always been surrounded by beings of all sorts who share elements of that which we had thought to be most distinctively our own: the capacities of will, thought and consciousness. How else do we account for the interest in the non-human that has been burgeoning in the humanities over the last decade and over a range of disciplines, from philosophy to anthropology and literary criticism" (41)? This renewed recognition is an indication that entities of the world have an immense potential to intervene into our process of thought. Their unseen presences have actually played a part in shaping our discussions without our being aware of it. This also calls for a revision in our habits of thought founded on the Cartesian dualism which endows all intelligence and agency to the human. Novel as a form can be seen to be a natural home for the uncanny.

X. CONSTRUCTION OF ILLUSORY APARTNESS FROM NATURE

The freakish weather events which frequently haunt us in unthinkable shapes and forms are in fact animated by cumulative human actions. And as such they have intimate connections with humans in the sense that all have contributed to some measure to their making. The customary frames of literature like the lyrical or elegiac or the romantic frames cannot accommodate this face of nature which is "too powerful, too grotesque, too dangerous, and too accusatory" and this point to " the uncanny intimacy of our relationship with the non-human" (43). Michael Shellenberger and Ted Nordhaus in their work *The Death of Environmentalism: Global Warming Politics in a Post-Environmental World* states that it is high time to re-examine everything we think we know about global warming and environmental politics, from what does and doesn't get counted as "environmental" to the movement's small-bore approach to policymaking. Their work states that though we have fully deconstructed the concepts of 'nature' and 'environment', "they retain their mythic and debilitating power within the environmental movement and the public at large" (12). They have written a bold challenge to environmental conventional wisdom. It is in this context that Bill McKibben in his book *The End of Nature* (1989) says that "We live in a post-natural world" (49). McKibben's argument is that the survival of the globe is dependent on a fundamental, philosophical shift in the way we relate to nature. It was certainly the deification of the human that provided an illusory apartness from Nature. The truth is that nature never existed that way. And now we have reached a time when non-human agencies have dispelled that illusion of "the uniformitarian expectations that are rooted in the 'regularity of bourgeois life'" (Ghosh 47) and "carried to the point of derangement" (48).

XI. THE MIDDLE-CLASS PATTERN OF THOUGHT-PROCESS

Ghosh had narrated the scene of a cyclone that sent a gigantic storm surge into the Sunderbans in the last part of his novel The Hungry Tide published in 2004. A few months after the publication of the novel, on the night of 25 December owing to a massive undersea earthquake in the Indian Ocean a cataclysmic tsunami had been set off which took many lives. This had a deeply upsetting effect on Ghosh. The television footage of tsunami somehow seemed to him a virtual representation of the images that had been implanted in his mind during the writing of *The Hungry Tide*. A few days later, he obtained a commission to report on the impact of tsunami on the Andaman and Nicobar Islands. The report he prepared had three premises: the damage was limited to half a mile radius along the shoreline; the island's interior was peaceful; and the most upwardly people on the island were living .on its edges. The indigenous islanders who lived mainly in the interior were unaffected by the tsunami. The educated and the middleclass who lived on the mainland and believed that improbable events belonged to the world of fantasy and not to their real world were the ones most affected by

tsunami. This is particularly evident at the air force base. In military matters they always observed the protocols of rank: "the higher the rank of officers, the closer their houses were to the water and better the view that they and their families enjoyed" (47).The base had been built by hard-headed military men and state-appointed engineers who " merely followed the example of the European colonists who had founded cities like Bombay, Madras, New York, Singapore and Hong Kong all of which are sited directly on the ocean" (48). Ghosh has a humorous comment for their effort: "A special place ought to be reserved in hell…for planners who build with such reckless regard for their surroundings" (48).

Nicobars can be considered as a microcosmic expression of middle-class patterns of living across the globe based on a colonial vision of the world. Proximity to the water is a sign of affluence and education and it represents power and security, mastery and conquest. A seafront location is a status symbol. An ocean view greatly increases the value of real estate. If we were to make a survey of the cities that are most directly threatened by climate change, we shall be informed that they would be those that are brought into being by processes of colonization. Throughout much of the human history before this execution of the colonial vision, people regarded the ocean with great wariness. Even when they earned their livelihood from the sea they did not live at the water's edge. The site of the old port cities of Europe, like London, Amsterdam, Rotterdam, Stockholm, Lisbon and Hamburg, or of the old Asian ports like Cochin, Surat, Tamluk, Dhaka and Malacca bear witness to this fact. "Before the early modern era, there had existed a general acceptance that provision had to be made for the unpredictable furies of the ocean - tsunamis, storm surges and the like" (49).

XII. EVACUATION

Ghosh asks, "What might happen if a Category of 4 or 5 storm, with 240 km ph or higher wind speeds, were to run directly into Mumbai?" (59) In most of our megacities disaster management is a post-disaster initiative. Of these emergency measures, probably the most effective is evacuation. However, this is probably a measure that would need years of planning and preparation. Often people living at those vulnerable areas are hardly educated about the dangers to which they might be exposed. This is beside the fact that many of the at-risk coastal cities like Mumbai or Miami are the very areas in which expensive new construction projects are now located. Creating awareness of the possible risks would mean decline in property values. We cannot expect builders and property developers to be supportive of the efforts to disseminate disaster-related information. This is besides the unholy alliance between the civic bodies and the construction lobbies: " One consequence of the last two decades of globalisation is that real estate interests have acquired enormous power, not just in Mumbai but around the world; very few civic bodies, especially in developing world, can hope to prevail against construction lobbies, even where it concerns public safety. The reality is that 'growth' in many coastal cities around the world now depends on ensuring that a blind eye is turned towards risk … The experience of New Orleans in days before Hurricane Katrina, or of New York before Sandy, or the city of Tacloban before Haiyan tells us that despite the most dire warnings large number of people will stay behind; even mandatory evacuation orders will be disregarded by many" (64-5).

Another threat of the climate crisis is the rising seas. The scientists fear that the seas may rise by one metre or more by the end of the century. If they do some parts of Mumbai, Chennai and many cities situated on the shoreline may become uninhabitable. Still more dangerous would be the threat that the rising seas poses to the nuclear installations around the world. Natalie Kopytko in an article in the Bulletin of the Atomic Scientists notes: "During the massive storms … there is a greatly increased chance of the loss of power at the nuclear power plant, which significantly contributes to safety risks". Similar to what has happened at the Fukushima Daiichi plant, the safety systems could be damaged; essential cooling systems could fail; contaminants could seep into the plant and radioactive water could leak out. The tanks in which liquid radioactive waste is stored contain radioactive fission products in high concentrations. They produce a lot of heat due to radioactive decay. Explosive chemicals in these tanks produce a lot of heat due to radioactive decay. These waste storage facilities are provided with safety systems to prevent explosions. However, during major storms these systems could be simultaneously disabled. An explosion at such a tank could bring about the dispersal of radioactivity over hundreds of square kilometres.

XIII. PRECARIOUSNESS OF HUMAN EXISTENCE

In every culture, an awareness of the precariousness of human existence is handed down to the posterity through folk and religious traditions and other cultural mechanisms. For instance, this is reflected in the Biblical and the Quranic images of the Apocalypse, in the figuring of the Fimbulwinter in Norse mythology, in the tales of pralaya in Sanskrit literature and so on. Here we might ask why these intuitions withdrew, not just from the minds of the founders of colonial cities, but also from the forefront of the literary imagination. Even in the West, the earth did not come to be regarded as moderate and orderly until long after the advent of modernity. But the practical men who ran colonies and founded cities had evidently acquired their indifference to the destructive powers of the earth much earlier. The predatory hubris of the European Enlightenment formed **a**

habit of mind that proceeded by creating discontinuities in relation to the earth and its resources." **…** they were trained to break problems into smaller and smaller puzzles until a solution presented itself. This is a way of thinking that deliberately excludes things and forces ('externalities') that lie beyond the horizon of the matter at hand…" (75).On the other hand the earth of the era of global warming, more than at any other time of recorded history, is a world of consistent, inescapable continuities. The waters that are invading the land, deserts that are advancing, occurrences of frequent wildfires etc. are the signs of the consistent continuities. Currently the forces of weather and geology are pressing themselves on us with relentless directness.

XIV. CENTRING AND DECENTRING THE HUMAN

Even when these continuities of inconceivably vast forces had an unavoidable bearing in our lives, fiction writing preferred to expel these from its territory. We pretended not t be aware of these forces of unthinkable magnitude that create unbearably intimate connections over vast gaps in time and space. The literary imagination became radically centred on the human when human activity was changing the earth's atmosphere. But now our rapidly changing earth has now forced us to recognise the place of non-human in the modern novel. The inanimate things have become suddenly alive. This is "one of the uncanniest effects of climate change, this renewed awareness of the elements of agency and consciousness that humans share with many other beings, and even perhaps the planet itself" (87) .

The climate crisis has forced us to recognise that "there are other, fully aware eyes looking over our shoulder" (88). When human activity was changing the earth's atmosphere, the literary imagination became radically centred on the human. If at all there was the subject of the non-human treated in a novel, it did not fall within the mansion of serious fiction. However this is not the case with poetry. Ghosh quotes from Gillen D'Arcy Wood, the words of Mary Shelly as she describes a storm she enjoyed: "One night we enjoyed finer storm than I had ever before beheld. The lake was lit up, the pines on the Jura made visible, and all the scene illuminated for an instant, when a pitchy blackness succeeded, and the thunder came in frightful bursts over our heads amid darkness"(Buxton 10). Byron **c**omposed a poem called "Darkness", which was imbued with what we might today call 'climate despair':

> The world was void,
> The populous and the powerful - was a lump,
> Seasonless, herbless, treeless, manless, lifeless -
> A lump of death- a chaos of hard clay.
> The rivers, lakes, and ocean all stood still,
> And nothing stirred within their silent depths.

These extracts show how even a few weeks of climate change can produce disorientation and desperation among sensitive people. The impulse behind the whole idea of modernity succeeds by the project of deepening the imaginary gulf between Nature and Culture. This partitioning relegated Nature exclusively to the sciences taking it beyond the limits of Culture. The Western mind was not immediately docile to the project of partitioning; it was even contested vigorously in England, the vanguard of modernity. William Blake in a couplet succinctly put the issue thus:" And was Jerusalem builded here/ Among these dark Satanic mills?". The Sonnet of Wordsworth beginning with the line, "The world is too much with us" also speaks about it:

> Little we see in Nature that is ours;
> We have given our hearts away, a sordid boon….
> Great God! I'd rather be
> A pagan suckled in a creed outworn;
> So might I, standing on this pleasant lea,
> Have glimpses that would make me less forlorn.

The whole idea of partitioning was resisted not only in England but also throughout Europe and North America, under the banners variously of romanticism, transcendentalism, pastoralism etc.

When Wordsworth laments "the onrushing intrusion" of the age, he announces his surrender to the most powerful of its tropes: that which envisages time as an irresistible, irreversible forward movement. This jealous deity, the Time-god of modernity, has power to decide who will be cast into the shadows of backwardness - the dark tunnel of time 'outworn'- and who will be granted the benediction of being ahead of the rest… It is this conception of time (which has much in common with both protestant and secular teleologies, like those of Hegel and Marx) that allows the work of partitioning to proceed within the novel, always aligning itself with the avant-garde as it hurtles forward in its impatience to erase every archaic reminder of man's kinship with the non-human." (94-5).The history of this partitioning is a narrative in itself, offering subplots and characters to suit the tastes of every reader. At the birth of modernity, the relationship between literature and science was very close. This relationship can best be exemplified in the figure of Goethe, Melville and numerous other writers. Goethe saw no conflict between his literary and scientific interests. Herman Melville's study of the Marine animals is expounded at length in Moby Dick. Naturalist and scientists produced

literary works such as Darwin's *Voyage of the Beagle* and Alfred Russell Walace's *The Malay Archipelago* which served as inspiration to writers and poets.

XV. ON THE REALMS OF THE IMAGINATIVE AND THE SCIENTIFIC

In spite of these efforts the realms of the imaginative and the scientific came to be separated. Possibly a preoccupation with purity of natures ensured that nature is consigned entirely to sciences beyond the limits of culture. The corollary to this is the suppression of hybrids. It is thus that science fiction was branded as a separate genre from the literary mainstream. The "zeitgeist of late modernity could not tolerate Nature-Culture hybrids" (96). In certain sense, science-fiction is better equipped to address climate crisis than mainstream literary fiction. There is a new genre of science fiction called 'climate fiction' or cli-fi. But this is mostly made up of disaster stories set in the future. However, here Ghosh clarifies that " the future is but one aspect of the age of human-induced global warming: it also includes the recent past, and most significantly the present" (97). Since most science fiction deals with some imagined other world located in some other 'time' and 'dimension', writers of the genre may find the subject of the here-and-now of the era of global warming are resistant to scientific fiction. At the same time what we think of normal now are in many ways uncanny. And this has opened the doorway into a universe animated by non-human voices. Ghosh also points to the works of Liz Jensen's Rapture and Barbara Kingsolver's Flight Behaviour as representatives of the writers who have overcome the above challenges: " Both are set in a time that is recognizable as our own, and they both communicate, with remarkable vividness, the uncanniness and improbability, the magnitude and interconnectedness of the transformations that are now under way" (98). Rapture is an electrifying story of science, faith, love, and self-destruction in a world on the brink with temperatures soaring to asphyxiating heights. All across the world, freak weather patterns—and the life-shattering catastrophes they entail—have become the norm. Flight Behavior is well observed breathtaking Appalachian parable of catastrophe and denial that explores climate crisis at its core.

XVI. INDIVIDUAL MORAL ADVENTURES VERSUS THE AGGREGATE

The subject of global warming shows resistance to arts particularly with the vocabulary associated with it. For instance the vocabulary associated with the transformation organic matter into fossilized forms include words like naphtha, bitumen, petroleum, tar, fossil fuels etc. It is difficult for a poet to make these syllables fall lightly on the ear. And besides the substances themselves are not things that evoke pleasant feeling. For instance we could think of "coal and the sooty residue it leaves on everything it touches" or "petroleum -viscous, foul-smelling, and repellent to all senses" (98). In the case of coal extraction it required a large work force. Hence the manner of extraction was "capable of sustaining stories of class solidarity, courage and resistance. The work of Zola's *Germinal* and John Sayles' film *Matewan* can be cited as examples. However in the case of oil extraction, the situation is different. Its extraction, transportation and distribution did not require a vast work force. Hence the leaders of the British and American political elites were ready to go to any extent to promote large scale use of oil. For the arts, unlike the substance of oil, the energy that petrol generates is easy to aestheticise. The Arabian Peninsula had a historical encounter with the West owing to the abundant availability of oil. And this had consequences that touch upon every aspect of our existence. Yet we do not possess the form that can give the Oil Encounter a literary expression. The Jordanian-born writer Abdel Rahman Munif's work translated into English under the title *Cities of Salt, a five-part series of novels is a rare piece of fiction to address the Oil Encounter*. The book's title suggests cities that offer no sustainable existence. When the waters enter into them, the first waves will dissolve the salt and reduce these great glass cities to dust. In antiquity, as you know, many cities simply disappeared. It is possible to foresee the downfall of cities that are inhuman. The principal protagonists of the Oil Encounter are the Americans on one side and the peoples of the Arabian Peninsula and the Persian Gulf on the other. He opines that "the history of oil is a matter of embarrassment verging on the unspeakable, the pornographic". John Updike's review of Cities of Salt says it does not read "much like a novel" because it is concerned not with a sense of individual moral adventures but rather with 'men in aggregate'. Here John Updike unconsciously intrudes into a very important aspect of contemporary culture: the collective is banished from the territory of the novel. However this turn in contemporary fiction has not affected the novel as a form: many novelists in the past as they continue to do so even now.

Yet this trend of turning away from the collective is coincidental with the acceleration in carbon emissions. Modernity sees the idea of progress at par with the concept of time as irreversible forward movement. These ideas have also been the animating forces of the literary and artistic imagination since the beginning of the twentieth century. Here we may note that the issue of the global warming is also a collective predicament. The most alarming fact is, at a time when a collective action is required to reverse the acceleration of global warming, that the idea of the collective has been exiled from politics, economics and literature alike.

When progress is contemplated as progression, it invariably creates winners and losers. In the twentieth century fiction the loser obviously was the writing of the kind in which the collective as a powerful presence. Fiction that gave predominance to the collective was usually of a realist variety and it was consigned to the realm of the backward. For instance, John Steinbeck who was never a favourite of the avant-garde was dismissed as a writer who thought 'like a social function" by Lionel Trilling. However, re-viewing his fiction from the point of view of the future of our planet, we see in them "a visionary placement of the human within the non-human" (107). In his works we may perceive a form or an approach that grapples with climate change.

XVII. ON THE MEANING OF FORMS

Ghosh in the final chapter of section one of the text, shares his experience of visiting Mrauk-U, the site of an enchanting complex of Buddhist pagodas and monasteries in western Burma. Getting to Mrauk-U isn't easy… journey to the site can take a day or more, depending on the condition of the road. As Mrauk-U approaches, ranges of low hills, of rounded, dome-like shapes appear in the distance; at times, the ridges seem to rise into spires and finials. Such is the effect that the experience of entering the site is like stepping into a zone where the human and the non-human eco each other with an uncanny resonance; the connection between built form and landscape seem to belong to a dimension other than the visual; it is like that of sympathetic chords of music. The echoes reach into the interiors of the monuments, which, with their openings and pathways, their intricate dappling of light and shadow, their endless iterations of images, seem to aspire to be forests of stone. (109)

In Eduardo Kohn's *How Forests Think: toward an Anthropology beyond the Human* (2013), the author challenges the very foundations of anthropology, calling into question our central assumptions about what it means to be human—and thus distinct from all other life forms. He suggests that a thinking forest is not a metaphor. Based on four years of fieldwork among the Runa of Ecuador's Upper Amazon, Eduardo Kohn draws on his rich ethnography to explore how Amazonians interact with the many creatures that inhabit one of the world's most complex ecosystems. This book teaches the reader how other-than-human encounters open possibilities for the emergent realization of worlds, not just worldviews. What humans share with all living beings is the fact that we all live with and through signs. Here 'forms' are much more than shapes or visual metaphors. Forms, according to him, are the means that enable our surroundings to think through us. To grasp these possibilities we need to be aware of thoughts not as bound by language but moving beyond the linguistic expediency to the multiple patterns of non-linguistic communication in which we are constantly engaging. For instance this is particularly evident in the way we interpret the patterns of birdcalls or the nuances of a dog's bark. These are hardly less informative than say radio news. We do this all the time yet we do not consider them as speech acts. This could be because language so imposes itself that the testimony of our senses is put aside. Ghosh gives an interesting example of a vigorously growing vine in his garden that regularly attempts to attach itself to a tree several metres away, by reaching out to it with a tendril.

This is not done randomly, for the tendrils are always well-aimed and they appear at exactly those points where the vine does actually stand a chance of bridging the gap: if this were a human, we would say that she was taking her best shot. This suggests to me that the vine is, in a sense, 'interpreting' the stimuli around it, perhaps the shadows that pass over it or the flow of air in its surroundings. Whatever those stimuli might be, the vine's 'reading' of them is clearly accurate enough to allow it to develop an 'image' of what it is 'reaching' for; something not unlike 'heat-imaging' in weapons and robots. (111)

XVIII. THINKING IN IMAGES

Hence Kohn would say that to think images would be to think like forest. Ghosh noticed astounding profusion of images in Mrauk- U directing the viewer away from the language towards all that cannot be thought using words. If this is admitted, our planet must be viewed as our interlocutor thinking through us. Kohn thus arrives at a methodology of thinking on climate crisis: to think about this era of climate change will be to think in images. This will invite us to move away from the accustomed logocentricism towards a more inclusive expression through images. This could be one reason why visual arts have been more successful in addressing climate change than literary fiction. With the invention of printing technology, all the pictorial elements that had previously existed within texts such as illuminated borders, portraits, line drawings, colouring and so on, gradually got discarded. Novels of eighteenth and nineteenth centuries often included frontispiece, plates and so on, gradually got faded away. Illustration became something pejorative early in the twentieth century both in fiction and in arts. The situation was "as if every doorway and window that might allow us to escape the confines of language had to be slammed shut, to make sure that humans had no company in their dwindling world but their own abstractions and concepts. This indeed, is the horizon within which every advance is achieved at the cost of 'making the world more unlivable" (113). However the internet saved the images: text and image could be twined with as in an illuminated manuscript. This gradually led to the rise of the graphic

novel. The resistance of climate change to literary fiction is ultimately its resistance to language itself. This follows that hybrid forms of expression have to emerge to accommodate the language of climate crisis.

XIX. CONCLUSION

Very few writers have attempted to integrate ecological concerns into their works. In one of the interviews with Ghosh, he referred to Herman Melville's Moby Dick, featuring a white whale, as one example of a novel that showed how man and animal were on a par with each other. He said, "Captain Ahab and Moby Dick are mirror image of each other in the novel, Ghosh says, pointing how Melville was perhaps ahead of his times when it came to how he portrayed the "wild". (Venkat, 9) We often use the words "nature" or "wild" to characterise non-human environmental subjects, a problem bestowed to us by the eighteenth-century Enlightenment-era intellectuals. This habit of mind shows that we haven't integrated nature into our literary consciousness yet. In the same interview Ghosh draws a contrast between the films of today and those directed by Satyajit Ray. In *Pather Panchali*, climate and weather events often formed recurrent motifs: the rains and the storms become a part of the narrative. Ghosh points out that our placement within a natural world has increasingly receded in our consciousness. The Great Derangement is a kind of book that tells that climate change is on us and as writers or readers we need to engage in a collective action.

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