

# Multiscalar Temporalities in Postcolonial Climate Fiction

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**Abstract** In the context of postcolonial ecocriticism and environmental time studies, I analyse different but interrelated scenes of confrontations between human history, ‘generational time’, deep time and myth to highlight a trend towards multiscalar temporalities in Anglophone climate fiction. Co-reading Amitav Ghosh’s *The Hungry Tide* (2004), *Gun Island* (2019) and Mahasweta Devi’s “Pterodactyl, Puran Sahay and Pirtha” ([1989] 1995), I focus on the texts’ multi-generational character constellations and their specific confrontations with geological time to reveal the literary strategies to capture the “slow violence” (Nixon 2011, 2) of global warming.

**Keywords** Biosemiotics. Mahasweta Devi. Ecocriticism. Ethicology. Amitav Ghosh. *Gun Island*. *The Hungry Tide*. Multiscalar temporalities. New materialism.

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## 1 Introduction

In this article, I wish to explore the literary construction of different but intersecting temporalities of human time, “generational time” (Woodward 2020, 54),<sup>1</sup> deep time and myth in postcolonial climate fiction as central responses to the representational challenges set by the climate crisis. I situate my topic in the field of postcolonial eco-criticism as well as environmental time studies that, as Paul Huebener has argued, “can help us read culture with a thoughtful and transformative awareness of the implications of temporal power as well as the need for temporal justice alongside social and environmental justice” (2020, 24). The narratives under scrutiny here – Mahasweta Devi’s “Pterodactyl, Puran Sahay and Pirtha” ([1989] 1995), a 1989 novella translated into English by Gayatri Chakravorty Spivak, as well as Amitav Ghosh’s *The Hungry Tide* (2004) and its sequel *Gun Island* (2019) – entangle ecological, economic, ethical and social discourses and interconnect different temporalities such as human and deep time by drawing on a palimpsest of myths and narratives. I read them together because Devi’s long story paves the way for Ghosh’s novels, particularly with a view to their shared enmeshment of generational time with deep time and myth as a counterstrategy to collapsing and narrowing down time to a solely human perspective in the face of global challenges. Ghosh’s novels spell out the fate of generations across more extended periods than a single novel can cover. The seriality that connects *The Hungry Tide* with *Gun Island* is a strategy of facing the challenge of representing the long-term temporality of climate change.

As recently as 2019, Robert Markley has argued that “climate change exceeds humankind’s ability to comprehend or narrate it” (2019, 17) and Amitav Ghosh even goes so far as to consider the realist novel a problematic cultural form that – with its character construction, plot development and liberal ideologies – fosters binary notions between ‘humans’ and their ‘environment’ as well as a kind of agency that condones the exploitation of ‘nature’ (see Ghosh 2016, 7; also see Caracciolo 2021, 3). Since the novel abides by “conventions

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<sup>1</sup> One of Kathleen Woodward’s central questions in “Ageing in the Anthropocene” is “How do imaginative worlds and works – in literature, theatre, cinema and new media – disclose to us multiple dimensions of the possible relationships between ageing and climate change?” (2020, 52), while her more general aim is to “bring together the fields of critical age studies and humanistic studies of climate change” (51). She explores these interconnections based on Margaret Drabble’s *The Dark Flood Rises* (2016), a novel in which ageing, generations and climate change come to intersect symptomatically. I will attempt to spell out this interconnection further dealing with postcolonial climate fiction. I concur with many of Woodward’s insights and approaches and take her article as an indication that, with our viewpoints converging so clearly, we are on a similar lead here that is worthwhile pursuing in further detail.

that came to shape the narrative imagination in precisely that period when the accumulation of carbon in the atmosphere was rewriting the destiny of the earth" (2016, 7), Ghosh classifies the novel as an inept form to represent climate change in his 2016 monograph *The Great Derangement*. While there is something to Ghosh's general assessment, current climate fiction, including Ghosh's own, responds to the representational challenges of the Anthropocene, particularly the question of how to convey what Rob Nixon has termed the "slow violence" of climate change, a form of

violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all. (Nixon 2011, 2)

Predating his critique of the novel in *The Great Derangement* by eleven years, Ghosh's 2004 novel *The Hungry Tide* already introduces narrative forms geared to altering problematic cognitive frames (see Lakoff 2010) of nature-culture relationships, and his *Gun Island* continues to play the gamut of different temporal scales (see Sze 2016) to imagine sustainable futures in both intergenerational and intertextual contexts. In an interview with Alessandro Vescovi, Ghosh aptly argued that

people can achieve deep insights through other forms of knowing, through forms of knowing that we wouldn't even recognise. And I think in fact the novel is one of those forms of knowing. (Vescovi 2009, 133)

Correspondingly, increasing attention needs to be paid to new narratologies in climate fiction as they wield performative cultural power to impact on ways of thinking and perceiving. While Erin James has laid the foundations for the emergence of econarratology in her 2015 *Storyworld Accord* and has extended the approach in her joint edition *Environment and Narrative: New Directions in Econarratology* published in 2020, Marco Caracciolo has recently contributed further to the field with his 2021 *Narrating the Mesh*. One of his central arguments is that

[e]xposure to formally sophisticated narratives could foster argumentative, ethical, and (in a broad sense) attentional skills that heighten our awareness of human-nonhuman connection and its underlying complexity. (Caracciolo 2021, 179)

Such sophistication, he claims, "involves nonlinearity, interdependency, and multiscalarity", while it avoids "the anthropocentric

tendencies inherent in narrative practices, and particularly in established Western genres such as the (realist) novel” (179).

Thus, he summarises central narratological strategies that indicate how narratives can help reframe our notions of ourselves in and as environment. Drawing on Dipesh Chakrabarty, I argue that multiscalearity makes “the Age-old Humanist Distinction between Natural History and Human History” collapse (2009, 201), and in line with Ursula Heise’s arguments, I’d like to draw attention to how

collective human temporality now has to be thought on at least three different scales: on the scale of a human history that has generated multiple inequalities between humans, on the scale of a humanity that has become an agent as a species, and on the scale of a geological power that transforms the planet’s physical nature. (2019, 278)

To complicate these intersections of different temporal scales further, I also draw on Katherine Woodward’s notion of generational time that interweaves “climate change and generational thinking” and “involves us affectively and cognitively” (2020, 54). Comprising

two, three, and four generations, perhaps even more, generational time is our singular way of understanding future time, linking us in altogether meaningful ways to others whose futures we care about deeply. (54)

The three postcolonial texts analysed in this article demonstrate a unique approach to temporal scales. Rather than existing independently, the texts interweave human time, deep time, and myth in a way that requires all three to be understood. This multiscalearity is intentional and creates a complex web of meaning. Generational time can serve as the temporal dimension that, in narratives, may help interweave temporal scales of imminent human concern and larger ones that exceed human experience, such as deep time. Generational time renders the impact of human histories on natural histories graspable and articulates them to convey the material interconnections of different time scales. Devi and Ghosh share a concern with the geological development of India as an aspect of deep time but entangle these large-scale histories with given historical events from human history that, in turn, are connected with a palimpsest of mythologies and narratives. Geology and myth thus come to be closely associated with the social histories of individual characters. These, in turn, are clearly defined by intergenerational relations.

In each text, I will focus on a crucial moment in which human history, myth and deep time enmesh different temporal scales to render processes such as climate change graspable in narrative fiction

and in order to tie them back to concrete individual and intergenerational histories. I suggest the approach of a multiscalar analysis to shed light on environmental “differends” (Lyotard [1983] 2011)<sup>2</sup> – in the sense of *impassés* between what cannot yet be said but must be said in a given discourse – articulated in narratives in which different temporal scales are shown to intersect. In other words, I consider multiscalarity a structural attempt at finding an idiom for what cannot be articulated otherwise or, as in the case of climate change, allegedly not be expressed in fiction. Against this background, I propose a two-fold thesis: Both Mahasweta Devi’s long story “Pterodactyl, Puran Sahay, and Pirtha” and Amitav Ghosh’s novels centre on the intersection of human history, geological time and myth and thus illustrate the human entanglement in different time scales without dissolving individual characters into universalised agents of the Anthropocene. Ultimately, then, postcolonial climate fiction calls for our deep adaptation (Bendell 2020) to the slow violence of climate change and requires new stances of reception defined by an ethical response to the differends caused by uneven socio-historical and ecological developments. The ethical question of how we respond to climate crises and whether these responses are just is crucially modulated by innovative scaling processes in these narratives. The narrative enmeshment of the human, the nonhuman and the more-than-human creates story worlds intimating material-discursive entanglements akin to David Abram’s sense:

The surrounding world, then, is experienced less as a collection of objects than as a community of active agents, or subjects. Indeed, every human community would seem to be nested within a wider, more-than-human community of beings. (2010, 276)

In increasing intensity, the three texts, ranging from Devi’s 1989 novella to Ghosh’s 2019 novel, perform such enmeshments of the human and the more-than-human, entangling the ‘human’ in several temporal scales and the natural history of postcolonial spaces (centring on the tectonic shifts of the Indian plate, one might call them

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**2** Lyotard defines the differend as follows: “In the differend, something ‘asks’ to be put into phrases, and suffers from the wrong of not being able to be put into phrases right away. This is when the human beings who thought they could use language as an instrument of communication learn through the feeling of pain which accompanies silence (and of pleasure which accompanies the invention of a new idiom), that they are summoned by language, not to augment to their profit the quantity of information communicable through existing idioms, but to recognise that what remains to be phrased exceeds what they can presently phrase, and that they must be allowed to institute idioms which do not yet exist” ([1983] 2011, 13). So, if the plight of climate change, its slow violence and its large time scales pose particular problems for fictional forms of communication, multiscalarity can be understood as a structural response to this communicational challenge.

'tects' rather than texts). In the words of Serenella Iovino and Serpil Oppermann, these texts create

a material 'mesh' of meanings, properties, and processes, in which human and nonhuman players are interlocked in networks that produce undeniable signifying forces. (2014, 1-2)

and come to be stories that matter, or even "storied matter" (1), turning their readers into co-performers of the "entanglement of matter and meaning" (Barad 2007). That performance amounts to a calibration of perception conducive to environmentally friendly ways of thinking and a new ethics of environmental reading.<sup>3</sup>

## 2 Mahasweta Devi, "Pterodactyl, Puran Sahay and Pirtha" [1989] (1995)

In Devi's novella "Pterodactyl", deep time is represented by way of what Adeline Johns-Putra calls "a jolt out of convention" (2021, 262); it is the shock of the intrusion of the pterodactyl into the otherwise realist world of a character constellation consisting of a journalist, more or less corrupt or inefficient administrative staff, and a particular Adivasi tribe living in India's Madhya Pradesh. Devi dedicated the texts in the collection *Imaginary Maps* to "all the indigenous peoples of the world" (1995, n.p.) and closely interconnects writing with activism. The story is set in the late 1980s and deals with the repercussions of India's Green Revolution, which began in the 1960s. The plot centres on the "'activist-journalist' (Puran) [who] travels to a remote Adivasi village in the tribal district of Pirtha in Madhya Pradesh, which has reported sightings of an impossible creature - the pterodactyl" (Farrier 2016, 455). In an interview with Gayatri Spivak, Devi stated that

[t]he pterodactyl is prehistoric. Modern man, the journalist, does not know anything about it. There is no point of communication with the pterodactyl. [...] Our double task is to resist 'development' actively and to learn to love. (1995, XXII)

The lack of communication addressed by Devi draws attention to the ethical problem entailed in the encounter between a prehistoric animal and a modern human. The silence between them indicates a

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<sup>3</sup> Environmental ethics clarifies the question "how humans should interact with the environment" and reflects on "the theoretical justifications of these directives" (Tirosh-Samuelson 2016, 106).

differend that demands a new idiom to represent the plight not only of the pterodactyl but also of the Adivasi and Puran. I'd like to follow Devi's notion to illustrate how the pterodactyl poses both a hermeneutic and an ethical conundrum in the context of Puran's well-meaning attempts to help the tribals. Drawing on Dominic O'Key, I will argue that the novella's "literary de-extinction of the pterodactyl [...] opens up literary form to a mode of non-anthropocentric thought" (2020, 85) and gestures towards "eco-political justice" (91).

Firstly, the pterodactyl embodies the idea of a chronotope, defined by Mikhail Bakhtin as "the intrinsic connectedness of temporal and spatial relationships that are artistically expressed in literature", so that time "thickens, takes on flesh, becomes artistically visible; likewise, space becomes charged and responsive to the movements of time, plot and history" (1981, 84). The appearance of the Jurassic animal in the late twentieth century is transformed into the shape of Pirtha on the novella's imaginary map as an aspect of "modelling" (Maran 2014, 147) and the "semiotization of matter" that may embody "the imprint of the organism or culture that has created it" (151). The pterodactyl alludes to the deep time of India's geological development after the supercontinent Pangea had divided into Gondwana and Laurasia at the end of the Triassic era. The Indian subcontinent then drifted from Antarctica northwards to Laurasia, and the time of the pterodactyl began. Since the animal is not endemic to India - its fossils are mainly found in what is now Europe - its incomprehensible appearance in the story's diegetic present of the late twentieth century performs a double displacement in space and time; furthermore, its silence illustrates how the plight of the Adivasi remains unrepresentable as in a differend that erases the voice of the tribals in the discourse of 'modern man'. Clearly, "[t]he subaltern cannot speak" (Spivak 1988, 308).

It is the 'modern man' Puran, however, to whom the pterodactyl reveals itself in another apparition that leaves him entirely baffled. As Dominic O'Key has highlighted, this encounter

reveals how [Puran's] humanitarianism is complicit with the slow anthropogenic violence of adivasi genocide and nonhuman ecocide. *Pterodactyl* thus opens out onto a plurality of human and nonhuman temporalities which trouble Puran's narrow anthropocentrism. (2020, 75)

The encounter thus serves to enmesh different kinds of differends in a complex entanglement of temporal scales and human-nonhuman interactions. The story represents something to us through a communicative *impassé*. Symptomatically, Puran can only come up with rhetorical questions as a first hermeneutic attempt at understanding the Pterodactyl. This is how the encounter is described and how the jolt out of convention is performed:

And, when the rain symphony was at its peak, then into Puran's room came the soul of the ancestor of Shankar's people, half claw scratching, half floating. It had crossed the passageway and entered the dead Dahi's house shrine, the inner shrine to the god of the house. [...] Filling the floor a dark form sits. From the other side of millions of years the soul of the ancestors of Shankar's people looks at Puran, and the glance is so prehistoric that Puran's brain cells, spreading a hundred antennae, understands nothing of that glance. (Devi 1995, 141)

This impossible meeting with deep time – also a prolonged generational time (“the ancestors of Shankar's people”, 141) – turns Puran into a character that becomes vectorised in intersecting temporalities. This clash of Puran's time with the prehistoric animal's time reveals a hermeneutic and communicative differend that might be ethically resolved by what Devi calls ‘love’ and what Lyotard calls ‘feeling’ ([1983] 2011, 13). So, we feel the ethical imperative of that encounter in the realm of affect as a marker of generational time. Puran's first attempt at understanding is cognitive, and it does not lead him to a concluding interpretation:

What does it want to tell? We are extinct by the inevitable natural geological evolution. You too are endangered. You too will become extinct in nuclear explosions, or in war, or in the aggressive advance of the strong as it obliterates the weak, which finally turns you naked, barbaric, primitive, think if you are going forward or back. (157)

Puran decides not to write about the pterodactyl after his sojourn in Pirtha; the encounter with deep time remains an experience articulated only by silence. The story ends with the insight into the ethical demand to ‘love’. Staging a Levinasian face-to-face encounter, Puran captures the ethical demand but becomes remote once more by leaving Pirtha on a truck and roads that stand for the destructive force of ‘modernisation’ and exploitation. In the face of the prehistoric, we can put the destructive character of modernity into a new perspective.

The pterodactyl's message requires a new form of communication and is passed down to the coming generation. David Farrier has highlighted that Puran, ‘the modern Indian’, meets

Bikhia, a young Adivasi man who is said to have witnessed the impossible creature and subsequently refuses to speak (in mourning, it is supposed, for the soul of the ancestors). Between the urgency of disaster and its normalisation there emerges a narrative rich both in times and untimely moments: the rapacious time of neoliberalism, the empty time of the nation, and the teleology of



development coexist with seasonal cyclicity, the ancestral time of inherited memory, and most significantly a revenant geologic or deep time. (Farrier 2016, 256)

Mahasweta Devi's novella "Pterodactyl, Puran Sahay, and Pirtha" weaves together different temporal scales and centres fundamental knowledge and responses in future generations, embodied by Bikhia. Only Bikhia is able to respond to the eco-gothic return of the pterodactyl with respect and care. Still, there is no idiom yet in which this return can be integrated into 'modern' discourse. Devi thus installs differends at the intersections of different temporal scales unfolding in dynamic and palimpsestic spaces that are affected by the tectonic movements of the Indian subcontinent from Antarctica to the Asian landmass. Nevertheless, the different historical inscriptions of these spaces are taken seriously in their specificity for humans, nonhumans, and the planetary. The pterodactyl is a migratory revenant of a chronotope that illustrates the importance of multiscalar readings. With that, Devi's novella proves paradigmatic for Amitav Ghosh's climate fiction by offering "a kind of postcolonial writing which interrupts the anthropocentric logics of the novel" (O'Key 2020, 90).

### 3 Amitav Ghosh, *The Hungry Tide* (2004)

Amitav Ghosh's *The Hungry Tide* takes a different, more consolatory and didactic tone with regard to the entanglements of human life and 'the environment' but uses very similar literary strategies as Devi to reveal such enmeshments. The novel is mainly set in the Tide country or the Sundarbans, a mangrove area in the Bay of Bengal. The ebb and flow of the tide provide a constant rhythm for the story that centres on Piya(li) Roy (see Gurr 2010, 74), an American cetologist of Indian descent. On her journey, she meets Kanai, a successful translator who travels from Kolkata and later meets his aunt and uncle, Nilima and Nirmal, in the Sundarbans. Piya visits the Sundarbans to explore river dolphins such as the Gangetic dolphin, the Irrawaddy dolphin, and *Orcaella brevirostris*. The constant ebb and flow in the tide country throws into relief that the ground the characters stand on is in motion and in a continuing process of change, as is the whole tectonic plate on which India is situated – different spatial dynamics are thus continually highlighted in the novel. This spatial setting that pits the Sundarbans against urban spaces such as Kolkata is interconnected with historical references of different scales. Human history, deep time and myths are intertwined in a way similar to the salt and fresh waters of the rivers that incessantly overlap and intermingle and thus form a chronotope that situates the characters in multiple temporalities.

One central turning point in human history that is recounted in the novel is the Morichjhāpi massacre of the late 1970s, a traumatic event that casts its shadows over the characters' present. Shakti Jaising elucidates that, "[i]n 1979, West Bengal's government violently displaced tens of thousands of mostly Dalit or lower caste refugee settlers from the island of Morichjhāpi in order to make room for a conservation project called Project Tiger" (2015, 64), which was launched by Indira Gandhi in 1973. These refugees' migrations resulted from both the Partition of India in 1947 and the Bangladesh Liberation War of 1971, and the novel thus straddles the "conflicting agendas of environmentalism, species preservation, state power, leftist politics, and refugee agency" (Jones 2018, 640). In Ghosh's novel, Nirmal's encounter with the settlers on Morichjhāpi triggers an imaginary confrontation of human history, deep time and myth.

The traumatic event on the scale of human history inspires Nirmal to develop an intergenerational teaching project, and the lesson symptomatically zooms in on the analogies between myth and deep time while both can be comprehensively captured by narrative. Narration thus proves *the* strategy to turn deep time into a comprehensible scale. Nirmal's thoughts render these intersections even more transparent.

*I decided, I'd tell them the story of the Greek goddess who was the Ganga's mother. I would take them back to the deep, deep time of geology and I would show them that where the Ganga now runs there was another coastline - a shore that marked the southern extremity of the Asian landmass. India was far, far away then, in another hemisphere. It was attached to Australia and Antarctica. I would show them the sea and tell them about its name, Tethys, in Greek mythology the wife of Oceanus. There were no Himalayas then and no holy rivers. [...] I would show them how it happened that India broke away suddenly, a hundred and forty million years ago, and began its journey north from Antarctica. (Ghosh 2004, 181, italics in the original)*

Later on, Nirmal imagines the following conversation between himself and his pupils:

*"And do you know how you can tell that the Sindhu and the Ganga were once conjoined?", «How, Saar?" "Because of the shushuk - the river dolphin. This creature of the sea was the legacy left to the twins by their mother, Tethys. [...] Nowhere else in the world is the shushuk to be found, but in the twin rivers, the Ganga and the Sindhu". (182, italics in the original)*

While the mythical Thetys dies as a consequence of continental drift, she leaves her river children, the river dolphin, the animal that Piya travels around the world to explore, a biological legacy. Human

history, Greek and Indian mythology, and the deep time of continental drift intermingle and enable as well as explain biological life forms adapted to the emerging environments. While some of these temporalities, deep time and myth, overlap as in a palimpsest and thus claim deep time for narrative appropriation and understanding, other scales intersect, too. Piya, as a representative of the values of 'the West', requires some time to adapt to the Sundarbans and needs to overhaul her value system that, despite her well-meaning care for animals such as tigers and particularly dolphins, excludes the plight of human refugees (see Ghosh 2004, 293-302). Thus, the novel throws into relief injustices and differends caused by a limited focus on a single scale or a single species. Similarly, Piya's cetologist and scientific perspective on the dolphins is modulated not only by the myth quoted above but also by the history of science since she looks for the river dolphins with guiding material from the eighteenth and nineteenth centuries. Thus,

the text traces the little known history of nineteenth-century Calcutta as a centre of cetacean zoology, locating its famed Botanical Gardens as the place where the Gangetic Dolphin was first identified by William Roxburgh. (Kaur 2007, 133)

Apart from Roxburgh (1751-1815) and his insight that "the freshwater dolphins of the Ganges delighted in the 'labyrinth of rivers, and creeks to the South and South-East of Calcutta'" (Ghosh 2004, 42), Piya draws extensively on nineteenth-century research of British naturalists and zoologists in colonial India. For instance, the illustrations of the river dolphins with which Piya tries to communicate her scientific interest to her local guides stem from Victorian times. Furthermore, she takes her cue for her theses on the animals' behaviour and habits from the findings of nineteenth-century naturalists such as John Anderson (1833-1900) and Edward Blyth (1810-73) (see 227-8). Her access to the object of her enquiry is hence duly mediated by the perspectives created in the nineteenth century, carrying its colonial (scientific) legacy into the very present of the novel:

In one of her backpacks, she had a display card she had chosen especially for this survey. It pictured the two species of river dolphin known to inhabit these waters - the Gangetic dolphin and the Irrawaddy dolphin. The drawings were copied from a monograph that dated back to 1878. They were not the best or most lifelike pictures she had ever come across (she knew of innumerable more accurate or more realistic photographs or diagrams), but for some reason she'd always had good luck with these drawings: they seemed to make the animals more recognisable than other, more realistic representations. (32)

This mediation serves not only as a reflection on the interdependences of different layers of human history but also on the perseverance of colonialist naturalist stances that continue to impact on current notions of ‘nature’ and ‘culture’ in the diegetic present (see 226-31). Central events of the novel are revealed to be the result of different time scales, and the novel advocates a multiscalar reading to reveal that single-scale interpretations always entail and create injustices and differends. The novel reflects on multiscalarity by enmeshing the individual fate of single characters in a longer perspective of human, generational and national history, as well as in deep time and myth, all of which can be telescoped into the narrative and are thus available for further working-through, which, for example, are mediated by the genre of the novel. In contrast to the genre’s power to train readers in environmentally inconsiderate stances that Ghosh laments in *The Great Derangement*, the novel, as an intertextually flexible genre, can equally achieve a form of awareness-raising based on its central strategies, mythopoesis and creative metaphors (see Caracciolo 2021, 144), which help to telescope otherwise ungraspable temporal scales and interrelations.

As such, *The Hungry Tide* attempts to find idioms to voice what has been silenced in a process akin to Lyotard’s differend, a fact that cues Jana María Giles to describe Ghosh’s novel as a “postcolonial sublime” (2014, 224). Revealing the complex interconnections of multiscalar temporalities is one of the novel’s strategies to articulate such differends since the single representation of one always silences the victimisation of others. Significantly, such differends, however, are shown to occur in interactions between different “biocultural creatures” (Frost 2016, 3), as Giles elucidates:

The political differend is exemplified not only by Fokir, but also by the Morichjhapi refugees, and the tigers and dolphins, threatened by development forces. (2014, 229-30)

The differends, as Giles shows, clearly run across established humanist human-nonhuman boundaries as well as across the divisions between the cosmopolitan middle-class characters and subalterns, such as Fokir or the settlers in Morichjhāpi that become silenced in the dominant discourse (also see White 2013, 515). The aesthetics of the novel, geared to find an idiom for those silenced, is thus part of its ethics, mediating and, to some degree, translating their plight.

The Sundarbans serve as a highly semanticised space to illustrate *The Hungry Tide*’s aesthetics. The fine negotiation of differences – for instance, between salt and fresh water – is a further case in point. The different currents are shown to intermingle but remain unique (see Dutta 2016, 38),

creating hundreds of different ecological niches, with streams of fresh water running along the floors of some channels, creating variations of salinity and turbidity. These microenvironments were like balloons suspended in the water, and they had their own patterns of flow. (Ghosh 2004, 125)

Ghosh wished the place “to have its own agency” (Vescovi 2009, 138), which links the novel’s construction of space to theoretical approaches such as new materialism, intimating, as it does, particular forms of intra-action that reveal the close entanglement of ‘people’ and ‘environments’. The spaces of the Sundarbans continuously change in both a temporal and a geographical respect. On the one hand, they are subject to “a rhythmic pattern of organisation that reflects nonvisual ways of knowing” (White 2013, 514), reflected in the alternation between “PART ONE: The Ebb: *Bhata*” and “PART TWO: The Flood: *Jowar*” (Ghosh 2004, n.p.); on the other, they are subject to constant vacillations between land and sea that Nirmal describes in his manuscript:

‘The rivers’ channels are spread across the land like a fine-mesh net creating a terrain where the boundaries between land and water are always mutating, always unpredictable. [...] There are no borders here to divide fresh water from salt, river from sea. The tides reach as far as three hundred kilometres inland and every day thousands of acres of forest disappear under water, only to re-emerge hours later. The currents are so powerful as to reshape the islands almost daily – some days the water tears away entire promontories and peninsulas; at other times it throws up new shelves and sandbanks where there were none before’. (7)

The Sundarbans are thus continually subject to a rhythm of palimpsestic rewriting, a constant pattern of erasure and re-construction that constitutes the agency of the space. Due to the novel’s multiscale, space and time create performative, rhythmic aesthetics, or, as Nandana Dutta has it, “a subaltern aesthetic of the border” (2016, 36).

Temporal and spatial interrelations are also captured in intergenerational relationships in *The Hungry Tide*. It is the question of what should be passed down to future generations in a time that is changing in social, economic and environmental terms that is of central concern in the novel. For instance, Moyna, Fokir’s wife and Tutul’s mother, strives for a good education for herself and her son to secure good job prospects in fields different from Fokir’s now unprofitable fishing. In the context of new economic requirements, she interdicts her son’s work with Fokir: “I had to put a stop to it [...] because Tutul has to go to school, doesn’t he?” (Ghosh 2004, 133). Moyna’s consideration also touches upon questions of sustainability and its focus on

how “the needs of both present and future generations” (Agyeman 2016, 187) can be met. With overfishing and the loss of biodiversity, Moyna responds both to environmental changes and the question of how human economic survival can be secured. In a similar vein, the Orcaella need to adapt to changing environments over different generations, and Piya keeps observing a “cow-and-calf pair” whom she believes to have “recognised her too” with the cow even making “eye contact” with her once (Ghosh 2004, 303). With all biocultural creatures under adaptational pressure, *The Hungry Tide* elucidates that the older generations do not necessarily have the requisite know-how to pass down to the following generations. In the novel, Piya finds the calf dead, a victim to a motor boat, as “the inexperienced calf had been slow to move out of its way” (346). The adaptive pressure on the Orcaella caused by human intervention is also addressed in *Gun Island*, in which Piya forms a close bond with Rani, another calf of the same dolphin (see Ghosh 2019, 100-2). Tutul, together with Kanai, Piya, Nilima, Moyna and Rani, is one of the characters that provide interfigural ties between *The Hungry Tide* and its sequel, which is a comment on the temporalities of contemporary novel craft in its own right. The rhythmic pattern between writing and rewriting is upheld in the further development of the story world.

#### 4 Amitav Ghosh, *Gun Island* (2019)

Amitav Ghosh’s sequel to *The Hungry Tide* continues many of its predecessor’s main concerns, among them its multi-layered temporalities as well as its palimpsestic spatialities mapped onto overlapping intertextualities. There are, as indicated above, several interfigural references between these two novels, and *The Hungry Tide*’s five-year-old Tutul becomes *Gun Island*’s young adult Tipu, a name he adopts due to his migrations between India and the US together with Piya (see Ghosh 2019, 55). Contrary to his argument that, in the modern novel, “the unheard-of [is banned to] the background” (Ghosh 2016, 16-17), Ghosh, in *Gun Island* even more strongly than in *The Hungry Tide*

extends the limits of the realist novel to decentre human centrality and expands what it means to be human, not as a self-enclosed entity but as a corporeal subjectivity that inevitably exists in tandem with its nonhuman environmental surroundings. (Samkaria 2022, 31)

Ashwarya Samkaria has highlighted trans-corporeal processes in *Gun Island* as part and parcel of an ecocritical strategy to decentre the ‘human’ (see 2022, 28). Stacy Alaimo’s notion of trans-corporeality

reveals that the duality between ‘humans’ and ‘environments’ is an unsustainable remnant of post-Cartesian thought that consolidated in and through the Enlightenment. Alaimo has shown that “the human is always intermeshed with the more-than-human world” and zooms in on the fact that “the human is ultimately inseparable from ‘the environment’” (2008, 238). Ghosh’s *Gun Island* performs this eco-critical insight through literary strategies of narrating the mesh, entangling, as it does, the different temporalities of history, myth, drama, and narratives of “Anthropocene mobilities” (Baldwin, Fröhlich, Rothe 2019, 290) of ‘humans’ and ‘animals’ alike, as well as of the slow violence of climate change.

Drawing on Andrew Baldwin, Lucinda Newns has argued that “the environment is ‘the very material substance through which mobility itself is mediated, experienced, and conceptualised’” (2022, 1099); as such, the environment can also be used “as a weapon” (1109), as is being done in migration policies today, for instance concerning deserts or the Mediterranean (see 1109). The Mediterranean serves as a central focus on migration in *Gun Island*. Temporalities and spatialities thus come to be closely enmeshed in the novel, sutured by migratory processes and trans-corporealities of biocultural beings inhabiting these spaces and times.

With its reference to myth, the novel not only taps into a flexible temporality but also into myth’s cyclical structure of return that becomes a structuring principle in the novel. The employment of myth, in particular the myth of Manasa Devi, “the goddess who rules over snakes and all other poisonous creatures” (Ghosh 2019, 6), is of key significance in *Gun Island*, and the novel centres on the goddess’s desperate pursuit of the so-called Gun Merchant. The novel’s focus on the severe effects of the venom of snakes and spiders on human bodies is not only to reveal the increasing endangerment of human life through the climate-change-induced migration of poisonous animals but also serves as a nodal point for the interconnection of myth, stories, semantics, climate change, trans-corporeality and environmental ethics. This narrative knot is expressed by the novel’s protagonist and narrator, Dinanath Datta, shortened to Deen, “a dealer in rare books and Asian antiquities” (3). While Deen mostly focuses on the Merchant’s perspective, he once takes the goddess’s point of view in the process of which he “seemed to slip through an opening, or a membrane” (166); this is prompted by the following reflection about the goddess’s persistence in her pursuit of the Merchant:

She was in effect a negotiator, a translator – or better still a portavoce – as the Italians say, ‘a voice carrier’ between two species that had no language in common and no shared means of communication. Without her mediation there could be no relationship between animal and human except hatred and aggression. [...] [I]f

he [the Gun Merchant], and others like him, were to disavow her authority then all those unseen boundaries would vanish, and humans - driven as was the Merchant, by the quest for profit - would recognise no restraint in relation to other living things. (167)

The goddess serves as a mediator between the human and the nonhuman. She is a third factor that ameliorates the differend between two parties lacking a common discourse, challenges the dualism between the two by introducing a triangular form of interaction, and serves as the entity that alone can secure an ethics not entirely dominated by a capitalist strife for profit. While this might seem like a retake on the feminine taming of predatory capitalism à la *Pretty Woman*,<sup>4</sup> *Gun Island* exceeds this notion by providing an environmental or 'ethicological' reflection on how to justify the protection of the environment, i.e. a form of meta-ethics (see Tirosh-Samuels 2016, 106).

Ghosh, I argue, is squarely situated in postmodernist environmental ethics, binding together an emphasis on "the performative aspects of language and its ability to transform human social experience" (107) with the discourse ethics of Lyotard as well as his notion of the postmodernist sublime. Such a postmodernist environmental ethics sets much store by "storied living" (107), complementing the ecocritical 'storied matter' mentioned above (see Iovino, Oppermann 2014, 1). Furthermore, "the context of certain narrative traditions" enables ethical judgement (Tirosh-Samuels 2016, 107), turning the particular mesh of intertexts into a trait of literary ethics. As such, it is vital to explore which narratives, or, more broadly, which literary traditions, come to be referenced in *Gun Island*.

The myth of Manasa Devi is firstly relayed with several versions of the story of the Gun Merchant, who, riddled by hubris, tries to escape the wrath of the goddess and does not bow to her deity until his son gets killed by a cobra (Ghosh 2019, 6). Throughout the novel, such a mythical story is revealed to be based on the historical journeys of a merchant, to the point that *Gun Island* puts history and myth on parallel trajectories to different symbolic forms of 'truth'. Significantly, the novel's intertexts are frequently available in several languages, interconnecting different cultures and religions. Deen, as a dealer in rare books, is a frequent visitor to Venice and, during one of those visits, goes to see "the *Hypnerotomachia* exhibition" in Venice's Querini Stampalia Library (226). There, he comes across an incunabulum, frequently attributed to the Franciscan monk Francesco Colonna, in an English translation from 1592 entitled *The Strife of Love in a Dreame* (see 227). This Renaissance novel deals with a man's quest

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<sup>4</sup> *Pretty Woman* (1990). Directed by G. Marshall. Written by J.F. Lawton. Starring R. Gere, J. Roberts. USA: Touchstone Pictures; Warner Bros.



for an elusive woman and his dream in a dream, “filled with fantastical creatures, sculptures and monuments, some of which are engraved with cryptic messages in Latin, Greek, Hebrew and Arabic” (227). These languages also impact on how to understand the story of the Gun Merchant because they modulate it in different cultural contexts, interconnecting these, in turn, with the Bangla encountered in the Sundarbans (see 178), while the spaces are interlinked in many ways, too (see 162, 256).<sup>5</sup> Venice, “the world centre of the book trade”, where “the first printed Quran, in Arabic script, had appeared” (226), serves as a cross-over space where all these cultures intersect. The reference to the incunabulum is hence of great significance because “[i]n this dreamt-of dream voices and messages emanate from beings of all sorts – animals, trees, flowers, spirits...” (227). The library in Venice serves as a kind of multi-voiced heterotopic (see Foucault 1986) mediator akin to Manasa Devi herself. Entranced by the exhibition, Deen, in turn, feels “dreamed by creatures whose very existence was fantastical to [him] – spiders, cobras, sea snakes – and yet they and [he] had somehow become part of each other’s dreams” (Ghosh 2019, 227). Complicating ontologies, the library makes audible “that roar which lies on the other side of silence” (Eliot 2000, 124), enabling a form of interspecies communication.

The multivocality of Venice is further corroborated by the novel’s academic, “Professoressa emerita” Giacinta Schiavon, “a giant” in the field of the history of Venice (Ghosh 2019, 25), who not only clarifies that the meaning of the word *bundook* means ‘Venice’, not ‘gun’ so that the Gun Merchant actually is a merchant of Venice (see 139; 151; also see Samkaria 2022, 29). She also delivers a concluding speech on a museum’s “acquisition of a very valuable seventeenth-century edition of *The Merchant of Venice*” in Los Angeles (Ghosh 2019, 125). Cinta reminds Deen that Venice, as “the most cosmopolitan place in the world”, served as the most plausible setting for Shakespearean characters such as “Shylock and Othello” (156; see also 152) and is defined by trade and migration alike (also see 140-1). Human trafficking, in particular, is addressed as part and parcel of colonial trade relations. Cinta refers to J.M.W. Turner’s “painting of a slave ship”. At the same time, Deen analogises “the indentured workers who had been transported from the Indian subcontinent” and highlights moneylending as the central practice financing human trafficking (303). With Venice Beach as complementary to Venice, Los Angeles becomes one more semanticised setting for the novel, interconnecting Italy and the US (see 142).

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<sup>5</sup> Lucinda Newns has captured the novel’s palimpsestic spatialities with the phrase “‘translocal’ ecology” that she considers to provide “an alternative environmental ethic” (Newns 2022, 1102), enabling “a more mobile form of ecological belonging” (1116).

Furthermore, the impact of India's and Bangladesh's colonial histories is added to these different but interrelated chronotopes, rooting them all in the seventeenth century. As Deen reflects, the shrine of Manasa Devi was most probably "built at some time between 1605, when the emperor Jahangir was enthroned, and 1690, when Calcutta was founded by the British" (23). The novel posits the seventeenth century as a central turning point pertaining to the fate of the climate, world literature, colonialism, processes of migration and racism:

Beginning with the early days of chattel slavery, the European imperial powers had launched upon the greatest and most cruel experiment in planetary remaking that history has ever known: in the service of commerce they had transported people between continents on an almost unimaginable scale, ultimately changing the demographic profile of the entire planet. But even as they were repopulating other continents they had always tried to preserve the whiteness of their own metropolitan territories in Europe. (305)

The L.A. conference celebrates the acquisition of *The Merchant of Venice*, a text whose publication coincides with the foundation of the East India Company in 1600 that was soon followed by the Royal African Company after the Restoration in 1660, thus evoking central dates that enabled human trafficking and colonial trade. During this event, Deen listens to a conference paper entitled "Climate and Apocalypse in the Seventeenth Century" (135), in which the speaker addresses the Little Ice Age of the period. The speaker continues to illustrate the simultaneous "crescendo in visions inspired by the bites of tarantulas" with "the beginning of the Age of Enlightenment", coinciding further with the erection of the Taj Mahal and "the Gun Merchant's shrine" (136). Historical events intersect with climate change, architectural achievements, spiritual convictions, and cultural production. Concluding his paper at the conference, the speaker challenges his critics by asking:

Couldn't it be said that it was in the seventeenth century that we started down the path that has brought us to where we are now? After all, it was then that Londoners began to use coal on a large scale, for heating, which was how our dependence on fossil fuels started. Would Jacobean playwrights have written as they did if they hadn't had coal fires to warm them? Did they know that an angry beast, which had long lain dormant within the earth, was coming to life? Did Hobbes or Leibniz or any of the other thinkers of the Enlightenment have any understanding of this? (137)

Fossil fuel exploitation, global warming, Jacobean writing and the material impact of these changes as storied matter coalesce here. The

seventeenth century is further understood as the origin of Enlightenment humanity and the corresponding dualist forms of framing 'nature' and 'culture' as separate entities; this philosophical legacy serves as a backdrop for "everything going wrong with the world - inequality, climate change, capitalism, corruption, the arms trade, the oil industry" (218). Tipu, who works in the "people-moving industry" (65), both cashes in on postcolonial and environmental forms of migration in the novel's present and, eventually, embodies the paradigmatic migrant, whose plight, together with Cinta's demise, concludes the story (see 307-12).

In *Gun Island*, processes of human migration are complemented by nonhuman forms of migration. Deen is terrified, for instance, when a brown recluse spider sits on his laptop, a species that migrates north due to global warming (see 215; 234), as Cinta further explains:

It is here because of our history; because of things human beings have done. It is linked to you already - you have a prior connection with that spider, whether you like it or not. (235)

The novel thus constructs co-migrations of humans and nonhumans on the basis of climate change (see also 230; 309), suggesting a deep-level interconnection between these processes as a result of human inscriptions into the planet. This interconnection is also reflected in what one may call the novel's biosemiotic ethicology. Cinta elucidates this when she argues that "Only through stories can invisible or inarticulate or silent beings speak to us; it is they who allow the past to reach out to us" (141).

Storytelling, she continues, might well be "the last remnant of our animal selves" (141), and thus not the distinguishing feature of the human as the only storytelling animal, but an evolutionary connection to the nonhuman, interconnecting different beings by way of storytelling. Instead, storytelling is a form of multiscalar, transhistorical communication. A new materialist view on 'storied matter' thus forms the basis of the interconnections between beings, phenomena, times and spaces. When Deen interprets the voices of biocultural creatures in a "dreamtime of the book" (228), he becomes further connected to the historical Gun Merchant walking the streets and exhibitions of Venice (see 152). In Venice, the Merchant borrowed signs from these cryptic messages that speak to Deen in the novel's present and to the readers in the graphic representation of the novel itself (see, e.g., 76-7; 228).

*Gun Island* also crafts further mediating intertexts for the Merchant, such as the "Odyssey, with a resourceful human protagonist being pitted against vastly more powerful forces, earthly and divine" (6) and, as was already indicated, William Shakespeare's *The Merchant of Venice* (1600) (see 125), making Ancient Greek, Indian, Jewish and European voices, cultures and spaces enmesh over time. The novel reflects on these references with its own theory of

intertextuality articulated by Deen. Not only does he argue that his whole journey “was launched by a word” – the word “*bundook*” with its various multilingual meanings (3); he also reflects on the genesis of this story:

The origins of the story can be traced back to the very infancy of Bengal’s memory: it was probably born amidst an original, autochthonous people of the region and was perhaps sired by real historical figures and events (to this day scattered across Assam, West Bengal and Bangladesh, there are archaeological sites that are linked, in popular memory, to the Merchant and his family). And in public memory too the legend seems to go through cycles of life, sometimes lying dormant for centuries only to be suddenly rejuvenated by a fresh wave of retellings, in some of which the familiar characters appear under new names, with subtly changed plot lines. (7)

The novel thus intertwines the pre- and postcolonial history of Bengal and a theory that explains intertextuality as a process with the power to (re-)activate the archives of cultural memory (see Assmann 1988). What is more, cultural, historical and deep memory (or the memory of deep time) come to be storied matter suffused with agency to reach out to us and impact us. Concerning *Gun Island’s* ecocritical strategies, this amounts to a new materialist biosemiotics that can be understood in analogy to human cultural memory and its recycling of meaning in different historical contexts. As bio-semiotician Timo Maran argues,

Through its shape, structure, patterns, and other properties, semiotized matter embodies the imprint of the organism or culture that has created it. Its inner semiotic potential remains, waiting to be launched into new semiotic and communicative relations. (2014, 151)

Maran’s words aptly describe the process in Ghosh’s novel, in which the mediator Manasa Devi reaches out to human beings over the centuries. This process’s close connection between time and space is another case in point. Manasa Devi’s shrine in the Sundarbans triggers an irreversible process for Deen, especially when he has already returned from this cross-border mangrove forest to his Brooklyn home. He claims:

It was as if some living thing had entered my body, something ancient that had lain dormant in the mud; [...] it was much older than me, some submerged aspect of time that had been brought suddenly to life when I entered that shrine – something fearsome,

venomous and overwhelmingly powerful, something that would not allow me to be rid of it. (Ghosh 2019, 113)

The logic of poisoning is employed as a metaphor to explain such biosemiotic, trans-corporeal communications. Aptly, the shrine is protected by a cobra invisible to Deen but visible to the younger generation of Rafi and Tipu. Tipu gets bitten by the snake (see 84), and when Rafi tries to save him by sucking the venom out of his wound, “it was as if the venom that had passed from Tipu’s body into Rafi’s mouth had created an almost carnal connection” (89). The trans-corporeal and spiritual quality of this process comes to the fore when Tipu claims that “they’re all over my body, they’re wrapped around my hands, they’re under my feet... but I’m not afraid of them; they’re trying to help me” (89). The transmission of the mythical creatures’ message is rendered plausible on different levels by a form of poisoning passed on from person to person, affecting them in different but related ways, by the impact of the cultural memory of re-activated myths and by biosemiotic forms of communication. In addition, poison on an industrial scale is also taken into the equation when the Sundarbans come under further environmental pressure due to the “chemical fertilisers” illegally released by a refinery, creating “oceanic dead zones” (104). Trans-corporeal interdependencies thus forcefully reveal the simple fact of all beings’ close enmeshments in one *ecosystem*.

Such an interconnection of species-specific ethics of temporal multiscalarity with corresponding chronotopes and cultural palimpsests seems to be one of the novel genre’s adaptations to the challenges of our times, first and foremost, the question of how we can address and represent the climate crisis in the novel without erasing the specific histories of biocultural creatures, defined as they are by economic, social, religious and other differences that impact on their lives and chances. Climate fiction thus proves highly aware of its ethico-logical function today.

## 5 Conclusion

Mahasweta Devi's "Pterodactyl" and Amitav Ghosh's novels *The Hungry Tide* and *Gun Island* enmesh characters in multiscalar temporalities, thus making human history, geological time, and myth intersect. Such multiscalar temporalities closely entangle the histories of different biocultural creatures, reveal the different needs pitted against one another on different scales and negotiate the ensuing differences. The narratological means to represent these entanglements show how adaptable the novel can be when it provides us with new understandings of 'ourselves as nature'. Multiscalarity can thus be understood as a narratological innovation that helps us reframe how we understand ourselves, reflect on, and possibly strive for environmental justice on multiple scales. Having an open ear for multi-generational voices across species and storied matter in that process is the ethical demand of our times. Situated in discourse ethics, the texts analysed here attempt to find new idioms to articulate the silenced voices across all living beings. To achieve that, they highlight the agency of matter, having imbibed central insights of material eco-criticism, and the importance of finding new forms of communication based, for instance, on the insights of biosemiotics. Decentering humanist notions of the human and the dualisms installed in the wake of the Enlightenment, they perform trans-corporeal enmeshments of beings and matter and suggest the ethics of the mesh, based as they are on expanded forms of perceiving and communicating. What needs to be perceived and communicated is rendered palpable on the level of generational time, with the youngest descendants of the respective families represented frequently being those who are most vital in the process of passing down biocultural memory and adaptational knowledge. Instead of narrowing down human perception, contemporary climate fiction seeks new ways of expanding it, training writers to narrate and readers to perceive the mesh. Becoming attuned to the "roar... on the other side of silence" (Eliot 2000, 124) may be a central prerequisite for developing notions of a climate-friendly form of co-existence.

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