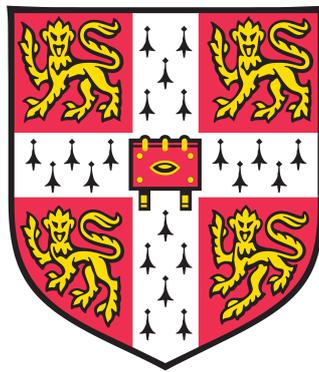# An Exploration of Nature and Human Development

in Young Adult Historical Fantasy

Jou-An Chen

Faculty of Education

Homerton College

University of Cambridge

Supervisor: David Whitley

September 2017

An Exploration of Nature and Human Development
in Young Adult Historical Fantasy

Jou-An Chen

Thesis summary

Traditional historical writing focuses on the cause and effect of human action, assuming that it is the historian's responsibility to recount the ebbs and flows of human progress. In the process of laying hold of the past as a narrative of human action, historical writing has developed the tendency to marginalise nature and undermine its power to influence the historical narrative. My investigation explores the fantastic in historical fantasy as a means of resisting historical writing's anthropocentrism. Historical fantasy uses fantastical elements to create counterfactual and alternative historical realities that have the potential to resist and undermine history's anthropocentric norm. My thesis examines four contemporary young adult historical fantasy trilogies that reimagine key turning points in history such as industrialisation, the American frontier, European imperialism, and World War I. They share the theme of retrieving and subverting anthropocentric discourses in the history of human development and thereby creating space for nature's presence and agency. My study finds that the fantastic is an effective means of subverting historical writing's anthropocentrism. But it also uncovers ambiguities and contradictions in historical fantasy's ecological revisionism, pointing to the idea that despite the fantastic's capacity for subversion, historical representations of nature cannot be separated from considerations of human identity and survival.

This dissertation is submitted for the degree of Doctor of Philosophy

Preface

This dissertation is the result of my own work and includes nothing which is the outcome of work done in collaboration except as declared in the Preface and specified in the text.

It is not substantially the same as any that I have submitted, or, is being concurrently submitted for a degree or diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text. I further state that no substantial part of my dissertation has already been submitted, or, is being concurrently submitted for any such degree, diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text.

This thesis does not exceed the prescribed word limit.

Acknowledgements

Table of Content

Introduction

> What is one human day in the life of an ecosystem?
>
> Nothing. And still, we cannot see.
>
> —Sherri L. Smith, *Orleans*

Contemplation on the relationship between nature and mankind is boundless but central to how we conceive ourselves and our future. Within the range of fictional forms, it spans from animals in myths and fables to futuristic extrapolations. In my own early ecological exploration as a child, the unlikely friendship in Disney's *The Fox and the Hound* was the catalyst that caused me to wonder about interspecies relationships. Following Disney films that I avidly watched, from *The Little Mermaid* to *Tarzan*, it was Roger Fouts' *Next of Kin: My Conversations with Chimpanzees* (1997) that left the most tangible imprint. The story of Washoe, a chimpanzee who learnt how to communicate with researchers using sign language, could be pinpointed as the beginning of my interest in our coexistence with other creatures and its philosophical ramifications. L. M. Montgomery's Anne Shirley, a kindred spirit, was also influential. Her romantic daydreams of forest sprites and surreal moments became a sort of personal sanctuary. Recently, science fiction novels have played a crucial role in cultivating an awareness of our human capacity for self-destruction. Scott Orson Card's *Ender's Game* and Mike A. Lancaster's *Human.4* have been particularly memorable because of their shock factor, which characterises mankind as the dangerous yet pitiful race whose annihilation could be a form of physical release and moral redemption.

With respect to this kind of apocalyptic thinking, Lawrence Buell explains that apocalypticism has become paramount in our environmental consciousness due to the emerging sense of environmental fragility. Buell argues in *The Environmental Imagination* (1995) that the metaphor of apocalypse now exists as the ideological nucleus in our "ecocentrism's projection of the future of a civilisation that refuses to transform itself according to the doctrine of the web" (285). Excess, distorted nature and environmental loss permeate ecological dystopias, which often articulate the moral message that we are on the path to self-destruction and that it is only a

matter of time before scientific progress fails us completely. Global warming, genetic modification, species extinction, and pollution affect not only the appearances of nature but moreover, what we think we know about it and our engagement with it. These modern phenomena force us to ask questions about what it means to be human in an age where nature is at risk. When people are no longer sure of what it is that they are consuming, or where the animal/human divide is, these speculative scenarios challenge the stability and boundaries of our human identity.

Hence, it is no wonder that science fiction, the literature of charting scientific and technological frontiers, turns its gaze toward a future world, which is often portrayed as a frightening, dismal place to caution us to take up our collective responsibility for the sake of our own survival. Alice Curry's *Environmental Crisis in Young Adult Fiction* observes young adult (YA) fiction's trend of locating ecological disasters in the near future. These future-oriented narratives tend to represent nature as "a deadly threat to humanity in its fragile state of recovery after disaster or apocalypse, or simply an unintelligibly entity with which the human population must battle for territorial supremacy" (2013, 40-1). Ecological fragility compels the YA protagonist to confront the detrimental effects of their own society, interweaving ideologies that define human progress with the effects of ecological crisis. The speculative element reinforces the notion of our world reaching a "tipping point" or global rupture, during which ecological destruction triggers social upheaval and compels the YA protagonist to re-evaluate her/his own cultural values and reconstitute the existing ontological framework. These narratives depict the fate of humanity as a future embedded in environmental processes that can be determined by human action. This idea that human beings have power over nature has ancient roots. But as Donald Worster notes in *The Wealth of Nature,*

> [I]t was not until the eighteenth century that the ideas came together into a recognisable modern form, becoming an intellectual mould that has fashioned our national thinking ever since. Those ideas would have cataclysmic ecological consequences; they would drive us relentlessly to create the man-made landscape we inhabit today and in the process nearly wipe out that wilder America. (1993, 9)

During this time, environmental awareness began taking a dystopian turn. Tensions between human and nature surfaced in moralistic disaster stories featuring the conflict between nature, technology and mankind. Brian Stableford (2009) mentions W. D. Hay's *The Doom of the Great City* (1880) and Robert Barr's 'The Doom of London' (1892) as examples that illustrate industrial nightmares and catastrophic smogs that denote pollution as a sign of physical and moral contagion. Then, fast-forwarding to the post-war period, writers began moving away from the focus on industrial machine imagery to dystopian speculations involving mass destruction and the problem of overpopulation.

But in the twenty-first century, due to the attention centred on global warming and modern technologies' radical transformations, writers are returning to the earlier problem of pollution amongst other concerns, including the preservation of biodiversity, the rise of eco-tourism, carbon emission, environmental literacy, and so on. In other words, nature has always had a prevalent and significant presence in speculative thinking about human progress and its forms have greatly diversified over the years but the dominant message has remained the same: there is an unfolding environmental catastrophe that cannot be halted or slowed down and humans are in the midst of it.

The dominant environmental thought may be futuristic and apocalyptic but alternative strands of discourse can also be found. Environmental history expresses the importance of being aware of and taking into account retrospective views on human-nature entanglements. Donald Worster's *The Wealth of Nature* (1993) serves as an example of renegotiating human-nature relations through history. Worster's environmental history can be seen as a follow-up to Aldo Leopold's approach to nature's influence on human development. It explores a wide range of issues from the aesthetics of the American wilderness to the chaos theory in order to establish a comprehensive understanding of the historical intersection between human and nature. A major theme that runs throughout the entire book is the notion that a society's interaction with nature leads to its own restructuring and evolution from one form to another. There are several examples in history that demonstrate this, but the most prominent one is the rise of what historian Karl August Wittfogel calls a "hydraulic society" in Asia. In Worster's account, the absence of rainfall in Asia instigated the development of hydraulic technology in order to meet the demand for water supply. As a result of hydraulic technology entering the scene, economic changes forced communities to adapt by reorganising social and political bodies into elaborate hierarchies of power. In view of the rainfall as the origination of economic development and redistribution of power, Worster claims that both nature and mankind are changed in this ongoing, unfolding dialectic, so that in each locality "[t]here could be no other arrangement of society so long as that ecological pattern, that techno-environment base, remained in place" (1993, 33).

Worster's framework omits other aspects of the interactions between nature and society. It fails to account for what human consciousness means in relation to the ecological and biological factors of life, which can be found in the arts and literature that manifest qualities of our belonging to and separation from the natural world. It also overlooks ethical readings that inform our personal and public dialogue, which may be contrary to the social and economic demands of society. The artistic dimension cannot be underestimated when it constitutes an essential part of our cartography of nature and mankind. Nevertheless, by focusing on the physical reality of environmental change

and human development, Worster points out something that is painfully obvious yet often taken for granted: the progress of humanity, something we consider as intrinsically human, is in fact embedded in environmental processes. Environmental history posits that there is the need to retrace our past as a map of dialectical pathways that interweave nature and mankind. After all, natural places are not stable entities. Rather, they are "continually shaped and reshaped by forces from both inside and outside. Places have histories; place is not just a noun but also a verb, a verb of action; and this action is always happening around us, because of us, despite us" (Buell 2001, 67). So, as the present finds itself on the verge of entering a future of irreversible ecological damage, there is an even greater need to turn to the past, to the histories of place and nature, and to historical points of ideological and ecological rupture.

Similarly, Roderick McGillis believes that before we turn our eyes to the future, we need look back:

> Unless we continue to narrate history, we cannot move toward that nowhere in which everyone is free and equal. At the same time, we must acknowledge that each act of narration —just like each act of interpretation—cannot escape participation in the series of events that are soon to become history. (2000, 50)

McGillis argues that there is an inherent retrospective impulse in YA fiction that confronts the future of science, technology, and the environment, since altering the shape of history has "transformative power" that can either "perpetuate the nightmare or set off an alarm" (49). McGillis states that historical revision has the potential to reconceptualise the relationship between nature and human beings. Historical narration, in McGillis's view, is a form of revision as much as reconciliation, without which society cannot move forward. As a narrative paradigm that explains and interprets forms of change and rupture, history enables the reader to reassess the causality between human action and environmental change, which cannot be examined simply through an unmediated perception of the past as separate and distinct from the present. Historical narration serves as a vehicle for articulating connections between our current state of ecological crisis and our past actions and decisions.

Historical Fantasy

Most historical fiction participates in this reconciliation, but historical fantasy is a form of retelling of the past that problematises human-nature relations in particular ways using fantasy and anachronism. Historical fiction recreates past events, persons, and settings so that the reader can

absorb a sense of the past and gain a fresh perspective of human experiences, which are imagined as different yet connected to the contemporary reader's understanding. György Lukács' *The Historical Novel* (1962) reveals that the production of historical fiction is intricately linked to its social condition, which is often driven by disappointment with human progress or the desperation for another social order. Lukács thus claims what matters is not "the retelling of great historical events, but the poetic awakening of the people who figured in those events. What matters is that we should re-experience the social and historical motives" (1962, 42). In order to retrieve these social and historical motives from the past for the contemporary reader to re-experience, the historical novel "has to demonstrate by artistic means that historical circumstances and characters existed in precisely such a way" (1962, 43). Hence, despite its claims of authenticity, historical fiction aims to uplift and diversify the contemporary reader's experience of the *human* past, which reinforces the notion that "history can be transformed into a national mythologising that becomes a means of transmitting a dominant culture, and that the past is always filtered through the prism of the present" (Wilson 2011, 191). Moreover, historical novels revolve around significant historical events and they are constructed with the goal of conveying "experience fractured through an individual consciousness" (Nikolajeva 2014, 40). The individual sense of history is communicated via an anthropocentric filter and reaffirms the YA protagonist's humanist position and importance in historical change. In other words, due to its emphasis on human development and human subjectivity as a filter, historical fiction has a particular anthropocentric drive that is not easy to override.

In contrast, historical fantasy portrays historical events but embellishes them with anachronistic and fantastical details that could potentially problematise history's anthropocentric tendencies. Historical fantasy is "a hybrid of two seemingly opposed modes, fantasy with its explicit rejection of consensus reality, and historical fiction, a genre grounded in realism and historically accurate events" (Schanoes 2012, 236). The consensus reality that historical fantasy rejects can be described as the facade of historical realism, which recalls the historical period, its conditions of life, and the significance of human action and intentionality for the reader to re-experience and re-live. The fantastic, in this sense, is the force of subversion that works against the dominant system of each historical period in order to evoke alternative worlds and hidden moments that contest and disrupt the realism that legitimises human beings as the central subject of historical narratives.

The notion that historical fantasy creates space for contestation is premised on Kathryn Hume's concept of fantasy and mimesis as the two impulses that drive all literary representations.

Hume asserts in *Fantasy and Mimesis* (1984) that literary representation is often—but not always—the product of two impulses, mimesis and fantasy. Mimesis is the impulse "to describe events, people, situations, and objects with such verisimilitude that others can share your experience" (1984, 20). But alongside the impulse to imitate reality is the impulse to resist reality which Hume calls fantasy, that is, "the desire to change givens and alter reality—out of boredom, play, vision, longing for something lacking, or need for metaphoric images that will bypass the audience's verbal defences" (ibid.). Hume's definition of fantasy literature appears inclusive and flexible, encompassing "many genres and forms, each with a characteristic blend or range of blends of the two impulses" (ibid.). Its versatility is an advantage to my exploration since it implies that historical fantasy effectively includes counterfactual histories, technological innovations that have not yet taken place and historical extrapolations. Through Hume's theoretical lens, mimesis and fantasy can be seen as dialectical impulses that enable the narrative to reproduce and alter past paradigms of human-nature engagement for undermining alienation from nature, inviting a deeper and more nuanced reflection of nonhuman creatures in human contexts, and stressing nature's impact on our human identity in past cultures.

Another factor in choosing historical fantasy as the literary genre for exploring alternative retellings of the relation between nature and human development is its anachronistic qualities. Anachronism occurs when the text references a thing or a thought that does not belong to its historical setting. In historical fiction, it is usually considered a sign of error that should be avoided. Catherine Butler and Hallie O'Donovan present in *Reading History in Children's Books* (2012) some of the reasons that historical writers treat anachronism with hostility. For example, historical writers believe that they owe it to the reader to not distort the past because historical fiction should be as authentic and factual as possible for evoking realism. As a result, historical writers strive for historical accuracy since it is part of their duty to readers and the past.

Historical facts are considered the supporting infrastructure of historical fiction, but it is really anachronism that triggers the reader's ideological probing of the past. Butler and O'Donovan explain that it is impossible for historical fiction to be factual because, if it were so, it would not be fiction. Anachronism is integral to our interpretation of historical representations because it is how the text creates resonance with the reader. It even has a pragmatic purpose, which is for "aiding comprehension and accessibility (in terms of language, for example)" (2012, 81). Anachronism is necessary in historical narration because it creates "the greatest possible overlap and the strongest possible analogies with the supposed interests" of the modern reader (ibid.). The reader perceives

anachronism as a source of familiarity that reassures the reader with a sense of false continuity between past and present.

Hence, anachronism is the key to understanding how writers destabilise the reader's perception of historical norms and thereby introduce new angles for thinking about past social, political, and even environmental conditions. It also serves as a reminder that as much as fantastical elements disrupt the historical norm, they could also be used to affirm the status quo, which may or may not result in a subversion of human superiority in its particular context. Anachronism's doubleness of unease and familiarity offers what Amy J. Ransom describes as "the double pleasure of recognition and estrangement" (2010, 260). The reader derives pleasure from detecting what has changed and what has remained the same. Alternating between recognition and estrangement, the reading experience transforms into a collaborative process, through which the writer and the reader jointly explore a new and different world in the altered timeline, resulting in

> tension between these two versions induces a form of ontological flicker between the two
> worlds: one moment, the official version seems to be eclipsed by the apocryphal version; the
> next moment, it is the apocryphal version that seems mirage-like, the official version
> appearing solid, irrefutable. (McHale 1987, 90)

Compared to traditional historical novelists who attempt to fill blank spaces of the past with historical realism using vivid details, writers of historical fantasy allow absences to remain as a source of disruption. Anachronistic spaces articulate that unsettling suspicion that the past is not something to be escaped, avoided, or controlled. Anachronism forces the reader to acknowledge that her/his perception of the past is and always will be incomplete and fragmented.

It is by recognising the past's incompleteness that historical fantasy articulates the limitations of representing nonhuman agency using human language and the ideological trappings of realist historical fiction. This retrospective impulse functions as the intellectual opening for exploring the causality, consequence, and condition of human-nature coexistence. History often tells us how a political rebellion instituted a change in government or how a scientific discovery caused a paradigm shift, but it does not always show how geographical and ecological factors determine basic social and cultural practices, such as what we eat, how we build our homes, and even the formation of political infrastructure. A re-examination of the past in historical fantasy takes on the function of highlighting previously occluded aspects of this transformative dialectic in our historical representations. Thus, the aim of my investigation is to explore young adult historical fantasy and uncover ways in which the fantastic reconstructs the dialectical relationship between

human development and ecological change outside the anthropocentric norm of historical representations.

Young Adult Fiction

Before I confront important matters related to my conceptualisation of nature and history, I would like to present my decision to locate my investigation in the literary genre of YA fiction. There are texts in genres other than YA fiction that I could have considered as the literary ground for my research. Cherie Priest's *Boneshaker* (2009) is a stand-alone counterfactual fantasy novel set in the early days of the Civil War, which illustrates the grotesque aftermath of unleashing a zombie disease when miners unearth pockets of poisonous gas. The novel's grim portrayal of destroyed American landscapes and its use of zombies as a metaphor for victims of war resonate with my interest in alternative ecological retellings of the past, which would have opened up avenues for discussing the materialism of ecological crisis in relation to bodily horrors of war. The manga series *Fullmetal Alchemist* by Hiromu Arakawa is another text that I regret not including in my corpus. In *Fullmetal Alchemist* alchemy becomes the engine of modernity, which propels a small nation to grow and conquer by developing a military autocracy that disturbingly resembles Nazi Germany. The text is scathingly critical when it comes to the marriage between state and science, and unapologetic yet ambivalent in representations of the ugly and dehumanising outcome of obsessively pursuing truth and enlightenment. With these other options available, my texts did not have to be YA, nor did they have to be strictly in the novel form. But there is the need to limit the field of my enquiry in a coherent way, and I have done so by choosing YA fiction as the literary scope of my corpus texts.

YA fiction is more or less a "hypothetical space between junior fiction and adult fiction" that is "informed by the values and assumptions about adolescence that are dominant in the culture at the time of the texts' production" (McCallum 2006, 215). Although novels targeted at adolescents existed prior to the twentieth century, such as scientific romance, penny dreadfuls, series fiction, and colonial adventure, what we identify as YA fiction is a relatively new cultural product. YA fiction is ideologically consistent because knowledge of what constitutes the adolescent experience depends on the text's cultural context. For the same reason, scholars treat YA fiction as the embodiment of social and cultural forces which articulates the hopes and anxieties of its society. Mary Hilton and Maria Nikolajeva assert,

Through sympathetically portraying the alienated pains and pleasures of adolescence, through

enacting adolescence with all its turmoil, writers bring young readers face to face with

different forms of cultural alienation itself: the legacy of colonialism, political injustice,

environmental desecration, sexual stereotyping, consumerism, madness, and death. (2012, 1)

In a metaphorical sense, the fictional YA protagonist reflects society's cultural awareness that is working out the internal discourses that make up who we are. It is important to state that YA fiction does not perform the exclusive work of embodying contemporary society's cultural awareness or providing insight into the causality between personal choices and the external world. To varying degrees, all fictional narratives enact this dialogue between the self and the world and between fiction and culture. So the choice to locate my investigation in the field of YA is more related to its established pattern than some kind of exclusive function that YA performs. Like other narrative genres YA fiction represents cultural transformations but particularly in relation to the human protagonist who is still in the process of becoming an adult. The in-betweenness that is characteristic of YA fiction makes the genre useful for interpreting the YA protagonist as the embodiment of a transformative cultural awareness. The YA protagonist becomes a platform for the reader to imagine what goes into the making of a modern adolescent and, by extension, a modern adult.

Moreover, I have chosen YA fiction because it is a genre that tends to portray the human identity as a formative construct that interacts with social, cultural and environmental factors. McCallum explains, the process of forming one's subjectivity is a dialogical one since it requires the subject to enter into "dialogue with others and with discourses constituting the society and culture s/he inhabits" (2006, 3). These dialogic moments compel the individual to assimilate discourses of the other and dislocate her/his own subjectivity from a narrow, solipsistic world, reproducing the individual as a dialogic construct. In this humanist mode, the individual "experiences an inner self as the locus of unique feelings, opinions, and thoughts that can have a greater reality and importance than the objective events that occasion them" (Appleyard 1990, 96-7). Modes of perception grounded on the human subject are never questioned. The question instead is what kind of subject it is and how it comes into being. When we approach the protagonist of YA fiction in this way, her/his interactions with environmental factors, landscapes, and animals can be magnified as an important ground for reconceptualising her/his historical identity through the assimilation of alternative nonhuman viewpoints and experiences.

YA fiction's tendency to illustrate changes in self-world relations thus becomes useful for exploring social and cultural influences that define a historical period, and by extension, a human individual located in that particular time. Literature on a whole enables this kind of dialogic

exploration and YA is not a unique exception. But YA is particularly good at dramatising the protagonist's reception of and resistance to external forces as an inherent and significant process to adolescence that operates as a cultural metaphor for human development. The choice to focus on YA, then, is simply that its emphasis on personal growth derived from self-world interaction is useful for exploring the causality between a historical period's social norms and cultural biases, its environmental concepts, and the formation of a human subject.

Historicising the Past

Having identified YA historical fantasy as the literary genre of my study, I now come to the conceptualisation of history in my investigation and problems in historicism that marginalise representations of nature. From the perspective of an environmental historian, the past is a narrative of human-nature entanglements, but there are challenges to representing the past using an inclusive perspective centred on the dialogic relations between human development and environmental change. The first challenge I want to confront is the difference in biospherical time and human time that has been highlighted by Daniel Gustav Anderson. Anderson (2012) argues that history does not lend itself intuitively to representing human and ecological activities within the same narrative because human time and biospherical time are not experienced at the same speed. Anderson follows the thought of Marxist theorist Antonio Gramsci in describing humans as beings embedded in the circulation of need, and thereby examines historical sites and epochs of progress to present human labour as a crucial factor of a region's biological life. In his exploration, Anderson notes that traditional historicism tends to downplay or ignore this causality between the metabolism of human activity and the health of a bio-region. Anderson suspects the reason might be that changes in a bio-region are not experienced in the same way as changes in human society. Natural phenomena such as volcanic activity, glacier formation, and soil erosion can be detected and measured scientifically. But because geological change requires the span of several human generations to be perceptible, Anderson concludes, "the felt experience of human time differs from the time of biospheres on one scale, or geological formation on another" (2012, 39). Compared to a human's average life span, Earth's biospherical time seems incalculable. Hence, if historians were to represent a bio-region's geological and ecological change, they would have to do so by illustrating it over an extensive period of time, in the midst of which human activities appear inconsequential and transient. But if historians were to focus on human events, unless the ecological change is abrupt and/or catastrophic, then nature would appear as static, repetitive, and even neutral.

Another factor related to time that complicates historical representations of human-nature entanglement is that human temporality is often seen as progressive while nature's temporality is rhythmic yet constant. Marcus Hall points out that nature is characterised by "the waxing and waning, ebbing and flowing of diurnal, lunar, and seasonal rhythms and planetary orbits, along with our everyday breathing and heartbeats, sleeping and waking" (2010, 15). In contrast, human history as a narrative of progress is characterised by unpredictable revolutions.

Even so, nature has its own dramatic change and turbulence. Michel Haar observes that nature is often spared from history and presented as an entity that is "older than Adam, older than History,"; but it is not without its own epochal dimension, making it "[h]istorical and yet non historical…the most elementary ground of the world, as its body, to which our body is necessarily connected" (1993, 5). Haar's point is that simply by being the materiality that human bodies are connected to, nature is implicated in a series of unpredictable changes. Nevertheless, the Enlightenment brought about a shift in the way we think about time and history by framing human progress as cumulative while natural change is cyclical and repetitive. Again, there is the separation between the time experienced by human beings in society and that of the natural world: in the natural world "[t]ime's circles are the ceaseless recurrent cycles of nature's constancies", while in human society time "flies only once from the irrecoverable past toward the foreign future, never again the same. The target of time's arrow is the contingent events and sporadic vagaries" (Lowenthal 2010, 15). The mechanical clock, which originated in northern Italy a little before AD1300 and was then refined by German clockmakers around 1550 to 1650, embodies this notion that time in the natural world is somehow distinct from human time. The High Baroque period treated the mechanical clock as a symbol of authority, leadership and order in human life, which is in contrast to nature that is unpredictable and chaotic. This distinction between nature's rhythm and mechanical clock becomes even more pronounced with the invention of internet, whose virtuality flattens our experience of time and renders it even more out of sync with nature's own rhythm of change.

The jarring discord between biospherical time and human time poses a challenge to representing human-nature entanglements in history, but it is not irreconcilable. Max Oelschlaeger's approach to this problem is enlightening because he identifies it as a symptom of modernity. Oelschlaeger claims that ecological degradation was barely perceptible to the Ancients because their sense of history was different from ours:

To the Neolithic peoples who settled in the flood-plains of the hills and the Tigris-Euphrates, humans were simply living as their ancestors had since the dawn of time. The Samarians and

Egyptians later theologically rationalised the agricultural civilisation they had built. Almost certainly they thought of nature as a sometimes capricious but essentially orderly, even designed process. (1991, 41)

To Oelschlaeger, modernity constitutes a fundamental factor of driving ecological degradation but it is also the antidote. Oelschlaeger explains, without the perception of the present as the culmination of past events, there cannot be the realisation that ecological degradation is a phenomenon that happens gradually over time, since a "sense of history—that is, the passage of time where changes fundamentally alter the natural landscape—is required before such an idea can be grasped" (ibid.). Mark Lassier similarly states, "Ecological acts rest upon a preceding mental event…This event is perhaps best described as an experience of intersubjectivity, a state of heightened awareness of implication within a broader field of interconnected forces" (2011, 257). Put succinctly, ecological awareness has to be premised on historical awareness. Just as there has to be the dialectic between human and nonhuman for ecological degradation to be perceived as the consequence of human activities, there has to be an overarching imagery of the present as "a palimpsest composed of different features associated with different periods" (Driver 1988, 498), or rather, as a conglomeration of human and nonhuman forms in history. Thus, although the conception of time based on clockwork and modernity may have caused dissonance between human affairs and natural cycles, it could also be the key to constructing human beings as beings embedded in nature.

In addition to history's tendency to exclude nature from its subject framework because of the dissonance between nature's rhythm and human perception of time, there is another convention of historical writing that distorts the representation of human and nature—history's tendency to objectify nature. In traditional historicism, nature has presence as the external materiality. But nature's material presence is not an active one, for history often translates it into the passive canvas on which human actions can be inscribed. Natural environments are sites where humans can be positioned, and nature's materiality exists to foreground human practices.

A symptom of nature's objectification, Jonathan Bate argues, is our longing for it. Bate's *The Song of the Earth* (2000) presents a nuanced retelling of the link between literature, poetry, and the environment. Our intellectual history, Bate finds, is a history of alienation that intensifies over time. Our longing for a more plentiful nature and our story of loss of the idyll are miniature narratives of the bigger story that illustrates humankind's departure from nature embodied in the rise of modernity. Processes of secularisation and rationalisation inaugurate modernity as the governing rationale of the present, which paves the way for objectification to come in. As a result,

[modernity's] disenchantment of nature licenses the destruction of nature and hence of

mankind. 'Men have always had to choose between their subjection to nature or the subjection of nature to the Self.' But: the further technology advances, the closer this choice comes to a crisis. (2000, 78)

In view of human history as a narrative of disenchantment, the exclusion of nature from the historical collective subject is a key factor that diminishes the representation of a shared past between nature and humankind.

Consequently, incorporating nature into history is more than a matter of including it as a historical subject. It requires demanding greater transparency and coherence in historical representations of humankind's ecological embeddedness, so that history not only recovers nature's presence as a historical subject, but moreover, its agency to affect human beings. Hence, the implied expectation is that the fantastic in historical fantasy should serve the function of bringing nature to the foreground and contesting modernity's alienating influences. Just to reiterate the main point before I conclude this section: when we view the past as a series of human-nature entanglements, this historical narration conveys an image of a humanity that is profoundly implicated in its engagement with nature. However, there are challenges to representing this narrative of the past. 1) Differences in the perceptions of biospherical and human time distort the scale of historical representation. 2) There is also the issue of alienation and detachment: because history is often seen as a literary construct for representing human development, it has the tendency to exclude nonhuman phenomena and agencies from its narrative framework. 3) Another factor is the influence of modernity, whose intellectual history constitutes a narrative of alienation that diminishes the role and presence of nature. Therefore, in order to counter history's anthropocentric erasure and exclusion of nature in our shared past, representational boundaries have to be redrawn and revised.

One could counter that history's anthropocentric representation of the past is the conventional norm, so if we redraw its representational borders it is no longer history but history with an environmentalist agenda. One could then add that nature is not completely invisible in history since it still serves as the background of human development. This may be the norm in contemporary historical writing, but it has not always been so. Jerome Hamilton Buckley's *The Triumph of Time: A Study of the Victorian Concepts of Time, History, Progress and Decadence* (1966) presents an alternative paradigm that used to exist in the Anglophone tradition of historicism. The Victorians were ambivalent towards the idea of scientific progress, and this ambivalence was reflected in their use of history. To the Victorians, history was not strictly a narrative of progress for establishing human exceptionality and superiority. History during this time was interwoven with the study of nature. It was a discipline that overlapped with new, emerging fields such as geology and

evolutionary biology with the aim of uncovering past remnants in natural artefacts. According to Buckley,

> The frontiers of history, or prehistory, were pushed farther and farther back, and the perspective of human time widened enormously. Meanwhile, Darwinian biology was pointing in the same direction. Man, like all other animals, had evolved—and was evolving—in a long slow time now to be subdivided and named and classified. In the nineteenth century the natural scientist moved closer than ever before to the approach and concern of the historian. (1966, 2)

Modern history predominantly features revolutions and paradigm shifts caused by humans for defining historical transitions and epochs. In contrast, the Victorian historian's study of the past was closely aligned to the scientist's study of nature to the extent that the Victorians' perception of nature altered their historical perception of the past:

> Evolution rather than revolution seemed the true way of history. Revolution, the upsetting of a fixed order, presupposed a clash of stable entities and essentially a static view of human nature…Evolution, on the other hand, meant an organic growth of all things in time. (Buckley 1966, 15)

In other words, the present norm of history is characterised by alienation and detachment, yet it has not always been the case. An interdisciplinary study of history and nature would not be a drastic deviation from early historicist perspectives. Rather, it would be a reinterpretation of an earlier conception of history, one that acknowledges and embraces the dialogic relationship between human and nature.

Dethroning Anthropocentrism

With the three aspects in focus—difference in temporality, exclusion from the collective, and the influence of modernity—the environmental-historical situation can be summed up in this way: because history has evolved into an anthropocentric narrative designed to highlight mankind and its actions, it has become the norm to diminish and censor the value, presence, and agency of nature. Our physical environment is a factor that determines how we live and who we are. Yet in our retelling of the past, nature's presence and agency are not always visible. Realising this conundrum, Worster asserts that there must be a counter-narrative to this anthropocentric mode of historical narration:

> This blooming, buzzing, howling world of nature that surrounds us has always been a force in

human life. It is so today, despite our efforts to free ourselves from that dependency, and despite our frequent unwillingness to acknowledge our dependency until it is too late and a crisis is upon us. Environmental history aims to bring back into our awareness that significance of nature and, with the aid of modern science, to discover some fresh truths about ourselves and our past. (1993, 63)

This demand for a counter-narrative is the crux of my investigation. From an anthropological perspective, the cultural production of human identity is embedded in interactions between nature and mankind. Environmental crisis is the result of centuries of physical degradation and pollution. But it also is the result of a particular mode of historiography that perpetuates an anthropocentric culture of human exceptionality and nature's passivity. Hence, the research question that directs my investigation is: how does the fantastic in YA historical fantasy reimagine the relation between nature and human development in the past?

Traditional historical writing is a narrative system designed to highlight figures, events, and movements in the past that contribute to the collective development of humanity and to separate this from the agency of the natural world. Historical fantasy, as a genre that blends and hybridises fantasy and historical elements, provides an opportunity to reimagine relational paradigms that govern human-nature interactions in the past. In other words, it is the presence of the fantastic that enables historical fantasy to contest and interrupt history's anthropocentric norm. In the context of my investigation, the fantastic is any imaginative device that illuminate elements and phenomena that usually are outside the dominant anthropocentric system of history.

This definition is based on Rosemary Jackson's conceptualisation of fantasy literature. The structure of the fantastic presented in Jackson's *Fantasy: the Literature of Subversion* (2009) is in some ways quite restrictive since it would exclude most of the texts I am interested in. Hume's idea of fantasy is also better for explaining historical fantasy's doubleness, which reproduces a sense of historical realism as well as the fantastic. However, I have included Jackson's definition of fantasy here because her idea that the fantastic uncovers forces outside dominant value systems is foundational to understanding how the fantastic illuminates nature's presence in historical representations and subverts history as an anthropocentric discursive system. Jackson asserts that the fantastic "opens up…that which lies outside the law, that which is outside dominant value systems…[and] traces the unsaid and the unseen of culture: that which has been silenced, made invisible, covered over and made 'absent'" (2009, 2). What Jackson refers to as things beyond cultural norms are not exclusive to nonhuman objects, entities, and phenomena. They could be fears, latent longings, radical visions, or oppressed beliefs. Nevertheless, the ecocritical premise of

my study emphasises nature as 'the unseen of culture' that has been alienated and marginalised by the anthropocentric conventions of historical narration. So then, applying Jackson's definition to my study, the fantastic is the principle in historical fantasy that creates an imaginative and playful space for making visible nature's transformative capacity that has been covered and erased by history's anthropocentrism. Similarly, Schanoes adds that the fantastic

> opens up alternative ways of understanding how history has worked, both in the sense of providing a 'secret' history…and in the sense that they call into question the distinction between history and fantasy that underlies the legitimacy of historical discourse. (2012, 246)

In view of Jackson's definition of fantasy, Schanoes' formulation implies the narrativisation of nature as a historical subject, which has been marginalised by hegemonic narratives' anthropocentric and eurocentric paradigms. The social and cultural norm of each historical period is distinct, but the underlying schemata is anthropocentric, designed to maintain human authority and exceptionality. Hence, using the premise of the fantastic as a means of subversion, my investigation examines the strategies by which YA historical fantasy incorporates fantastical elements and devices into historical events and settings so that the narrative creates space for nature's agency to surface and contest the anthropocentric representational borders of the historical norm.

As for whether there is a need for this kind of retelling, Slavoj Žižek's assessment of the current state of ecological crisis is useful. The exclusion of nature from the historical collective is detrimental to the extent that Žižek claims that in order to reconsider the intermingling between human and nature, history's borders need to be redrawn. Žižek's 'Nature and its Disconcontents' is premised on the notion that unprecedented ecological change has propelled "ordinary humanity toward the dimensions of the inhuman" (2008, 48). Using examples of pollution and global warming, Žižek presents a tragic picture of nature's fragility and humankind's role in it. This endangered ecology articulates the shared finitude of human and nature, that "we are not Cartesian subjects extracted from reality, we are finite beings embedded in a biosphere that vastly transcends our horizon" (2008, 54). Consequently, our ecological embeddedness should open the way to erase the division between nature and humanity that exists in our historical narration. In order to confront the reality of environmental catastrophe, Žižek believes there has to be a revisionary mode of historicism that encompasses human beings and nature, which redesigns "the value of the modal propositions about the past" so that we can contemplate a possibility other than history as a human-dominant narrative (2008, 68). Without a new mode of narrating history, the intermingling of nature and mankind and the historical depth of ecological crisis cannot be represented adequately.

In its current formulation—how does young adult historical fantasy reimagine the relation between nature and human development?—my research question has multiple components and a close examination of each would help with clarifying the implications and establishing some boundaries. First of all, there is the matter of what is 'nature'. In *Ecology Without Nature* Timothy Morton (2007) likens nature to Pandora's box because nature encapsulates an infinite series of fantasies. It is the outward geographical environment, but it is also the essence of being. It has a place in the symbolic language and lends itself to being a host of other concepts. Yet it can also be the norm against which deviation is measured. It is both substantial and essential. Nature as substance occupies a material space and nature as essence occupies a psychological space. As a substance, nature is that which constitutes the surrounding environmental landscape. As a concept, nature adapts to the present cultural and political atmosphere, which means that in our history there are multiple versions of nature. To apply the term 'nature' consistently across a range of historical periods is counterintuitive, since each period has its own social and cultural stimuli that construct a contextual variation of nature. For example, American frontier's colonial landscape foregrounds nature as the 'wilderness' by contrasting its otherness against human civilisation, whereas a society that runs on bio-technologies finds the term 'nonhuman' more relevant because the blanket term for all nonhuman creatures signifies a blurring of boundaries that separate natural-born animals, genetically modified creatures, and machines. Hence, in the context of my investigation, rather than viewing nature as a metaphysical empty place holder, or "a plastic knockoff of the real thing" (Morton 2010, 7), it is more beneficial to see nature's multiplicity as a sign of its embeddedness in historical change and transformation.

The second component in my research question that need to be clarified is concerned with historical fantasy as a form of reimagining. The term 'reimagine' implies two things: firstly, history is a narrative that can be revised, and secondly, there is a broadly consensual narrative of history that most historical fantasy is working with. Hayden White in particular has been a key figure in illuminating history's representational nature which can be reconfigured and modified. White approaches history from a literary standpoint to argue that history relies on the historian's own subjectivity, language, and rhetorical strategies in order to take on the narrative form of human past:

> [T]he very language that the historian uses to describe his object of study, prior to any effort he may make formally to explain or interpret it, he subjects that object of study to the kind of distortion that historicists impose upon their materials in a more explicit and formal way. (1992, 102)

The significance of White's assertion is that historical objectivity is hypothetical. Whether the historian is conscious of it or not, retelling history is an act of revision through one's subjectivity. History is not a singular collective destiny and its coherence is not a sign of its authority. History only appears coherent because the historian interprets the past by the choice of a plot structure and then by the choice of paradigm. The plot structure gives the narrative of the past a recognisable form, whereas the choice of paradigm provides explanation that gives the historian's argument a particular shape. Therefore, there is not much difference between fiction and history as a literature of historical events, or what White calls, a "fiction of factual representations" (123).

Having established that history can be reimagined and interrupted because it is a matter of interpretation and semiotics, I move on to the second implication of historical fantasy as a form of reimagining, that there is a broadly consensual narrative of history that most historical fantasy is working with. I am not basing my research on the premise that there is a single grand narrative that can be reinterpreted. Nevertheless, within historical writing there is the tradition of constructing narratives centred on human development. Agnes Heller explains in *A Theory of History* that history is traditionally arranged according to the human life-experiences and the struggles of civilisation because "History—with a capital H—is a *project* of modern civilisation" (1982, 281). As such, history expresses human "elevations and humiliations, tensions and contradictions; its catastrophes and its capacity to overcome catastrophes; its crimes and punishments, heroism and pettiness, poetry and prose, its values" (ibid.). In other words, while natural phenomena—for example, natural catastrophes—have historical value, their significance in history is subjectively estimated in terms of the impact they produce on mankind as a collective subject. History includes nature only to the extent of its relevance to human development. Beyond the bounds of the collective humanity, nature is ignored.

But as Jurgen Pieters points out in his review of historicism's narrative boundaries, individuals and events enter history when they are seen as have a compelling force on society, in the sense that "certain objects and practices produce particular supra-individual feelings because they contain a certain amount of 'social energy'" (2000, 33). According to this basic formulation of historical narrativism, when environmental features exert a significant amount of 'social energy', or influence over the collective development of society, they deserve to be seen as historical. The nuance here is that history does not exclude nature entirely. Rather, history's inclusion of nature is decidedly based on anthropocentric considerations.

Consequently, the term 'reimagine' is not necessarily working against preexisting narratives of history per se, but it is working against a particular norm of anthropocentrism that prevails in

historical writing. This leads to my sub-question, which is, to what extent do YA historical fantasies resist history's anthropocentrism? To be more specific, the term 'reimagine' denotes a conscious resistance to history's anthropocentric monologic, but the degree of historical fantasy's resistance is still something that needs to be evaluated. My approach is a more inclusive mode of interpreting nature and ecology in historical fantasy, but it is problematised by how the narrative reproduces to the dominant ideologies of history in order to subvert its anthropocentrism. Hence, an integral part of my investigation is to explore how fantastical elements and devices are strategically placed to interact with the dominant systems of history and to what extent these strategies constitute a form of resistance against history's anthropocentrism.

In one sense, this sub-question requires my investigation to be historically and geographically diverse. The absolute prioritisation of human beings over other species is prevalent across multiple historical periods and geographical locations, yet its universality does not adequately cover the multiple dimensions of anthropocentrism. To assess 'history's anthropocentrism' in a single historical period would be erroneous since it assumes that anthropocentrism is a condition that remains constant regardless of ideological and environmental differences in different time periods. Just as nature is culturally defined, so are the form and expression of human exceptionality.

To adopt this approach means recognising that a place's physical and geographical features have impact on the trajectory and narrative of human progress. Some of these influences may be overt. For example, the vastness of American plains and its rich materials have reinforced a particular narrative of human conquest; and the forests of Japanese mountains have inspired metaphysical resonance that undermines the separation between nature and culture. But even these influences have subtleties and complexities that deserve a more in-depth study since they are interwoven into the region's cultural and physical landscapes. America's vastness is only one of the many geographical factors that have shaped its colonial narrative, and the mystical qualities of Japanese forests have also led to the creation of religious rites that affirm human-ness as a form of protection from supernatural forces. Therefore, in order to properly assess the degree to which historical fantasy subverts history's anthropocentrism, there is the need to acknowledge anthropocentrism's universality, but then move away from the premise of universal anthropocentrism to explore multiple and diverse places in time and the particular relations between environmental factors and cultural ideas in each distinct historical setting.

Adopting an Ecocritical Approach

In spite of dealing with representations of the past, the aim of my investigation is ecocritical since the focus is on the relationship between nature and mankind in historical contexts. The term ecocriticism was coined by William Rueckert in 1978, which describes a movement that came out of the 1960s' and 1970s' anxieties surrounding Cold War nuclear annihilation, water and air pollution, toxic wastes, deforestation, species extinction, global warming, and urbanisation (Love 2003, 3-4). The most succinct definition is given by Cheryll Glotfelty, who asserts that ecocriticism is "the study of the relationship between literature and the physical environment" (1996, xviii). Although Glotfelty's definition is widely applicable to the majority of critical discussions surrounding nature and the environment, Lawrence Buell realises that the term has been misused because ecocriticism in function is not like dominant methodologies such as critical formalism, structuralism, or phenomenology. In most academic contexts ecocriticism simply denotes a critical awareness that "gathers itself around a commitment to environmentality from whatever critical vantage point" (2005, 11). Buell perceives this as ecocriticism's weakness. Because ecocriticism "implies a nonexistent methodological holism," it is prone to overstating "the degree to which the environmental turn in the literary studies was ever a coordinated project" (2005, 12). Buell's intention to delimit ecocriticism is understandable since the term is still in the process of carving out its ground, boundaries, and relevance.

Yet despite its elusive nature and even overused state, ecocriticism has its usefulness particularly in the historical-environmental context of my investigation. I am neither laying claim to ecocriticism's ubiquity in literary studies nor asserting its instrumental value as a paradigm-shifting methodology. Instead, to clarify ecocriticism's relevance to my investigation, I turn to Laurence Coupe's definition of ecocriticism in his introduction to *The Green Reader* (1991) where he presents ecocriticism as a pragmatics that can be applied to existing forms of the cultural imagination. According to Coupe, the purpose of ecocriticism is to invoke a more self-reflexive approach to literary, visual, and poetic expressions of the dialectic between human and nature. It entails a revision of a culturalism "which renders other species, as well as flora and fauna, subordinate to human capacity for signification" (1991, 4). It also addresses and queries "the validity of treating nature as something which is 'produced' by language" (ibid.). Hence, the main reason for identifying my investigation as ecocritical is that the term illuminates the critical consciousness of culture and nature as dialectical forces. Ecocriticism operates as an ideological magnet that draws in the central issues that I am interested in, such as nature's haunting presence in

history, nature's formative influence in each historical epoch, the cause and effect of human activities and ecological degradation, scientific speculations of nonhuman bodies and phenomena, and our endless fascination with nature as something beyond human knowledge and understanding.

Mainly my ecocritical interest is in analysing and evaluating representations of the past that subvert history's anthropocentrism. By design, history is an anthropocentric narrative system that excludes nonhuman agency to highlight human motives and actions, and the aim of my investigation is to recover narratives that contest it by illustrating nature's ability to transform, disrupt, and alter the human condition, and its status as historical agent that produces tangible sociopolitical outcomes and make history. As Jane Bennett points out in *Vibrant Matters,* even though humans treat nature's materiality as either resource or background, it possesses a vitality that can be surprisingly impactful and pervasive. When Bennett observes nonhuman phenomena in nature, such as decomposition and electrical current, she finds that nonhuman processes and organisms possess a vitality that allows them "not only to impede or block the will and designs of humans but also act as quasi agents or forces with trajectories, propensities, or tendencies of their own" (2010, viii). Nature, in Bennett's view, articulates "vibrant materiality that runs alongside and inside humans," which means that it is about time to see "how analyses of political events might change if we gave the force of things more due" (ibid.).

Bennett's focus is political, that is, to establish a polity with more channels of communication between human and nonhuman members. Even so, she hints at the possibility of approaching nonhuman agency from a historical perspective. At one point she recalls Charles Darwin's *Formation of Vegetable Mould through the Actions of Worms with Observations on Their Habits* (1881) as an example of how nonhuman organisms such as worms have the ability to shape history. Worms 'make history' by making vegetable mould for seedlings, "which makes possible an earth hospitable for humans, which makes possible the cultural artefacts, rituals, and endeavours of human history" (2010, 95-6). She then adds that worms make history by preserving the artefacts that humans make: worms protect "for an indefinitely long period every object, not liable to decay, which is dropped on the surface of the land, by burying it beneath their castings," a service for which "archaeologists ought to be grateful to worms" (2010, 96). Admittedly, it is strange and unconventional to view worms in this light. But William Blake's famous epigram, "the cut worm forgives the plow" (2008, 35), exemplifies the intent to bring nonhuman creatures in the likes of humble worms into our network of meaning-making. Moreover, from Donna Haraway's posthuman perspective, the worm's 'touch' does not make it small, rather, "it peppers its partners with attachment sites for world making…In touch and regard, partners willy nilly are the miscegenous

mud that infuses our bodies with all that brought that contact into being. Touch and regard have consequences" (Haraway 2008, 36). This is the kind of ecocritical vision that is needed in order to recover a critical awareness of human and nonhuman agents coexisting in a locality. It forces us to concede that, as strange as it may seem, worms are necessary members of a community that humans are part of, and that unbeknownst to us, they possess the ability to determine how we live, how we remember the past, and who we are. It is a vision that reveals humans and nonhumans in a complex knot, which coevolves as the species merge and reciprocate through metabolic and physiological practices.

Selection of Corpus

My investigation begins with the thought that since history often has an anthropocentric premise, historical fantasy could use its fantastical elements to create a space for subverting history's anthropocentrism and constructing an alternative narrative of nature as a historical subject that transforms the coexistence of nature and mankind. I initiated my textual analysis with the hope that alternative visions of the past would make up for what is lacking in our own history, since it would be the desire for an outcome other than environmental destruction that motivates speculative writers to extrapolate and reimagine the history of human-nature entanglements. During the initial stage of my exploration, I read across a wide range of genres and narratives: steampunk, animal fantasy, historical fiction, dystopian fiction, magical realism, and epic fantasy. As long as the book featured nature and nonhuman creatures in an alternative historical context, it was included in my corpus. Eventually I narrowed my selection to four trilogies, *The Lotus War* by Jay Kristoff, *Frontier Magic* by Patricia Wrede, *Larklight* by Philip Reeve, and *Leviathan* by Scott Westerfeld, for two reasons. First of all, the trilogies engage centrally with the causality between human development and environmental change; and secondly, their historical settings function as significant cruxes in the intellectual history of environmental consciousness.

Jay Kristoff's *The Lotus War* explores the ecological impact of industrialisation in an island country that resembles Japan during the Edo period. *The Lotus War* uses the cultivation of Blood Lotus, an imaginary botanical species, as a premise for exploring the interrelations between technology, agriculture, ecology, and human well-being. The image of ecocide caused by excessive farming and industrialisation invites the reader to contemplate on the ecological demands of industrial progress and the moral dimensions of human responses to ecological crisis. The trilogy opens my study of historical fantasy because it features industrialisation as a key historical event

24

that alters human-nature relations. In the history of human development, industrialisation is marked as a key phase of progress that has lead to nature's alienation and destruction. In addition to reconfiguring industrialisation using fantastical elements and imageries, *The Lotus War* opens itself to the possibility of portraying nonhuman creatures as agents of historical change, since it features a nonhuman protagonist whose decisions and actions become a major driving force in political rebellion.

Frontier Magic approaches the relation between human development and environmental change from a different angle by turning to American colonialism and its impact on the formation of human communities and perceptions of nature. Patricia Wrede's historical fantasy is set in an alternative North America where magic exists. The trilogy follows the trajectory of the colonial westward expansion, which is halted just beyond the Mississippi River due to the presence of hostile magical and non-magical creatures. Much of the narrative is centred on the ecological consequence of manipulating environments by setting up magical barriers that separate settlements and nature. Through the prism of the protagonist's magic training, the narrative illustrates the ethical dilemma involved in personal decisions, especially when they impact the survival of human settlements and the preservation of the entire ecosystem.

Reeve's *Larklight* trilogy is also concerned with colonialism's influence on nature but instead represents the relation between human development and environmental change using a series of alien invasions that parody British imperialism and human society. The *Larklight* trilogy is written in the style of Victorian scientific romance and adventure stories with postmodern elements of irony and pastiche. It depicts an alternative Victorian England where fantastical technologies have propelled human colonists into space to conquer planets, enslave aliens, and collect specimens for scientific development. Each book is centred on a significant conflict between human imperialists and nonhuman aliens that becomes an adventure narrative with the use of postmodern and revisionist narrative strategies. A mix of irony and adventure fiction tropes characterise human beings as an environmentally destructive species, and the inversion of anthropocentric conventions evoke humour that ridicule the futility of science for consolidating human colonists' domination.

Finally, *Leviathan* by Scott Westerfeld is included because it engages with the ecological ramifications of military technology in modern warfare. *Leviathan* explores the technological aspect of human development in a re-telling of World War I that takes place in an alternative Europe. *Leviathan*'s alternative Europe is divided into the Darwinists, nations that use genetic engineering to produce hybrid creatures as weapons of war, and the Clankers, nations that use diesel and electrical machines as their military armaments. The war between Darwinists and Clankers

establishes the premise for examining WWI as an event characterised by problematic views of animals, ecology and technology.

These four trilogies have been chosen because they reveal that just as human beings shape their natural environments through migration and technological advancement, nature also has ways of reconfiguring human identity and society. In this sense, these four representations of the causality between human action and ecological change constitute a global cartography of human development, which provides a broad geographical survey of the impact of human presence in different regions with diverse environmental and ideological factors and influences. Japan's unique position as an isolated island with limited resources provides *The Lotus War* with the necessary background for exaggerating the harmful effects of water and air pollution. The vastness of the American plains in *Frontier Magic* denotes fluidity between nature and civilisation, which stimulates the exploration of human survival in relation to the health of a region's ecosystem. British imperialism is extended into space in *Larklight*, where new territories provide the ground for reproducing the colonial power dynamics between human explorers and indigenous species. Finally, *Leviathan*'s divided political situation in Europe is crucial since it forms a contrast against a holistic view of ecology that connects human and nonhuman creatures. The inclusion of Japan, North America, Japan, and Space in my corpus texts may seem eclectic at first. But the range of different locations allows my investigation to examine the distinctiveness of each geographical region, revealing how geographical and environmental features interact and affect human development.

The second condition in my corpus selection is that the text features a significant historical juncture that brings human-nature relations to the foreground. Industrialisation, frontier colonisation, imperialist expansion, and WWI are historical events that enact a distinct set of environmental ideologies and images. But more importantly, they have been chosen because they each produce a distinct discourse of anthropocentrism, so that having four different historical contexts in view would provide a more comprehensive study. Just as nature is culturally defined and multi-faceted, anthropocentrism has various historical manifestations. Industrialisation is a historical phenomenon that began in Britain from the eighteenth century onward. It saw the development of steam engines and marked the shift from agrarian economy to factories for mass production. Pollution, over-extraction of resources, and waste are endemic problems which produced a sense of alienation and disenchantment and provoked a yearning for a more intimate and harmonious relationship with the natural world. The sense of anthropocentrism that underlies the industrial process is not the same as the frontier's colonial and anthropocentric discourse. The frontier was developed in several phases as more Europeans came and settled in the Hudson River

Valley, and then headed towards the Ohio River in the first half of the eighteenth century. The American frontier constructed an anthropocentric narrative of colonisation, which involved destroying landscapes and killing animals and indigenous people for the interests of European human settlements and westward expansion. European imperialism is generally recognised as a powerful engine that reshaped the global environment in the early modern world, which politicised nature through its discourse of the other, constructing romantic narratives of taming colonial beasts and landscapes that strengthened the notion of anthropocentric and eurocentric superiority. WWI, also known as the First World War and the Great War, was a global war that began on 28 July 1914 and ended on 11 November 1918. Its traumatic and violent history pushed to crisis point the connection between human hubris, technological advancement, and environmental hubris and problematised the ideological divide that separated animals and machines.

Each historical movement provides unique insight into the formation of anthropocentrism in its time period and thereby invites the fantastic to problematise human-nature interactions using diverse elements and strategies. *The Lotus War*'s representation of Industrial Revolution may not be factual, but its fantastical revision of industrialisation provides an interesting perspective, which reveals the ethical and moral nuances in our evaluation of industrialisation's environmental destruction. *Frontier Magic*'s fantastical frontier in North America is also situated on boundaries that separate nature and civilisation, but the boundary's arbitrary establishment and protective qualities creates the opening for alternative interpretations of human-nature divisions and the ecological function of human beings. *Larklight'*s space opera reproduces British imperialism and its destructive influence over colonial landscapes. But hostile alien species with superior science and technology operate as devices of irony and subversion, which create humorous but also unsettling moments that contest human superiority and complacency. *Leviathan* appropriates WWI's historical context and dystopian and element, but its revisionist qualities demonstrate how a fantastical history of WWI could produce a different outcome, one that leads human progress towards a more sympathetic interpretation of technology's impact on human-nature relations. In other words, *The Lotus War, Frontier Magic, Larklight,* and *Leviathan* have been chosen because they, first of all, revise the causality between human development and environmental change using elements of the fantastic and, secondly, their historical settings function as significant cruxes in the development of environmental consciousness.

To open my ecological investigation of historical fantasy, chapter one examines *The Lotus War*[1] trilogy by Jay Kristoff. The Japan-inspired steampunk trilogy is set in a post-industrial era where factories and war machines have destroyed most of the island's natural landscapes. Despite its post-industrial setting, the Shima islands are reminiscent of premodern Japan during the Edo period, relying on the feudal system for distributing land and labour. The synthesis of post-industrial setting and premodern culture is a notable strategy that the trilogy uses to create an alternative and fantastical space, which I intend to explore to uncover how anachronism revises the human-nature paradigm of industrial rationalism. Another prominent fantastical device in the trilogy is the nonhuman protagonist, whose relationship with the human protagonist constitutes an important strategy for reconfiguring animality and highlighting the nonhuman figure as a historical agent that rebels against the anthropocentric norm of ecological crisis.

Chapter two looks at the conflict between human and nature reimagined in a fantastical American frontier. Patricia Wrede's *Frontier Magic* is set in an alternate North America where there are no Native Americans. Instead, the only "other" that European colonists have to deal with is the presence of magic and magical creatures that live in wild, unpopulated areas. Magic's ability to cause non-magical creatures to "evolve" into magical ones reinforces the traditional characterisation of the wilderness as that which is beyond human civilisation and comprehension. Nonetheless, magic also reinforces the other aspect of the frontier narrative, that is, the discourse of mastery. The story of this unfolding conflict is narrated in the bildungsroman mode, in which the heroine Eff undergoes a magician's training to control magic of the wilderness and use her magical ability and knowledge to fix environmental problems. Hence, the focus will be on magic as a fantastical device that the trilogy employs to represent the problematic relationship between nature and mankind in a colonial context, and the text's fantastical historicity as a form of resistance against modernity that causes certain epistemological modes to disappear.

Chapter three explores nature and imperialism in the style of postmodern pastiche in Philip Reeve's *Larklight* trilogy. *Larklight* is a literary homage to the early founders of science fiction, such as Jules Verne and H. G. Wells. Written in the form and style of scientific romance and nineteenth-century colonial adventure, *Larklight* is a postmodern science fiction that adopts the fantastical tropes of alien invasion and scientific experimentation to examine contemporary biases and issues surrounding the use and abuse of science and technology. The text's reference to

---

[1] The trilogy titles and the book titles will be italicised to distinguish between, for example, the Lotus War as it is known in the books and the trilogy title *The Lotus War;* and between Leviathan the titular flying whale, and the first book of the trilogy *Leviathan,* which is also the trilogy's title.

imperialist adventures where human-nonhuman conflict is a main source of excitement and amusement denotes a nostalgic return to earlier modes of scientific exploration. However, it also includes the element of subversion, which uses fantasy to turn the representation of imperialist history and scientific progress into a construct of irony and errors. Finally, the text appropriates adventure fiction's predation dynamics to address contemporary issues such as capitalist consumption, so that the colonial hunter's obsession with power and novelty becomes a metaphor for the modern consumer's craving for happiness. Consequently, *Larklight*'s use of the alien figure to create postmodern responses to speciesism will feature as the central issue in my analysis of the text's imperialist discourse and setting and representation of the nonhuman other.

Chapter four investigates Scott Westerfeld's fusion of fantasy and history in his retelling of WWI, where the protagonists Alek and Deryn from opposing sides join forces as allies to end the war. There are the Darwinist nations on one side, countries that use genetic engineering to produce hybrid creatures for utilitarian and military purposes. Opposing them are the Clanker nations, countries that use diesel, steam, and electricity to power their destructive war machines. Deryn and Alek's reconciliation forms a major part of Westerfeld's re-imagining of WWI's cause and outcome to the extent that their alliance brings the end of WWI forward by a few years and realises a more utopian and collaborative approach to the dialectics between nature, technology, and mankind. In addition, Westerfeld's alternate history resists traditional historicism's anthropocentric impulse by positioning nonhuman creatures in the centre of international diplomacy and warfare. Therefore, I intend to focus on the text's historical alterity as a fantastical device for illuminating the nonhuman's materiality, presence, and agency in the history of modern warfare and for interrogating the nature/technology binary to pose a dynamic network composed of humans, machines, and nonhuman creatures.

Chapter One: Ecocide and Mythology in *The Lotus War*'s Feudal Japan

> I believe that there is a subtle magnetism in Nature,
> which, if we unconsciously yield to it, will direct us aright.
> —Henry David Thoreau, *Walking*

Jay Kristoff's *The Lotus War* trilogy is a historical fantasy set in a Japanese-inspired feudal nation called Shima. The samurai elite has monopolised industrial power for producing weapons and fuel in their ongoing war with a neighbouring nation. When the story of *The Lotus War* begins, industrial progress, combined with class division, has already destroyed most of Shima's natural environments, driven away animals and mythical creatures, and created an atmosphere of discontent ripe for rebellion. The primary cause of Shima's ecocide is the Lotus Guild, a religious sect of corrupt, fanatical scientists and engineers that follow Lady Izanami, the goddess of the underworld. The first book *Stormdancer* (2012) introduces the sixteen year-old heroine Yukiko and Buruu, a mythical thunder-tiger with griffin-like appearance, as they overcome their initial hostility and develop a symbiotic bond. It also lays the foundation for exposing the Lotus Guild's corruption and the pivotal role of the toxic flower Blood Lotus in causing pollution. The second book *Kinslayer* (2013) illustrates deepening uncertainty in Yukiko and Buruu's ethical choices as they attempt to find a way to reconcile human and nonhuman differences. The last book *Endsinger* (2014) depicts the final battle between the Lotus Guild and the group of rebels led by Yukiko and Buruu, and concludes with Buruu making the ultimate sacrifice in order to restore Shima's natural landscapes.

The Lotus War's fantastic revisionism has two aspects in particular that are worth exploring. The first is its fusion of historicities, which merges premodern Japan's cultural elements with industrial modernity's environmental concerns. Shima's historical setting bears the same cultural and political conventions as Japan during the Edo period (1603-1868). They both operate under an isolationist policy. They are agrarian island communities with finite supplies. They both utilise a feudal infrastructure composed of warlords and samurais. But the environmental crisis Shima faces is a distinctly post-industrial problem, which Japan did not experience until it opened its doors to the West and brought in in industrial technologies. This kind of anachronism illuminates new facets

of the narrative of industrialisation. The other aspect worth examining is the use of fantastical creatures as a device for exploring the effects of ecocide. Kristoff uses language and dialogue to humanise Buruu, the nonhuman protagonist in the form of a mythical creature. But his role as a redemptive deus ex machina adds complexity to the text's expressions of nonhuman autonomy in human society. To examine *The Lotus War* as an anachronistic and fantastical narrative about environmental degradation, I begin with an overview of Japanese history. It includes the role of lotus and poppy flowers in Japanese history and culture, and the relationship between humans and island landscapes in Edo Japan. The remaining section is divided into two parts: part one explores the representation of ecocide in a premodern context; while part two investigates key conventions and scenarios that allegorise and anthropomorphise Buruu the nonhuman protagonist.

Shima: a Japanese Fantasy

Shima is composed of islands ruled by the samurai nobility within a feudal system called the Great Zaibatsu. Like the samurais of Edo Japan, the Shiman warriors are raised to believe that *Bushido*, a formal code of conduct that promotes "rectitude, courage, benevolence, respect, honesty, honour, and loyalty" (*Endsinger* 664), is an absolute way of life. However, contrary to their honourable beliefs and conviction to their feudal duty, the Great Zaibatsu are ignorant of the ecological impact of their invasive military actions. The islands are dotted with forges and smelting plants that rise "like blood blisters behind a barbed-wire forest, wreathed in smoke. Trains rolling on rusted tracks, hauling iron and coal from the Midland mines…" (*Kinslayer* 358). Shima's ecological devastation intensifies when the people discover that the Blood Lotus, a red flower indigenous to Shima and central to its industrialisation, is so toxic that it renders the soil around it "barren in just a few short years" (*Stormdancer* 66). The lack of clean water and soil forces Shima to invade Morcheeba, a neighbouring nation based on Russia. In order to secure military weapons and industrial fuel, the Great Zaibatsu allies itself with the Lotus Guild and institutionalises the destruction of nature for the sake of military advancement. The Lotus Guild have scientists and engineers who develop the toxic Blood Lotus into chi[2], a combustible fuel derived from the seeds. They also cull war captives to use their blood and flesh to make inochi[3], a fertiliser that delays the onset of soil degradation caused by the Blood Lotus's toxicity. Their alliance typifies the destructive

---

[2] Literally 'blood' in Japanese.

[3] Literally 'life' in Japanese.

unification of politics and science, which enables the state to regulate scientific research and assert political and sometimes military control over the use and development of natural resources.

From one angle, *The Lotus War*'s samurai culture is foundational to its historical context since it recalls the image of Japan in its premodern era. Samurais are usually considered bygone relics of Japan's feudal past that inspire "a pronounced nostalgia for a vanished martial ideal" (Benesch 2014, 2). From another angle, it is the plot of overthrowing industrial ecocide dominates the narrative. This ambivalence creates a historical context characterised by both premodern and post-industrial sentiments and concerns, resulting in an anachronistic setting that "free[s] the reader from accepted histories" (Jagoda, 2010, 65). Blending the familiar industrial trope of ecocide with premodern Japan's cultural framing, the narrative appropriates Japanese figures and tropes into allegories to represent contemporary environmentalist sensibilities. Hence, the crux of my exploration of *The Lotus War* is, first of all, the text's anachronism and its impact on the representation of ecological crisis, and secondly, the text's appropriation of Japanese mythology to provide ecological commentary on the relationship between humans and the natural world.

The representation of Buruu the arashitora[4] constitutes a significant appropriation of mythological themes and devices for the purpose of articulating modern environmental discourse. The arashitora is a half-tiger, half-eagle creature whose character development enables a diverse range of environmental issues to emerge, such as species extinction and a holistic approach to ecological recovery. Once believed to be extinct, Buruu returns to Shima as a revived legendary beast and becomes a companion to Yukiko as they martial resistance against the Guild and the Great Zaibatsu. Buruu's anger towards fallen humanity is a trait that defines the nonhuman figure's allegorical function in articulating our implicit self-condemnation: "Your race is no longer worthy. Arashitora despise you…Look around. Game dead, rivers black, land choked with weed. Skins bleeding, red as blood" (*Stormdancer* 172-3).

Though Buruu primarily functions as an allegorical figure, the text also resists its own use of the nonhuman as a symbol of humanist ideals. Linda Kalof warns, in the context of searching for animals in history, "If we look at animals and see only the reflection of ourselves, we deny the reality of their own existence" (2007, 140). This desire to perceive the nonhuman as an independent, autonomous being with its own motivations and intentions is echoed by the portrayal of Buruu in his relationship with Yukiko. As Buruu grows more attached to Yukiko, their bond humanises Buruu to the extent that his allegorical status is enmeshed in the exploration of

---

[4] Literally translates as thunder-tiger.

interspecies attachment and empathy. Then, under the influence of Buruu's animal instincts, Yukiko becomes more aggressive, dangerous, and determined, which forms an emotional progression that invites the reader to probe the ramifications of interspecies contact and its evolutionary consequences. Therefore, there are multiple layers in Kristoff's representation of the nonhuman. Buruu functions as an allegorical figure that voices nature's discontent, but as a nonhuman character with his own development trajectory, Buruu is also an exploratory device for examining the construction of human-animal intimacy. In addition, Buruu is anthropomorphised to the extent that he expresses qualities such as honour and fidelity, shaping his humanisation process into a channel for environmental ethics.

This exploratory stance is not to undermine the allegorical reading of the nonhuman as an extension of humanist agency, since representation of animality often takes place in the realm of signs and symbols. Animal stories, David Rudd explains, have strong ties to the realm of poetic symbolism because "although books can only ever represent animals through textuality, animals are not thereby only textual" (2009, 256). To express animality as a multi-faceted construct, fictionality enables the writer to go beyond reality and into a world where anything can have a voice, a will, and a narrative. Hence, the subsequent analysis of *The Lotus War* presents ways in which the nonhuman's multi-dimensionality is a vital touchstone that informs the text's critical engagement with concepts of inter-species intersubjectivity and the nonhuman's symbolic energy.

Nature and Industrialisation in Feudal Japan

Japan's official government during the Edo period was known as the Tokugawa Shōgunate. The head of the state was the *Shōgun* (general/military dictator), who was appointed by the emperor and ruled approximately 300 regional *daimyo* (warlords). During the 250 years of the Edo period, the nation flourished as it developed better means of crop production, transportation, housing, food, and entertainment. However, despite signs of premodern urbanisation, Karan notes that "Japan lagged behind the West because of its policy of seclusion from the rest of the world during the Edo period" (2010, 376). In contrast to western European countries, Edo Japan's industrialisation was still in its nascent stage. It was not until the Meiji period (1868-1912) that Japan entered its technological renaissance, during which it completed the early designs of Japanese railroads, built around 32,000 factories, and 54,000 steam engines (Walker 2010, 88). Edo Japan's isolationist policy also meant that it rarely attempted territorial expansion, forcing the nation to turn inward and "consider their lands and natural resources as finite and limited" (Richards 2003, 149). In addition

to Japan's isolationist policy and lack of industrial development, Buddhism and Shinto beliefs are a significant factor that influenced Japan's environmental thinking. Naturalist religiosity expressed as gratitude towards the natural realm was a common theme, resting on the notion that humans and nature exist "in a state of mutual reciprocity" (Hein 2009, 156). Profound reverence for nature meant that the Shōgun and other lords imposed sanctions on logging and hunting, designating several important habitats for the breeding of Northern goshawk and Eurasian sparrowhawk as *osutakayama* (hawk-nested mountains). So although Edo Japan had not yet entered the process of modern industrialisation and experienced pollution, its environmental thinking was already developing in a way that was similar to European's anti- and post-industrial environmental movements. However, Edo Japan's conservationist stance was not unchallenged. Despite Japan's isolationist policy fostered a minimalist, conservationist lifestyle, it also forced the nation to intensify fishing and whaling in order to find a more stable source of food and income, which would imply that the Japanese's respect for nature, especially forests as the habitation of *yokai* (supernatural monsters and spirits), was maturing Japan's environmental thinking in a limited scope.

Nevertheless, Takeshi Murota (2005) recognises the Edo period as the moment when Japan began to form a primitive understanding of ecosystems through their minimalist and conservationist approach to natural resources. Having realised they could not depend on foreign nation,

> Tokugawa[5] Shōgun and other lords adopted strict forest policies: they assumed direct control of important forests and issued prohibitions on the harvesting of timber in general. They also protected the forests in order to ensure the sources of water supplies. (Yumoto 2010, 9)

The prohibition on logging had two main causes. Shintoism fostered a profound respect for forests as the home of sacred beings. Edo Japan's rapid population growth from 12 million in 1600 to 32 million in 1730 also caused concern. The sudden rise in the demand for timber and housing and forced the government to enforce policies that protected forests from excessive logging. Moreover, by the end of the 1780s, commercial fishing was beginning to take its toll on the environment, and in 1789 "the summer herring shoals failed to appear off southwestern Hokkaido, and the following five years were years of dearth for the south coast fisheries" (Morris-Suzuki 1995, 44). In order to not rely on foreign nations and be materially self-sustainable, Edo Japan began to identify and counter signs of ecological devastation, such as deforestation in Kiso and over-fishing in Hokkaido

---

[5] The last shogunate in Japan (1603-1867).

the over-use of commercial fertiliser [6]. In other words, signs of environmental degradation were visible but not comparable to the extent of the industrial conditions during Japan's modernisation phase. Nonetheless, already the nation was developing ecological self-awareness and moving in the direction of reassessing the national impact of urbanisation. The ecological condition of feudal Japan was therefore a rather complex situation, which saw natural places being protected as well as exploited by the state.

Crossovers between *The Lotus War*'s historicity and Edo Japan's environmental sensibility are intricate and not always transparent. Shima's and Edo Japan's demands for resources are analogous. Similar to Edo Japan, Shima is an island nation, whose isolated geography adds stress to its demand for food and labour. However, unlike Japan with its isolationist policy, the Lotus Guild asserts, "The war against the gaijin [foreigners] must be renewed. We need more land. More slaves. More inochi" (*Endsinger* 29). The Lotus Guild's invasive military stance causes the narrative to deviate from Edo Japan's historical trajectory, which enacts a more concentrated assessment of the causality between war, industrialisation and the pragmatic reasons for environmental destruction. The presence of samurais gives *The Lotus War*'s ecological exploration an interesting moral and historical dimension. When Hiro, one of the main samurai antagonists, is about to enter the final battle that would usher in a new era of technological progress, his mother writes, "There is no sense to this. No honour in any of it. We have built a world where we murder children to feed our soil" (*Endsinger* 384). Her reproach, conveyed on the basis of Hiro's samurai ethics, adds ambivalence to *The Lotus War*'s representation of nature and history. The emphasis on samurai honour implicates the narrative in Edo Japan's cultural and religious norms, yet the subject of ecological crisis caused by industrialisation and military invasion contradicts Edo Japan's environmental context.

In other words, Kristoff's authorial control over historicity for establishing ecological context is inconsistent. In an online interview with the author about the inspiration behind *The Lotus War*, Kristoff admits,

> I've had people ask if I did a degree in Japanese studies, but the closest I've come is reading all six volumes of *AKIRA* in a week. Maybe I'd picked up a lot of detail through film and manga that I've consumed down through the years, but Wikipedia was really my go-to-guy. (Qwill 2012)

---

[6] Commercial fertiliser in the form of night soil, human excrement, began to circulate in rural towns. It was usually oil-cake, dried sardine or herring (imported from Hokkaido), which supported Kaga's economy but then placed a heavy burden on farm finances and fisheries in Hokkaido due to rising demand.

Kristoff's admission elucidates the creative process that leads to this anachronistic inconsistency. His appropriation of Tokugawa Japan's ecological conditions is filtered through popular sources, which means that the historical semblance between Shima and Edo Japan becomes a matter of selecting materials for evoking historical ambience. It could be that the island geography remains unmodified because Edo Japan's appreciation of forests and their sense of finitude are useful for evoking ecological tension and anxiety. However, unlike the historical Edo Japan's landscape, which predates copper mining pollution between 1880 and 1990, Shima is "pockmarked by dark stains; broad tracts of smoking, ashen soil, utterly devoid of life" (*Stormdancer* 66), which identifies Shima's industrial pollution instead of its isolationist policy as the cause of ecological degradation. So, in terms of the level of industrialisation and ecological degradation, Kristoff has avoided depicting a specific historical event (such as the acquisition of a steam warship in 1855). Instead, he detaches the narrative from factual history to focus on the overall ambience of anxiety.

Lotus and Poppy in Japanese and Chinese Culture

The Blood Lotus occupies a significant status in the narrative since it is the device that binds premodern Japan's feudal practices with post-industrial environmental concerns. In Shima's feudal system most labourers are sent to work on Blood Lotus plantations. It is a phenomenon that recalls the British East India Company's control over opium production that forced China to grow its own supply of opium. By the 1880s the Chinese were in firm possession of both the technique of smoking opium as well as its production, which compelled officials such as William Gladstone and Sir Rutherford Alcock to scheme to maximise profit and flood China "with Indian opium, which would make the price plummet and put indigenous growers out of business" (Hanes III & Sanello 2002, 294). As a reflection of this kind of feudal ethos mixed with an immoral free market ideology, *The Lotus War* portrays the labourers as "[d]isenfranchised farmers out for revenge", who are beginning to realise that the Blood Lotus plantations are turning "the once lush and beautiful countryside" into "a vast lotus field scarred by stretches of smoking, dead earth" (*Stormdancer* 84-5). To further consolidate the Blood Lotus's role in establishing the juncture between premodern agriculture and industrial commerce, the Blood Lotus shares the same commercial and cultural value as the opium poppy.

The Blood Lotus has botanical qualities and cultural significance that reflect the natural history of the opium poppy and the lotus flower, both of which have vivid cultural and historical manifestations in Japan and China. Symbolically the opium poppy possesses distinct images that vary from country to country. In Ancient Greek, Egyptian and Roman societies, it is linked with

sleep due to the sedative effect of the plant's sap. The first reference in Greek literature is found in Homer's *Odyssey* that describes the drug as one that "quiets all pains and quarrels"; while in the Hippocratic corpus there are thirteen references, nine of which appear in gynaecological tracts circulated amongst midwives and are less used by male physicians (Scarborough 1995, 4-5). Hellenistic and Roman medicine practitioners knew the dangers of applying the opium poppy's latex, but its medicinal benefit outweighed its fatalistic and addictive properties in antiquity. Historical figures like Marcus Aurelius reportedly relied on opium as a form of medicine without becoming addicted. The poppy's medicinal properties are not as prominent in Chinese and Japanese cultures, for the red poppy signifies romantic love while the white poppy is tied to death. But due to the Opium Wars the red poppy is also remembered as a flower that is associated with war and death in the East, shaping the Blood Lotus into a symbol of violence and degradation.

Julia Lovell (2011) describes opium poppy as a "wonder crop" since almost every part of the plant could be used. The poppy's sap was processed into raw opium, its leaves could be safely eaten as a vegetable, its stem was used as a dye, and its seeds were pressed to make oil. The Blood Lotus has similar botanical properties, since it is described as a versatile plant that is widely processed and commercialised. *Stormdancer* introduces the Blood Lotus as an addictive substance early on: "A third of the country is hooked on bud smoke, and the rest drink lotus leaf tea. That plant is a blessing from the Maker God to anyone with eyes to see" (64). But its opiate property is not the Blood Lotus's only value. Anaesthetics can be drawn from its sap; toxins from its roots; and the Blood Lotus's rind can be washed, dried, and then bound into threads for making ropes, cloth, and canvas. Despite these resemblances are useful for overlaying the Blood Lotus with opium's historical significance, the narrative concentrates on the association between poppy and death using Yukiko's discovery of the Blood Lotus's role in causing pollution:

> How completely it ruled this place. To think something so innocuous—one tiny flower— could transform the shape of the land so utterly. The engines and machines and treasures spitting tiny puffs of poison into once blue skies, turning slowly to scarlet. Killing the land one breath at a time, wrapped in a bow of blood-red petals. (*Endsinger* 231)

In addition to using the protagonist's lamentation as a filter for heightening the grotesque nature of ecocide, the narrative uses the flower's association with Lady Izanami, goddess of the underworld in Japanese mythology, to exaggerate the horror of ecological crisis. The Lotus Guild, under Lady Izanami's manipulation, recycles human blood and flesh into fertilisers. In other words, the Blood Lotus is not a direct parallel to the opium poppy. Historically the poppy did not cause ecocide, nor did the lotus flower. However, both flowers have an underlying poetic that evoke death and

immortality. The narrative provides only enough details to establish resonance between the opium poppy and the Blood Lotus for evoking poetic connections to violence, greed, war, and destruction. After to a certain point, the historical resemblance ceases and the Blood Lotus imagery appears as a stylised trope of fantasy for producing poetic energies that underline ecological devastation.

It is interesting to note that despite the cherry blossom's iconic status in Japanese culture and history, Kristoff has named the eponymous flower 'the Blood Lotus', which prompts investigation into the poetic and historical values of the lotus flower. Beverly Seaton (1995) distinguishes the lotus as the most important symbolic flower in Japan and China, since it is the flower most frequently featured in portraits of Buddha. It is a sign of absolute truth, perfection, immortality. Above all, it is a flower associated with purity. The Japanese proverb "deichu no hasu" (lit. a lotus flower in the mud) describes "a young woman who keeps her chastity in spite of morally unhealthy surroundings" (Buchanan 1965, 264). Relying on the lotus flower's cultural association with innocence and purity, Kristoff creates an effective juxtaposition between the real lotus known for its sanctity and the Blood Lotus known for its toxicity. The juxtaposition demonstrates that both poppy and lotus have been chosen for their aesthetic power as well as their historical significance, although the poppy's historical affiliation with war and greed features prominently as a key anchorage point in Kristoff's historical fantasy.

Industrial Ecocide

A major element that clashes with *The Lotus War*'s historical realism is the inclusion of creatures from Japanese mythology, which are woven into Shima's geological and ecological history. Dragons with "[s]pines of poison and teeth as long and sharp as katana" are remembered as extinct dangerous predators that once roamed Shima's coast, growing "fat and huge on the plunder of the eastern ocean, and the fishermen of the island of Takaiyama" (*Stormdancer* 91). Although the Iishi Mountains, "the last stretch of true wilderness in all of Shima" (*Stormdancer* 143), are remembered as the place where monsters and spirits have taken refuge from the aggressive advances of the Lotus Guild's industrialisation. The Lotus Guild's ethos is another element that creates dissonance between the narrative's historical realism and its fantastical projection. On the one hand, the Lotus Guild conjures up the familiar image of scientists and engineers whose methods and ideals are dictated by reason. On the other hand, despite their emphasis on rationalist thinking and scientific progress, they follow a religion that is loosely based on Japan's Shintoism. They rely on teachings from an ancient book called the 'Book of Ten Thousand Days', which recounts the

spread of the underworld's "filth" that is said to be the cause of Shima's environmental pollution. Their fanaticism compels them to sacrifice innocent lives to 'cleanse' Shima, while their religious beliefs blind them from perceiving the real outcome of Shima's industrial progress, which is that their scientific development has been causing the Blood Lotus's toxin to spread "[l]ike cancer in a black lung victim" (*Stormdancer* 66). The Lotus Guild's paradoxical ethos, which fuses scientific rationalism with religious superstition, produces a distinct approach to understanding modern obsession with technology and the causality between rationalism and environmental destruction. This section examines the Lotus Guild's hybridisation of religion and science, and the role of Japanese mythology in evoking a sense of horror that enhances the grotesque and dehumanising nature of industrial technology.

'The Lotus must bloom'

In *Environmental Culture: the Ecological Crisis of Reason,* Val Plumwood explores scientific rationalism as a hubristic form of thinking that defines nature in mechanistic terms. According to Plumwood, rationalism cultivates disengagement and empties nature of agency, mind, and purpose by separating subjects from objects of study. Rationalism is what Plumwood calls "a cult of reason that elevates to extreme supremacy a particular narrow form of reason and correspondingly devalues the contrasted and reduced sphere of nature and embodiment" (2002, 4). The rationalist thinker perceives nature strictly in unemotional and unbiased terms, which alienates nature as inferior, passive, and mindless, existing only for the sake of the human subject. Hence, Plumwood states what is required to resist this remorseless logic is a thorough reconceptualisation of nature, one that abandons "hyper-rational stances that emphasise human superiority, reason, mastery and manipulation, human-centredness and instrumentalism" (2002, 11). An imaginative equivalent to Plumwood's pervasive logic of industrialism is embodied in Kristoff's construction of the Lotus Guild, a religious institution that preaches the worship of technological progress without regard for its ecological consequence.

Within the Lotus Guild, 'the Lotus must bloom' is their most common precept. It is used as a prophetic warning and a declaration of religious worship. The precept expresses the Lotus Guild's belief that progress is immanent because "[n]ature knows no mercy" (*Kinslayer* 358). They use this belief to justify industrial pollution as a form of natural transformation. The construction of *Earthcrusher*, a gigantic machine of war, is the embodiment of the Lotus Guild's mechanistic and destructive ideology. The machine is three-hundred feet tall with eight legs, saw-blade arms, pistons, and chimney stacks running down its spines. *Earthcrusher*'s insectoid form shows metal

alloys growing and forming into a colossal monstrous predator, which expresses science's arbitrary and unsettling fusion of nature and machine. Kin, one of their most skilled engineers, inspects *Earthcrusher* from above and imagines that "[t]he Guildsmen were insects beside it—some vast sleeping giant, nodding in a sea of mosquitoes, too enormous to feel their sting" (*Kinslayer* 359). The machine's abnormally large and predatory form denotes the human-nonhuman conflict that drives the Lotus Guild's obsession with scientific progress, while the metaphor embodies the Lotus Guild's subconscious fear of industrialisation as an all-consuming monster.

Moreover, the Lotus Guild uses their worship of Lady Izanami (goddess of the death and chaos) as a form of religious justification for environmental destruction. The coexistence of industrial logic and religious superstition in the Lotus Guild's ideological make-up is striking. In the history of environmental thinking, a "disenchantment of the natural world is seen as having been intensified by the rapacious successes of industrial technology" (Clark 2014, 77). This implies that although the rise of industrial technology did not directly negate and erase animistic forms of ecological thought, the rationalist thought became an unstoppable force of disenchantment that devalued mythology and superstition. Yet within the Lotus Guild's ideology, superstition and industrialism become intertwined. The Lotus Guild sets up a system of worship that glorifies the use of technology as a form of physical and moral redemption, which cleanses the user from environmental pollution and reinforces the class hierarchy that defines the samurai world. Shima's industrialisation has not led to a wave of disenchantment nor has it nullified and transported magic and superstition into the past. Rather, industrialisation and magic coexist side by side as dialogic discourses that reinforce the Lotus Guild's destructive ideology. Contrary to their claim of rationalism, the Lotus Guild is a system of deception that seduces the Shiman people to believe that technology is a sign of spiritual transcendence over human flesh.

Kin, a disillusioned engineer who joins Yukiko's environmentalist resistance, sheds light on the Lotus Guild's regulations and practices. He speaks of obtaining truth and transcendence through technological means:

> I remember what it was like to be encased in metal skin. To see the world through blood-red glass. To stand apart and above and beyond and know there was so much more…to recall what it was like to be proud of who I was. To feel the flesh tingle beneath my skin as I accepted my truth. (*Endsinger* 605-6)

The Guild adopts an extremist religious rhetoric that underlines the industrial logic's potential to beguile. The foundation of the Lotus Guild's belief system is their worship of Lady Izanami as goddess of death and chaos. It is said that the Serpents, the Guild's founders, "venerated Lady

Izanami, Mother of Death…They built temples to her name in the wilds. Called upon her to sing the song that would end the world" (*Endsinger* 153). As an amalgam of religion and ecocide, the Lotus Guild illustrates the industrial logic's hypocrisy. According to the Lotus Guild's fanatical beliefs, technology is the object of their worship and the path to attaining truth and enlightenment. Consequently, through its religious filter, ecological destruction is not seen as an act of humanity but the determined will of an abstract, omnipresent power. The arrogance of the Lotus Guild's supposedly rationalist and mechanistic assumption cultivates a harmful paradigm of human agency. It dehumanises the individual into a mindless extension of the collective, which shifts the responsibility from the individual to the institution. In this way, the Lotus Guild's mechanistic ideology appears fraudulent and ultimately detrimental to perceiving the causality between human development and ecological crisis. As a result, Kristoff's fusion of superstition and scientific progress reframes industrialisation as a movement that deceives the populace using a religious rhetoric that fosters obsession, violence, and ignorance.

Another principal effect of blending Japanese mythology with industrial technology is that the narrative heightens the grotesque horror of technology's dehumanisation. Shima's workers drill deep holes for smelting, which produce "a tar-thick, sticky smog" that lingers, "choking daylight utterly" (*Kinslayer* 362). The description is reminiscent of historical scenarios of industrial pollution (the Great Smog in London) and pollution in urban settings (Beijing's smog which has travelled as far as Japan). However, Kristoff laces this scenario of industrial pollution with Japanese mythology by introducing Lady Izanami's presence in an industrial setting where her seductive voice can be heard from the depths of the mines. This connection between technology and mythic horror is also brought out by the visuality of the Falsifiers, "flesh-automata" designed by the Lotus Guild. They are half-machine, half-human androids. The Guild conducts surgical procedures by "installing implants into newborns" (*Kinslayer* 65), so that metal armour fuses itself organically with the human body. As a result, the Falsifiers have an uncanny appearance: "blood-red eyes" set in a "mouthless face", and their whole body covered in a brown, leather membrane (*Kinslayer* 64). Kristoff overlays the image of industrial pollution with mythology in order to evoke technology as a source of strange and uncanny horror, resulting in the horrific epiphany that technology is dehumanising and that we may never be able to escape the deceptive logic of industrialisation. The element of mythic horror becomes a pervasive aesthetic that characterises the industrial logic as an inescapable and grotesque pathology of the mind, according to which the machine harbours dangerous, preternatural forces that are outside our control and comprehension.

'Flesh is weak'

Aestheticising the machine using pagan mythology is not an end to itself, since it lays the premise for the protagonist's pastoral turn from the mechanical realm and toward the natural world. This pastoral turn from machine to nature begins for Kin when he sheds his mechanical suit to experience the outside world with his senses. Since Kin is a valued engineer of the Lotus Guild, he is instructed to always wear a mechanical suit in public lest his skin is exposed to the polluted air. The mechanical suit is built with brass and "studded with fixtures and gears and spinning clockwork, shielding it from the pollution the rest of the populace breathed daily" (*Stormdancer* 30). The body is matched by its insectoid helmet, which is "all smooth lines and curves" with a cluster of "metallic tentacles" spilling from its mouth and bayonets plugged into various contraptions (ibid.). The mechanical suit indicates that all their experiences and knowledge are filtered via a system of clockwork cogs and wheels, which produces a nightmarish spectacle of the human body, distorted, restrained, and putatively enhanced by technology.

Motives behind the mechanical suit's design are more complex. The basis is a practical one—to protect the human individual from the polluted atmosphere, which shows some regard for human well-being. However, the design also expresses the innate fear of human frailty. The engineers call the suit Skin because they are brought up to believe that "the flesh beneath is only an illusion. Flawed and powerless" (*Stormdancer* 181). The eponymous reference to human skin highlights the biological fact that to be human is to be limited by our skin surface. But the reference goes beyond representing the limitations of human corporeality, since it revives the disturbing suspicion that as our body ages and weakens over time, our perception of who we are become helplessly distorted and unreliable. Hence, the Guildsmen believe their salvation lies in the mechanical suit, which overrides the physical body's vulnerability and embodies the precept: "Skin is strong. Flesh is weak…The Lotus must bloom" (*Stormdancer* 181). The suit hides their flesh beneath the metallic skin, effectively obscuring signs of human corruptibility. The result is a semblance of power and protection on which the Guildsmen depend.

Therefore, the representation of Kin's suit is more problematic that of than the *Earthcrusher* since it explores the body as an organic interface that has been reconfigured by technology. When Yukiko confronts Kin about his metallic suit, he explains, "being seen in public without our suits is forbidden. It's a great sin for your kind to see our flesh, for us to risk contamination from the outside world" (*Stormdancer* 180). The religious connotation is that the suit separates the wearer from the common people as a source of moral corruption. But with its air filters and internal supply

of fresh water, the suit is essentially a form of physical protection from the polluted atmosphere. Kristoff's representation of technology as necessary protection reflects the dangerous vision of prosthetics outlined by Harry Berger, that "the second nature of technology will enable humans to slough off the sorry skin of their first, or natural-born, nature" (2015, 99). The thought that human being's natural body requires the compensations and enhancements of technology presumes that human being's natural body is inadequate and already degraded. Berger explains,

> Technophiles may exalt the benefits of enhancements and technophobes lament the costs of alienation, but within the structure of technical change there is a motivated skew toward representing the body as a diminished thing. (2015, 218)

Berger's posthuman concept reconstructs Kin's dependence on his protective suit into an example of technological body horror, which affirms that the human natural body is by default damaged, or in Kin's own words, "[f]lawed and powerless" (*Stormdancer* 181). The suit's original purpose may have been to meet the user's need of physical protection. But it has also evolved into proof that the human body is innately and naturally deficient. Kin's mechanical suit thus shows what started out as enhancement and protection can, to one's horror, retroactively transform into compensation that diminishes the value of unimproved human nature, life, and body.

Moreover, what is intended to be an appealing spectacle of the human's becoming one with technology is undermined by the reality of what lies beneath, a ravaged body. Once the suit is removed, the viewer is confronted with a frightful sight of synthetic fabric melting into the wearer's shoulder and chest, making "the skin beneath red and blistered" (*Stormdancer* 193). There are black pipes "plugged directly into Kin's flesh. Bayonet fixtures made of dark metal were studded along his ribs" (ibid.). The body is no longer Kin's, for it has become an extension of the machine that controls how he moves, and in an even more grotesque scene, how he eats. When Yukiko offers Kin some food out of goodwill, he rejects it and explains, "The suit feeds me intravenously. A complex string of protein and mineral supplements. It is forbidden for us to eat the food of the hadanashi [people without skins]" (*Stormdancer* 185). Kin's refusal to eat with Yukiko evokes the posthuman fear that once the human body has adjusted itself to accommodate technological contraptions, the physical change will inevitably alter and undermine social customs and conventions that we rely on as human beings. Commensality—eating and drinking together—is a fundamental social activity that establishes solidarity and boundaries in human relationships. In Japan, the tea ceremony is carried out using a single cup for all the participants as a sign of trust and respect. In Christianity, there is the eucharist that symbolises oneness with Christ and the other believers. In like manner, to overcome their species difference and abandon their statuses as prey and predator, a transformative

moment for Yukiko and Buruu the thunder-tiger is when they hunt and eat together. Kin, on the other hand, rejects the food that Yukiko has prepared and withdraws because his suit is seen as his only reliable source of nutrient. Kin's rejection denotes that, by recalibrating human physicality and biology, the machine becomes a socially disruptive and divisive force.

Kristoff's depiction of body horror is characteristically posthuman yet it also goes against posthumanism's core ideology. Posthumanism on the whole exhibits a positive attitude towards technology as a transformative force. Donna Haraway claims the cyborg is "a condensed image of both imagination and material reality, the two joined centres structuring any possibility of historical transformation" (1991, 150). Two decades later, when Cary Wolfe is dealing with Haraway's heritage in his conceptualisation of posthumanism, he continues the trend of acknowledging posthumanist hybridity as a power of transformation, a sign that the human is "fundamentally a prosthetic creature that has coevolved with other forms of technicity and materiality, forms that are radically 'not human' and yet have nevertheless made the human what it is" (2010, xxv). Yet despite Haraway's and Wolfe's claims of posthumanism as a preferable and even necessary condition of being human, Kristoff's representation of technology's invasion of the body is anything but desirable. Instead, it draws on the pastoral tradition to show that the body attached to the machine is no longer the anchor that grounds the self in material reality and that hybridity is a sign of dehumanisation.

The pastoral has been synonymous with the idea of returning to a less urbanised and more wholesome state of existence. Lawrence Buell identifies pastoralism as a "cultural equipment that western thought has for more than two millennia been unable to do without" (1995, 32). In Greco-Roman literature, the pastoral "satirised and replicated the hyper-civilisation of urban life by portraying supposititious shepherds and other rustics in such stylised attitudes as playful exuberance and amatory despair" (Buell 1995, 32). Then, starting in the seventeenth century, pastoralism began to be used as a form of cultural nationalism, which had an "ambiguous impact on pastoral representation, opening up the possibility of a more densely imaged, environmentally responsive art yet also the possibility of reducing the land to a highly selective ideological construct" (Buell 1995, 32). Hence, Buell is wary of what kind of form pastoralism takes on in contemporary narratives of crisis and destruction. In the present day, Buell believes the challenge is how to deploy pastoralism as a conceptual apparatus without reducing it to a static vision of the idyll. He asks the question whether pastoralism is really playing a crucial role in critiquing the modern phenomenon of industrial detachment from nature, or is it interposing "some major stumbling blocks in the way of developing a mature environmental aesthetics" (ibid.).

44

Treating *The Lotus War* as a response to this enquiry, it seems that Kin's pastoral desire is a useful trope for conceptualising the emotional significance of resisting industrialisation's repression and distortion of human existence. The pastoral sentiment grows as Kin realises that the mechanical suit is a barrier that keeps the world out: "I had never watched the sun kiss the horizon, setting the sky on fire as it sank below the lip of the world. Never felt the whisper-gentle press of a night wind on my face" (*Kinslayer* 605). Kin then suggests that the lack of sensuous experiences has caused him to be emotionally impoverished. Because of his separation, he has "[n]ever known what it was to belong or betray. To refuse or resist. To love or to lose" (ibid.). The desire for contact with nature intensifies and motivates him to rebel against the Lotus Guild. Finally, at the Lotus Guild's downfall, Kin declares, "No more sealing ourselves off in suits of brass. No more filling the skies with poison, the river with tar, the earth with ashes, We will be *part* of this world. Not above it. Not outside it" (*Endsinger* 583). His nostalgic longing for a more meaningful existence in the realm of nature resonates with the pastoral ideology, and it effectively evokes a pastoral vision of human living not apart from nature but intimately related to it.

Kin's longing for subjective experiences of nature resonates with phenomenological ecocriticism, which articulates the need for a more sensuous and direct connection with the natural world. Phenomenological thinkers like Gernot Böhme and David Abram see the problem of modernity as essentially one of alienation from the body and our feelings. Böhme develops a general theory of perception that he calls a new aesthetic of atmosphere, which identifies atmosphere as

> the common reality of the perceiver and the perceived. It is the reality of the perceived as the sphere of its presence and the reality of the perceiver, insofar as in sensing the atmosphere s/he is bodily present in a certain way. (2016, 20)

The new aesthetic of atmosphere, as its name suggests, is intended to liberate human subjectivity from reduction to information processing and mediated experiences of reality and the natural environments. Böhme's aesthetic determines that the perceiver's sensation of forms, light, colours, etc, is proof that s/he is present in the same reality as the perceived object, which gravitates towards a more materialist, sensuous mode of engaging with the natural world. In this mode of engagement, the physical body is the individual's entry into the natural world, an idea David Abram expresses in the context of nature as an animate realm:

> As we return to our senses, we gradually discover our sensory perceptions to be simply our part of a vast, interpenetrating webwork of perceptions and sensations borne by countless other bodies--supported, that is, not just by ourselves, but by icy streams tumbling down

granitic slopes, by owl wings and lichens, and by the unseen, imperturbable wind. (1996, 65)
In this phenomenological backdrop, Kin's longing to sense the warmth of the setting sun retrieves
the body from the realm of discourse. Anticipating dynamic interrelations between human and
nonhuman, Kin begins his resistance against the ideological and physical alienation caused by
industrialisation. It focuses the reader's attention on the physical entanglements of natures, both
human and more-than-human, and amplifies the poetic potency of nonhuman elements.

Although *The Lotus War*'s ecological representation is entrenched in the phenomenological
discourse, its vision of ecological embeddedness also indicates that Kristoff is open to exploring the
more complex issues of the pastoral tradition, such as the integration of technology in a modified
form. The text opens itself to elements that are more debatable and contradictory. For instance,
Buruu the thunder-tiger is equipped with prosthetic wings, and while Yukiko herself never handles
industrialised weapons, the rebellion she leads relies on various technological innovations for
espionage, communication, and open warfare. These examples of nature-machine hybridity
constructs what Terry Gifford proposes as a "post-pastoral" phase, which does not signify "after"
but "reaching beyond…a collapse of human/nature divide while being aware of the problematics
involved. It is more about connection than the disconnection essential to the pastoral" (2014, 26).

Kin longs for a pastoral return. But he is also aware that he lives in an age where the total
absence of technology is impossible, which signifies a shift towards a post-pastoral reconciliation
between nature and technology. After Kin joins the Kage rebellion in the Iishi Mountains, the last
unpolluted place in Shima, friction between Kin and Yukiko occurs when Kin admits that he has
intentions to experiment with the Blood Lotus "in a controlled environment" so that he can "figure
out a way to stop it killing the soil it grows in…[t]o save what's left of Shima" (*Kinslayer* 134). But
Yukiko sees science as a profanity and objects, "We won't save Shima by planting more lotus…We
incinerate the fields. So there's nothing left but ashes…The lotus must burn" (*Kinslayer* 134-5). Kin
retaliates by asking her: "what about afterwards? When all this is done?" (ibid.). This causes Yukiko
to steer the conversation away from any reconciliation between her own environmentalist ideals and
Kin's experimental attitude.

The narrative introduces the possibility for post-pastoral integration. But ultimately the return
to a more sensuous realm is more prominent since it is more effective in intensifying the horror of
ecocide. The more conservative end of pastoralism assumes that a fulfilling and sustainable way of
life is more desirable without the presence of technology as a source of corruption. *The Lotus War*
maintains Yukiko as the embodiment of deep green environmentalism, whose radical determination
and rejection of technology would lead to Shima's ecological recovery. It circumvents dealing with

nuances and contradictions, such as downplaying Kin's hope for technology to be part of Shima's landscape, and as a result, overlooks the potential of using technology to restore nature and fails to explore the possibility of appropriating technology for environmental conservation.

Just as British fantasy writers use real locales and settings to create some of the most notable places in the history of fiction, such as the Ridgeway as Tolkien's road from Shire to Rivendell, or Otmoor as the moor in *The Power of Three*, Kristoff evokes elements of real histories, especially those that have shaped our environmental consciousness, to construct ideological conflicts in his fantasy. It could be that Kristoff fuses fantasy and history to satiate our appetite for a cosmology that reaches beyond the policies and pragmatics of the often dry contemporary discourses of sustainability. After all, Mark Llewellyn claims that present writers turn to the past, especially the Victorian era as the most enriched and relevant historical period, in order to find "a textual salvation in mimicking them as a salve to our (post)modern condition" (2009, 43). However, viewing Kristoff's ecological narrative as a whole, the representation of premodern aesthetics and ecocide appears more coherent and ethically centred than a vague expression of longing for salvation. *The Lotus War* fuses Japanese mythology with ecocide to intensify the emotional satisfaction derived from witnessing ecological recovery as a form of moral redemption. But the fusion also stresses the powerful didactic message regarding the institutionalisation of human greed. *The Lotus War* draws poetic links between the present state of ecological crisis and Japanese mythology reinvoked as horror and, as a result, lends the ecocide narrative an air of mysticism that enhances the essential elements of ecocide as a moral fable.

Mythologising the Nonhuman Figure

A dominant mythological element in *The Lotus War* is Japan's Shinto religion. As one of the three great belief systems of Japan, Shinto is formed from the Chinese characters *shen* and *tao* to denote the 'Way of the Spirits'. According to Shinto beliefs, the spirits—or kami—are not gods in the Judaeo-Christian sense,

> but all that is resplendent in nature and man. This means that Shinto—unlike Confucianism
> and Buddhism—is less concerned with prescriptive ethics and more concerned with
> recognising in word and deed the primordial wonder of existence itself. (Young 2009, 193-4)

The influence of Shinto in *The Lotus War* becomes palpable when Yukiko's 'Kenning' ability awakens. Kristoff describes it as the power of "the kami spirits of the Iishi Mountains" that flows "in the blood" (*Stormdancer* 60). With Kenning, Yukiko can enter—with permission—another

creature's mind. She learns to "walk in the forest and listen to the minds of the birds and beasts," feeling for "the faint flutters of life, the rapid, shallow thoughts of the small warmbloods" (*Stormdancer* 61).Through Yukiko's Kenning ability, Kristoff spiritualises Shima's natural surroundings and establishes environmental sensitivity as the basis of Yukiko's resistance against the Lotus Guild's disenchantment and objectification of nature.

More importantly, *The Lotus War*'s Shinto tradition constructs Buruu, the thunder-tiger, into an allegorical figure. Alongside the presence of kami (Japanese gods and goddesses) is yokai, a broad category of nonhuman entities in Japanese folklore and mythology which, depending on the context, can mean spirits, goblins, phantoms, spectres, sprites, shapeshifters, demons, numinous occurrences, and of course, monsters. Because of the yokai's artistic versatility and openness to revision, Kristoff has adopted the term and merged it with the four guardian gods of Chinese mythology to denote an imagined categorisation of mythical creatures:

> There are three kinds of yokai…The white such as great phoenix. Pure and fierce…The black, spawned in the Yomi underworld; oni, nagaraja and the like. Creatures of evil…But most breeds of spirit beasts are simply grey. They are elemental, unconstrained. They can be noble like the great thunder tiger, who answers the call of the Stormdancer. But like the sea dragons, they can seem cruel to us, just as a rip-tide will seem cruel to a drowning man. (*Stormdancer* 92)

Based on Kristoff's description of yokai in Shima's spirit world, it seems that most spirit beasts act according to their innate nature. They are either good or evil. And in the case where they are neither, they appear as larger-than-life entities that embody the unpredictable and majestic power of nature. In contrast, Buruu's cognitive maturity and complexity constitutes a distinct quality of his species identity. Yukiko admits to being "struck by the complexity of its thoughts; a fierce intelligence and sense of self she'd not encountered in a beast before" (*Stormdancer* 129). A notable event occurring in *Stormdancer* strengthens this pattern of anthropomorphism and paints the nonhuman as an intelligent and rational creature capable of deception in the realm of human politics. In Yukiko and Buruu's plot to assassinate the Shōgun Yoritomo, they plan to use Buruu as cover for entering the palace by disguising him as a dumb, captured, and tamed beast to be presented as a gift. During the presentation ceremony, Yukiko expresses her indignation that the rebellion is forcing Buruu to debase himself, to which he replies, "I said I will play my part…I will endure" (*Stormdancer* 293-4). Buruu even steps in as the voice of rationality to assure Yukiko, saying, "Calm. Be calm. Soon we will right these wrongs" (*Stormdancer* 290). *The Lotus War* humanises Buruu to the extent

he appears conscious of his deception, which reveals the complexity or even the impossibility for humans to see animals as they are.

Martha Nussbaum claims that the prerequisite of an ethical approach to representing the animal is the ability to see "each living thing flourish as the sort of thing it is" (2007, 31). It implies a movement towards the nonhuman, leaving behind the safety and familiarity of human privilege and dominance, in order to exercise an openness to the other. But Helena Pedersen contends, "From a critical animal studies perspective, tendencies towards subject boundary dissolution are never symmetrical and therefore cannot be innocent" (2011, 72). Pedersen's point is that even though animal studies addresses oppressive institutions and arrangements that regulate human-nonhuman relations by contesting boundaries, this kind of boundary contestation can also be "viewed in less political and more emotional terms as a form of metonymic desire; a (human) desire to be part of an expanded context and community of life forms" (ibid.). So Pedersen's question is, if alterity must be maintained for it to have meaning, "Where are the edges here? At what point does 'companion species' slip into 'companion speciesism'? (2011, 73) *The Lotus War* shows that the distinction between the two is all too easily disturbed and erased, that what may be a sign of human-nonhuman mutuality and trust to a human subject is seen by the animal as a sign of human dominance. Buruu's disguise as a dumb animal is anything but innocent, since it presents empathy between human and nonhuman as malleable, which allows the human to manipulate the conditions of empathy in human interest, or in this case, the interest of the rebellion. At the same time, Buruu's self-awareness goes against the grain of this instrumentalist reading. Buruu recognises that his humiliation is only part of the whole movement to regain and recover Shima's landscapes, so as a result, he is willing to suffer under the guise of a wild beast.

Therefore, at the paradoxical core of Buruu's humanisation is his decision to appear as a captured, wounded, tamed creature. Buruu's performance begins with Yukiko summoning him from the ship, whistling to him as an animal trainer would to her animal. Incapacitated by his mutilated wings, Buruu flies clumsily and crashes to the ground with "talons tearing deep furrows in his wake" (*Stormdancer* 292). Although his wretched state is intended to invite remorse and sympathy, the crowd's response of exhilaration transforms his suffering into a spectacle:

> The children shrieked and pointed, men and women gasped in wonder…Applause. Jubilant, euphoric, a giddy wave spilling over the throng and turning Yukiko's stomach. An awful sound; all slapping sallow skin and bare, stamping feet, row upon row of grubbing kerchiefs hiding a streetful of empty, crooked smiles. (*Stormdancer* 292)

The crowd's cheer reflects the success of Buruu's deception. But their mad frenzy at the sight of Buruu's obvious discomfort also transforms nonhuman suffering into a spectacle for consumption, which provokes their flesh to slap, stamp, and cry out in a way that ironically exposes the crowd's own animality.

John Berger provides an insightful commentary on this phenomenon of treating animal as spectacle. Berger states that the reduction of the animal in modern industrial societies is linked to the imprisoning of animal bodies within zoo enclosures and the transformation of animals into spectacles. According to Berger,

> animals are always the observed. The fact that they can observe us has lost all significance. They are the objects of our ever-extending knowledge. What we know about them is an index of our power, and thus an index of what separates us from them. The more we know, the further away they are. (2007, 257)

Buruu's performance is reminiscent of this modern phenomenon that aestheticises the nonhuman's body and suffering, so that beholding the animal body equals a capitalist transaction through which the viewer obtains a fresh understanding of themselves. Appearing in the form of a beast, Buruu unleashes a primal roar and "as the assembled crowd gasped in wonder, Buruu dipped his head and scratched at the ground before the Shōgun's feet. The beast was bowing to their Lord" (*Stormdancer* 292). Since the visible part of Buruu's body is that of a beast, it becomes an ideological and aesthetic screen to the spectator, through which the human subdues the nonhuman as a sign of human dominance. With his performance of submission, Buruu acknowledges the shogun's mastery and provides the opening for the anthropocentric discourse to return. Buruu's performance is supposed to establish the nonhuman's agency and autonomy. But instead, the narrative uses it to reveal the human gaze's anthropocentric tendency. What is potentially and inwardly a sign of nonhuman agency is reclaimed by the human viewer as a sign of nonhuman inferiority and transferred into the realm of human politics. Contrary to the nonhuman's intention, the human gaze affirms the nonhuman as a spectacle that reflects human desires for power and control.

However, there is a counter-narrative to be found, through which Buruu uses his othering gaze to critique human society. Through Buruu's eyes,

> [industrial vehicles] glittered in the sun like beetle shells, crawling with men and their growling swords, surrounded by a choir of wailing monkey-children. Reeking of wealth, of stinking excess, of blind, mad hubris. He has yet to lay eyes on this Yoritomo-no-miya, and already he despised him. (*Stormdancer* 288)

The nonhuman here is no longer an objectified spectacle that cements human superiority. Rather, it appears as a source of subversion and condemnation. The gaze of the nonhuman illuminates human society's self-destructive tendency as its most telling characteristic, and thereby compels us to renegotiate the underlying affinity between human and nonhuman. Thus, the significance of Buruu's performance is that it provides the reader with an ambivalent position in terms of focalisation. The same performance is seen from the multiple angles of the protagonist's quest to advance the rebellion, the nonhuman's powerful subjectivity, and the reductive gaze of human spectators. *The Lotus War* is open to portraying the creature's inner life and consciousness. But this opening is complicated by the reader's multi-faceted focalisation, which reveals how the human gaze relies on outward signs that support the anthropocentric norm of an industrial society and simplifies the interpretive process that constructs nonhuman subjectivity and autonomy. On the one hand, Buruu's suffering is treated as a sign of his submission. On the other hand, Buruu's suffering is a trope that humanises him. By describing Buruu as a suffering subject who recognises the value of his own sacrifice, the narrative reproduces what Cary Wolfe (2007) identifies as the ultimate Cartesian trap in animal studies, that is, the tendency to describe suffering as an experience that humanises the nonhuman. Wolfe explains that it is easy for animal rights philosophers and scientists to speak about the pain of animals, but it is not so easy for them to speak about their suffering, because for suffering to be an experience, there has to be an enduring subject who not only feels pain but is conscious of the emotional and physical consequence of pain. So when we say that animals suffer, what we are doing is humanising their pain. This can be a positive beginning to understanding the moral status of animals, but as *The Lotus War* illustrates, it can also be a way for the anthropocentric, instrumentalist framework to return.

Human-nonhuman Intimacy

Although the spectacle scene instrumentalises Buruu's nonhuman body, the narrative works against its own anthropocentric discourse by portraying Yukiko and Buruu's intimate bond using battle scenes in which Yukiko's and Buruu's minds synchronise without language. In one particular scene, "Yukiko felt the bloodlust build inside the arashitora, the hair on her flesh standing up as raw electricity cascaded along his wings. She bared her teeth and growled alongside him" (*Stormdancer* 258). Yukiko's Kenning ability erases the division of selfhood between human and nonhuman, creating an intersubjectivity beyond language and discourse. She becomes an extension of Buruu's animality. Just as Yukiko becomes more animal-like in her expression, Buruu becomes more human-like in his thoughts: "the link between them was changing him, her humanity leaking into

him like irezumi ink spilled on cotton weave. He was becoming *more*" (*Stormdancer* 256). The metaphor of irezumi ink, the traditional ink used for Japanese tattoo, has a problematic connotation. Drawing on the pastoral trope of nature as a source of purity and innocence, the metaphor connotes that humanity produces an indelible stain on the nonhuman, whose innocence is symbolised by the blank canvas of cotton weave. The metaphor of ink and cotton weave also recalls the instrumentalist discourse, which is reinforced by the image of Yukiko and Buruu moving in the likeness of a master and her sword. In the description of Yukiko and Burruu's bonding, Kristoff suggests that Buruu's primal instinct of aggression is "being gradually tempered with elegant thought, complex concepts, all too human impulses growing in their bond" (*Stormdancer* 256). To illustrate Buruu's inward change as 'tempering' recalls the process of reheating and cooling metal in a smithy, which improves the metal's strength and resilience. The sword's lethal instrumentality and its connotation of beauty shape the nonhuman into an object of violence that deserves to be treated with respect and admiration.

More importantly, the synchronicity between a samurai and his sword in motion lends Yukiko and Buruu's relationship a unity that is disconcerting—yet potentially subversive with an ecological inflection. The metaphor derives its artistic energy from the historical context in which a samurai and his sword are inseparable. The samurai lives by the sword that he alone can wield, something that is not just a weapon but an integral part of his being and identity. The sword remains a deadly weapon, an inanimate object. But when it is being wielded by the samurai, both the sword and the samurai are transformed into something *more*. As a result, the metaphor of master and weapon opens the way for realising an alternative human-nonhuman coexistence founded on alterity rather than affinity. Yukiko likens Buruu's bloodlust to steel,

> folded and sharp, light rippling across the surface and glinting on his edge. He flooded her
> with it, tempered and hard, a resolve forged in lightning and thunder and cooked by the
> pounding rain. He was strong. So they were strong. (*Stormdancer* 280)

Using the language of the smithy to frame Buruu's mentality suggests that Buruu's body does not belong to him, nor does Yukiko's mind belong to her. It frames Buruu's subjectivity as transformative, which undergoes the process of being changed by Yukiko's human thoughts and reasoning at a higher cognitive level. There is no centre, stability, or division, in their bond. Instead, there is only a constant, transformative tension between human and nonhuman minds. They form a dialectic of body and subjectivity that reinforces their synchronicity in thought and motion. Yet in their intersubjective experience they remain as distinct individuals in the same way that a master

remains human and the sword remains an object, implying that alterity, as strange as it may seem, is an integral part of their intersubjectivity.

Therefore, Buruu and Yukiko exemplify the possibility of human and nonhuman constructing a destabilised ontology of alterity, according to which they are the same yet undeniably changed by their bond, becoming something human yet nonhuman. They actualise what Gilles Deleuze and Félix Guattari identify as the process of 'becoming-animal'. Deleuze and Guattari's *A Thousand Plateaus* (2014) describes the dynamic sequence by which the human individual comprehends the violence of animals, which momentarily uproots her/himself from humanity and calls the s/he "toward unheard-of becomings" (280). These crossings, transformations, or becomings, are not literal. They are the imaginative product of affiliation and symbiosis. It is a process that allows consistency between two heterogeneous components to connect and define them yet the two components remain distinct and autonomous. Deleuze and Guattari use the example of the wolf-man to illustrate this process of becoming-animal, a case where the wolf as an idea forms the contagion that enters the image of man:

> there is a first multiplicity, of hair, taken up in a becoming-red fur; and a second multiplicity
> of wolves, which in turn takes up the becoming-animal of the man. Between the two, there
> is…symbiosis of our passage between heterogeneities. (2004, 292)

The idea of the wolf infects the imagination of the human body, and the human body assimilates it. But the 'wolfness' or the idea of the wolf does not vanish, nor does it devolve into something that is not wolf-like. Thus, when we view the image of the wolf-man, the risk of perceiving the wolf-man as a wolf or a man is always present and uncertain, because their symbiosis has somehow fused wolf and man together yet allowed them to remain as they are.

In *The Lotus War,* Yukiko and Buruu's becoming-animal provides an alternative to the Lotus Guild's exploitative anthropocentrism. To depict the nonhuman as a human weapon has a strong instrumentalist undertone that cannot be ignored. But due to their symbiosis, both human and nonhuman identities are deterritorialized so that they express the other's "otherness" while retaining their own unique form, characteristics, and qualities. *The Lotus War*'s portrayal of intersubjectivity signals an alternative form of consciousness that is being animated for our own age, according to which the animal is an extension of the human and the human is also an extension of the animal without collapsing the distance between the two. In their becomings, "[t]wo sets of eyes watched the enemy, moving in symbiosis…There was no time. There was no gravity. There was no Yukiko. There was only motion" (*Stormdancer* 259). In other words, as Sherryl Vint argues, the transformative process of becoming-animal is "not reducible to simply liking animals or behaving

as one thinks an animal might behave" (2012, 53). Becoming-animal is a rejection of imitation and abandonment. It cares not for thinking like an animal nor abandoning human-ness to be an animal. Rather, it is a fluctuating state of being where the human subject is constantly approaching and drawing closer to the nonhuman other but never fully becoming it.

The paradox of Yukiko's becoming animal echoes Timothy Morton's concept of 'Ecology without Nature', that is, "a non-conceptual network of infinite proliferation and diversity" (2008, 76). Morton is critical of Deleuze and Guattari's becoming-animal, claiming that it obfuscates the process and approaches "too hastily towards what may turn out to be ideological mirages" (80). But his own concept of ecology has the undertone of Deleuze and Guattari's formulation of human-nonhuman connections as a network of alterity. Morton believes, since our society can no longer be declared completely 'human', nor can 'animal' be a distinct category, there is, instead, a network in which nodes are connected and separated by "a radical gap", "an irreducible alterity" (ibid.). Ecology, then, is "an endless network of strange strangeness" (77). The most compelling effect of positioning human and nonhuman within an 'Ecology without Nature' is that human and animal would not collapse into each other, yet they are still able to hybridise and connect.

Although the emerging shape of *The Lotus War*'s ecology is congruent to a degree with a post-structuralist, relativist approach to representing the natural world, the representation of Kenning and Yukiko's bond with animals give *The Lotus War*'s ecology equal footing with fantasy literature's tradition of animism. Fantasy, as a literature of revision that creates alternate realities, has the ability to offer the reader "an animistic way of perceiving the natural world by 'departing from reality'" (Brawley 2014, 23). Animism assumes that the world around is a living and vital realm where humans can connect and even communicate with other beings. *The Lotus War*'s use of animism is, in some ways, similar to Hayao Miyazaki's deployment of the trope in his fantasy films, especially those that have environmentalist import. Like *The Lotus War*, *Spirited Away* (Suzuki & Miyazaki, 2001) represents a collision between human beings and the spirit—kami—world, resulting in moments of tension that highlight environmentalist issues with a tacit understanding of the world as something vital and animistic. Soon after Chihiro is contracted to work at Yubaba's bathhouse in the kami world, she is tasked with cleaning an oozing mass of sentient sludge, which seems unusual even compared to the other kami customers in phantasmagoric forms of humanised vegetables, giant chicks, and horned demons. Although Chihiro is initially repulsed, she carries on and discovers that there is something concealed beneath the muck. After Chihiro releases the river god from the weight of industrial trash and polluted soil, there is a poignant moment of silence between the human and the river god as he suspends Chihiro in a floating stream of water, meeting

her gaze with his. Following this surreal moment of animistic contact, Chihiro is left with a deep impression of the mystical and oneiric connection between her as a living person and the world around her, whether it be the bathhouse, her parents, or the natural world. Her epiphany proves pivotal to her growth as a person, since is it through her implicit understanding of this invisible and living connection with other forms of life that she is able to sympathise with No-face, a masked figure who reflects the thoughts and desires of those who behold him and embodies the inscrutable mystery of the human heart.

But representations of animism are not always positive in Miyazaki's fantasy films. The forest kami in *Princess Mononoke* (Suzuki & Miyazaki, 1997) is portrayed as the embodiment of animistic forces and it has two forms that reveal the duality of animism. During daytime, the forest kami is a kirin[7] who prowls and protects the forest. Even though it symbolises the benevolent, life-giving aspect of nature, when Ashitaka comes to it for help, the forest kami consumes the life force of Ashitaka's sacrificial plant. Then during the night, the forest kami transforms into a nightwalker, whose menacing and fluorescent form symbolises nature's ineffable yet revered darkness. These contrasts between light and darkness, life and death, sacred power and fragile mortality reproduce the animistic tradition but avoid equating vitalistic connection with regeneration and alienation with disaster and death. Miyazaki diversifies the forms of animism to show that when human and nature connect, it is not always to the benefit of both; and when discord occurs, the result is not always detrimental to human societies and natural environments.

The Lotus War's animistic cosmology expresses a similar ambivalence. On the one hand, it portrays Kenning as a means of establishing affinity, connection, and empathy between Yukiko and her nonhuman companion. Yet it never neglects that the vital contact between human and nature also exists as a source of danger and disruption. The more Yukiko learns about Kenning, the more she fears the consequence, for "[t]o even glance into the Kenning was to look at the sun" (*Kinslayer* 125). When she finally immerses too deeply in the Kenning, she loses control of herself momentarily: "It was as if her legs had suddenly betrayed her, sending her skipping when she wanted to stand still, tripping her onto her face when she wanted to run" (*Kinslayer* 161). Kenning enables her to experience human-nonhuman intersubjectivity, but her loss of control means that "[f]or the first time in her life, she was *afraid* of it. Truly afraid of who and what she was" (*Kinslayer* 161). Kate Rigby argues that to allow our relationship with nature to evolve to new heights, fear of nature's otherness forms an indispensable protection against "a romantic poetics of

---

[7] A chimerical creature in the form of a stag.

identification, in which nature figures as an extension of the transcendental Self" (2004, 260). So even though the shape of Kristoff's human-nonhuman paradigm resembles romanticist affinity and empathy, the underpinning principle is an ecology of alterity and fear, with each person (human or nonhuman) possessing alterity that infects and transforms those connected to it, and that each person is constantly vigilant of the danger of losing themselves to the other.

Interestingly, this fear of becoming the other resides also within the animal. Buruu realises that "[n]ow he was more; ferocious cunning layered with human faculties for judgment" (*Kinslayer* 50). At the same time, Buruu remembers what it was like to be enslaved and dominated by "the monster within":

> He'd thought himself beyond it, that his bond with Yukiko had laid that demon to rest and washed the taste of his own from his tongue. But how easily he'd fallen back. How quickly he'd taken up the mantle of who he used to be. (*Kinslayer* 379)

The representation of the nonhuman fearing his own animality revives the anthropocentric discourse that keeps the other in check. Yet it also calls forth Cary Wolfe's desire for a narrative mode that realises we are not ourselves because we are "always radically other" (2009, 571). Yukiko and Buruu's bond reminds the reader that the human has always been 'othered' by the "materiality and technicity of a language that is always on the scene before we are" (ibid). In the evolutionary and biological sense we are just as 'othered' as the animals we confront. But moreover, we are always radically othered because of the fluidity of our ontological connection, and the fact that we can register an animal being human and a human being animal.

The Nonhuman's Redemptive Power

Finally, Kristoff positions the nonhuman symbolically as a deus ex machina figure, whose sacrificial death eliminates the source of pollution and galvanises human survivors to be more ethically principled and ecologically aware. Despite the fact that the human rebels prepare to disable the Lotus Guild's *Earthcrusher* from within, Yukiko and Buruu have their own task of closing the Devil's Gate, the portal to the underworld through which pollution and yokai escape. At the end of *Endsinger,* Yukiko and Buruu discover the only way to reseal the portal is using the blood of a yokai-kin, humans who have inherited yokai blood and abilities. Although the original plan involves Buruu and Yukiko flying into the Devil's Gate, Buruu orders another thunder-tiger to carry Yukiko to safety while he closes the portal with another yokai-kin.

When we examine the moral dimension of Buruu's motive, it seems that *The Lotus War* is deliberately juxtaposing Buruu, a morally upright nonhuman against the corrupt samurai of Shima

in order to construct a didactic model of environmental aesthetics. It is chilling to see Hiro, leader of the Kazumitsu Elite, proclaiming that he will level every tree and turn every stone, if that is what it takes to destroy the rebellion that has shamed his lord (*Kinslayer* 359). Hiro's feudal duty and aspiration for honour are exposed as empty promises, exemplifying the true horror of being blinded by ideology shaped by human needs. In contrast, the text portrays Buruu's desire for honour as an internal principle that regulates the nonhuman's action, which is derived from and results in ecological interconnectedness, responsibility, and recovery. Buruu's backstory in *Kinslayer* reveals that his sense of honour originates from the ecological self-awareness of his species' impending extinction. Amongst the thunder-tigers, it is dishonourable to kill another thunder-tiger because they are "slow to breed. Any day a cub first took to the wing was a momentous one; one step closer to crawling back from extinction's brink" (*Kinslayer* 235). For the sake of preserving his species and Shima's future, Buruu declares, "I am more than that now…We must do what is right not what is just. And there is a difference" (*Kinslayer* 532). To Buruu, doing 'what is right' is "[to] do what others will not. To place your pack above yourself. The mark of a true ruler" (*Kinslayer* 606). In the context of Shima's ecological crisis, Buruu's honour means sacrificing his own life for the sake of others, becoming the guide of environmental justice that emphasises the importance of choosing the interest of the collective over that of the individual.

Buruu's heroic narrative suggests that his death is not necessarily the death of a noble animal but that of a righteous, honourable human wearing the guise of the animal. His choice to sacrifice and thereby redeem himself humanises and re-casts him as a tragic anti-hero, while his death paints the romantic allegorical image of the noble beast, compared to whom humans seem mediocre, ugly, and corrupt. Josephine Donovan (2011) notes that using animal death as a symbol of the protagonist's emotional state or humanity's condition continues to be a standard fictional device. As a result, "[t]he circumstantial realities of the animal themselves are largely ignored…the moral reality of the animals' suffering is overridden in the interest of creating an aesthetic effect" (2011, 206). In this view, although Buruu's death serves as a fulfilling culmination of his heroic narrative arc. But it coincidentally plays into the anthropocentric tradition of animal stories that portray the animal as a metaphor of human values. Buruu's death can be reckoned as a poetic device that brings to light "the abject aspects of nature and the beauty within these disturbing, but essential aspects of life and its inevitable end" (Smith & Parsons 2012, 32). Treating the nonhuman as the embodiment of human ideals suggests that ideals and the nonhuman reside most comfortably within the realm of symbolism rather than that of environmental pragmatism.

So even though Kristoff attempts to carve out a space of resistance, in which the nonhuman is treated as a source of subversion and an independent subject, the narrative cannot not fully separate the nonhuman from its conservative symbolic framing. Paul Wells's *The Animated Bestiary* (2009) discusses this kind of ambivalent treatment of the animal, which leaves tensions unresolved. Using Pixar's *Madagascar* as an example, Wells explains how the film as a popular narrative has conflicting imperatives for both closure and conflict. This creates an unsatisfactory ending "because it reduces a complex animal discourse—*which the film introduced as its core dramatic problem*—merely to the notion of polite eating" (2009, 22). To an extent I agree with Wells, that a fundamentally paradoxical imperative drives popular narratives. It pushes against known boundaries to address and problematise implicit social and cultural forces that define human-nonhuman paradigms. But the need for closure often compels the narrative to revert to a more conservative—and thus unsatisfactory—ending. This internal paradox can be seen in *The Lotus War* also. Kristoff alternates between human and nonhuman perspectives to infuse the nonhuman's actions with a sense of dissonance and multiple meanings, the nonhuman's final act of redemption reverts back to the symbolic tradition, according to which the nonhuman is celebrated as an embodiment of human virtues. Nevertheless, I would argue that this kind of ambivalence and layering is a necessary strategy for establishing the nonhuman as a multi-faceted construct. The view of Buruu as a spectacle contradicts his display of autonomy and free will. Yet it is through this kind of contradiction that the narrative successfully establishes the nonhuman figure in human social spaces as individual existence that cannot be reduced to a single function or dimension. Without the multiple perspective that frame Buruu's animality as a spectacle, a historical agent and an allegorical figure, the narrative would overlook the richness of Buruu's animality.

The cause may be, as Wells claims, popular narrative's inherent contradictory impulses. But *The Lotus War*'s thematic ambivalence also has roots in the narrative's historical doubleness. *The Lotus War* does not deviate from the mythopoeic tradition of fantasy, which uses the supernatural to illuminate hidden fragments of our inner reality, and thereby awaken our sense of wonder and desire for alternative powers, existences, and ways of thinking. At the same time, the trilogy's historical anachronism challenges mythopoeic fantasy's conservative framing. The fusion of premodern mythology and industrial rationalism revises the history of industrialisation, so that the reader becomes attentive to industrial rationalism's deceptive potential and alternative modes of understanding the nonhuman. *The Lotus War*'s historical ambivalence provokes us to restructure our dichotomised perception of the nonhuman as an individual and a spectacle and to reassess our reliance on industrial ideology. Through the lens of *The Lotus War*'s fantastical historicity, the

reader confronts similarities between religious and scientific institutions, reaching the unsettling realisation that our post-industrial society's rationalist paradigm can be a form of dangerous deception that fosters blind obsession and a singular conviction in science's redemptive powers. Then, on the basis of its fusion of mythic and mechanistic thinking, *The Lotus War* draws the reader into an anachronistic space where the nonhuman's multi-faceted dimensions are brought to light. *The Lotus War* rearranges Edo Japan's political landscape to show that our need for the animal as a form of spectacle is what invites the nonhuman into the anthropocentric realm, where the nonhuman exists as a symbol of human dominance. At the same time, *The Lotus War* draws on Japanese mythology to establish an animistic cosmology. Drawing parallels between Buruu's animality and samurai swords, *The Lotus War* suggests that nonhuman subjectivity is an inherently transformative construct that coevolves with its human companion. At the same time, Yukiko and Buruu's bond signals the disconcerting reality that from the perspective of the nonhuman, we as human beings are always radically other and that our humanity is fundamentally flawed.

In sum, *The Lotus War* demonstrates anachronism as an effective strategy of the fantastic to contest history's anthropocentrism, but it is not as simple as decentring human characters and uplifting nonhuman forces as historical agents so that they become the primary subject of the historical narrative. The fantastic resists industrialisation's anthropocentric treatment of nature by showing an enriched and powerful bond between the two human and nonhuman protagonists that becomes critical to collapsing the human institution that instigates ecological crisis. Moreover, premodern mythology characterises rationalism as a form of deception and exposes how industrial ideology alienates and devalues nature.

But the narrative's subversion becomes more complex when it comes to the treatment of nonhuman agency, which indicates that the process of uncovering the secret history of nature is embedded in anthropocentrism in problematic ways. *The Lotus War* grants its nonhuman protagonist the capacity to determine the outcome of human conflict and participate in ecological restoration. But the representation of nonhuman agency is founded on human assumptions of autonomy, intelligence, and intentionality. *The Lotus War* reveals that our relationship with nonhuman creatures is filtered through a myriad of discourses that inspire control as much as sympathy. As a result, revitalising the history of nature's agency can contest but not displace or erase history's anthropocentric borders. My investigation of *The Lotus War* thus concludes that anachronism is an effective strategy for recovering nonhuman agency in the narrative of industrialisation. However, as much as the fantastic enacts nonhuman creatures as agents of political change against an industrialised nation, the subversion also relies on established notions of

human agency to empower the nonhuman. This is not necessarily a negative outcome, since it allows our perception of the relationship between nature and mankind in historical settings to be more multi-faceted and complex. But it also demonstrates problematic ways in which history remains resolutely anthropocentric.

Chapter Two: Knowledge and Conquest in *Frontier Magic*'s Colonial America

> They are wandering aimlessly in the land;
>
> the wilderness has hemmed them in.
>
> — Exodus 14:3

In 'The Trouble with Wilderness: Or, Getting Back to the Wrong Nature', William Cronon claims that because of the conflict between man and nature in colonial America, the frontier is traditionally known as "the place of youth and childhood, into which men escape by abandoning their past and entering a world of freedom where the constraints of civilisation fade into memory" (1996, 16). Wilderness beyond the frontier is a liminal place associated with danger, heroism, and finding oneself, which lends itself to YA fiction's exploration of identity. Unlike family-centric adventure stories and pioneer fiction for children such as *The Little House on the Prairie* series or *The Swiss Family Robinson*, YA frontier fiction often pits a group of youths (sometimes a lone, teen outcast) against the wilderness to show personal growth and transformation. Clare Bradford (2007) believes the frontier occupies central importance in postcolonial historical fiction for young adults because it embodies an ontological and temporal separating line that moves and retreats as the individual grows. The rite-of-passage includes encounters with wild beasts and traversing dangerous terrains, so that the journey constitutes a pattern of maturation through which the protagonist overcomes and assimilates elements of the other and rediscovers boundaries and values that define her/his identity. The frontier is never just a geographical border. It is where the protagonist undergoes transformative processes in human and natural settings, during which the protagonist learns to reconcile dichotomies, such as savagery and civilisation, in order to establish a solid understanding of the self.

Patricia Wrede's *Frontier Magic* trilogy is located in this frontier narrative tradition. It appropriates the wilderness to represent the heroine's growth and transformation. As she grows from a young girl intrigued by stories about the wilderness into a professional naturalist magician who uses magic to detect and solve ecological problems, the wilderness also undergoes various changes and transformations. Like most frontier fiction, *Frontier Magic* begins with the image of

the wilderness as palace outside the sphere of social norms. It is an unexplored region that inspires fear due to the presence of hostile creatures and magical threats. Then as the protagonist acquires magical knowledge of the natural world through her education and apprenticeship, the wilderness shifts from a mysterious area outside of herself and into a transformative space of self-discovery. This trajectory of learning forms the main plot of the heroine's bildungsroman throughout the trilogy. *Thirteenth Child*[8] depicts Eff as a child moving to the edge of the frontier and beginning her magical education. Eff graduates and begins her work as a naturalist magician in *Across the Great Barrier*[9]. She travels to settler colonies and unexplored areas to examine and solve environmental problems caused by magical disturbances. Finally in *The Far West*[10] Eff joins a pioneering scientific expedition and discovers how magic and ecology intertwine as a result of human action.

    Frontier Magic exhibits the conventional representation of the frontier as a place of growth and maturation. However, what sets *Frontier Magic* apart is its use of the frontier setting as a place of synthesising various paradigms of environmental knowledge in the forms of magic: Avrupan magic that represents scientific rationalism, Aphrikan magic which embodies the significance of shamanistic phenomenological affinity, and Hijero-Cathayan magic which fosters a Taoist approach to nature, emphasising harmony and balance over power and control. Even though Eff's bildungsroman has other facets, such as her developing relationship with a romantic interest and her struggle against various institutional restrictions, the core transformation that takes place is within Eff's environmental subjectivity. Subjectivity, as McCallum defines it, is "an individual's sense of a personal identity as a subject—in the sense of being subject to some measure of external coercion— and as an agent—that is, being capable of conscious and deliberate thought and action" (1999, 4). Subjectivity is formed as a result of a person entering into dialogue with other ideologies and discourse; and in *Frontier Magic*, the dominant ideologies are the three magical systems which have their own pragmatics, approaches, values and forms of natural knowledge. Her magical training, which exposes her to the rationalist logic of mastery and sensuous ways of contacting nature and teaches her to collaborate with other individuals for balance, becomes a basis for forming an environmental subjectivity that defines her relationship with the natural world as an exemplary model for the reader.

---

[8] Abbreviated as *TC*

[9] Abbreviated as *AGB*

[10] Abbreviated as *TFW*

Avrupan magic can be seen as a derivative of European scientific empiricism even though this is not explicitly stated in the trilogy, since there are signs that suggest Avrupan magic's development is parallel to that of scientific rationalism. Miss Ochiba, Eff's magic tutor, teaches that "Pythagoras laid the numerical foundation for both mathematics and magic…All these numbers, and more, have meanings and importance according to Avrupan numeracy theory" (*TC* 98-9). On the theoretical foundation of mathematics, Avrupan magicians cast magic using scientific instruments to "raise up and control enough magic to do things" (*TC* 201). Subsequently, Avrupan magic projects a view of the wilderness as a source of danger that should be contained. To Avrupan magicians, "wildlife is something you shoot first and study later" (*TFW* 193). Nature's value is drastically reduced. Within the Avrupan paradigm, nature exists as materials that can be measured, quantified, and then reshaped. Nature's agency is not an ethical question because it is entirely devoid of it.

In contrast to Avrupan magic's instrumentalist view of nature, Aphrikan magicians perceive the natural world as a realm of living connections which they can enter by meditation that heightens their senses. The phenomenological inflection of Aphrikan magic is associated with the shaman stereotype found in frontier films and novels, appearing as a medicine man or a witch-doctor who practices their arts for healing, divining, and other less benign purposes. The shaman is both central yet marginal to their community, since the shaman is an individual who is human yet divine as he or she acts as an intermediary between the spiritual and the physical realms. *Frontier Magic* presents the Aphrikan conjurefolk as mystical shamans who experience deep and spiritual connections with the more-than-human world. Aphrikan sensing is about "feeling the links between what we [are] sensing and our selves" (*TFW* 174). It begins with "looking, not doing. Instead of calling up magic and controlling it, Aphrikan conjurefolk find places where magic is already moving and then guide it somewhere else" (*TFW* 201). To Aphrikan magicians, nature is not something to be studied or measured. It exists as a more-than-human world that can be experienced. The more an Aphrikan magician is connected to nature through an uplifted ecological experience, the less s/he fears nature as a source of alienation, threat, and otherness.

Lastly, Hijero-Cathayan magic is a form of magic that extols "life as a process of change" (*TC* 100). Hijero-Cathayan magicians believe that beneath the surface of what is visible lies a universal flow of energy that connects all living things. Their practice of immersing themselves in the flow of magic is analogous to Taoism, which sees nature as the hidden energy of the world that "gives all things their being and sustains them" (Marshall 2015, 12). In the same way, Hijero-Cathayan magicians believe nature is too vast and omnipresent for humans to control. But by entering the flow of natural energy, they are able to obtain clarity and insight that help them to understand and

work with aspects of the natural world. As Eff progresses from one type to another, she is forced to confront and reconcile their different and often conflicting views of nature. The result is a hybridised understanding of nature that enables her to see from different angles. This chapter investigates *Frontier Magic'*s representations of environmental subjectivity and focuses on the dissonance between the narrative's historical setting and its inclusion of different environmental discourses, with the aim of showing how *Frontier Magic* adopts the frontier setting to explore the desire to return to a more intuitive way of engaging with nature.

The American Frontier in History and Fiction

Before we enter Wrede's alternative American frontier, it is helpful to establish some understanding of the frontier's historical backdrop, the cultural space it occupies, and the strategies by which Wrede reconfigures the frontier. In the context of American history the frontier refers to colonial movement that began when settlers moved westward from the Atlantic Coast and the eastern rivers to establish settlements. The frontier was developed in several phases as more Europeans came and settled in the Hudson River Valley, and then headed towards the Ohio River in the first half of the eighteenth century. After the United States' victory in the American Revolutionary War in 1783, the U.S. officially gained control over British lands west of the Appalachians. From this time onward, thousands of settlers, the famous Daniel Boone included, crossed into Kentucky, Tennessee, and the upper waters of Ohio. For the next century, this westward expansion would continue and increase, following the Louisiana Purchase in 1803.

New Western historians may try to limit the word 'frontier' to denote the geographical region west of the Mississippi River Valley, but as Frederick Jackson Turner demonstrates in The Frontier in American History (2010), the frontier is more than physical landscape. Turner acknowledges that the frontier is, first and foremost, a geographical area. As the westward expansion leaps over the Alleghenies and advances onto the Great Plains and Rocky Mountains, natural boundaries mark and affect the characteristics of the frontier region. Turner's point, however, is that this geographical movement has developed into a metaphor particularly with respect to the conflict between savagery and civilisation: "This perennial rebirth, this fluidity of American life, this expansion westward with its new opportunities, its continuous touch with the simplicity of primitive society, furnishes the forces dominating American character" (2010, 2-3). The frontier, in Turner's view, is a crucial intellectual force that constructs America's national identity, having evolved into a metaphor for

generating and undermining the arbitrary division between savagery and civilisation, human and wilderness, self and other.

Historically, the frontier era has three dominant characteristics: new beginnings, abundance of natural wealth, and triumph over the wilderness. These three aspects are derived from the frontier as an in-between geographical region where wild areas can morph into a space for productive labour regulated by human needs. The frontier as a place of regeneration is related to its image as an attractive option to trappers, herders, and miners, who were drawn to the abundance of natural resources and pockets of mineral wealth in colonial Virginia and Massachusetts (Billington & Ridge 2001). Hunters went after buffaloes, coyotes, beavers, donkey-eared jack rabbits and antelopes for their meat, fur, claws and hide. Farmers, whose goal was "not to adapt but to conquer", (Weidensaul 2012, 5) made it their mission to strip away acres of virgin timber and exterminate wild animals to protect their land, crops, and community. In most respects, Wrede's alternate frontier is grounded in real history. There is the mention of the Civil War, the establishment of homestead and settlement offices, and Lewis and Clark's expedition that opened the era of pioneering. Geographical similarities also help to ground the reader in the historical realism of eighteenth-century colonial America. However, the narrative omits several important features of the frontier expansion, which is a key strategy Wrede employs to reconfigure frontier history.

The most prominent absence is that of the Native Americans. A series of historical conflicts between American settlers and Native Americans occurred between 1811 and 1924 known as the Indian Wars. Initial peace was disrupted when American trappers and ranchers invaded the mountains and plains, with the Sioux of the Northern Plains and the Apache of the Southwest responding with animosity over land encroachment. Scott Weidensaul explains:

> To Europeans, land was a commodity to be owned outright by one person or entity, and ownership was clear-cut and guaranteed by law. Among the Indians, to the extent that land was 'owned' at all, it was held communally and represented a complex web of vital resources, both physical and spiritual, bound tightly with the seasonal round of life and in which was deeply embedded intricate social bond. (2012, 116)

The conflict between Native Americans and European settlers epitomised a clash of ecological views caused by their distinct cultural systems. The Native Americans possessed an implicit understanding of the land's vastness that could not be determined by human laws. The Europeans, on the other hand, saw the plains and the mountain ranges as a source of wealth to be owned.

Removing the presence of Native Americans in the Northern Plains, Wrede's alternate America appears comparatively more wild and unpopulated prior to the Europeans' arrival. Since

there are no Native Americans to guide the Europeans in their pioneering, at the time Eff's family moves to the western border, the area beyond it is still unexplored and seen as a dangerous, mysterious place: "It was suicide to go west of the Mammoth River, or north of its headwaters, without a magician to keep you safe" (*TC* 68-9). The western region appears threatening partly because the area has not yet been explored. But more importantly, the wilderness appears dangerous and resists human control because the area is home to a mix of magical and non-magical creatures, such as the Columbian sphinxes, saber cats, jackals, terror birds, and dazzlepigs. Some of these wild creatures are fiercely territorial and their unpredictable behaviour of feeding and migration forms a constant threat to the settlers' plan to invade and conquer the western regions.

Another element that the narrative omits to enhance the sense of danger associated with exploring the wilderness is the success of Lewis and Clark's expedition. The Lewis and Clark expedition that lasted from 1804 to 1806 was pivotal to the frontier expansion and *Frontier Magic* frequently references it as the act that opens the era of western expansion. In history, the Lewis and Clark expedition was the first overland expedition to the Pacific Coast and back, and the pioneers were instructed to make reports on the Indian tribes, geography, climate, and distribution of animals and plants in order to prepare for the nation's migration to the west. In *Frontier Magic*, however, Lewis and Clark never make it back, confirming the settlers' fear that some parts of the western region are too dangerous to colonise.

Lastly, *Frontier Magic* erases environmental destruction caused by gold-mining in order to focus on the conflict between human settlers and magical creatures in the wilderness. During the frontier era, the promise of gold was exceptionally appealing, and with it the westward expansion accelerated in order to meet the demand for more housing, faster communication, better transportation, and more efficient government services. The gold rush was a source of extraordinary freedom and empowerment. The gold frontier gave anyone the opportunity to reinvent themselves and test their abilities. But more quickly than other frontiers, perhaps because of its use of hydraulic mining, the gold frontier destroyed natural landscapes for the benefit of miners and capitalists, effectively shaping the frontier narrative into one that privileges economic wealth and material gains over the health of the bio-regions.

By erasing parts of American history that characterise the frontier's ecological consciousness as problematic, such as the presence of Native Americans that implicated the frontier landscape in political turmoils, Wrede's alternative frontier history reduces social conflict between human beings and thus enables a more concentrated look on the conflict between human and nature. Wrede's omission of the presence of Native Americans, Lewis and Clark's successful expedition, and the

gold rush's environmental destruction illustrates that *Frontier Magic* evokes reflection of environmental history through absence and elimination as well as inclusion of fantastical elements. History in *Frontier Magic* is not "the static presence of the material things and structures arranged around us" (Gosetti-Ferencei 2012, 193). *Frontier Magic*'s deliberate omissions indicate that this is not the nature that we know historically, but a constructed image of a fantastical wilderness. *Frontier Magic* reveals history as "a play between presence (things, meanings, actualities) and absence (possibilities, past and future, projects)" (ibid.). *Frontier Magic*'s selective omission is a means of restructuring the cultural and ideological make-up of the frontier and redefining the frontier expansion's trajectory. First of all, by portraying the Lewis and Clark expedition as a failure, the narrative foreshadows the impossibility of pushing against the wilderness and establishing more settlements. The last book, *To the Far West,* involves Eff joining a second expedition to venture beyond where Lewis and Clark were last seen. Their exploration is cut short because the region proves too wild and alien for them to even visit let alone colonise. Portraying the settlers' attempt to tame and colonise the western regions as futile, the narrative creates an alternative frontier in which mastery over nature is not only undesirable but also impossible.

Consequently, the settlers' top priority is to survive by keeping out the wilderness rather than taming it, and this limitation becomes a significant factor that directs Eff's development of environmental subjectivity. Since the settlers' goal is not to control nature but rather to resist it, Eff perceives her magical training as the means of obtaining enough knowledge about the natural world so that she can use it to help settlements to survive environmental catastrophes and the attacks of magical predators. The emphasis on survival rather than control causes her to be open to other magic systems like Hijero-Cathayan magic from the East. Hence, *Frontier Magic*'s ecological exploration of the conflict between colonists and the wilderness is not exactly guiding the reader to engage with what happened in the past. Instead, it uses the frontier as a liminal and transformative place for negotiating diverse epistemological modes and producing a model of ecological agency for responding to environmental crisis.

What might have started out in history as a place of fertile land and bountiful resources has evolved into a narrative model for working out difference and diversity derived from inevitable conflicts. In the imagination of American culture, the frontier is "a complexly resonant symbol, a vivid and memorable set of hero-tales—each a model of successful and morally justifying action on the stage of historical conflict" (Slotkin 1992, 2). For example, *Bad Day at Black Rock* released in 1955 shows a protagonist coming not on horseback but on "a railroad liner— symbol of an urbane, post-World War II America", while Western films in the 1960s and 1970s display "an increasing

cynicism and violence that reflected the national experience of war, assassination, riot, and Watergate" (O'Connor and Rollins 2005, 23). In this way, the frontier embodies the zeitgeist of the historical period of its production.

A key device that awakens the frontier as a land of regeneration in *Frontier Magic* and sets the foundation for its ecological imagery is the use of magic to represent the land's vitality. Where there is an abundance of magic, the spot would have a "warm" aura that signifies the health of the ecosystem. But where there is an abnormality that causes the ecosystem to suffer, the damaged part of the landscape would feel "cold" (*AGB* 186). This notion of magic as a property of living things has its roots in pre-Enlightenment pagan traditions. Keith Thomas writes in *Religion and the Decline of Magic* that in the sixteenth century, during which was no distinction between magic and nature, some of the 'magical' properties are actually "obsolete assumptions about the physical properties of natural substances" (1997, 189). Wrede's representation of ambient magic recalls this pre-Enlightenment formulation of magic, which characterises it as a reflection of the invisible state of the natural world. In addition to projecting the hidden reality of the natural world, magic also functions as a metaphor for ecological interconnectedness. Magic is transferred when magical herbivores consume magical plants that draw on the magic in the soil; and then these magical herbivores are devoured by magical carnivores, whose body would decompose and release the magical energy back into the soil (*AGB* 140). Magic, as the force that pervades all things, becomes an important device in Wrede's construction of the natural world. It gives the narrative a distinct ecological undertone and sets the premise for breaking down species distinction, so that the boundary between settlements and the wilderness becomes destabilised and permeable.

As much as magic serves to recall the historical image of the frontier as a land of vitality, it also reflects the other aspect of the frontier, that is, the land beyond the settlements as a source of primitive danger. Kerwin Lee Klein's *Frontiers of Historical Imagination* (1999) states that the frontier is the "pristine nature of free lands and abundance" that provides the settlers with everything they need for survival, but it also bears the image of the "geography of savagery…the setting of an anachronistic survival of the primitive age of man" (134-5). There is the latent fear of regression embodied in the experience of the frontier. As the settlers battle wild beasts to protect their homes, survive harsh weathers, and labour tirelessly on their homestead farms, the settlers experience a return to a more primitive lifestyle, and moreover, a deep fear of the wild forces of nature. Nature's resistance characterises it as a threat to their physical body, emotional well-being, and self-identity as a civilised human being. Without proper boundaries in place, humans are not any different from the beasts they hunt and kill.

The antagonism between human settlers and nature is core to the pioneering experience, which feeds into the image of the wilderness as a cultural construct. Cronon (1996) explains that the frontier imagery predominantly features man's control over what is traditionally known as the wilderness. The wilderness is the land beyond the settlements. It includes all the natural places that colonists have yet to step into, casting over it an air of mystery and darkness. Cronon, however, also points out that as ecological places become fewer, wilderness begins to be seen as a place that we escape to, a place that stands apart from humanity. Despite the attempt to identify the wilderness as "natural" and untouched by human beings, Cronon asserts that the wilderness is actually "quite profoundly a human creation—indeed, the creation of very particular cultures at very particular moments in human history" (1996, 7). Wilderness, Cronon argues, is comparable to a mirror that we hold up for ourselves, so that we can behold nature, when really,

> we see the reflection of our own unexamined longings and desires. For this reason, we mistake ourselves when we supposed that the wilderness can be the solution to our culture's problematic relationships with the nonhuman world, for wilderness is itself no small part of the problem. (1996, 7-8)

Wilderness in each of its historical manifestations is a symptom of that society's unresolved feelings towards the natural world that stubbornly remains outside human control. In the Bible it is a place of trials and temptations where one is always in fear and trembling. The sense of wilderness as a supernatural place is implicit to the nineteenth-century manifestation, which typifies "those rare places on earth where one had more chance than elsewhere to glimpse the face of God" (1996, 10). The frontier's manifestation of wilderness, however, is slightly different, since it exists simultaneously as a dangerous, primitive place as well as a place of spiritual refuge from the confining strictures of civilised life.

In order to inflect this aspect of the wilderness, Wrede uses magic to enhance the frontier's violent image. The unpopulated areas beyond the settlements are seen as wild because they are inhabited by magical creatures. Greatwolves, columbian boars, mammoths, and bisons roam the forests and plains west of the Mammoth River (which corresponds to the Mississippi River geographically), while the mountain ranges remain mostly unexplored after Lewis and Clark who headed the first group of expedition, go missing in 1804 in Wrede's alternative version. Even though there are research centres set up to investigate animal behaviour and to develop local magical plants into crops for farming, very little is known about the region beyond the settlements known as the wilderness. Moreover, the air of mystery and magic as a form of wild natural energy evokes a strong sense that the frontier "was more than a wild country; it was unknown" (*TC* 25).

Natural magic, as Wrede's naturalist magicians have observed, cannot be destroyed: "you can't permanently destroy ambient magic…You can drain an area of magic temporarily, but it always returns to normal within a few years" (*AGB* 119). Magic is an intrinsic part of the land and serves as a tangible yet mystical indication of the region's health and vitality. Despite having developed magical systems to structure their use and understanding of natural magic, human settlers continue to perceive magic as a sign of the mysterious and threatening power of the wilderness.

Magic, in this sense, is an imaginative device that enhances the frontier's ecological characteristics and highlights the settler's desire to tame the wilderness. When the heroine Eff hears that there is to be a new scientific expedition after Lewis and Clark's that ventures into the wild lands, she exclaims, "[I]t's an even stranger and more dangerous place than anybody says. That's why whenever someone makes it a little further west and come back alive, they have tales of new wildlife no one's seen or heard to tell of" (*TFW* 1). The new expedition indicates that while the settlers fear the wilderness because of strange tales about magical creatures, such as swarms of flaming beasts and lizards that turn humans into stones, they are not content with leaving the wilderness and its magic unexplored and unconquered. To the settlers, the wilderness is "land that men haven't tamed" (*AGB* 60). But with their westward expansion and expedition, they can use their knowledge of natural magic to transform the unknown wilderness into a space that serves human needs. Some magical creatures also have the ability to consciously use their magic to serve their own needs. For instance, the medusa lizards use their innate magic for camouflage and detecting prey. But human magic users are different since they use magic not on themselves but on the external environments as a way of taming nature.

Since magic is seen as "the only thing that will hold back the wilderness" (*TC* 30), Eff's magical training constitutes an ideological synthesis between wilderness and human settlers. As Eff acquires different sets of skills from learning Aphrikan, Avrupan and Hijero-Cathayan magic, she learns to negotiate the three cultural modes of thinking, all of which have distinct ecological inflections. In the historical past, each mode of ecological thinking is confined to their historical epoch and geographical context: the Enlightenment in Europe, the rise of Taoism in China, and African witchcraft in North America. Yet they are brought into the same space of ecological exploration by, first of all, the presence of magic in a revisionist frontier setting, and secondly, the heroine's bildungsroman narrative that identifies a synthesis of magic types as the goal of her growth and training. In other words, Eff's education in magic is an attempt to recover what has been lost in our history with nature by reimagining the evolution of environmental thought. In more practical terms, Eff's magical training is a medium that enables the reader to consider the

hybridisation of natural knowledge in a contemporary society overwhelmed with information, and how hybridised knowledge can contribute to our reception of ecological crisis. Hence, *Frontier Magic*'s most innovative feature is not really magic that reproduces notable dimensions of the frontier, such as nature's vitality, nature's wild and untamed aspects, or human settlers' desire for control even though they are important for establishing revisionist ecological dimensions of the frontier. Rather, it is the portrayal of magic that operates as the most significant narrative device for reconciling distinct modes of ecological awareness.

Sensing Nature

Eff's first stage of training involves Aphrikan magic. It equips her with the basic skill of 'world-sensing', which is a mode of ecological perception that signifies the importance of being open to external forces. Aphrikan magic's way of sensing nature is distinct from Avrupan magic's objective knowledge. In their first class, Miss Ochiba emphasises being open as a necessary discipline in order to cast Aphrikan magic. She tells the class, "To be a good magician, you must see in many ways. You must be flexible. You must be willing to learn from different sources" (*TC* 50). Eff describes it as learning "to watch everything around you very closely and try to meditate quietly inside your head, both at the same time" (*TC* 103). It requires intense self-awareness, which Eff likens to "lighting the candles and getting the balls rolling in the first place" (ibid.). The first time Eff successfully practices Aphrikan magic's world-sensing, Miss Ochiba tells her, "That was your sense of the world, unfolding" (*TC* 105). World-sensing enables Eff to perceive the natural world in a way that is not readily experienced by ordinary humans, which draws Eff into a higher realm of consciousness where she realises her connection with other organisms in the environment.

Eff's heightened senses can be located in the tradition of phenomenology, a term that was coined by the physicist Johann Heinrich Lambert in 1764 to designate the study of physical phenomena as they appear to the senses. It was then developed by post-Kantian philosophers Edmund Husserl, Martin Heidegger, and Maurice Merleau-Ponty as a way of exploring intuition and existence. Miss Ochiba's emphasis on openness and receptivity through meditation inflects the phenomenological tendency to treat the body as the point zero of the subject's self-orientation in the world. Through Aphrikan magic's phenomenological filter, the body becomes the origin and expression of the individual's subjective intentionality, which is distinguished from Avrupan magic's divisive approach to body and matter. The narrative thus presents Eff as a model of ecological subjectivity formation that signals phenomenology as a way out of a rigid structuring of

human-nonhuman processes. In their introduction to *Eco-Phenomenology: Back to the Earth Itself*, Charles S. Brown and Ted Toadvine write:

> For environmental philosophers, phenomenology suggests alternatives to many of the ingrained tendencies that limit our inherited perspectives: our myopic obsession with objectivity, our anthropocentric conceptions of value, and other legacies of Cartesian dualism. Phenomenology opens a space for interdisciplinary examination of our relation with nature, for a scrutiny of the historical and institutional construction of the "natural," and even the role this concept plays in the formation of our cultural and self-identities. (2012, xii)

Eff's training in Aphrikan magic shares many similarities to phenomenology, such as rejection of scientific duality and attraction to a less anthropocentric outlook, framing Eff's personal development as a case of using phenomenology as the catalyst of her shift towards the ecological and her entry into a less hostile relationship with the natural world. *Frontier Magic* portrays world-sensing as a huge turning point in her Aphrikan magic training, enabling Eff to overcome Avrupan magic's rationalist assumptions that hinder her growth as a magician and conceals her true powers. According to Avrupan magic, which is based on numbers, being a thirteenth child means that she is cursed. The 'cursed child' label has always been a burden to Eff, since it creates the impression that she should not use magic since it will cause harm to others. The curse becomes a metaphor for rationalism's inherent biases and their detrimental values. It exposes the rationalist calm to categorise living organisms as an unnecessary harmful exercise, since it suppresses each creature's individual subjectivity and autonomy. Hence, Eff's unconscious resistance to Avrupan magic signals the need to turn away from scientific rationalism's arbitrary assumptions, and Aphrikan magic's emphasis on receptivity and intuition as the more sympathetic mode of ecological thinking.

Eff's heightened receptivity initiates her experience of the wilderness beyond the structures of social norm and rationalist discourse. Aphrikan magic identifies the human body as a receptive network and the wilderness as the subjective experiential realm. World-sensing is a skill that favours controlling oneself more than controlling the environment, which is similar to the kind magical creatures use for survival, for it is "something you do to yourself, inside your own head, so that you can feel more of what's going on around you" (*AGB* 184). Aphrikan magic depicts an ecological reality of which humans are already a part. Consequently, Eff begins to see the wilderness as a realm of spiritual energies and where rocks, plants, animals, clouds, rain, wind, and shadows are treated as meaningful reflections of nonhuman agencies that are outside her body, yet nonetheless, part of her existence in some way. Nature's lack of agency and our sense of alienation, as Aphrikan magic demonstrates, are not problems derived from our position in nature. Since we

72

have not taken our bodies out of nature, they are problems related to our self-perception that renders nature's agency ineffective. Our body is an open network, as illustrated by Aphrikan magic, which enables our senses to operate in a state of readiness to receive and to contact the nonhuman environment that surrounds us. Yet as we increasingly see ourselves not in relation but in contrast to the nonhuman world, that distinction dulls and suppresses our sensuous awareness of forces and materials that touch and even enter our bodies.

Eff's preference for Aphrikan magic's world-sensing reflects wilderness's image as a refuge from the emotional burden of living in a post-industrial society. In this light, Eff's training encourages a return to a simpler and more primitive understanding of human-nature relations, which Abram conceives as the lost ability to make contact with nonhuman powers. Abram explains, due to "the modern, civilised assumption that the natural world is largely determinate, and mechanical…that that which is regarded as mysterious, powerful, and beyond human ken must therefore be of some other, nonphysical realm *above* nature" (1996, 8). Eff's world-sensing is a way out of the modern, more detached and alienated conception of nature, but it is not without its own inherent complications.

Aphrikan magic's ability to connect to living organisms purely in the physical mode turns dangerous and problematic when Eff calls upon her world-sensing skill to destroy a species of magical insects. *Frontier Magic* uses the infestation trope to portray the mirror bugs' destructive influence over the settlements. Infestation is a trope of environmentalist fiction, which portrays the moment when a species turns invasive and aggressive against other species to the detriment of the entire ecosystem. The infestation is an event that causes Eff to reconsider and reconstruct the intricacy of ecological interrelatedness and evaluate her own anthropocentric judgment of species based on their contribution to and effect on human survival. The mirror bugs' larvae eat "all the grass and grain and leaves", which leaves "no food for the small animal, like mice and squirrels and birds" (*TC* 262). With no food for large animals, the predators become "hungry enough to attack travellers and even settlements in spite of the protective spells" (ibid.). *Frontier Magic* legitimises the heroine's extermination of the mirror bugs as a necessary act of violence. The unprecedented scale of the infestation forces Eff to confront a warm of mirror bugs and use Aphrikan magic to 'tweak' their magic-absorbing mechanism so that the species end up devouring each other, an image Eff likens to "setting fire to the corner of a sheet of paper…[which] turn[s] black and curling, and you have to drop it or singe your finger" (*TC* 334). The connection between violence and Eff's use of Aphrikan magic is a reminder that, just because Aphrikan magic frames the wilderness into an experiential sensorium, that does not necessarily imply that the wilderness is a safe ecological

space. The infestation and the insects' extinction renders the imagined sensorium a zone of conflict between human and wildlife, which undermines the notion that a sensorium is benign to its inhabitants.

More importantly, Eff's use of Aphrikan magic to exterminate and restore the ecosystem back to its functional state advocates a form of ecological stewardship that is inherently contradictory. The imagery of dropping a piece of burning paper in order to save yourself is alarmist and radical in the most problematic way, since it implies that human beings possess enough objectivity to discern the source of ecological collapse and the power to remove and eliminate it. The mastery undertone contradicts the phenomenological approach EFf practices and creates a paradoxical dilemma in which the method is ecological but the outcome is anthropocentric and egocentric. On the one hand, ecological stewardship encourages the reader to think about nature more holistically and historically from a conservationist vantage point. It also encourages the reader to take a more active role in pastoral responsibility, which includes managing living organisms in a locality so that the ecosystem's health remains in an optimum range for the growth and development of all its human and nonhuman inhabitants. On the other hand, ecological stewardship denotes the need to carry out utilitarian assessments that contradict its holistic vision of all creatures being equal and essential. Ecological stewardship implies converting nature conceptually into resources for efficient management and long-term preservation, which appears as a convenient yet unsettling justification for the extermination of an invasive species.

In summary, Wrede's revisionist history appears didactic as a means of communicating and making relevant a particular form of sensibility in a time of ecological crisis. It opens up the possibility that violence and conflict are inevitable when it comes to conservation. The extermination of the mirror bugs questions the extent to which ecological stewardship in practice could be ruthless and unfeeling. When Eff senses nature, she is forced to realise that nature is inherently violent but human action renders problematic existing tensions of conflict. Eff's phenomenological encounter and subsequent control over the mirror bugs reveal the disconcerting causality between the settlers' fear of the wilderness and the unnatural evolution of the mirror bugs and, as a result, forces her to acknowledge that conflict between settlers and nature is aggravated when humans attempt to control and manage wildlife.

Studying Nature

Even though the first stage of Eff's training leads her away from Avrupan magic's divisive approach and towards a more sensuous mode of contact and reflection, there is still the need to confront their ideological differences. This mostly takes place in the second book *Across the Great Barrier*, which features demonstrations of Avrupan magic as a necessary tool for conservation and studying the ecosystem. Avrupan magic is a system based on analysis and control. It contains various disciplines, each with its own specialised methods and instruments such as geomancy, which is a "difficult specialisation that mixes geology with several kinds of magic, including divination" (*TFW* 33). Then there are the more general spells worked by most Avrupan magicians, which usually require the magician to process and distribute botanic materials in a specific pattern. Unlike Hijero-Cathayan magic that emphasises collectivism, Avrupan magic is about the individual:

> when teams of magicians work together on something, they do it by each casting one particular spell that fits together with all the other spells, like the teeth on a set of gears fit each other. If one magician gets it wrong and his piece fizzles or blows up, the big spell doesn't work, but it doesn't hurt any of the other magicians or affect their magic. (*TC* 200)

The clockwork metaphor implies that Avrupan magic operates in a similar manner to scientific rationalism with an emphasis on precision and mastery. Avrupan magic has its roots in numerancy[11], also known as Pythagoran number magic, and relies on mathematical calculations for casting spells: "All of these numbers, and more, have meanings and importance, according to Avrupan numerancy theory" (*TC* 99). Thomas S. Kuhn identifies paradigm shifts as a fundamental concept that explains the development of ideas and practices in the scientific discipline, but Kuhn also argues that in the process leading up to the paradigm shift, scientific development is a cumulative process by which "items have been added, singly and in combination, to the ever growing stockpile that constitutes scientific technique and knowledge" (1996, 1). Avrupan magic, on the other hand, remains faithful to the Pythagorean theory and a paradigm shift that transitions the magicians out of Pythagorean theorem and into, for example, Newtonian physics, never occurs. Critique of Avrupan magic's rationalist conception of nature, thus, is articulated by an Aphrikan magician who is more sympathetic towards the natural world.Miss Ochiba illustrates Avrupan magic as a form of primitive science that remains bound to its early biases, since "Pythagoras laid the numerical foundation for both mathematics and magic. Unfortunately, like many of the ancient Greeks, his work was not always as rigorous as it might have been" (*TC* 98). Hence, because the historical development of scientific rationalism occurs in stages while Avrupan magic has not, it is difficult to

---

[11] A neologism that is the equivalent of combining magic with numeracy.

identify Avrupan magic as scientific rationalism's direct parallel. Nevertheless, with its clockwork imagery, use of instruments and objective methodology, and numerical calculations, Avrupan magic operates as an imaginative device for enacting the most striking feature of scientific rationalism, that is, its emphasis on scientific objectivity and mastery.

The difference between Aphrikan and Avrupan magic means that when Eff's Avrupan study progresses alongside her Aphrikan training, Eff has to reconcile her shamanistic receptivity with Avrupan magic's mechanistic practices and philosophy. In Aphrikan magic's shamanistic universe, magic is "alive, to be shaped as a master gardener shapes his trees and bushes" (*TFW* 208). Unlike Aphrikan magic's non-intrusive approach to the nonhuman world, Avrupan magic disregards the nonhuman environment's agency and dynamism, and instead, forces things "to change and be the way the magicians want them to be" (*TFW* 118). It projects a mechanistic view that reinforces the arbitrary separation between human society and the natural world, designating wildlife as beasts outside the boundaries of civilisation. Using Eff's learning trajectory, *Frontier Magic* projects the possibility of inculcating scientific thinking without negating the heroine's intuitive approach to the natural world. This negotiation is central to both the heroine's formation of ecological subjectivity and the reader's understanding of the tension between rationalism and intuition.

When Wash, Eff's guide and Aphrikan magic tutor, notices that Eff is synthesising Aphrikan and Avrupan magic by using one to fix the other, he warns, "Aphrikan ways of spell working don't generally mix well or easily with Avrupan-style magic" (*AGB* 69). Yet Eff continues to accommodate Aphrikan magic in her Avrupan magic learning by using it to "tweak the magic of the spell directly if it started to go wrong" (ibid.). Eff's hybridisation demonstrates that ecological subjectivity is not about assimilating the more scientific theory to replace the outdated one; rather, it is allowing different thoughts and discourses to shape one another. Eff's formation of ecological subjectivity promotes a cross-pollination of ideas. The hybridisation indicates that the basis of ecological receptivity should not be abandoned but integrated with scientific objectivity despite their antithetical operations.

Although Aphrikan magic is not negated, Avrupan magic emerges as the dominant model that has the most influence on Eff's environmental consciousness. Bringing the protagonist further into the colonial system of human mastery, the narrative progression suggests that the two systems may coexist, but the settlers' goal and aim should be intrinsically related to understanding nature and subjecting it to human intentions. Later when Dr. Torgeson, Eff's Avrupan tutor, disciplines her to use Avrupan magic without the aid of Aphrikan magic, Eff expresses frustration because she has developed the habit of using them in tandem. Eventually she learns that the trick of casting Avrupan

magic is about finding a "balance point…Like building with jackstraws, one at a time" (*AGB* 208), at which point she confesses,

> I'd been using Aphrikan magic all wrong for near on to a year now. I hadn't really been trying to work my Avrupan spells right…I'd never thought of my problems with Avrupan magic as mistakes that I could learn to fix. (*AGB* 210-11)

Eff's discovery changes the course of her learning, propelling the narrative towards a discourse of control and mastery. The reason for Avrupan magic's dominance becomes apparent in a conversation between Torgeson and Eff regarding its merits and contribution to the process of colonisation of the land. Professor Torgeson tells her, "Gathering base data is just as important as making entirely new observations. More important, sometimes; you can't tell whether something's changed if you don't know what it was like to begin with" (*AGB* 124). In other words, Avrupan magicians like Torgeson do not merely conduct geological surveys because they desire to know more about nature. They do it because the scientific survey is how they can obtain useful information about wildlife behaviour, patterns of plantation growth, and weather change, all of which are necessary if the settlers are to survive on the edge of the frontier.

Frontier Magic uses Avrupan magic to articulate the importance of controlling nature for the sake of human survival. But it also suggests that Avrupan magic has dangerous and divisive inclinations. The danger of conforming to Avrupan magic is that it is a system that alienates nature. Speaking as an Avrupan magician, Torgeson tells Eff that wildlife is something "you shoot first, and study later" (*TFW* 193). Torgeson's statement effectively captures the instrumentalist values of Avrupan magic and reveals its objectification of wildlife. Moreover, the Great Barrier Spell, which keeps out wildlife, is a prominent embodiment of Avrupan magic's detached, objective, and instrumentalist approach to nature. The Great Barrier is constructed by the fictionalised Benjamin Franklin and Thomas Jefferson before the American Civil War for the sole purpose of keeping out "the dire wolves and saber cats and steam dragons and other wildlife of North Columbia" (*AGB* 48). Franklin and Jefferson never wrote down how they built it, and it is assumed that Franklin "improvised a lot when it came to actually working the spell" while Jefferson "never could remember that most other magicians hadn't read four thousand or so books the way he had" (*TC* 248). Even so, Eff's generation of magicians know enough about the Barrier to treat it as a symbolic and literal division between settlements and wilderness.

Based on the settlers' view of the barrier as a survival necessity, it is clear that there is a connection between their innate fear of the wilderness and their preference for Avrupan magic that emphasises objectivity and control. Among the settlers there is the common understanding that

"magic is the only thing that will hold back the wildlife" (*TC* 30), so no one should disturb the Barrier "on account of maybe making it fall apart and letting the wildlife back in" (*AGB* 58-9). The Barrier thus instantiates binaries that are foundational to the frontier imagery: predators that threaten human livelihood are kept outside the Barrier, while crops and livestock are allowed in. Wilderness is what is outside the Barrier, a desolate and dangerous place without human presence and influence; while the settlement is inside the barrier, a risk-free and circumscribed space without signs of wilderness. To the settlers, the binary is not some abstract theory but a constructed reality that defines their human identity.

Despite its practical use as a necessary form of defense, the Great Barrier Spell disrupts the flow of magic, and creates an ecological crisis that requires Eff to use her hybridised knowledge to counteract its effects. An unforeseeable consequence of the Great Barrier Spell is that the Barrier forces the magic upstream all the way to its source, creating an abnormal reservoir of magic at the head of the river. According to Avrupan magicians who have reproduced this phenomenon in scientific settings, "[a]ll of them collapsed after a short time, letting the reservoir of magic that had been built up flow back along the generating conduit all at once. The surge always overloaded the desired spell, causing it to collapse—sometimes with unpredictable side effects" (*TFW* 317). In the controlled setting of Avrupan magic, the experiment signals the potential collapse of the Great Barrier and predicts its influence on the surrounding settlements. But it fails to take into account the Barrier's destruction as a form of ecological crisis, which impacts indigenous plants and animals. It is not until the magicians enter the western region that they could tangibly perceive signs of this outcome. Dr. Lefevre explains, based on the topology and distribution of magical and non-magical creatures, "there seem to be a lot more wildlife indications on the northern half than farther south," which means that "the magic build-up along the river was attracting magical wildlife" and as a result, "[t]he magical wildlife around the river appears to have adapted to the high levels of available magic caused by this peculiar build up" (*TFW* 359). The trappers suspect that the ecological disturbance makes their livelihood more difficult. The newly evolved magical predators drive away their prey, so "[t]here might be enough for the rabbits and ground squirrels to eat, but for sure not the giant beavers and deer" (*AGB* 293). Magic is not only a device that illuminates ecological connectivity, nor is it merely for representing distinct modes of ecological subjectivity. In this particular case, the magical barrier and its potential collapse signal the disrupted relationship between the land and its people.

To the contemporary reader, the Great Barrier Spell becomes the metaphorical representation of physical and psychological alienation from nature, while the unnatural reservoir of magic forms

the imagery of the ecosystem's disrupted order. Based on Avrupan magicians' study of natural magic, they claim that "[n]atural magic, the kind that grew from rivers and plants and animals, was organised…according to whatever grew it" (*TFW* 354). Magic, the life force of living things, implies a predetermined order according to the functions of each living organism. Nature, then, is the order that regulates the growth and distribution of plants and animals in their habitats and environments. The Great Barrier Spell, however, undermines this supposedly 'natural' order of things and instigates an unprecedented ecological crisis. The cause of ecological crisis, as *Frontier Magic* reveals, is embedded in the settlers' belief in their power to control nature. Instead of allowing magic as the natural force of life to govern their living, livelihood, and migration, they treat magic as a thing to be used like "stone to be shaped, metal to be melted and re-formed" (*TFW* 208). The Great Barrier Spell shows that the root of environmental crisis may be more to do with how we think about nature than nature's diminishing state. As *Frontier Magic* moves from the embodied experience of nature offered by Aphrikan magic to the alienation induced by Avrupan magic, it constructs an ecological cause-and-effect formula that prepares the reader for instruction: instrumentalism produces alienation, alienation produces ignorance, and ignorance produces crisis.

What appears to be a rational self-defence against man's inability to comprehend nature's more-than-human condition is in fact an attempt to conceal the reality of our embeddedness. In consideration of the rampaging fear of ecological crisis in the contemporary present, Žižek writes, "We are not Cartesian subjects extracted from reality, we are finite beings embedded in a biosphere that vastly transcends our horizons" (2008, 54). In this light, the negative example of the Great Barrier causing environmental meltdown can be seen as a warning system, which signals to the reader the danger of being estranged and alienated from nature. Consequently, *Frontier Magic* portrays Avrupan magic in a negative light as a divisive and destructive ideology, but ultimately it also serves as a practical means of self-defense that allows the settlers to demystify their fear of nature. The decision to see nature as vital and phenomenological, or mechanical and utilitarian, thus becomes an exemplary model for the reader, who exists in a society where both exist—though in unequal relationship— and remain active as cultural forces. Eff's transition thus articulates the view that, because we cannot escape being defined by rationalism's mechanistic metaphor, we need to be even more vigilant and sensitive to our own embeddedness, lest we are deceived by the illusion that a constructed barrier can truly keep out the wilderness.

Working with Nature

The final stage of Eff's training involves Hijero-Cathayan magic, which acts as a buffer between Aphrikan and Avrupan magic so that they can coexist dialectically within the heroine's ecological subjectivity. Hijero-Cathayan magic is known as the magic of the East, which emphasises cooperation, harmony, and balance. Its spells are always done in groups rather than by individuals for big projects such as "moving rivers and clearing out dragon rookeries" (*TC* 200). When Eff sees Hijero-Cathayan magic for the first time, she describes it as a slow group dance:

> At first, all five of them made the same flowing movements…After a few minutes, the adept called out a single word. Smoothly, the five aides changed their movements again. They were still slow and deliberate, moving smoothly and continuously from one direction to another, but each person was doing something different instead of everyone making the same movement. It still looked like a dance, but like one with different parts that fit together instead of like one where everyone did the same thing. (*TFW* 101-2)

The progression from repetition to variation while retaining a sense of balance and cohesion is a defining characteristic of Hijero-Cathayan magic. It is the type of magic that values flexibility and collectivity, which requires the individual to adapt to others.

Unlike Avrupan magic, that identifies nature as wilderness to be conquered, Hijero-Cathayan magic is about joining the holistic flow and becoming one with it. From a Hijero-Cathayan perspective, magic is an undercurrent of energy that magicians tap into. Avrupan magician's individualism is myopic because, as Adept Alikaket points out, "You Avrupans, you fill a bucket with water and think you know the river. But if you take the river to pieces, it isn't a river any longer" (*TFW* 209). In this sense, Hijero-Cathayan magic resonates with the Taoist image that likens nature to a flowing river that cannot be grasped or contained:

> The Tao itself cannot be defined; it is nameless and formless. Lao Tau likens it to an empty vessel, a river flowing home to the sea, or an uncharted block. The Tao follows what is natural. It is the way in which the universe works, the order of nature which gives all things their being and sustains them. (Marshall 2015, 12)

The similarity between Taoist views and Hijero-Cathayan magic is a useful starting point for orienting Hijero-Cathayan magic's ecological design and accommodation of other forms of magic. At the end of *The Far West,* Avrupan, Aphrikan, and Hijero-Cathayan magicians work together to prevent the magic reservoir from flooding the settlements. Presenting cooperation as the completing lesson, Eff's development asserts that our struggle against environmental degradation cannot be achieved by isolated individuals. Through Eff's Hijero-Cathayan magic training, she apprehends that the greater the crisis, the more she needs to rely on others' abilities and viewpoints.

Hijero-Cathayan magic serves the didactic function of articulating the importance of shaping oneself to fit and cooperate with others. To practice Hijero-Cathayan magic, the magician "must be at one with the magic that is oneself" (*TC* 268). Adept Alikaket likens the process to the feeling of being immersed in the river as a drop of water: "We flow together, and then apart, but it is still the same. It is the harmony, the balance, that joins us to cast the elegant spells and then parts us once more" (*TFW* 208). Cooperation becomes essential when Eff confronts her final challenge. When Eff and her group pool together their knowledge to evaluate the crisis scenario, Eff applies this principle of cooperation to bring together Aphrikan, Avrupan, and Hijero-Cathayan magicians and find a common solution: Aphrikan magician Wash is in charge of 'sensing' a weak spot, Professor Torgeson and Dr. Lefevre co-ordinate with Wash to stabilise the spell using Avrupan magic, while Adept Alikaket performs as the main Hijero-Cathayan magician who oversees the entire operation and works the main spell (*TFW* 347). The image of magicians from different cultures and backgrounds working together is admittedly idealistic and impractical. But its idealism is necessary since the image presents a metaphorical closure to the problem of being alienated from nature and of being divided ideologically amongst themselves.

During this last stage of Eff's ecological formation, Eff enters a deeper level of experiencing the nonhuman world and finds magic as the essence that permeates all living things. She discovers "the quiet that was just magic and no spells…like the ocean in my dream: calm one minute, swirling chaos the next" (*TFW* 334, 355). The subterranean space of deep magic exposes spells and systems as constructs that humans forcibly impose on the nonhuman world. Hijero-Cathayan magic, it turns out, is closely aligned to the "true" appearance of magic. Hijero-Cathayan magic goes beyond Aphrikan magic's phenomenological embodiment in the nonhuman world, and even Avrupan magic's instrumentalist exploitation and alienation from the wilderness. To the Hijero-Cathayan, "Our magic, the Cathayan magic, is us, and we are it, all together, as drops of water are a river and the river is made of drops of water" (*TFW* 208). The Hijero-Cathayan magician calls upon magic as a means of harmonising one's being with the world, as one who has been assimilated into the collective network of living relations. The image of nature as deep and boundless, in which we all play a part, is foundational to Eff's ecological subjectivity. Instead of forcing nature to do what humans want, Eff's utmost priority in the face of crisis is to succumb to nature's inherent agency to meet its needs. By heightening the significance of magic that denotes unity and force of life, *Frontier Magic* reinvigorates the image of America's colonial landscape to express nature's inherent agency and vitality. The goal and aim of nature, as Eff discovers, are simply "according to whatever [grows] it" (*TFW* 354). At the end of the trilogy, *Frontier Magic* returns to this crucial thought

regarding a deep and profound respect for nature, including the way different kinds of plants and animals grow according to their own kind. However, there is nuance in *Frontier Magic*'s representation of nature derived from the subtle difference between suppressing nature's agency and controlling it in order to protect it. Magicians, who typify human colonists, are the supposed masters of nature who impose their will on their environmental surroundings. *Frontier Magic* shows this to be sometimes a positive interference in the natural order of things, especially when nature itself goes awry and becomes hazardous to the survival of numerous species. The awareness of nature's agency that imposes order is meant to provide consolation, as it makes Eff's intervention seem less calculating, and nature more alive and vital in its own right, but it also seems heavily romanticised, abstract, and impractical.

The goal of Eff's ecological subjectivity is similar to deep ecology. which in children's literature is often presented as "an approach to understanding the natural world and participating in it" (Newman 2009, 182). In its original conception, deep ecology conveys the significance of spontaneous experience of the more-than-human world, and "a realisation that we are dependent on the non-human elements as well as those directly pertaining to human life" (ibid.). Its purpose in children's literature is often to provoke a new awareness of human-nonhuman relationships in order to foster an ethical commitment to nature. *Frontier Magic*'s formulation of magic enacts this by setting up a totalising realm of energy as a metaphor for the interdependence that subsists between human and nature. Curry (2013) finds deep ecology as a potent moral antidote to capitalist exploitation, but she also criticises deep ecology's abstraction of nature, which is also present in *Frontier Magic*. Curry writes, "If the abstract expanded Self of deep ecology is to encompass nonhuman others, it lacks the capacity to distinguish the specific and particular needs of the environment it represents over the more general needs of the human who defines the medium of representation" (2013, 162). The same dilemma can be seen in the culmination of Eff's development. Before she is subsumed by magic that flows in the subterranean world, she competently navigates the different epistemological systems and cultural arrangements that define human-nonhuman contact. Even though she never completely reconciles them, her development usefully draws out their contradictory aspects and demonstrates how the various discourses could be complementary to each other. But as soon as she enters a mystical space where all things are connected, the qualities that make each magic system distinct lose their meaning and significance. The reader is left with the perplexing situation of realising that the diversity of human culture and knowledge could be used to resolve environmental issues, and yet discovers this approach to be

useless in the end when the protagonist could simply fuse herself with nature to fix the problems internally.

The ecological ramifications of this unsatisfactory closure needs to be examined in the colonial context of *Frontier Magic*'s revisionist history in order to ascertain its meaning. First of all, Eff's magical solution to the frontier's ecological crisis implies that the bond between man and nature is founded on a connection of life, and as an alternative to nineteenth-century colonial America's anthropocentric paradigm. The image of an interconnecting web of life and vital energies is a powerful one. It is the ultimate reckoning of the heroine's ecological awareness that links human and nature so that they either thrive together or perish together. Historically the frontier is known as an expansionist movement. But *Frontier Magic* has used magic to reconfigure the frontier to be a landscape of living connections, so that instead of existing as a colonial space that expands westward, the frontier emerges as a constricted space surrounded by wild dangers that brings the theme of conservation and coexistence to the foreground.

A Fantastical Frontier

Kerwin Lee Klein states that it is characteristic of the frontier to provoke reflection about human beings' past relationship with the land, since the frontier is "the ragged edge of history itself, where historical and nonhistorical defied and defined each other" (1999, 7). Indeed *Frontier Magic* presents the frontier as the meeting place between old and new ways of thinking about the natural world. Wrede's alternative frontier functions as an imaginative space in which indigenous traditions and scientific rationalism mix to create hybridised approaches to nature. At the end of Eff's coming-of-age, she subscribes to multiple cultural perspectives that animate her ecological subjectivity. All three approaches prove instrumental to helping Eff to improve the settlers' livelihood and survival, and moreover, to restore the ecological balance in her local region. In this way, Eff's coming-of-age is a story about our evolving environmental thinking. Aphrikan, Avrupan, and Hijero-Cathayan magic all have their roots in environmental thinking or science that was, at one point, popular and authoritative in its historical context. But as knowledge evolves over time, they have become marginalised or obsolete compared to contemporary rationalist science. Wrede's fantasy de-historicises these historical forms of thinking by allowing them to converge and collide, forming a postmodern space that enables the reader to imaginatively negotiate conflicting environmental views.

The plurality of Eff's ecological subjectivity, despite its eclecticism, is not random. The intermingling of ecological perspectives is significant since it underlines a distrust of grand narrative. Instead of repressing each ecological thought in its distinct period, *Frontier Magic* confronts the past as a space of "repetition and deferral" (Elias 2001, 48). *Frontier Magic*'s fantasy, in this sense, is a decentred absence, removed yet anchored in history. In this way, Wrede uses fantasy to reconfigure the history of environmental thinking and asserts a kind of alternative imaginative coherence amongst ideologies and discourses, with the intent of producing environmental subjectivity in the protagonist and the reader that can best confront ecological crisis.

According to Kristine Kathryn Rusch, alternative pasts operate as thinking tools because they reveal the tendency for mistakes in human beings: "We look backward to go forward. We have to understand what we did wrong before we attempt something a second time…One tool in the analysis is the what-if" (2012, 83). In the same way, by layering Eff's cognition of nature, the narrative promotes the retrieval and synthesis of older forms of ecological thoughts to provide ideological pathways that are not readily available in the reader's present. From within the anachronistic gap created by fantasy, Eff's learning experience enables three distinct epistemologies to intersect and cross-pollinate, balancing out each other's flaws and weaknesses and strengthening their potency overall. By unveiling an alternative past that is a composition of heterogenous cultural histories, Wrede conveys the notion that there cannot only be a single "right" and "correct" paradigm that explains the complexity of human and nature interactions. Aphrikan magic's world-sensing complements Avrupan magic's precise calculations. In contrast, Hijero-Cathayan magic's holistic orientation is the platform on which the three types of magic can intermix while retaining their own unique traits. On their own, they are inadequate responses to ecological crisis. Without Avrupan magic's geological survey, Eff's group would not know where to establish the boundaries of their group spell, which could potentially spill over and aggravate the crisis scenario. Similarly, without Aphrikan magic's world-sensing, their group would not be able to sense how the magic in the river is growing stronger or find another river to redirect the flow of magic. Eff's dialogic reception overrides the either/or mentality and replaces it with synthesis and hybridisation. This kind of closure fails to resolve fundamental contradictions, but it has an emotional reach that provides the reader with consolation, articulating the impractical and superficial message that a hybridised thinking is the beginning of forming a practical environmental subjectivity.

But there is also complication caused by presenting this kind of ecological ideal in a historical context. Because the frontier setting brings human-nature conflict to the foreground, the heroine's development of ecological subjectivity invariably takes human survival as its goal. Despite Eff's

progressive view on how magicians should engage with various forms of life, Eff's maturation enacts the settlers' triumph over the wild. Each of Eff's solutions contributes to the ecosystem's collective health, but it always involves some form of violence against nature. In order to save the settlements and the forests from being overrun by the mirror bugs, Eff exterminates the entire species using Aphrikan magic, which results in the mirror bugs' falling from the sky "like silver rain. New mirror bugs rained upward as the crawling beetles popped and took off, then fell in turn as the beetles farther out absorbed *their* magic" (*TC* 334). Despite its poetic ring, what Eff has effectively instigated is the mirror bugs' extinction. Eff's encounter with the medusa lizards has a similarly morbid ending:

> I saw a flash of movement between the trees and everything slowed. My world-sensing spread out around me, clearer and stronger than before…I felt the second medusa lizard pull the scales back from the knob on its forehead and open its mouth to send its petrifying magic straight at Lan and me…I moved my riffle barrel a hairsbreadth to the left and squeezed the trigger. The bullet hit square on the black knob in the lizard's forehead. It didn't even have time to shriek before it fell over and died. (*AGB* 330)

Eff's sharpened senses in the moment of violence as rupture in her connection with nature is potentially problematic because, on the one hand, it shows that *Frontier Magic* constructs the heroine as an agent of positive ecological change. By destroying the lizards that have been depleting magic in the northern regions and thereby destabilising the ecosystem, Eff presents a picture of human intervention as something necessary to the maintenance of the ecosystem. But on other hand, because of the historical frontier's mastery discourse, Eff's experience of human-nonhuman violence and triumph over the wilderness show that ultimately human survival is what matters. In this respect, *Frontier Magic* is not as subversive as it premise suggests. Instead, it consoles and assures the reader, regardless of whether your ecological disposition benefits the ecosystem or not, what is most important is that it results in human survival.

Frontier Magic demonstrates there is danger in returning to the frontier to reimagine the triumph of man over nature since the approach implies a degree of compliance as well as resistance. *Frontier Magic*'s revisionist aspect appears as an innovative way of processing diverse environmental discourses, but its efficacy is limited by the narrative's implied justification for environmental violence. *Frontier Magic* as a representation of ecological recovery is timely and relevant because it articulates present concerns about the conceptual, spiritual and practical methods by which ecological crisis can be resolved. The concluding scene, in which Eff alters the flow of magic in nature in order to correct it, is a sign that ecological crisis and human anxiety of being

swallowed up by nature are inescapable, so our best response is that take up our responsibility to exercise our ecological stewardship.

Eff's environmental subjectivity is inherently dialogic, allowing multiple diverse thoughts to traverse its internal landscape and interact with one another. It is both a critical reflection of our own complex society, and an ideal of how our environmental subjectivity should be. It is important to recognise that *Frontier Magic* contests the mastery discourse of traditional frontier narrative using the deep ecological image of living relations, but the magic systems themselves do not subvert the frontier narrative's anthropocentrism completely. Rather, the magic systems are there to reorient human mastery over nature in a colonial setting so that human knowledge can be more closely aligned with the needs of nature as well as those of human settlers. The image of human magicians collaborating to resolve ecological crisis reinforces the notion that the fate of nature and that of human settlers are deeply intertwined, since "[a]ll people need functioning, unpolluted ecosystems for everything from food and materials to medicine and protection from natural disasters. The ecosystems that provide these services to humanity are the same ecosystems on which many other species also depend" (Kareiva & Marvier 2012, 965). Indeed as Eff and other magicians speculate on the frontier's future and their spell's effects, they realise, "while it's certainly not back to what we would consider normal levels, the change is bound to have an equally significant effect on the adapted species" (*TFW* 360). At first their human intervention may seem detrimental to the species' survival, in the sense that "[p]redators that use magic to hunt will have much greater difficulty in catching their preferred prey" (ibid.). But overall, there is the belief that draining the magic reservoir is a positive outcome, since it restores the ecosystem to the state before the Great Barrier's construction.

Frontier Magic thus shows that it is difficult to distinguish between anthropocentric and biocentric decisions through the protagonist's hybridised subjectivity. Although the settlers' intention is to drain the reservoir so that it can prevent the creation of more invasive and threatening magical species, their human-centred decision has positive influences on the region's level of natural magic, and by extension, its ecological health. Consequently, although the narrative culminates in an image of deep ecology that connects all things, the tone is cautionary. Dr. Lefevre is optimistic that Eff has solved the problem and that they have "just put things back the way they were supposed to be" (*TFW* 364). But Professor Torgeson, having examined the source of the problem, retorts, "we'd only lowered the magic levels temporarily" and that there is no way of knowing "what effects such an abrupt up-and-down change would cause" (ibid.). The contradiction of taking the initiative to restore magical balance yet being content with a temporary solution

86

articulates the message: fix nature if you can, as much as you can, because apparently it cannot restore itself. It is uncertain where this balance actually lies, but clearly *Frontier Magic* is positioned in an ethical framework that extols the positive benefits and practices of stewardship and conservation when nature mutates and becomes a danger to the intrinsic order of living things and, in particular, the survival of human beings.

In closing, *Frontier Magic* effectively demonstrates the ambivalent use of the fantastic in subverting human mastery in a colonial context. The fantastic serves to recalibrate the human protagonist's subjectivity so that it becomes more attuned to ecological processes, but it can also be a means of reproducing the historical period's anthropocentric discourse of mastery albeit in the more environmental friendly form of proper stewardship. Moreover, my study finds that there are necessary compromises in the process of uncovering nature as a historical subject in a colonial setting. The protagonist's formative subjectivity reconfigures the more-than-human world into a dynamic network of living organisms and relations. But it is also through the protagonist's human-centred and subjective considerations that she develops a sense of ecological responsibility to prevent the ecosystem's collapse. In other words, *Frontier Magic* signifies that it may not always be necessary to subvert colonial America's anthropocentric norm in order to bring about a more ecological view of human-nature relations, since the discourse of mastery can be reshaped into a model of environmental ethics that resonates with the contemporary audience in a world of ecological crisis.

Chapter Three: Science and Speciesism in *Larklight*'s Imperialist Britain

Science, my lad, is made up of mistakes,

but they are mistakes which it is useful to make,

because they lead little by little to the Truth.

— Jules Verne, *Journey to the Centre of the Earth*

In the history of environmental thinking, European imperialism is seen as a powerful engine that reshaped the global environment in the early modern world. Richard H. Grove argues in *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600-1860* (1996) that the imperialist era was "deeply influenced by a growing European consciousness of natural processes in the tropics and by a distinctive awareness of non-European epistemologies of nature" (1996, 486). The movement imposed modern eurocentric ideology on pre-colonial environments and led to the tropical commodity boom, deforestation, excavation of colonial resources, and questionable scientific practices, all of which were negative environmental milestones. The colonists were not entirely ignorant of the ecological outcome of their actions. The early phases of Europe's territorial expansion "undoubtedly provided the critical stimulus to the emergence of colonial environmental sensibilities" (474). Some island colonies presented "well-documented episodes of rapid ecological deterioration" and as a result "witnessed some of the first deliberate attempts to counteract the process artificially" (474). But these scenarios were not widespread nor consistent enough for their attempts to be labelled as successful ecological restoration, hence the horrific legacy of imperialism that has come to be known as an era that spread diseases and brought destruction to colonial environments.

It is within an imaginative and fancifully reconfigured imperialist expansion that Philip Reeve situates the *Larklight* trilogy, a space opera featuring aliens, exotic landscapes, and quasi-scientific experiments. *Larklight* is an alternative history of British imperialism with a fantastical extrapolation. *Larklight*'s premise is founded on the idea that when Sir Isaac Newton discovered gravity, he also invented 'chemical wedding', an alchemical process that enables space travel.

Newton, according to the narrating alien, "was very keen on Alchemy[12]…and I thought he would be pleased to see some genuine transformations going on in his smelly old oven, so I suggested certain elements he might try combining" (*Larklight* 328). The result is the invention of aetherships taking humans into space to colonise moons, asteroids, and planets. Along with the British Empire's expansion, explorers are also sent to the colonised planets to collect specimens, geographers to conduct land appraisals, and naturalists to oversee scientific experiments.

The *Larklight* trilogy's main plot is centred on the conflict between the British Empire and alien invaders who seek to conquer Earth. This conflict is narrated through the perspective of Art and Myrtle Mumby as they journey in space to protect the empire from alien threat. Their adventure begins in *Larklight* (2006) with giant spiders ("the First Ones") as the main antagonist. The Spiders' myth speaks of them as ancient beings

> [o]lder than all the worlds of the Sun. Once all this was theirs. Now they live in only one place, weaving their webs among the rings of stone and ice. They have lain quiet for a long time. Now [humans] have roused them again. (202)

With their superior scientific knowledge and technologies, the Spiders infiltrate the British government with automata disguised as human officials to destroy London using a giant mechanical spider. However, this plan is overthrown by Myrtle when she kills the tiny spider pilot with a copy of the *Times*. The second book *Starcross* (2007) replaces the Spiders with the Moobs ("the Last Ones") who come from a time "[w]hen all else is darkness, and the last stars are guttering like candle stubs, and the great cold is spreading across the Heavens" (248). They are parasitic aliens in the form of black blobs that latch onto living organisms to feed on their host's thoughts. Seeking more thoughts to devour, they time-travel through a wormhole to the Victorian era where there are multitudes of humans for them to feed on. Despite their plan to gather and farm humans, Art and Myrtle, again, save the empire from alien invasion by returning the Moobs to their own world in the far future. The last book *Mothstorm* (2008) introduces the Snilths, an Amazonian alien race that live for the sake of conquering the universe. Their history is a bloody one, "whirl[ing] through space amid their herds of moths, stripping bare any world which lay in their path" (190). Ironically their downfall occurs when their female warriors realise under Myrtle's guidance that they wish to

---

[12] Since Newton is commonly recognised as one of the greatest mathematicians in history, his experiments in alchemy and chemistry have been overlooked. Newton disdained the study of astrology, having realised early on that there was no validity to horoscopes, but apart from that, Newton was deeply committed to esoteric studies such as theology, prophecy, alchemy and other forms of ancient wisdom. The influence of alchemical principles became a source of complication in his scientific pursuit, for he perceived his studies of alchemy and his "hard science" to be closely associated: "One feature of alchemical writings that evidently had a special appeal to Newton was the belief that these texts, if properly interpreted, would reveal the wisdom handed down by God in the distant past" (Cohen & Smith 2002, 24).

"undersssstand the joys of needlework, flower arranging, polite conversssation and other passstimes suited to young ladiessss" (348), which parodies imperialist adventure fiction's portrayal of gender norms and the responsibility of female imperialists to civilise the indigenous people.

Because of *Larklight*'s theme, style and setting, it is possible to locate the narrative in the tradition of nineteenth-century adventure stories and Victorian scientific romances, so that the Spiders, Moobs, and Snilths take on the satirical function of sociopolitical critique comparable to the hostile alien in H. G. Wells's science fiction or the foreign other in Jules Verne's fantastical travelogues. Some of the aliens' characteristics frame them as satirical devices. The Snilths are a caricature of Victorian girlhood in imperialist adventure stories, while the Spiders reflect industrial modernity's destructive potential. Scientific discourses, such as the fear of degeneration and vivisection of animal bodies, appear as prominent motifs and lend the narrative a historical ambience. However, what is most notable about *Larklight* is neither its incorporation of elements of Victorian science nor its reflection of imperialist ideology, but rather, its inclusion of humour and nonsense in the representation of imperialist Britain. Throughout the narrative, ridiculous excess and moments of foolery punctuate the more ominous imperialist plot of surviving alien threats. Flying pigs and domestic alien-pests in the form of Christmas pudding provide comic relief, and more importantly, prominent traits of alien invaders mirror specific dimensions of imperialism to parody the conceit of human imperialists and post-colonial literature's didactic tendency. Due to the narrative's postmodern reconfiguration to reproduce but also satirise imperialist Britain, Reeve's alternative history also constitutes a resistance to the narrative tradition of scientific romance. This chapter explores *Larklight* by unveiling a multi-layered narrative that retrieves adventure stories' representations of human-nonhuman interaction, and reacts to these historical images using self-referentiality, humour, and irony. This postmodern approach articulates a nostalgic excitement about nature's otherness. But it is also steeped in an ironic and ambivalent perception of human-nature entanglements in the past, resulting in a conflicted view of species superiority and its ramifications in the conflict between human colonists and the nonhuman other.

Fictionalising Britain's Imperialist Past

At the end of *Mothstorm* when Myrtle is confronted by aliens who question her conversion of the Snilths, she declares with a sense of naive conviction, "decency and genteel behaviour always triumph over brutality in the end. And that's what you are, I am afraid. I don't mean to be unkind, but you are a brute" (368-9). Myrtle's separation between savages and civilised colonists and her

subsequent reformation of the Snilths are symptomatic of *Larklight*'s ethnocentric and anthropocentric drive, and signal Reeve's deliberate retrieval of earlier modes of representing speciesism in adventure stories. Peter Hunt and Karen Sands in 'The View from the Centre: British Empire and Post-Empire Children's Literature' (2013) explain that adventure stories rely on speciesism, the assumption of human superiority that leads to the exploitation of the nonhuman other, for the purpose of delivering tantalising experiences of overcoming unpredictable nonhuman threats and provide a formula for re-affirming human dominance. Conflicts between human and beast, explorer and flesh-eating plants, colonist and native savages, are how adventure fiction creates tension and excitement as a form of entertainment. At the same time, human-nonhuman conflict operates as a form of ideological propaganda that fosters English values and prepares young readers for future roles as empire-builders. Through the readers' assimilation of speciesism as an inherent discourse of adventure fiction, they learn the duty of asserting, strengthening and reaffirming imperialist power and authority. So even though there is space for subversion, overall the adventure tradition valorises human superiority and dominance as "a part of the inescapable matrix of imperialism" (Hunt & Sands 2013, 45). The adventure tradition's anthropocentric drive remains influential to the extent that, even in the post-empire period, adventure stories continue to represent youths as prototypical imperialists, who establish domination over those more vulnerable than them—particularly animals—and thus operate as "unconsciously racist and isolationist worlds for the child reader to confront" (Hunt & Sands 2013, 47). Consequently, *Larklight*'s struggle between humans and aliens constitutes a significant trope that not only pays homage to the anthropocentric formula of adventure stories, but also functions as a key method through which Reeve activates the ideological norm of adventure fiction that dictates that humans' triumph over the nonhuman other, albeit in postmodern, ironic forms.

Due to *Larklight*'s compliance to past ideologies, its representation of the human-nonhuman relationship can sometimes seem offensive to the modern reader. For example, when Art and Myrtle encounter talking mushrooms, natives that live on the Moon, they discover that the mushroom people do not speak English but rather "in the whispery, sighing speech of the Moon" (*Larklight* 48). Yet Art and Myrtle stubbornly insist on speaking English and accuse the mushroom-man of being ignorant and backward, conjecturing that the mushroom-man "has probably never seen a human being before" (ibid.). The alien figure's role in illuminating the human protagonist's anthropocentric tendency is a staple in science fiction, where the alien appears as the satirical embodiment of otherness because its displacing gaze puts the human subject under scrutiny. The gaze of otherness, Homi Bhabha writes, is a gaze that disrupts normality and turns the observer into

the observed, so that "'partial' representation rearticulates the whole notion of identity and alienates it from essence" (1984, 129). The alien serves as an embodiment of otherness that disrupts the human protagonist's ideological experience of the world, and subsequently, forces the human protagonist as well as the reader to be aware of their societal norm as a partial, incomplete reality.

In *Larklight* Reeve often uses footnotes to inject light-hearted humorous observation about the alien other to disrupt adventure fiction's anthropocentrism. For example, when Art meets the pirate crew that consists mostly of aliens, he describes Nipper, who looks like a giant crab, as "looking sheepish" (*Larklight* 102). Yet in the footnote Art interjects, "Well, he still looked crabbish really, but I am sure you take my meaning" (ibid.). These humorous instances involving alien otherness are an important strategy for drawing young readers. They circulate stereotypical images of otherness and indicate a degree of compliance. But the farcical silliness also suggests a sense of distance and removal from the colonial discourse of the other, which invites the question, is *Larklight* using humour to disrupt and commentate on adventure fiction's anthropocentric norm in a subversive way, or is it a way for the narrative to project a comical spectacle of British imperialism to appeal to the modern reader?

This question has to be answered in view of Blanka Grzegorczyk's claim that contemporary adventure narrative is a mixture of compliance and resistance. Grzegorczyk asserts that postcolonial fiction invariably "resort to the very exoticising, romanticising and objectifying of their racial others which they set out to illuminate and challenge" (2015, 97). When this postcolonial framing is applied to *Larklight*'s treatment of alien figures, its representation of human-nonhuman conflict appears as a postmodern narrative that is inherently and intensely ambivalent. On the one hand, it seeks to address the imperialist Britain's anthropocentric abuse of the nonhuman other; but on the other hand, it recognises that the reality of anthropocentrism is still very much alive in modern society, so that its representation requires some critical distance that provokes irony, skepticism, and even self-deprecation. But when it comes to looking at Reeve's representation of nonhuman nature more closely, the assertion that *Larklight* is a postmodern product of equal parts compliance and resistance is problematic because it neglects the third element of the narrative that is rarely discussed—nostalgia for excitement that occurs when encountering the nonhuman other as a source of danger.

In fact, for the most part Reeve evokes this nostalgia for danger and excitement by exoticising aliens and exaggerating the protagonist's anthropocentrism so that the protagonists can continue with their adventure and that a lively atmosphere can be produced. One of Jupiter's moons, Georgium Sidus, is the primary location for most of the third book's human-nonhuman conflict. Art

describes it as a mysterious, gaseous planet with "[w]raiths of mist wavering about [them], half concealing the strange shapes of alien vegetation which rose all around" (*Mothstorm* 71). The planet's surface is covered by "giant green cabbages…about the size of a London hansom cab" (ibid.). The ground is invisible and "hidden beneath a dense, rubbery web made from their interweaving roots" (*Mothstorm* 72). To Art, Georgium Sidus' watery surface represents an othered space that he is unable to control. In the face of giant cabbages that he has never seen before, his immediate response is that the planet is "a perfectly beastly spot" (ibid.). Art's responses of shock and awe show that *Larklight*'s representation of nonhuman environments embraces, and even exaggerates, nature's exotic otherness. *Larklight*'s nature in its imperialist context is terrifying because the human protagonist has the awareness that he should tame it but he is unable to. In other words, instead of resisting the pastness and even datedness of this imperialist image of nature, Reeve consistently sharpens its edges of otherness so that nature appears even more strange. This suggests a curious longing for nature as a source of mystery and violence, the kind that is similar to a comic book's hyperbolic excess and caricature. By retrieving the image of the nonhuman other as a source of terror from the adventure tradition, *Larklight* communicates a sense of nostalgia for a time when the nonhuman is perceived as a viable threat to human dominance, and thus evokes excitement and amusement as a distinctive aspect of the human experience that deserves to be recalled in modern society.

So, why long for this when the present condition of ecological crisis demands the opposite? One way of answering this question is to turn to the role and function of nostalgia in modern society. The term 'nostalgia' was coined in 1688 by Johannes Ofer by combining the Greek words 'nostos' (home) and 'algos' (pain), to refer to what was considered to be a medical disorder at the time, a disabling longing for home (Bonnett 2010). But since then nostalgia has escaped from its medical origin into the realm of cultural practices, personal pleasures, comfort, and even political rhetoric. With respect to nostalgia's role in enacting modernity, Malcolm Chase and Christopher Shaw argue that nostalgia is indispensable since it has become "the attempt to cling to the alleged certainties of the past, ignoring the fact that, like it or not, the only constant in our lives is change" (1989, 8). Nostalgia is no longer the subjective, emotional longing for a past that we once knew and experienced. As an emotive response to modernity's relativism that inspires uncertainty and skepticism, nostalgia enables the modern subject to recall ghosts of the past as a way of finding comfort and permanence.

In the same way, *Larklight*'s representation of nature's exotic otherness can be seen as a response to the popularised image of nature in crisis. In the universe of *Larklight*, nature as the

other is dangerous but it is not inscrutable, since it is by identifying nature as a threat that the human protagonist is able to maintain his imperialist world order and perpetuate a sense of stability. *Larklight*'s exotic, threatening, and violent caricature of nature functions as a form of cultural comfort food catering to the modern reader who is, perhaps, still dealing with anxieties that could be seen as a legacy of nineteenth-century imperialist practices. Reeve's exotic nature in an imagined past serves as an antidote of escapism by triggering an array of emotions all inside the safely contained space of an imagined past that assures the reader, this is all fun and games, and for once you don't have to view nature as something irrecoverable, something fragile, and something you need to protect. There is delight to be found in this. Thus, in a rather paradoxical turn, *Larklight*'s representation of nature's otherness operates as a refuge from modern turbulence and uncertainty.

Larklight's alien creatures and environments illustrate how adventure fiction's anthropocentrism—that causes the human protagonist to either fear the other or act in a condescending manner—lingers still in our cultural awareness as a residue of the past. These residues of imperialism can then be re-activated in forms of caricature. This enables the reader to recognise the unresolved quality of human-nonhuman conflict and to acknowledge that the imperialist past is not something to be avoided. Instead, the legacy of imperialism is something that we confront by recognising its limitation as well as power. In the introduction to *Culture and Imperialism*, Edward Said suggests,

> Appeals to the past are among the commonest strategies in interpreting the present. What animates such appeals is not only disagreement about what happened in the past and what the past was, but uncertainty about whether the past is really past, over and concluded, or whether it continues, albeit in different forms, perhaps. (1994, 1)

To be amused by Art's imperialist arrogance or *Larklight*'s fantastical otherness is to be willing to concede that the past is still with us and that there is a quality of doubleness to our perception of it. Some aspects of the past now circulate as stereotypes that can be comically grotesque; others remain indelible yet unutterable, compelling writers and artists to convey them using implausible forms of fantasy. This contradiction is an inherent element of *Larklight*'s representation of the nonhuman in the imperialist context. *Larklight*'s imagery of nature's exotic otherness operates as an aesthetic instrument that encourages the reader to accept rather than ignore his/her anxieties about the other. *Larklight* represents nature as the comically frightening other because the modern reader is able apprehend and experience nature's uncanny dimensions by resurrecting nature in this particular form, and thus, recalibrate his/her own perception of nature in the realm of spectacle and artificiality. As a postmodern adventure story, *Larklight* revives the excitement of coming face-to-

face with something strange and out of the ordinary, and revels in the satisfaction of colonising the other, which has been made palatable though comical and ironic representations. This is not exactly for the purpose of dismantling stereotypes, but rather, for that of allowing the reader to activate other dimensions of speciesism in the tradition of adventure stories that constitute the legacy of imperialism.

History: a System of Error

Larklight retrieves adventure fiction's human-nonhuman relational paradigm and represents nature both as a spectacle and the other that threatens to overwhelm the protagonist's human self. However, the problem is that Reeve is not content with leaving the reader with an image of nature as a spectacle. In *Larklight*, often it is when the difference between human and the nonhuman other is radicalised that Reeve retracts from it. For instance, Art's initial response to the mer-people on Georgium Sidus is fear and repulsion. Yet the narrative subverts Art's colonial bias in a retrospective footnote where Art details a developed understanding, appreciation, and respect for the mer-people and their culture. They have "luminous starfish which serve them for lamps, the water-filled bladders which they use as nurseries for their tadpole babies, [and] the charming gardens of seaweed and shells" (*Mothstorm* 129). If the semblance of electricity, nurseries, and well-tended gardens is not a sufficient sign of the mer-people's civility, Art further comments on their leisure activity, which is to set up "hunting parties down in the deeps beneath me, chasing luminescent sea-slugs across the ocean floor" (ibid.). *Larklight*'s whimsical deceit offers an ambivalent scenario. There is a degree of absurdity in perceiving the image of British nostalgia for domestic cosiness reproduced as the natural habitat of the alien other, and certainly Reeve is presenting this image as a spectacle of the imperialist legacy. But the degree of irony is questionable, and so is the degree of post-colonial resistance.

Clare Bradford proposes that postcolonial texts evoke transformative reading by "interrupting narratives of white heroism through humour and irony" and "inserting Indigenous historical perspectives" (2007, 119). Bradford emphasises postcolonialism's metanarrative quality, while Ashcroft, Griffiths and Tiffin speak of postcolonialism as a discourse in a Foucauldian sense, which invokes "certain ways of thinking about language, about truth, about power, and about the interrelationships between all three" (2003, 165), which would resist hegemonic narratives of eurocentrism. But a subversion of eurocentric power does not seem to be the underlying trajectory

of Art's ironic appreciation of the mer-people's culture since the appearance of European-style housing evokes an appealing sense of comfort. *Larklight*'s inversion, turning what is alluring and exotic into what is conventional and safe, is a common literary device in children's literature even outside postcolonial works. It serves various functions, from evoking a deeper curiosity in the details of the ordinary to contesting the power status-quo between adult and child. In other words, Art's initial repulsion and subsequent appreciation constitute postcolonial resistance, albeit a rather weak one, because it is less to do with undermining imperialism's ideological structures than with alerting the protagonist, as well as the reader, to what is considered normal from a displaced, othered position. This reveals that Art is able to dispel his vision of the mer-people's otherness not because he has stepped outside his own ideological constraints, but rather, because he has found a way to incorporate the other safely in his imperialist norm.

Evoking irony and ambivalence using Art's encounter with the other is a common pattern in *Larklight.* But two cases stand out in particular when presented side by side, since they illuminate how *Larklight*'s imagined history operates as an intentional system of error to produce both failure and success of the human race. In the history of adventure fiction, cultural narratives of colonialism and imperialism tend to embrace a progressive cosmic perspective. It is often a deterministic one "in which the entire future might be calculated by deduction if only one had a full enough knowledge of the present" (Stableford 1985, 56). The corollary of this ideological projection is the declaration that "hope for the future (if there is any) must be tied to the transcendence of this brutishness, by education, or evolution, or both" (Stableford 1985, 338). So when the human explorer or scientist makes a discovery that deepens their knowledge of the world, it is usually perceived as having some kind of redemptive power that could rescue mankind from a past of ruin and despair and lead them into a better future founded on order and reason.

The Royal Xenological Institute in the *Larklight* universe embodies this anthropocentric and deterministic conviction. The scientists in *Larklight* all belong to the state-owned institution called the Royal Xenological Institute whose aim is "to study all the different flora and fauna of our solar system" (*Larklight* 15) and to uncover "anomalous specimens of unearthly life" (*Larklight* 131). They perceive science, the "only certain way to knowledge" (*Larklight* 141), as the method by which human beings can fulfil their duty to advance civilisation. Dr. Blears insists that it is the duty of scientists "to investigate every new discovery and see if it may be used as a weapon to defend our homes and our possessions on the other worlds" (*Mothstorm* 28). The Royal Xenological Institute's philosophy has implications that also affect history as a construct, revealing the cross-pollination between science and history as discursive paradigms. Agnes Heller, writing about what

it means to possess historical consciousness, explains that historical consciousness is the realisation that history has "different peoples, states and civilisations" but they are "parts and parcels of the general movement: they all serve one goal, one outcome" (1980, 5). *Larklight*'s scientists operate precisely under this belief. To them, science is an instrument that enables progress and allows human beings to achieve continuity from one human condition to the next. Dr. Blears declares, "if sometimes [science] goes wrong and results in a few unimportant farmers and fishermen being converted into shrubs, then that is a price that must be paid" (*Larklight* 28). As long as they accomplish their goal of strengthening the British Empire through their scientific discovery and technological invention, their actions are justified. In this imperialist context, science serves as an ideological tool for establishing speciesism by sorting the world into two categories: the main category consists of human beings, who can use science to advance their own existence; the other category consists of the remnant, materials and objects that scientists use to develop their scientific progress. Scientists use methods such as vivisection and dissection to support eurocentric and anthropocentric claims, which reduce alien life forms to beings "not even human, let alone English" (*Larklight* 9). This arbitrary categorisation illustrates how science in an imperialist context ensures that humans are the significant subject of this progressive sequence, and that nonhuman things are only significant insofar as they can be utilised by the human scientists to further their scientific progress.

 Larklight reveals the archetypal form of scientific progress as a manifestation of human history, but that does not mean that *Larklight* yields to adventure fiction's anthropocentric drive. Rather, it is decidedly ambivalent in its treatment of human and nonhuman's position and agency in history. A failed experiment on Venus undermines the scientists' anthropocentric claims and faith in scientific development, and as a result, invites the reader to reshape history's anthropocentric contours. Sir Joseph Bank brings the first samples of Venusian plants back to London in 1770, which include the Changeling spores, a type of tree pollen that infects Venusian animals and transforms them into trees. Discovering that the Changeling spores have no effect on creatures and humans on Earth, the Royal Xenological Institute sends back a group of botanists with the hope of modifying the Changeling spores into a species that can infect humans "as a weapon against the rebels in America" (*Mothstorm* 26). After the botanists succeed, the modified pollen escapes "into the wild somehow," resulting in the Tree Sickness of 1839 that turns all its human botanists, scientists, and colonists into trees (ibid.). By recognising human-turned-trees as "sad mementoes of Britannia's doomed attempt to gain a foothold on this world" (*Larklight* 115), Reeve explicitly marks the failed experiment as a subversion of imperialist dominance. The random and inexplicable

nature of the pollen escaping "somehow" illustrates that, contrary to the scientists' claim of sovereignty over nature, nature remains untameable.

Scientists may use science to shape and determine their narrative of progress, but what *Larklight* reveals through their ironic downfall is that history is not a narrative of human progress and triumph over nature. Rather, it is a narrative of errors and accidents that occur in the dialectical relationship between human and their nonhuman environments. The scientists' failure reveals that humans are not infallible, nature cannot be controlled, and that humans are not in control of their fate and narrative. This notion that history is informed by error and accident has postmodernist undertones since it resonates with Jean-François Lyotard's conception of history and narrative. Lyotard's *The Postmodern Condition* (1984) introduces postmodernism as a crisis of narratives, that is, "an incredulity towards metanarratives" (xxiv). A metanarrative in Lyotard's definition is "a universal 'history' of spirit, spirit is 'life', and 'life' is its own self-presentation and formulation in the ordered knowledge of all of its forms contained in the empirical sciences" (1984, 34). *Larklight*'s scientists embody this faith in metanarratives as the manifestation of ordered knowledge, claiming that science is "the only certain way to knowledge" (*Larklight* 141). Hence, the scientists' annihilation echoes the postmodernist claim that science desires to lay claim to knowledge and truth, but it "does not have the resources to legitimise their truth on their own" (Lyotard 1984, 28). Science is insufficient as a means of obtaining knowledge and truth because "[t]rue knowledge, in this perspective, is always indirect knowledge; it is composed of reported statements that are incorporated into the metanarrative of a subject that guarantees its legitimacy" (Lyotard 1984, 35). Hence, despite what grand claims Dr. Blears has put forth about great scientific discoveries for the sake of human progress, these moments of natural accidents, unpredictable errors, and random interferences present a rather different picture. They illustrate the fact that chance and error rather than scientific development form human history, and that nature as the source of unpredictable occurrences is a crucial agent in determining and shaping human beings into what they are.

In *Larklight*, error and coincidence produce not only the downfall of human beings but also their success, which creates a historical narrative of nature and human progress that is distinctly ambivalent and cynical towards the possibility of resolving the conflict between human and nonhuman species. The case in question involves the Spiders, the main antagonist of *Larklight*. When they first appear they are topped with black bowler hats that characterise the Spiders as the anti-self of the British imperialists. They once ruled the world when the sun was "much younger, brighter, whiter" (*Larklight* 298), and their intergalactic empire stretched from "fleet-foot

Mercury…all the way to the realms of Uranus and Pluto, all was under the dominion of the white spiders!" (299) When the Spiders find a solar system in the early stages of formation, "they bind it, and tie it, and wrap it in their knots and cradles, and make sure that no world can ever form, and no sort of life but their own can ever thrive" (*Larklight* 325). Ironically they are also the most ill-suited to initiate any form of imperial invasion because of their feeble bodies, which succumb to gravity when it "pulls too strongly at them [on earth]; their legs grow weak, their webs are warped" (*Larklight* 325). But the greater irony is that even when the Spiders return, having bred some mutants that can withstand Earth's gravity, their invasion is foiled by an innocuous act.

At the climax of *Larklight*, Art and Myrtle return to London to see the Crystal Palace being destroyed by a giant spider automaton. Myrtle, simply following others around in their chaos, winds up in the pilot chamber of the automaton. Inside she sees there is "a horrid little spider inside, just like the one which steered the false Sir Waverley. [She] squash[es] it with a rolled-up copy of the *Times*" (*Larklight* 391). That single act of crushing the spider like a common pest becomes the moment that cinches Britain's victory, since without the automaton the Spiders are powerless. Yet Myrtle removes any self-determined agency from her action, saying that "I do not know how I managed to steer the automaton towards you and crush him; I suppose desperation helped me to focus my mind. I certainly could not do it again" (*Larklight* 391). This results in the humorous and contradictory closure of the first part of the trilogy, where the Spiders' defeat reaffirms history as an anthropocentric narrative of progress, but Myrtle's lack of agency indicates the contrary. *Larklight* reveals that, even in a situation that culminates in human triumph, progress is not the cumulative result of human action. Through the irony of the Spiders' defeat, *Larklight* portrays human history as a narrative of a series of random events occurring in ongoing conflict between nonhuman creatures and mankind.

History: a Struggle for Power

In the instances we have examined thus far, *Larklight*'s speculative representations of the past transform history from a record of human progress into a narrative of human-nonhuman dialectics, in which neither human nor nonhuman agents has the power to determine the course of history. Both human imperialists and alien invaders are at the mercy of a random play of power. However, from another angle, *Larklight* is purposefully using the chaotic and ironic nature of its alternative history in order to highlight struggle for power between nature and mankind.

A key component in adventure stories is the hunter versus prey dynamic re-enacted in the wilderness, military expeditions, and exotic places to display the recognisable pattern of human triumph over the nonhuman other. It is often through the spectacle of exotic animal bodies that the hunter asserts his dominance over the nonhuman other. John Miller's *Empire and the Animal Body: Violence, Identity and Ecology in Victorian Adventure Fiction* (2014) identifies adventure stories as a key site for interrogating the human/animal binary because of the animal's symbolic significance in a colonial context. Writers like G. A. Henty and John Buchan consistently deny 'an animal real' beyond human interests to the extent that an animal's cultural value is defined by its usefulness and relevance to the human subject, for example, in the form of commodified hunting trophy that embodies the thrill of the chase.

The notion that the animal figure, whether dead or alive, serves human interests is also prevalent in the scientific realm. Even though natural history promulgates "an ostensibly ideologically neutral objective order of creation," its manifestations as scientific discourse in adventure stories invest the animal body "with the self-confidence of a culture busily containing the world in a scientific order that constituted a crucial aspect of many colonial romances' didactic, patriotic agenda" (Miller 2014, 55). Adventure stories often use the trope of killing and investigating animal bodies to introduce the reader to scientific practices, but at the same time, taxonomic classification of flora and fauna emerge "not just as a series of technologies and practices for signifying non-human others, but also, critically, as a means of signifying the self" (Miller 2014, 56). These cultural processes implicate the animal figure in the anthropocentric system, to the extent that even though they occur in a prism of contradictory and ever-shifting ideological and cultural values, ultimately they perform the function of evaluating the animal figure by the degree to which it contributes to the human's imperialist claims and expansion.

As a parody of Victorian adventure fiction, *Larklight* explores the ecological dimensions of the hunting trope by infusing it with postmodern qualities, resulting in contradictions and ironic reversals. Instead of identifying the human colonists as the dominant species that hunt for leisure, *Larklight* reverses the predator/prey dynamic to portray aliens as the predators that hunt humans as foodstuff. The Moobs appearing in the second book *Starcross* are aliens that perform the predator role. The Moobs, also known as the Last Ones, are a parasitic alien race that feed on thoughts. Because they do not possess a definable shape, mostly they exist as amorphous black blobs. It is not clearly stated if the Moobs are the consequence of a particular species' degeneration, but the possibility is implied since the Moobs claim,

[W]e are what remains. We have none of the vim and vigour of life forms in your era. We do

not love, or dream, or hope, or have adventures. We are the Last Ones, and all such passions have been washed out of us. All we ever do is eat, and what we eat are thoughts. (*Starcross* 248)

The Moobs perceive hunting as a leisure activity because their environment provides little mental stimulation, which places them in an analogous position to the imperialist sport hunters. The Moobs claim that there are "beings who live inside the stars" and often they would stretch themselves thin like nets to catch their thoughts. But it is "meagre fare, for all the sun-beings think the same thing; they are very sorry that their sun is going out" (*Starcross* 249). So, due to boredom as well as necessity, some Moobs would slip through wormholes to different times to hunt for food. After the Moobs discover a stranded airship containing human survivors, they develop a taste for human thoughts and disguise themselves as hats. It is later revealed that their consumption weakens the human host, For the Moobs "to drink up all their thoughts, day in, day out, was horribly harmful" (*Starcross* 252). Nevertheless, even after realising that their feeding is killing their human host and that their host's thoughts turn tasteless after excessive feeding, the Moobs continue to hunt.

Some comparisons between the Moobs and imperialist hunters in adventure stories can be drawn at this point. Their need for pleasure and amusement and "the scent of fresh thoughts" (ibid.) aligns them with the imperialists. They do not need to hunt in order to survive. They do it for the thrill and excitement, signifying an obsessive preoccupation with defining the self by using the other that leads to feelings of superiority and self-affirmation. In adventure stories, the hunting discourse often has the effect of establishing the human-nonhuman division to reinforce imperialist rule. Animals are the object of the hunter's violence because it is through the practice of hunting and killing animal prey that the human subject discloses "a transferable skill deployed for both leisure and conquest" (Miller 2014, 41). Like white hunters who claim to help the natives by killing man-eating tigers, forming "a powerful sign of imperial benevolence that operated alongside the 'administrative territorialisation'" (ibid.), the Moobs justify their hunting by professing that it is good for the humans: "we were doing them a favour by taking their thoughts away", since it seemed as if the survivors "were in a sad pickle, those men, marooned so far from their own time, without a hope of rescue" (*Starcross* 251). In actuality, this feeding becomes an act of power, which characterises the humans as an inferior species that deserves the Moobs' pity and attracts their condescension. The ontological division between species gives ground to the Moobs' assertion of superiority and dominance.

The Moobs' habit of predation and consumption reverses adventure fiction's predator/prey dynamic and enacts a self-deprecating gaze on the phenomenon of commodifying animal bodies.

The narrative posits the question, what becomes of our human identity when we become the commodity for the consumption and pleasure of the other? In this sense, *Larklight* works against the established trope in order to speak to the contemporary reader concerning some of our own capitalist practices. In the imperialist era, hunters primarily preserve animal bodies as souvenir for personal gratification. Miller writes,

> Ivory and in particular the softer ivory of young East African elephants was very much in demand…the fashion for decorative feathers in ladies' hats, often taken from African ostriches, but also more rarely from Asian birds of paradise, was another profitable enterprise among many…Given the increasing prominence of colonial animal bodies in metropolitan capitalism, it is tempting to foist a pun on Richards' analysis: the 'dead centre of the modern world' conveying not just the dominance of commerce but also, in the imperial context, the histories of predation behind many finished products. (2014, 46)

Larklight reconfigures this imperialist practice of commodifying animal parts using the Moobs' systematic gathering of human bodies and subsequent destruction of their human hosts. Having developed a taste for human thoughts, the Moobs return to eighteenth-century Mars where they take control of two entrepreneurs by the names of Sir Launcelot Spriggs and Mr. Titfer. Under the Moobs' influence, the human entrepreneurs start a business in two stages: the first stage is to use science "to develop an advertisement spore which will persuade people to buy [their] horrible hypnotic hats"; the second is to export those hats, which are Moobs in disguise, so that they will have access to more humans to feed on (*Starcross* 190). The outcome, as one human character puts it, "is that the British Empire stands on the brink of an invasion by highly intelligent hats from the future" (*Starcross* 195).

As ridiculous as it sounds, the Moobs' commercial venture can be seen as a fantastical reversal of the empire's commodification of nonhumans. Jessica Langer's *Postcolonialism and Science Fiction* explains that alienness in science fiction

> has acted both as a metaphor and as *perceived historical metonym* rather than extrapolative device. That is, the 'alienation' of the colonised, conquered aliens in so many of these stories correspond closely to the historical dehumanisation of indigenous colonised people—even, perhaps especially, when those 'aliens' are humans themselves. (2011, 84)

To a degree, Langer's assertion applies to *Larklight*'s reconfiguration of alien and human since it presents an extreme realisation of imperial power and its influence over commerce and trade. Not only do the Moobs hunt and consume, but they also commodify and direct the flow of their products in order to maximise their access to more human beings and profit. But ultimately this

reversal is ridiculous and nonsensical. *Larklight* uses the alienness reconfigure causal relations between hunting, destruction, and capitalism within the ideological matrix of imperialism into a ludicrous, whimsical business of selling parasitic hats. It is questionable to what degree this reversal marshals critical consciousness in the reader concerning how capitalism and imperialism are enmeshed together, but it certainly creates an opening for projecting the grotesque cruelties of an imperialist system onto alien others. The issue here, then, is that the Moobs are aligned with the coloniser rather than the colonised, which creates a reversal that is both comical and unsettling. It is comical since the Moobs' feeble appearance causes the human colonists to underestimate their power. There is also ridiculousness found in the Moobs' plot, which appears complex and secretive but ultimately hinges on the desire of the ordinary people to shop for hats. At the same time, the reversal is disconcerting because it identifies human imperialists as the other through the Moobs' colonising gaze. The human body becomes the goal of a legion of consuming hats, which does not seem to be raising serious questions about the legitimacy of imperial power, but at least it has the potential to cause the reader to be more reflective of the boundaries that separate human and nonhuman, and what exactly constitutes the quality of otherness in a contemporary, capitalist world.

The nonhuman other in adventure fiction has always been an uneasy mix of desire and violence, and *Larklight* is immersed in it. But what is interesting about *Larklight* is that, as much as it provides a fantastical framework for reconfiguring hunting in our environmental history, it appropriates the colonial dynamic of predation in our past to characterise the relationship between a modern consumer and the novelty s/he desires. Monica Hughes, reflecting on why she takes her characters into space, says, "Only away from Earth can the protagonists find the promise of a new beginning—not a utopia certainly, but its possibility" (2003, 153). Here though, space does not open to a utopia that the protagonist can escape to, but a nightmarish reality in which predatory aliens easily belittle human existence. This fantastical representation of our imperialist past can be construed as a kind of revival that puts unsettled and disturbing feelings about the past into circulation with considerable imaginative vigour.

Indeed what *Larklight*'s human-nonhuman conflict reveals is a disconcerting image of consumption in modern society in a twofold manner. The Moobs may have started eating human thoughts because it is how their metabolism works. But it is evident that pleasure soon overrides their biological instinct as the primary factor of their predation and consumption. The Moobs describes the initial taste of human dreams as "pudding and warm custard" while a nightmare tastes "sour as curdled milk" (*Starcross* 251). Soon the Moobs become addicted to the delectable variety of human dreams, to the extent that they "would drink up all their thoughts, day in, day out" without

thinking of their host's well-being (*Starcross* 252). The Moobs' parasitism is suggestive of many other different relations and analogies in the real world. But a particular dimension is that the Moobs' need for gratification and the resulting lack of self-restraint depict modern society's pursuit of happiness as a form of self-destruction.

Eric G. Wilson's *Against Happiness* (2008) argues that the pursuit of happiness is comparable to the crux of modern capitalism. The American Declaration of Independence states that everyone enjoys an inalienable right to "life, liberty, and the pursuit of happiness" (Wilson 2008, 13). But Wilson points out that this pursuit of happiness is secretly connected to the ownership of property, as revealed in John Locke's *Second Treatise of Civil Government* (1690), which states that everyone has a right to "life, liberty, and property" (ibid.). This modern preoccupation with finding happiness through ownership paves the way for capitalism to reach its pinnacle, where "curious creatures are transformed into quantifiable commodities" and this "outlandish, mysterious, sometimes turbulent world is turned into a safe place, a smooth plain on which one can project his numerical fantasies. This is the method of capitalist[ic] seeing" (Wilson 2008, 14). What Wilson calls "the method of capitalist seeing" is essentially a way of evaluating the world in terms of happiness, which the Moobs emphatically embody through their search for appetising thoughts to satisfy their desire for wonder and variety. The Moobs' consumption reveals that, just as they homogenise humans into a singular entity as their source of pleasure, humans have done the same to nature in their pursuit of happiness. Thus, *Larklight*'s Moobs operate as a metaphor for human desire for pleasure, which conceals the objective materiality from the subject. The Moobs' pursuit of happiness illustrates our own obsession with personal comfort and happiness at the risk of destroying the very things that fascinate us and nourish our physical bodies, resulting in a crisis whereby nature is depreciated and exists as quantifiable objects that are measured by the kind and degree of happiness they evoke.

Secondly, the Moobs are a metaphor for how humans become what they eat. The Moobs' lack of original thoughts and subsequent boredom suggest potent parallels to theories of modern society becoming a system of simulation, in which each individual imitates the ideas of others. Nowhere is this more clearly seen than online, where a constant stream of information threatens to overwhelm our subjectivity and individuality. Jean Baudrillard's *Simulacra and Simulation* (1994) provides us with a clue as to what this endless reproduction and consumption of unoriginal ideas would look like. Baudrillard argues that the virtual world is saturated with copies and replicas without an original source. In Baudrillard's hyperrealist view, virtuality is no longer a representation of reality, since it is "produced from miniaturised cells, matrices, and memory banks, models of control—and it can be reproduced any number of times from these" (1994, 2). *Larklight* does not explicitly depict

the Moobs as a fantastical virtual network, but their characterisation inflects certain tendencies and qualities of the virtual world, such as the loss of depth and homogeneity. Because of the Moobs' black and amorphous appearance, they are able to form "clouds of utter blackness…great, complicated, raggedy-edged clouds bigger than worlds" (*Starcross* 328). And from within the black masses of "infinite emptiness which lay all about…the cold bright eyes of countless Moobs were turning hungrily on Starcross" (*Starcross* 329). Their nebulous and boundless existence indicates the immeasurable virtuality of the internet, which appears to shape itself according to the desire of the user. The presence of Moobs and their "cold bright eyes" within the blackness represent the desire to consume as the pervasive energy that animates and sustains the virtual network. Another characteristic of the Moobs that reflects the internet's virtuality is the Moobs' inability to speak unless they are attached to a human host. When the kind Moob speaks to Art, it is done through another human host as the conduit. The Moob says, "Moob, Moob, Moob…That is to say, my name is Moob, I am Moob, and I come from a place called Moob. Moob is the only sound we can make" (*Starcross* 247). The Moobs' repetitious speech and self-mimicry constitute a disturbing reflection of the virtual world, in which the responses of individuals are often channels for spreading the popular opinions of the masses. It forms a picture of virtual simulation that encourages individuals to consume in a mindless way. The disturbing imagery implies that human users consume and regurgitate pre-made, processed memes and thoughts in order to participate and perhaps 'live' in the virtual world.

The most significant characteristic that frames the Moobs as the embodiment of virtual information is their tendency to become what they eat. The Moobs consume humans to the extent that they take on the personality of their human host. By drinking the thoughts of an educated captain, its Moob becomes kind and thoughtful. In contrast, by drinking the thoughts of "rough, angry, and thoughtless rogues," the other Moobs grow "churlish, rogue, and sullen" (*Starcross* 252). The Moobs' personality change through consumption evokes the prevalent concern surrounding mass media and its effect on impressionable young viewers. Marshall McLuhan claims that in the digital era "the medium is the message", in the sense that "the personal and social consequences of any medium—that is, of any extension of ourselves—result from the new scale that is introduced into our affairs by each extension of ourselves, or by any new technology" (2006, 282). The Moobs' parasitism constitutes a representation of the ways virtual worlds and especially social networks commodify human thoughts in order to control their behaviour. The Moobs' transformation through consuming information implies that identity-making in a media culture is a process of assimilating and xeroxing information, through which humans consume information to the extent their

personality is deprived of any originality. The search for mental stimulation, as the Moobs show, always goes hand in hand with the awareness that any attempt to claim originality is a meaningless, repetitious act that produces excess. The Moobs' non-identity and assimilation of human thoughts convey the startling image that the more we search for novelty, the more we lose our subjectivity and individuality. The Moobs are not immaterial in the same way that virtual data is operational and self-duplicating with countless back-up copies, and colonial dynamics of predation are defining characteristics of adventure fiction and imperialist history. Nevertheless, *Larklight* exemplifies how fragments of our environmental past can be revived and reconstructed into speculative devices that illuminate what is problematic or repressed in our society.

Because *Larklight* does not actively redefine nonhuman agency and instead is more interested in creating an alternative to history as a narrative of human progress, its representation of nature is not exactly empowering or revolutionary, although it is certainly whimsical and stimulating. This inconclusive stance is due to postmodernism's elusive quality that causes its historical narration to seem contingent, ineffable, and discontinuous. Amy J. Elias explains, "What is left to postmodernists in this in-between state of belief is only 'metahistory', the ability to theorise and ironically desire history rather than access it through discovery and reconstruction" (2001, xvii). This occurs in *Larklight* through the text's internal ambivalence and irony. But the problem is that *Larklight*'s doubleness creates more uncertainty and that its historicity becomes a matter of voice, diction, and mentality. Elisabeth Wesseling (1991), however, stands in opposition to the claim that postmodernist historical fiction is by default nihilistic. Wesseling proposes that alternative history's revisionism is meaningful despite its ambivalence and contingency because they are the means by which alternative history performs its most imaginative function in encouraging an interplay of past and present. Hence, to see *Larklight*'s contingency and indeterminacy in this light is to see its discourse of error as a way of compelling the reader to conceive of the alternative and the multiple, that nature is the other but it is just as helpless and vulnerable as human beings in the grand narrative of progress.

On the whole, *Larklight* conforms to the anthropocentric tradition of scientific romance. Instead of resisting imperialist dominance, the fantastic reproduces human mastery over the alien other, which prevents nonhuman agency from emerging as a source of transformation that impacts the history of imperialism. Nevertheless, *Larklight* creates space for ambiguity by evoking a sense of nostalgia for a more romantic and exotic engagement with the natural world, so that new dimensions of history's anthropocentrism can be brought to light. But as I have mentioned already, *Larklight* is a multi-layered narrative that is inherently conflicted. Due to the ridiculous means by

which imperialists achieve triumph over the other, human mastery becomes the random product of accidental encounters between human and nonhuman agents, which leads to a conflicted view of human mastery in the past. On the one hand, the fantastic reproduces imperialist history's anthropocentric borders; but on the other hand, it activates ironic humour that contests imperialism's anthropocentric discourse from within. Consequently, *Larklight*'s alternate history demonstrates that the fantastic's subversion of anthropocentrism is more complicated than undermining imperialist dominance and its power play since the fantastic also has the potential to produce a postmodern scenario in which human dominance or ecological frailty are aspects of a destabilised engagement between nature and mankind. This may seem troubling at first but it can also be an effective way to encourage the reader to view imperialism's anthropocentric legacy with a sense of irony and self-deprecation, leading to a deeper self-awareness of ambiguities and nostalgia implicit in the historical narration of our imperialist past.

Chapter Four: Technology and Animals in *Leviathan*'s Alternate World War I

> When you learn enough about the world,
>
> even a blade of grass can be a weapon.
>
> — Ken Liu, *The Grace of Kings*

     In *The Great War and Modern Memory* (2000) Paul Fussell writes, "Every war is ironic because every war is worse than expected" (8) since in retrospect the cause, the escalating violence, and the number of deaths incurred are always tragic and irrational. Even so, Fussell observes that WWI is remembered with exceptional poignancy because of its unprecedented scale and subsequent impact on European consciousness. In the summer of 1914, the generation that marched into World War I[13] believed in progress and had no doubts about the positive potential of technology. However, WWI's technological destruction brought out an alarming vulnerability in humanity that undermined positive views of modern technology as a means of human progress. A prominent facet of this culture of distrust is the 'invasion scare' literature, which portrayed machines as instruments of war to evoke what was known as the 'Zeppelin panic' that caused many Londoners to flee and parents to send their children to the countryside. The purpose of these publications was nationalist and propagandist, spreading fear among its readers, but some writers were more prescient than others, and thus, more willing to explore technology's problematic potentialities. H. G. Wells, for instance, saw in technology a potentially redemptive yet pervasively destructive power.

     Nevertheless, the dominant narrative of WWI has evolved into a disillusioning story of modernity's failure, one that reveals the futility of not just violence itself but violence as a means of achieving progress. In their introduction to *World War I and the Cultures of Modernity* (2000), Douglas Mackaman and Michael Mays note that, when historians assess WWI, there is a near consensus that the WWI narrative articulates "how science, administration and progress were fused with barbarous results" (xviii). Personal memoirs, visual records, and literature of WWI portrayed WWI as "the negative realisation of Enlightenment and Industrialisation", the springboard leading into the second war, "where death was still more scientifically and industrially delivered and after

---

[13] Abbreviated as WWI.

which the Romantic pastoral was quite plainly gone" (ibid.). Hence, it was not just the ideology of modernity itself that WWI revealed in a negative light, but moreover, the dark potentiality of industrial technology and its role in enabling destruction.

In any case, the popular post-war reaction to science and technology was an ambivalent one. The European nations were invested in industrial progress as the path that would lead them away from barbarity toward civility and enlightenment. But technology also inspired dystopian visions of frightening uncertainty and critiques of social consequences. When the war broke out, both sides oscillated between embracing and resisting the power of industrial technology, all the while remaining unsure yet hopeful of what it could offer. Germany "allowed tactics to be shaped by technology in order to maximise its potential, although they continued to rely upon technological enhancement rather than technological innovation: they embraced neither motorisation nor armoured warfare" (Beckett 2014, 223). Britain was slower than Germany in setting up scientific advisory commissions, despite the existence of the Royal Arsenal at Woolwich and the Royal Aircraft Factory at Farnborough, partly because Britain believed that the war would be short. Then, when ideas began to take shape of how technology could accelerate the progression of war, leading to victory, many of the ideas themselves were quite ludicrous, "such as the suggestion that cormorants with explosives fastened to them be trained to swoop on surfaced submarines…training seagulls to perch on periscopes and sea lions to dive on submarines with mines" (Beckett 2014, 216). The deployment of animals during WWI is significant for it brings the nature and the nonhuman into WWI's problematisation of human and technology. The use of animals in warfare has its own history that can be traced to the Egyptians' use of war dogs, the Romans' use of carrier pigeons, and Hannibal's elephants that marched through the Pyrenees, crossed the Rhone river, and ascended the alps. The militarisation of animals resonates with the discourse of rationalism, which distances the human subject from the animal as an object of study and utilitarian functions, but it is much more complex than a product of objectifying animal bodies. The bond that often develops between soldiers and animals suggests a strong undercurrent of animal intimacy in the tradition of militarising animals. Some animals were seen as military mascots, becoming much loved by the soldiers for their morale-raising powers. In other incidents, the bond between humans and animals served to alleviate antagonism between opposing sides, framing the animal figure into a peace-making trope. In other words, the militarisation of animals certainly asserts the instrumentalist logic of modernity, but WWI's use of animals is also problematised by perceptions of human-animal intimacy and the underlying connotation of animal innocence as a sanctuary.

Using this angle of WWI as a problematic juncture of human, technology, and animal, I intend to examine Scott Westerfeld's *Leviathan* trilogy as an alternate historical narrative that renegotiates fears and anxieties associated with technological progress and the role of animals in the history of human development. The *Leviathan* trilogy, composed of *Leviathan* (2009)*, Behemoth* (2010)*,* and *Goliath* (2011)*,* is the only true alternate history in my corpus according to Karen Hellekson's (2001) purist definition because its nexus point is overt and unmistakable: Charles Darwin's discovery of DNA, 'life threads', on the Archipelago islands. By bringing forward the discovery of genetic engineering, *Leviathan* directs WWI's development towards a set of posthuman possibilities in which genetic hybrids operate as aerial weapons, healing devices, and breathing submarines. The alternate Darwin's discovery of 'life threads' reshapes WWI into a battle between Clankers, nations that reject bio-technology and rely on industrial and diesel machinery, and Darwinists, nations that have bio-technology as a significant cornerstone of their society and military prowess. The reinvented military powers of WWI posit unsettling ideological binaries in the form of hybrid organisms versus diesel machines. Using the dichotomy of living organism and constructed machines to frame WWI, *Leviathan* delves into difficult ethical dilemmas. The core question is related to the production of hybrid lifeforms, which involves probing into the nonhuman's instrumentality and autonomy, and reconstructing boundaries that define what is natural and what is artificial.

At the centre of this battle are the protagonists Alek and Deryn from opposing sides. Their encounter and subsequent alliance become the medium through which the narrative reconciles ideological differences. Alek is Franz Ferdinand's surviving son, while Deryn is a girl disguised as a boy joining the British Air Force. Their adventure begins in *Leviathan* when they meet aboard the Leviathan, a bio-engineered flying whale that the British air force have in possession as a dirigible. It continues in *Behemoth* where they are embroiled in the Turkish rebellion. The British spy intelligence, armed with bio-weaponry, join forces with local rebels and their alliance successfully bring down the Turkish government and prevents their interference in the course of war. Finally, in *Goliath*, their journey takes them to North America where technologies like film-making and Nikola Tesla's electrical devices are seen as modern, appealing yet dangerous due to their potential to alter the course of war.

The first half of this chapter examines *Leviathan*'s imagined Darwinist creations and their characteristics, such as muteness, intelligence, and empathy. As a historical fantasy driven by scientific speculation, *Leviathan* is attuned to ways in which concepts of animal sentience can be activated and disrupted. Genetic hybrids and their designated biological capabilities question the

ontological norm in which reason and language separate animals and human beings, and establish modes of inter-species communication that subvert humanist and anthropocentric concepts of speech and language. The second half focuses on the representation of Clanker and Darwinist technologies as metaphors for the mechanical and the organic, and explores how their respective technologies enact distinct visions of the future of human-nature relations. Through the protagonists' assimilation and reconciliation of conflicting discourses, *Leviathan* deconstructs dichotomic separation between nature and technology, which culminates in the posthuman realisation that organic and mechanical modes are integral to human subjectivity and the dialogical relationship between oneself and the world. As a result, the human protagonists are transformed into historical agents who have resolved and assimilated nature-machine differences on a personal level, and their hybridised view reaffirms the popular message of WWI literature about the futility of war and the importance of reconciliation.

Historical and Literary Representations

In the literary consciousness, the story of WWI is remembered and retold as a parable that warns the reader of war's meaningless destructions. WWI's image in the historical consciousness is one that articulates "how science, administration and progress were fused with barbarous results" (Mackaman & Mays 2000, xviii). Through the personal memoirs and poetry of Robert Graves, Siegfried Sassoon, and Edmund Blunden, WWI is recounted as a surreal, traumatic period of profound suffering, in which "the depth and the sheer pointlessness of the men's endurance" were intensified to such an extent that it broke the strongest and the bravest (Tate 2009, 161). The destructive impact of the war also found its artistic expression in the iconic modernist poem *The Waste Land* (1922) by T. S. Eliot, which interweaves elegiac reminiscences with apocalyptic scenes. J. M. Winter (2006) argues that the desire to make sense of the war's meaninglessness led to what is known as the post-war memory boom, for it is through remembering and reconstructing the event in the popular imagination that the present enacts a symbolic exchange between those who remain and those who suffered or died (279). This type of post-war remembering was not entirely without an agenda. Peter Middleton and Tim Woods observe that collectively WWI literature since the 1920s tends to articulate an anti-war message. It encourages readers living in the present to learn that "we must not forget" and "we must not succumb to violence" (2000, 107), which strengthens and perpetuates the emotive re-telling of WWI as a modern parable.

The WWI is also remembered as a time of violence that transmutes soldiers' physical bodies into vulnerable flesh, which exemplified human frailty when confronting the destructive power of technology. The durability of metal forms a clear contrast to the vulnerability of human flesh, while its lethal power provokes human beings to seek intimacy and a more meaningful mode of understanding adversity and difference. In this way, the WWI narrative operates as a soundboard for testing and reflecting ontological distinctions between self and other, and in particular, the natural vs. the mechanical. WWI has lingered in our cultural imagination because it is remembered as a time in which our intrinsic humanity is put to the test, and the corruptibility of our bodies becomes exposed when confronted with technologies of mass destruction. This didactic agenda of WWI fiction becomes even more sharply defined in the field of children's literature. During the war and in the post-war period, there was a gradual development of a literary and visual culture devoted to portraying WWI from the perspective of the child. Like its adult counterpart, children's literature often depicts WWI as an intensely horrific event that could be used to teach young readers about the importance of resilience and morality. The didactic quality pervades to the extent that Michael Paris identifies the entirety of WWI literature as a "literature of disillusionment" that condemns modern warfare as much as it attacks "the sanitised, romantic, and glamourised images of war" that had permeated prewar literature (2004, xii). From the romanticised adventures of WWI in the 1920s and 1930s to novels like Michael Morpurgo's *War Horse*, Michael Foreman's *War Game*, and Scott Westerfeld's *Leviathan* trilogy, it is as if although the event ended in 1918 but the story has never had its closing chapter.

Technology and Nature in WWI Literature

During the WWI, artillery, systems of communication, reconnaissance, and trench warfare were all improved by the latest scientific inventions. Military aircraft was used for the first time in WWI, providing valuable reconnaissance for directing artillery fire on ground, while the British Royal Naval Air Service conducted the first effective bombing raids of the war in 1914 to strike Zeppelin shells at Dusseldorf (Black 2013). The image of an irresponsible, destructive machine thus becomes the embodied vision of WWI:

> [T]he unstoppable and all-consuming machine, the runaway vehicle, the horse that rides its
> rider; of war even as the unconscious of progress; the driving force which does not recognise
> the word 'no' and which, ultimately, cannot be fully repressed; which breaks through the
> illusory order, the surface world of 'progress' or 'decadence' and its attendant 'diplomacies';

which slips through in the interstices of everyday national life. (Pick 1996, 189)

In other words, it is no coincidence that the orcs' factory in Middle-Earth visualises the dark and destructive side of modernity in the form of military technology, or that Rainer Maria Rilke speaks of industrial progress as a disruptive force that has "convulsed time itself" (Pick 1996, 190). It has become a common theme for post-war writers to portray war and destruction as the inevitable consequence of industrialisation. So even before President Dwight D. Eisenhower coined the term 'military-industrial complex' in 1961, there was already the awareness that modern warfare was made all the more brutal and terrible by the technological invention and the mechanical organisation of human bodies.

In order to provide a counterpoint to the destructive mechanisation of war, writers often include nature as a thematic trope. There are several strands of ecocriticism and animal studies running throughout the WWI narrative, including human-animal companionship, the weaponisation of animals, the development of medical science, the use of animals in war propaganda, and unprecedented technological destruction. Huriye Reis (2011) claims that nature is common in war poetry because pastoral images of unadulterated nature effectively create contrast between peace and war, life and death, home and front, creation and destruction. Anti-war poetry utilises the pastoral to foreground war as a mechanical system of damage, going against everything that is positive and sacred. In *The Lord of the Rings*, Saruman's appropriation of nature typifies the industrial and utilitarian spirit of WWI, while the Shire appears pastoral and homely, the place where hobbits can live comfortably inside earth itself (Brawley 2014, 113). In addition, the pattern of portraying soil as a visual signifier finds its precursor in writers like Ivor Gurney and Edward Thomas, who describe it as a material and symbolic medium for remembering and bearing witness to what is often the unspeakable yet tangible effects of WWI. Their writings portray the land as

> a kind of mother—as in Ivor Gurney's 'Strange Service' or 'England the Other' in his collection *Severn and Somme* (1917)—and the devastated war zones are remembered as a material body. The land protects the men, but also threatens to suffocate or drown them in its midst. In return for this ambiguous nurturing, the men and their machines attack the land, and one another within it, making their surroundings even more unstable and dangerous. (Tate 2009, 171-2)

The ambiguity of nature as a nurturing yet annihilating force also finds its expression in Ernst Junger's *Storm of Steel* (1920), which shows the soil as an allegorical expression of the profane and the divine, and in Paul Nash's 1918 Painting *We Are Making a New World*, which blends the colour of rusted or melted metals with the comforting earthy tones of the soil (Stout 2015, 77-80). The

juxtaposition between the organic and the mechanical is made alive in the trenches where men find their bodies pressed against the ground, which could potentially shatter and explode, transforming nature into a material force that alters the human body. Images of war destruction also establish an ironic parallel between the effect of explosives and the tilling of the soil, denoting the idea that technology is endlessly warring against the natural world, so that regardless of who wins, humans emerge as the victims. The use of soil may not have much bearing in my examination of *Leviathan,* since the narrative mostly takes place on-board a dirigible, but it serves as an important indicator of nature's significance in WWI's historical imagination where discourses of modernity are often brought to the foreground. These examples illustrate nature as an important artistic means for establishing and exploring the comparison between the organic and the mechanical, the living and the dead.

Another prominent aspect of nature in WWI literature is the representation of animals, and most notably, horses and their riders. Over a million horses were conscripted into wartime service for battle and transportation. Historical accounts of equine friendship have inspired novels such as Michael Morpurgo's *War Horse,* which uses the majesty of the horse to counterbalance the violence of war. Paul Stevens (2016) contends that *War Horse* romanticises the horse to the extent that it is "idealised as a means of mediation" and that it "provides the common ground in which their trust can grow and the familiar fraternisation topos of the First World War is given a new twist" (12). Stevens treats the horse's animality as something untainted by WWI's industrial logic, but Jennifer Parker-Starbuck (2013) claims that most historical accounts of WWI show the opposite of using machines and animals side by side, which produces and reinforces the misconception of animals as dispensable, mechanistic beings. It would be erroneous to treat WWI as the ultimate realisation of the industrial logic, since it was in fact more of a transitional period, during which animals were no match for the weaponry being used and were gradually replaced by mechanic technology.

In the next section, I explore how the *Leviathan* trilogy repositions ideological tensions between animals and machines. Westerfeld reproduces WWI according to the romanticised adventure tradition, incorporating the maturation plot in order to shift the focus from mass destruction to a lesson in how nature, technology, and human needs can be imaginatively realigned. The genetic hybrids constitute a source of uncertainty and ambivalence. Their instrumentalist value and capability assert their seemingly unnatural and technological origin, but their organic bodies and emotional intelligence establish moments of physical and emotional intimacy that recall the importance of human-animal companionship in WWI horse stories. The resulting tensions between

paradoxical views of what is natural and what is unnatural allow a more complex and decentred view of technology's influence on human and ecological conditions.

Communication with Hybrids

As Lewis Mumford recalls, in each historical epoch there is always a distinct form of mastery for "[t]he dream of conquering nature is one of the oldest that has flowed and ebbed in man's mind" (2010, 37). Mastery in the *Leviathan* trilogy takes on a recognisable form that resonates with the Cartesian notion—animals as "natural automata"—which evokes nature as the realm of the mechanical, without consciousness or sentience (Taylor 2008, 178). The Darwinists are nations of the Allied Powers that accept and promote genetic engineering. They use their natural philosophy to create chimeras that are designed to serve utilitarian purposes. There are message lizards with the ability to memorise and repeat long sentences, half-plant, half-animal organisms designed to heal wounds, barnacles engineered to propagate at an unnatural pace to weaken metal, and lupine tigersques, "half-wolf tigers, all sinews and claws, a crafty intelligence lurking in their eyes" (*Leviathan* 30). The notion that beasties are engineered to be strictly utilitarian objects is the essence of the Darwinist consciousness. When Deryn encounters for the first time a 'companion animal' in the form of an unengineered Tasmanian Tiger, she is startled by its naturalness and lack of usefulness. Deryn surmises, "Dr. Barlow had to be joking. The creature didn't look natural in the least. And she was taking it along as a *pet*? Tazza looked heavy enough to displace at least one unlucky midshipman" (*Leviathan* 155). The misidentification of an extinct but natural species as unnatural is pertinent since it signals to the reader that what human beings consider as natural is often dependent on the established norm. In our world, a live Tasmanian tiger would be unnatural since it would be an engineered replica of an extinct species. In the world of *Leviathan,* however, hybrids appear to be the norm and natural creatures are the abnormalities. Moreover, Deryn's fear of being relocated causes her to compare her own functionality with that of a pet companion. The scene demonstrates the prevalence and governance of Clanker's utilitarian discourse as a criterion for evaluating the worth of human and nonhuman beings. It is in the midst of this utilitarian culture that Deryn establishes and negotiates relationships with nonhuman 'beasties'.

Mastery Through Reason

In the first book of *Leviathan*, there is a particularly memorable encounter between Deryn and a beastie that sets the text's ambivalent tone for exploring instrumentalist mastery. The encounter

features the heroine Deryn, disguised as Dylan, taking her midshipman test as part of the conscription process. The test involves the manoeuvring of a fabricated species called the Huxley Ascender, a jellyfish-based beastie that flies like an air balloon. The test is meant for the airman to demonstrate his knowledge of aerial navigation, ability to work with beasties, and what they call 'air sense', that is, the intuition that allows the pilot to remain calm and in control over the beastie while airborne. This scene is particularly striking because, unlike her subsequent encounters with beasties, such as the task of releasing fléchette bats[14] when the ship is under attack, this opening scene sets the framework for exploring human-nonhuman engagements as more than a utilitarian paradigm.

The Huxley Ascender is the first hydrogen breather designed and fabricated by the Darwinists:

> The Huxley was made from the life chains of medusae—jellyfish and other venomous sea creatures—and was practically as dangerous. One wrong puff of wind could spook a Huxley, sending it diving for the ground like a bird headed for worms. The creatures' fishy guts could survive almost any fall, but their human passengers were rarely so lucky. (*Leviathan* 32)

As the product of the Darwinists' early designs, the Huxley Ascender reveals some of the most basic and intrinsic visions of Darwinist philosophy. The Darwinists' genetic modification establishes an ideological perspective on nature that could be identified as transhumanist and opens up some key areas for interrogation. According to the Darwinists' initial design, the selection of 'life-threads' (their version of DNA) is purely functional. It realises the transhumanist notion that humans have the rights to transformative technologies as means of realising and maintaining what Nick Bostrom calls 'posthuman dignity'. Bostrom's essay 'In Defense of Posthuman Dignity' (2005) asserts that transformative technologies like genetic engineering place the ethical obligation on their human users to explore the full potential of living beings. The result of transformative technologies would be improved natures of new life forms that, instead of "deferring to the natural order", would have surpassing capabilities "in accordance with humane values and personal aspirations" (2005, 205). After all, Bostrom argues, "What we are is not a function solely of our DNA but also of our technological and social context. Human nature in this broader sense is dynamic, partially human-made, and improvable" (2005, 213). The Huxley Ascender's design illustrates a similar ideological inclination, that transformative technologies should fulfil human

---

[14] Genetically engineered bats that consume feed mixed with metal shards. They are designed to be afraid of red light, which is used as a signal to frighten the bats into releasing their biological waste in battle, so that the metal shards would pierce the surface of the zeppelins.

aspirations and that nature in its original state is improvable. However, the Huxley Ascender's design also raises some interesting issues for interrogation. For instance, the transhumanist perspective implies that nature in its original state is improvable, and thus, flawed in some respect. The Darwinist scientists recognise this by noting that the jellyfish's irritable nature makes the Huxley Ascender particularly hazardous and difficult to control.

Yet paradoxically, despite their emphasis on functionality and control, the early Darwinist engineers have retained the jellyfish's erratic nature. The contradiction suggests that while unmodified nature is, to some extent, flawed according to the Darwinist scientists' utilitarian evaluation, some flaws are not detrimental to the extent that they need to be erased through engineering. In the Darwinists' view, improvement is not fixing nature; rather, it is creating new combinations that could be utilised in different contexts. The Huxley Ascender's design thus implies that the Darwinist philosophy is to work 'with' nature rather than against it. Their striving for functionality and pragmatism is not the same as Victor Frankenstein's pursuit of perfection. The Darwinists understand that nature is unpredictable and imperfect, and they are willing to work with it rather than refine it, even though in their view there is clearly room for improvement.

So when Deryn begins her midshipman test, it is on this premise of working with enhanced yet imperfect nature that she engages with the Huxley Ascender. As a part of Deryn's midshipman test, she is instructed to ascend with the Huxley and then wait for the ground crew to pull them down. There are leather straps under her arms and around her waist that resemble horse-riding equipment, which are "clipped to the curved seat that she perched on like a horseman riding sidesaddle" (*Leviathan* 33). The ground crew tells her, "Enjoy the view…Most of all, don't do *anything* to upset the beastie" (ibid.). Aware of the Huxley's capricious nature and having been warned to not unnerve the it lest it throws her off, Deryn is confronted with a new, disconcerting reality, in which the fabricated beastie is more in control of her movement than herself. Before she takes off, she learns how to use "a cord leading to a pair of water bags harnessed to the creature's tentacles" to control the speed of descent in case the Huxley goes into a sudden dive (*Leviathan* 34). The cord enables a modicum of control over the beastie which she learns to use effectively once they are in the air. This is a steep learning curve, however: a sudden thunderstorm presents itself as a terrifying test of her ability to direct the nonhuman to ensure their survival.

As soon as Deryn senses the oncoming danger, she instinctively establishes her mastery through verbal command. Deryn proclaims, "I may have gotten you into this mess, but I'm gonna get you out, too. And I'm telling you: Now's not the time to panic!" (*Leviathan* 59). Deryn's initiation of dialogue presupposes the beastie's sentience, but her commanding tone suggests that its

sentience is not on the same level as hers. Between the beastie and herself, Deryn discerns that she alone possesses sufficient capability to rescue them. Reason and language, in this case, are no less than the key that causes the protagonist to emerge as the dominant subject.

In the context of modern society, the concept that humans alone possess the ability to rationalise and communicate is more or less an indelible residue of Enlightenment ideology. Modern science and empirical research demonstrate that plants and animals communicate using complex visual, aural, and chemical signals, most of which are incomprehensible to humans. Moreover, realising that each species has its own distinct methods of forming social relations, it would be presumptuous to think that nonhuman signals can even be translated into human speech. Yet Deryn's assumption of superiority on the basis of human language demonstrates the potency and enduring quality of this humanist belief, that reason is a singular marker of human being's exceptional status.

By articulating her sense of control, Deryn's speech reveals that her speech definitely implicates both the human and the nonhuman in a power paradigm, but it is not as simple as assuming that speech alone grants the human subject power. Given the prominence of reason in Enlightenment ideology, Chris Danta and Dimitris Vardoulakis (2008) point out that there are two common responses to humanism: to persist with the definition of the human as a rational animal, or, to recognise that animality needs to be re-defined outside the political sphere where reason reigns (4). From an ecological perspective, Danta and Vardoulakis claim that a revision of industrial rationalism should be led by "the initiative to allow the nonhuman to re-organise or even disorganise social space occupied by both human and nonhuman entities (2008, 5). To allow the nonhuman to disrupt a collective social space extends beyond recognising that the nonhuman possesses power. It requires the human subject to be willing to adapt to the nonhuman as a force of change. In other words, the human subject must concede that the nonhuman has the ability to define and redefine linguistic structures that give meaning to a social space. To a degree, Deryn's recognition of the Huxley's sentience is the beginning of redefining and disturbing the fabrics of rationalism as a structure of social space. But recognising the encounter as a disruption also suggests that Deryn also shows that fundamentally the responsibility of directing animality still lies with the human subject. She has to be the one to initiate dialogue, through which the nonhuman exists as an agential being capable of affecting the sociality and materiality of their shared environments. What I am stressing, therefore, is that Deryn and the Huxley's encounter reveals something basic and intrinsic about redefining animality in Danta and Vardoulakis' scheme, that it has to and can only begin with humans *allowing* their reality to be altered.

Deryn's engagement with the Huxley demonstrates that redefining animality begins with the human subject inviting the nonhuman into a dialogue, which becomes a pivotal moment in Deryn's understanding of nonhuman beasties. After floating aimlessly in the sky, realising that both the Huxley and she herself are at the mercy of the variable wind changes, she wonders,

What was she supposed to do, talk the beastie down?

"Oi!" she shouted. "You there!"

The nearest tentacle curled a bit, but that was all.

"Beastie! I'm talking to you!

No reaction.

Deryn scowled. An hour ago the Huxley had been so easy to spook! (*Leviathan* 67)

Deryn not only speaks to the beastie as a way of working out her own anxiety. She tries to use her speaking to engage with the beastie and elicit a response: Deryn tells the beastie, "I'm talking to you!" It is unclear whether Deryn is attempting to use her tone, the sound of her voice, or actual words to communicate with the beastie. However, the underlying significance is that Deryn reaches out to the beastie, and yet the beastie remains stubbornly silent.

Of course there is the suspicion that the Huxley Ascender ignores Deryn because its mental faculty is not developed enough to comprehend human language. We may even infer that the beastie's physical response is to the tone, rather than the content, of Deryn's utterances. But if we are to believe Jacques Derrida's claim that muteness is the essence of animality that compels the human subject to recognise her/his own limitations, then the Huxley's silence is actually emblematic of its power over Deryn. Derrida writes, "[I]f nature laments, expressing a mute but audible lament through the sensuous breath and rustling of plants, it is because the terms have to be inverted…There must be a reversal" (2002, 388). The Huxley's muteness is not as simple as an expression of its dumbness, subservience, or even passivity. Its silence is a form of self-expression, indicating that "[t]he creature made no promises" (*Leviathan* 59). It is a rebellion against the absoluteness of human reason and language, which manifests itself as a deliberate ambiguity of gesture and intent. So while Danta and Vardoulakis' notion of redefining animality has anchorage in Deryn's experience of the nonhuman world, Derrida's idea of muteness calls forth this other dynamic of power between human and nonhuman, that our own inability to comprehend and acknowledge the animal's silence can paradoxically allow the animal to resist human control.

To delve into the ramifications of this paradox, Giorgio Agamben's work on language and mastery in *The Open: Man and Animal* (2004) is useful as a starting point. Agamben begins with recognising that up until the eighteenth century, language had operated as human's key signifier of

his own exceptionality and humanity. Although it is "not a natural given already inherent in the psychophysical structure of man; it is, rather, a historical production which, as such, can be properly assigned neither to man nor animal" (2004, 36), which is a historical production that has left its lasting imprint on human culture, so that "[i]n identifying himself with language, the speaking man places his own muteness outside of himself, as already and not yet human" (2004, 35). Implicit to the historical production of muteness is the idea that muteness equals powerlessness, servility, passivity, and dumbness, which are characteristics that have to be expelled from the construction of the ideal man.

Compared to this traditional humanist conception of human-animal distinction, *Leviathan* projects a more nuanced vision, in which muteness exists as an ambiguous and enigmatic expression of animality. Westerfeld works with rather than against the discourse of mastery in the representation of human and other, making manifest "an openness to the Other that is both visual (one regards the face of the Other) and performatively enunciated through language (a 'saying' that is also a doing) that irrefutably exposes one to the Other" (Bunch 2014, 43). The more Deryn spends time inside the Leviathan, the flying whale, the more she learns how to read the beastie's physical responses and visual cues. For instance, after the Leviathan escapes from the Clankers' electromagnetic pulse without the pilot's direction, Deryn is the one who notices that the Leviathan is acting differently: "Deryn looked down at the flank, her eyes widening. The cilia were still moving, still carrying the airship away from danger" (*Behemoth* 35). Based on her observation, she notes, "Usually a hydrogen breather without engines was content to drift. Of course, the airbeast *had* been acting strangely since the crash in the Alps" (ibid.). This observation leads her to deduce that the Clanker engines that are now housed inside the Leviathan have been giving the airbeast a newfound sense of power and autonomy, providing insight into the nonhuman creature's independent subjectivity that is usually overlooked by other Darwinists who have a more utilitarian perspective.

Westerfeld shows that it is pointless to conceive human superiority on the basis of "having language" for the animal resides outside it. The animal's silence is not a proof of its dumbness but rather its alterity that includes implicit subservience and active resistance. This is not an attempt to humanise the animal by endowing it with reason, for this type of post-Enlightenment subversion often ends up glorifying human attributes. Instead, Westerfeld's narrative model proposes a more complex approach. On the one hand, *Leviathan* portrays the animal's silence as an invitation to the human subject to assert their mastery and control. On the other hand, *Leviathan* depicts the animal's silence as a disruptive linguistic marker that interrogates human mastery. In this sense, *Leviathan* is

not constructing Deryn's relationship with the Huxley into an absolute antithesis to her own Darwinist utilitarian beliefs. Rather, it serves to inflect her instrumentalist assumptions with a different dynamic that she is not familiar with and cannot be fully settled.

Dialogue and Mimicry

As the first encounter between human and beastie in the trilogy, Deryn and the Huxley Ascender's interaction identifies language as an important facet of *Leviathan*'s exploration of animality, and later on, a particular beastie in the *Leviathan* trilogy appears as a prominent nonhuman character that embodies the narrative's ambivalent treatment of nonhuman language and intelligence. To grasp the full extent of this beastie as a type of subversion, it is important to be aware of the established norm in Westerfeld's alternate Europe, especially as a reflection of our own anthropocentric assumptions. In Westerfeld's alternate universe, when Darwin discovered the way to bio-engineer new species, he also laid down some laws to regulate genetic engineering, with the most important one being: "No fabricated creature shall show human reason" (*Behemoth* 178). This law of bio-engineering, along with the other that states no one shall use human life-strands to produce hybrids, evokes the common fear in science fiction, the fear of the collapse of the human-animal divide. To resist hybridity as a form of challenge to the human subject, the Darwinist scientists put forth reason as an ontological signifier that consolidates humanist exceptionality and species distinction. Yet in Dr. Barlow's description of the perspicacious loris, she explicitly states that she has designed the species to be perspicacious, that is, insightful, discerning, and prescient. These are qualities that we would typically associate with intelligence, yet not necessarily deductive reason, for one can be intuitive and insightful in perception yet not appear to have undergone a process of deductive reasoning. The naming and design suggest a fundamental flaw in treating reason as an ontological signifier—there are attributes other than reason that enable the subject to express intelligence and sentience, which may, sometimes, be more efficacious and pragmatic.

A notable incident in which nonhuman intuition surpasses human reason demonstrates this type of reversal. Bovril the perspicacious loris is designed to listen and mimic human speech in order to present revelation and insight that are not always obvious to its human creator and companions. At one point, Alek recalls an incident that illuminates the beastie's preternatural perspicacity:

> The creature had sat on Klopp's shoulder all night, listening to everything, rolling words like "magnetism" and "elektrikals" in its mouth. And then it had plucked Dr. Barlow's necklace from her and demonstrated the purpose of the strange device. That was how the beast's

perspicaciousness worked. It listened, then somehow drew everything together into a neat

bundle. (*Goliath* 112)

What Bovril the perspicacious loris presents, then, is the opportunity to examine an embodiment of

nonhuman intelligence that disrupts rationalist assumption about animal sentience. When Deryn

witnesses the perspicacious loris being observant and insightful, she is unable to treat it as another

nonhuman instrument, and more importantly, she confronts the inadequacy of human reason as a

form of comprehension. Bovril's nonhuman solution to a human problem subverts the rationalist

assumption that reason alone is a measure of intelligent being, and signifies what may be lacking in

our scientific disciplines and rationalist society.

In the initial stage, Bovril signifies a type of cognitive function different to human reason.

But as the narrative progresses, Bovril's thinking and ability begin to evolve, to the extent of

contesting its biological limit. Deryn appears confused and disconcerted when she notices that the

lorises are conversing. Bovril recites "whole conversations that Deryn had shared with Alek or Lilit

or Zaven" while another loris responds with "declamations that sounded just like Dr. Barlow

talking, even a few that had to be Count Volger" (*Behemoth* 472). The uncanny effect is derived

from the tension between the scientific ideal that the beastie embodies and the scientific reality of

the beastie. According to her Darwinist upbringing and teaching, a designed and fabricated beastie

is incapable of reason and intelligence since this is a necessary limitation that preserves the beastie's

instrumentalist value. Yet she encounters in Bovril the embodiment of ontological subversion: the

perspicacious loris displays intelligence that displaces it from the Darwinist norm of beastie

behaviour; but its intelligence is the expression of its genetic programming. Dr. Barlow explains to

Deryn that the perspicacious loris becomes more perspicacious over time because it simply "doing

what comes naturally to [it]" (*Behemoth* 472). This is an interesting conundrum. Bovril is learning

because it is designed to listen, assimilate, and develop cognitively. But what if Bovril is learning to

the extent where its capability surpasses that of its original design and its function as an instrument

of human political interest? In this case, could its intelligence still be the result of its genetic

programming? Hence, the perspicacious loris' subversive ontology produces an ironic and playful

conceit. It makes fun of what humans perceive as rational and logical and reveals the ridiculous

nature of human social values and expectations. At the same time, it poses a necessary question, to

which there is not a 'right' answer, regarding the dialectics of transformation in human perception

of nonhuman sentience and intelligence.

Another problematic dimension of Bovril's nonhuman intelligence is related to its role in

human politics on the premise that Bovril is designed to serve human interests. Alek, seeing the

loris for the first time, learns, "This animal was fabricated, not born of nature. It had some purpose in the Darwinists' plans, a role in Dr. Barlow's schemes to keep the Ottomans out of the war. And he had no idea what that purpose was" (*Behemoth* 133). The possibility that the nonhuman creature is meant to be used as a political device is the only certain knowable trait that defines Bovril's existence, and throughout Alek's adventure, Bovril repeatedly demonstrates that he possesses a form of nonhuman prescience that is often used to illuminate what the human protagonists are unaware of. An interesting example of Bovril's prescience is when it meets another perspicacious loris, and both beasties communicate by repeating things they have heard:

> "Mr. Sharp," the new beastie said again.
>
> > "*Mr.* Sharp," Bovril corrected, then they both began to giggle.
> >
> > "Why does it keep laughing?" asked the lady boffin.
> >
> > "I've no barking idea," Deryn said. "Sometimes I think it's cracked in the attic."
> >
> > "Revolution," Bovril announced.
> >
> > Deryn stared at it. She'd never heard the creature say something out of the blue before.
> >
> > The new beastie repeated the word, rolling it around on its tongue happily, then said,
>
> "Balance of power."
>
> > Bovril chuckled at the phrase, then dutifully parroted it. (*Behemoth* 472-3)

There are several discursive dimensions to this dialogue between Bovril and the new beastie, which are notably, and, perhaps deliberately, ambiguous and question the extent to which Bovril is an instrument of human politics. Dr. Barlow is the only other person on the Leviathan who knows Deryn's true identity as a girl. Yet, Bovril, through his nonhuman intuition and observation, realises this fact also and subsequently parrots, "*Mr.* Sharp" ironically in Deryn's presence. Bovril's stress on the 'mister' part clearly indicates his understanding of Deryn's true identity—and the kind of ironic humour he generates with his utterance. This particular comment is unrelated to political motives in WWI, which indicates that Bovril is developing and applying his intuition skills in a direction different from its genetic design. However, when Bovril begins to repeat the words "revolution" and "balance of power", it becomes ambiguous whether Bovril's repetition is as intelligent as his ironic expression implies. The description of Bovril chuckling at the phrase and yet "dutifully" parroting it creates more questioning than certainty. It makes the reader wonder, is Bovril repeating the phrase because it has a mind of its own anticipates that the Ottoman's successful revolution could tip the balance in Britain's favour, or is it mindlessly repeating the phrase simply because it is doing what it is programmed to do?

This kind of ambiguity only serves to highlight Bovril's function as a device of irony. On the one hand, its mimicry operates as a reflection of human behaviour, which produces doubleness that ridicules outward social conventions as much as it lays bare the perspicacious loris' inherent and unknowable nonhumanness. On the other hand, the mimicry's elusive and ambiguous nature invites the reader to contemplate the limit of human logic, which encourages the human protagonist and the reader to be more receptive to alternative nonhuman forms of intelligence. In this way, Bovril opens the conceptual space for human protagonists to experience a subjective displacement that deprives them of their self-assured superiority based on human reasoning. Bovril's disconcerting presence shows that, when our understanding of personhood and knowledge is exposed as incomplete by the voice of the nonhuman, it raises the question of whether 'we' have always been 'we'. Wolfe claims that the animal serves effectively as the other because it is able to bring about the revelation that

> 'we' are always radically other, already in- or human in our very being…in our subjection and constitution in the materiality and the technicality of a language that is always on the scene before we are, as a radically ahuman precondition for our subjectivity, for what makes us human. (2009, 571)

The flight from human reason leads the human protagonists into a space where the nonhuman's language reveals what is most nonhuman—and lacking—in their humanity. Bovril pulls the human protagonists away from their position of power so that they become unsettled, vulnerable, and thereby susceptible to other energies, standpoints, and intelligences. Merely by 'being' what it is, Bovril disrupts human-centred concepts and complacency. It confirms Derrida's suspicion that animality is disturbing because it makes the human viewer aware of the nonhuman that resides within the human subject so that it is at unease with itself (2002, 372). The perspicacious loris operates as the embodiment of nonhuman transgression in both ideological and social terms.

But when the beastie is viewed as an extension of the fool tradition, its potential for subversion becomes questionable and problematic. In *The Idea of Comedy: History, Theory, Critique* (2006), Jan Walsh Hokenson presents the fool as integral to the medieval conception of subversion, which uses irony and reversal to implicate others in an endless cycle of reversal and counter-reversal. Hokenson writes,

> On the one hand, he is normative social value, for one of his comic functions is to castigate profiteering priests and lawless barons, all the foolish abusers of social rank and right. But however clever and bitting, such satire is subordinated to the pervasive irony radiating from his fool's wear and to the comic structure leading to ruin, reversal of all he says, and the revelation that all is folly. On the other hand, he is autonomous, the disenfranchised outsider

in rags, mocking the lordly, and his gentlest compassion is reserved for the suffering and discontented. But his mockery springs from his ironic mirror revealing the lords to be ragged fools too. He derides not the hierarchical order but puffery and counterfeit pretensions to infallibility in a fallen world. (2006, 152)

In some ways, the loris performs some of the crucial functions of the fool archetype. Like the fool, which meets both criteria while ultimately satisfying none, the loris is "irony in a dunce cap holding up a mirror, so that anything he says and does constitutes a comic reversal and counter-reversal almost infinitely" (Hokenson 2006, 152). The perspicacious loris is an imaginary species that vocalises animal intuition through mimicry to unsettle Enlightenment ideology. It constructs a dualistic reality in which the nonhuman is simultaneously an unthinking, programmable machine and an intelligent creature capable of altering social norms. Therefore, the perspicacious loris' subversive quality lies not necessarily in its deconstruction of animality or anthropocentrism, but rather in its mutable ambiguity that resists and reproduces both conflicting discourses.

As a creature that shows sentience complex enough to produce linguistic doubleness and deceit, the perspicacious loris is undeniably on the verge of trespassing its own genetic limitations to resist the instrumentalist definition of animality. But at the same time, viewed as a creature that draws forth its intelligence on the basis of its genetic design, the perspicacious loris' artificiality returns the viewer to the mechanistic discourse, and thus slides away from the ecocentric definition that characterises nature as a product of human-nonhuman symbiosis. In this way, the perspicacious loris embodies a more nuanced awareness of ideological categorisations. Its doubleness creates an endless cycle of reversal and counter-reversal to perceiving the nonhuman creature as a military weapon designed by the Darwinist scientists and an emerging nonhuman consciousness that leads to independent thinking, judgment, and autonomy. This constant feedback of beastie's mechanisation and nonhuman autonomy exemplifies the problematic tension that emerges when WWI locates the nonhuman figure at the juncture of militaristic, diplomatic, and personal demands. In the end, both reader and protagonist are left with the ambivalent representation of nonhuman silence and intelligence, which encourages a more open and flexible engagement with the nonhuman in WWI's ideological landscapes.

Nature vs. Technology

This section can be seen as a continuation of the previous discussion of nonhuman nature in mechanistic and non-mechanistic terms by expanding the focus from specific nonhuman agencies

such as the Huxley Ascender and the perspicacious loris to the shape of the nature/technology binary within the narrative. It illustrates how *Leviathan* uses characteristics of nature to reimagine technology. However, *Leviathan* does not entirely erase the distinction between nature and technology. Rather, the narrative uses technology's imitation of nature to probe the ramifications of treating technological modifications as a form of development.

The Machine's Vitality

The most obvious interrogation of the nature/technology binary occurs when *Leviathan* depicts the machine moving in the likeness of a living creature. *Leviathan* draws artistic connections between Clanker technology's design and the visceral carnality of living, breathing, and moving monsters. The German land dreadnought is described as a hulking monster "twice as tall as trees", on top of which "men scurried like ants" (*Leviathan* 46-7), while the Cyklop Stormwalker that Alek pilots is seen as "one of the Darwinist monsters" whose belly hatch is like "the jaws of some giant predator bending down to take a bite" (*Leviathan* 11). The rhetoric of depicting the machine in animalistic imagery is hardly original. But what is notable about Westerfeld's characterisation is that it operates as the initiation of a more organic and intuitive engagement between human and machine. Inside this mechanical monster that fires cannons and breathes smoke, Alek mentions flashes of light, burning sensations, being choked by cannon smoke, the smell of diesel, kerosene and sweat, and the Stormwalker's sauntering rhythm trembling in his bones. The multiple layers of sensation compose a somatic experience of the machine that is in sharp contrast to the image of the cyborg, which is usually seen as a sterilised, functional database in a humanoid form.

The image of the machine as a living creature has its own tradition in mythology and history. In *Authority, Liberty, and Automatic Machinery in Early Modern Europe* (1989), Otto Mayr includes in this tradition the wooden dove of Archytas, the water-powered world machine of Archimedes, the life-size mechanical woman built by Albertus Magnus, and the lion built by Leonardo da Vinci in Milan for the reception of the French king. Because these mechanical creatures were frequently mentioned in 16th and 17th century texts alongside signs of magic, Mayr highlights the difficulty of distinguishing mechanical feats from tales of sorcery during this period (Mayr 1989, 23). The cross-pollination between the mechanical and the magical became so saturated to the extent that the clockwork machine imagery operated as a means of accessing a higher collective mentality and obtaining a proper natural order. Hence, *Leviathan*'s representation of the machine is a return to the pre-Enlightenment period in which the machine seems

indistinguishable from natural phenomena and beings, which makes it seem uncanny and strange. On this basis, *Leviathan* reproduces the machine's strange qualities as a reflection of human weaknesses, which is most effectively conveyed when Alek synchronises and almost loses control of the Stormwalker. *Leviathan* describes the unity in their motion by highlighting Alek's human intention as the trigger of the machine's physical response: "He urged it forward, stretching the metal legs farther with every step. Then came the moment when walking turned to running, both feet in the air at once, the cabin shuddering with every impact against the ground" (*Leviathan* 92). So when the Stormwalker picks up its pace, from walking to running, Alek registers the movement both as the Stormwalker's shuddering and as his own glorious escape after long nights spent creeping through the forest (*Leviathan* 93). Consequently, when he loses control of the Stormwalker, he also perceives the machine's unwieldy and clumsy nature as a reflection of his own vulnerability. Sensing that the Stormwalker is running too fast, Alek eases back on the saunters to slow down the pace, but to Alek's dismay the Stormwalker's momentum carries it forward. The accidental slip forces Alek to abandon the saunters, and only then Alek belatedly comprehends the machine as something unpredictable with its own quirks (*Leviathan* 94-5). Count Volger reassures Alek that everyone makes the same mistake of assuming they have complete control over the machine, and their over-confidence causes them to always neglect the machine as an entity that has its own flaws and tendencies that make up its own vulnerability.

The machine in Westerfeld's alternate world is uncanny and gigantic, yet resonant with human vulnerability in its equally jarring movements. It resists human intentionality not because it is developing a mind of its own, but because it is recognisably flawed, imperfect, and vulnerable. So that as Alek learns to control the machine, he forms a union with it on the basis of his own human fallibility. In this way, Westerfeld establishes a pattern of forming intersubjectivity that is reminiscent of the steampunk aesthetic that seeks to restore connections to a perceived lost mechanical world. Steampunk is a genre that emerged in the late 1980s and 1990s as a branch of cyberpunk. It is pioneered by writers such as K. W. Jeter, William Gibson, and Bruce Sterling who created alternate historical narratives set in Victorian times, focusing on the complications of anachronistic technologies. Rebecca Onion observes that among steampunk writers, there is often the motive for resisting the technologies of their own time, echoing "the anger of anti-moderns of the late nineteenth and early twentieth century, who, through the Arts and Crafts movement, advocated a return to a pre-modern "middle" landscape" (2008, 142). In their desire to see a more positive orientation of human-technology engagement without collapsing the ontological boundaries in posthumanist terms, steampunk writers and designers rely on the principle of making

the machine seem more human rather than making the human seem more mechanical. Steampunk machines retain their mechanical qualities, especially those tangible signs that enable the human to register the machine as mechanical, such as its metallic sheen or the stain of diesel oil on the human body. But added to them is a sense of vulnerability and individuation often in the form of unique and unpredictable movement. The machine remains physically and ontologically mechanical in its behaviour and engagement with human beings. Even so, there is an emerging awareness of elements of chaos and randomness within the machine that cause it to escape the traditional image of the orderly and regulated industrial machine.

There are other forms of mechanical performativity in *Leviathan* that are just as provocative, while some appear more conservative in their instrumentality. Nikolas Tesla, reimagined as a Clanker inventor of the Tesla Cannon, claims, "War is always ghastly, whether conducted with machines or animals…Though at least machines feel no pain" (*Goliath* 196). It institutes the Cartesian tradition of nature and machine that clashes with Alek's sympathetic relations to the machine. In consideration of these branches of mechanical performativity driven by other political intentionalities and ideologies, it would be presumptuous to claim that Westerfeld's alternate history projects a utopian vision of human and machine's coexistence in contrast to the dystopian image of destructive technology in the WWI imagination. The machine is, at times, difficult and impossible to wield, even turning against its human creator. For example, the Tesla Cannon Goliath is described as "one that becomes part of the Earth's magnetic field" which "casts the planet's energy through the atmosphere around the world" (*Goliath* 109). It is heralded as technology of the future, the kind of weapon that could end the war. Nonetheless, when Tesla is about to activate it to destroy Berlin, Alek uses Tesla's own miniature electrical weapon against him:

> Lightning slashed out across the room. It took Tesla's body and shook him like a puppet. Fingers of white flame spilled out of the cane to dance across the controls. Sparks spat in all direction, and the smell of burned metal and plastic filled the room…The rumble in the floor beneath Alek began to shudder, surging and falling, rattling the whole building in shock wave after shock wave, as if a giant were staggering past. (*Goliath* 503-4)

This scene of destroying a deadly weapon with another adds contradiction to *Leviathan*'s reimagining of the machine. The lightning is described as sweeping over Tesla's body to the extent that the nonhuman power appears to be the dominant agency. The mention of burned metal and flying electrical sparks evokes the image of industrial pollution and technology running rampant, defying the agency and control of its human creator. Alek's perception of shock waves is also interesting. It is described "as if a giant were staggering past," which calls to mind the name given

to the Tesla Cannon—Goliath—the champion from Gath, who appears in 1 Samuel 17:4. The underlying connotation of David and Goliath recalls both the machine's destructiveness and its inevitable fallibility. The machine in *Leviathan* is frightful and violent and appears almost larger than life. However, it is not some supernatural force that cannot be touched.

The trilogy maintains this ambivalent portrayal of the machine throughout the narrative, to the extent that Westerfeld uses the machine's vulnerability as something that undermines human agency. This sense of conflict between human and machine surfaces in the throne room scene where Deryn and Alek behold a giant automaton controlled by a team of Clanker engineers to mirror the sultan's movement: "The sultan crossed his arms, and the statue followed suit. Deryn noticed that the machine's movements were a bit stiff…Perhaps to aid the illusion, the sultan moved slowly and carefully, like an actor in a pantomime show" (*Behemoth* 185). In contrast to Alek's Stormwalker that illustrates the parallel between human weakness and mechanical idiosyncrasy, the automaton's mechanical nature is a force of constraint that overrides the human subject's intentionality, limiting —though not directing—the sultan's movement.

This realisation occurs when the automaton, piloted by a team of engineers, crushes the perspicacious loris eggs presented to the sultan as a gift of diplomatic goodwill. Deryn notes that "the man seemed surprised himself, as if he hadn't realised what he was doing. Of course, *he* hadn't done anything—the automaton had" (*Behemoth* 186). Having worked out how the automaton is piloted, Deryn implies that it is being used by German Clankers to—literally and figuratively— move the sultan's hand and instigate a war between Istanbul and England. Even so, the scene of the machine moving without the sultan's intention lends the machine an uncanny, rebellious streak. Admittedly the automaton's mobility does not have the same level of sophistication as those found in cyborg rebellion narratives. Nonetheless, the uncanny moment reveals, even though the Clanker machine is a designed construct that serves the human inventor's utilitarian needs, the machine can rebel against human intentionality not because it has surpassed human capability or intelligence, but rather, because its capability is inferior to that of the human pilot.

In other words, *Leviathan* is not evoking a utopian imagination of human and machine coexisting harmoniously, since its alternate representation of WWI technology cedes to the dystopian tradition of WWI that paints technology as a source of terror and destruction. But there is also a positive driving force behind *Leviathan*'s representations of technology. This desire to perceive the machine in a less destructive paradigm frames the human protagonist's piloting of the Stormwalker as a necessary formative experience. The relationship between Alek and his Stormwalker reveals the crucial principle of positive reclamation that underlies Westerfeld's

anachronistic technology. Returning to an earlier time when the technology has not yet entered the digital age, Westerfeld reclaims some of the experiences that we have lost, especially those centred on the machine's texture, materiality, and potential to disrupt the humanist norm. More importantly, returning to a time when the machine is not yet fully automatic and still requires a human pilot, Westerfeld recovers the principle of codependence between human and technology. This mode of engagement, derived from anachronistic technology's fallibility, transforms technology into a way of revealing, intimating, and negotiating the materiality that binds human beings to their external environment.

This definition of technology resonates with Martin Heidegger's concept, which can be used to reframe *Leviathan*'s alternate history into a critique of the history of modernity, and more specifically, WWI as a war driven by industrial mechanisation. In 'The Question Concerning Technology' Heidegger moves away from the instrumental definition of technology as a means and the anthropological definition of technology as a human activity. Instead, he proposes that technology is "a way of revealing" (1954, 12). Heidegger asserts that technology reveals what is hidden and obscured in nature

> in the sense of a challenging forth…in that the energy concealed in nature is unlocked, what is unlocked is transformed, what is transformed is stored up, what is stored up is, in turn, distributed, and what is distributed is switched about ever anew. (1954, 16)

Heidegger falls into vague abstraction in claiming that technology reveals "the energy concealed in nature" without specifying the kind of energy, whether it be physical, chemical, social, political, or even spiritual. Yet it seems to touch what is intrinsic in *Leviathan*'s anachronistic constructions of technology in alternate WWI, that technology reveals what lies beneath the surface of human cognition. When Alek is pondering over his discovery of random metal pieces that seem too similar in design to be random, he reflects on how his being is, to some extent, possessed by the workings of technological objects: "He groaned, wishing the thoughts would let him sleep. But mechanikal[15] puzzles had taken over his brain. Perhaps this proved he was a Clanker at heart and there would never be a place for him aboard a Darwinist ship" (*Goliath* 61). Although Alek's initial preoccupation is with solving the puzzle, his reflection on technology leads him to contemplate on his social and political status in the matrix of Clanker and Darwinist politics. He envisions being rejected by the Leviathan's crew because for him the way technology operates is no longer just a utilitarian means of achieving his goals. Rather, technology inculcates a form of rationalist thinking

---

[15] The Clanker spelling of 'mechanical'

that he has assimilated into his very being. This notion that technology implies to the human protagonist who and what he is echoes Heidegger's overarching argument that technology is never just a weapon or a vehicle. Using technology results in discovering, unlocking, and experiencing something new aspects of human fragility and idiosyncrasy, which adds dimensionality to the traditional WWI narrative of technology as a force of destruction. Westerfeld's revisionist representation poses an alternative model of human-machine dynamics, which has the potential but also the ability to bring forth the hidden parts of our own subjectivity. Technology, as an instrument of revealing, shows us what we didn't know about ourselves. By going back in time to revive some older forms of mechanicality, Westerfeld's alternate history effectively functions as a creative outlet for imagining other ways of coexisting with technology in our post-industrial society and, as a result, exposes the conceits of industrialisation as a process that has distorted the fundamental engagement between human, technology, and the external world.

Nature as a Machine

WWI was not the first time in history when humans took for granted their right to conscript animals for battle. Even so, WWI was, in its own way, an exceptional historical phenomenon that magnified the instrumentality of animals due to the influence of industrialisation. There are records of insects used to detect poison gas (moths) and attack enemy troops (bees); pigeons used for carrying messages and canaries to detect poison; elephants, horses, mules, and camels for transporting war supplies; and dogs to guard military grounds, detect explosives, and scouting out land mines and enemy troops. Around eight million horses were killed in WWI, while around 20,000 homing pigeons died since enemies, knowing their mission, would try to shoot them (Alger & Alger 2013, 77-8). On the specific case of WWI's use of animals in the military, John M. Kistler claims,

> Just as industrialisation led to mass production in the 19th century, so had the engines of efficiency taken over the military of World War I. Between 1916 to 1919 the British Army let nothing to go waste. The British shipped 40,000 horse and mule hides to England from the French veterinary hospitals, to be used for leather. (2011, 201)

WWI's objectification of animals established a hierarchy that diminishes and neutralises animals, returning the human-animal engagement to the Cartesian paradigm where animals were "natural automata" or "robots made by God" and nature was "the realm of the mechanical" (Taylor 2008, 178). However, the human-animal engagement in military contexts is not always utilitarian.

In this section, I intend to address Westerfeld's treatment of WWI's industrial mentality that characterised both human and animal. The *Leviathan* trilogy's exploration of nature and machine is primarily carried out by reimagining the image of nature as a mechanical engine governed by laws of science and physics. In the novel's Darwinist conception of nature and genetic engineering, 'beasties' are hybridised species composed of multiple 'life threads' of existing animals. Because of the pragmatism inherent to the beasties' designs, the concept of keeping nonhumans as pets or having any empathetic relation with them is foreign to the Darwinists. When Deryn discovers Alek has named the new beastie Bovril, she protests, "But you're not supposed to name beasties! If you get too attached, you can't use them properly" (*Behemoth* 330). Likewise, the Darwinists would argue that it is irrational to fear beasties as unnatural beings since they are comparable to machines. When the kraken is directed by blue lights to attack (*Behemoth* 447), or when the half-plant, half-animal organism attaches itself to Deryn's wound and heals it with its secretion (*Goliath* 379), the Darwinists only see beasties as crafted objects whose biological instincts have been programmed to serve human needs.

The Darwinists' view of nature as materials for humans to rearrange and reshape is embodied in the titular hydrogen breather Leviathan, a flying whale that houses an engineered ecosystem as its organic engine. The base of Leviathan's biological make-up is described as "the life threads of a whale…a hundred other species were tangled into its design, countless creatures fitting together like the gears of a stopwatch" (*Leviathan* 69). Using Leviathan's clockwork metaphor, Westerfeld reimagines the engineer's function and skills so that Darwinist bio-engineering appears less intrusive. To a Darwinist engineer, life strands are the equivalent of clockwork pieces that can be refitted and replaced for the purpose of creating new arrangements that can best highlight nature's unique attributes and abilities. The Darwinists' desire to preserve 'naturalness' in spite of their intervention is most emphatically seen when Deryn makes the observation that it is "a typical boffin strategy" to craft the hydrogen breather's biological blueprint using existing "life threads" instead of inventing new ones, since there is "no point in creating a new system when you could borrow one already fine-tuned by evolution" (*Leviathan* 192). Instead of inventing an industrial engine, the boffins borrow the existing ecosystem and refines it:

> In summer the fields passing beneath the airship were full of flowers, each containing a tiny squick of nectar. The bees gathered that nectar and distilled it into honey, and then the bacteria in the air beast's gut gobbled that up and farted hydrogen. (ibid.)

The integration exemplifies a heightened ideal of the engineer and their work, in which the engineer borrows from and tinkers with nature in his technological design without distorting the core

functionalities of the natural organisms. The engineer, a character type more commonly appearing as the mad scientist, is well-established in science fiction. But unlike its predecessors that embodied the awe and terror of scientific progress, such as Dr. Moreau, Victor Frankenstein, and Dr. Jekyll, Darwinist boffins are not isolated and hungry for god-like powers, fanatic acolytes who worship beauty and perfection in nature, or blinded by self-righteousness in their intellectual pursuits. The Darwinist boffins' design of the Leviathan's biological engine conveys a vivid image of collaboration characterised by respect for nature's inherent qualities. There is the tendency and the willingness to tinker with nature. yet the engineers recognise that their transformative technology is limited and that the most effective means of transformation is refining nature through hybridisation.

Due to the text's alterity, the *Leviathan* trilogy negates WWI's historical condition, which Westerfeld uses as a basis for creating a familiar but fantastical world order that reveals a less alienated and destructive potential in WWI's mechanisation of nature. The Leviathan's design suggests that within liberal yet respectful ethical bounds, the mechanisation of nature in a military context can produce a positive, collaborative atmosphere in which humans are less intrusive and harmful and nature is able to preserve its essential qualities of dynamism and vitality. However, it must be noted that despite this model's idealism, the narrative as a whole is not radically promoting a utopian kind of pro-nature genetic engineering. This disorienting perspective of human, nature and technology is comparable to Donna Haraway's vision of the cyborg world that she explores in *Simians, Cyborgs, and Women: the Reinvention of Nature*. Haraway, writing about the cyborg world as nature and culture reworked, claims,

> [A] cyborg world might be about lived social and bodily realities in which people are not afraid of their joint kinship with animals and machines, not afraid of permanently partial identities and contradictory standpoints. The political struggle is to see from both perspectives at once because each reveals both dominations and possibilities unimaginable from the other vantage point. (1991, 154)

To an extent, the Darwinist engineering recreates the cyborg world. But to keep alive the political struggle, and prevent the narrative from producing the kind of single vision that Haraway sees as "worse illusions than double vision" (ibid.), Westerfeld uses hybrids such as the perspicacious loris. Bovril's perspicacity produces ongoing tension between using technology to reinvent nature for utilitarian purposes and the possibility that the hybrid could have capabilities that exceed its utilitarian design. For instance, in Mexico when General Villa, their potential ally, meets Bovril for the first time, Deryn explains, "It repeats things, a bit like a message lizard" (*Goliath* 374). But General Villa is skeptical, pointing out, "It does not only repeat…It told me I was wrong" (ibid.).

Alek, then, realises there is the possibility that Bovril's designed mimicry is surpassing the capability of its source material as well as the boundaries set by its human designers: "As the weeks had passed, the lorises' memories had grown longer. They sometimes parroted things from days before, or that they'd heard only from each other. It wasn't always clear now where a word or phrase had come from" (*Goliath* 375). The ambiguity of Bovril's intelligence unsettles Alek. In contrast, Deryn as a Darwinist embraces this kind of uncertainty, claiming that nature's inconsistency is "what kept the world interesting…reality had no gears, and you never know what surprises would come spinning out of its chaos" (*Goliath* 19). In other words, *Leviathan*'s overall imagery of human, nature, and technology fosters a positive posthuman and bioethical response towards genetic engineering. But it is also keen on keeping nature's chaotic and mutable qualities in focus as a source of ambivalence that is generative and necessary. Including Bovril as the embodiment of ambivalence and disruption warns the reader, that, while it is possible to control and manipulate nature to improve society and our ways of living, a part of nature will always remain out of reach and incomprehensible.

Hence, what is most interesting about *Leviathan* is not its posthumanist vision, but rather, how it appropriates and applies the vision of the cyborg world to shape the YA protagonist's formative experience. Using the airship's biogenetic engine, the narrative establishes an ecological paradigm of agency formation that results in co-dependence and versatility, stressing the importance of adapting oneself to environmental changes. The flying whale's ecosystem engine denotes that each person as a unit or a link cannot exist without others because they are all part of the same ecological design. The imagery conveys the thought that since all the members are indispensable, their power to affect others and cause change is derived from their situated position within the ecosystem. In other words, Deryn as an individual is capable of affecting change because she is recognised by the collective as a unique and functional member of the flying whale's internal workings. This concept of deriving power from being located within an organic ecosystem is especially significant since it becomes the foundation of Deryn and Alek's understanding of being a unique and autonomous self in a larger community. Having spent time aboard the Leviathan, observing the scientific method through which organic materials are recycled, and the arrangement of beasties working alongside their human companions, Alek is socially conditioned to perceive the ecological thought beneath the seemingly human movement and organisation. To this end he realises, "It feels *right* here…As if this is where I'm meant to be…here on this ship…This is one place where [I] fit…where [I] feel real" (*Behemoth* 92-3). Alek's attachment to the Leviathan and his sense of belonging convey nature's mechanistic imagination as a way of informing adolescent subject's understanding of self-

in-the-world, enabling the subject to retain his or her unique characteristics and identity while assimilating oneself into one's social and cultural environment. So even though Westerfeld takes the reader back into the past of WWI, in actuality it is an act of returning to the past to orient toward the future. On the revisionist assumption that bio-engineering is collaborative and that a mechanistic conception of society leads to a sense of belonging, the narrative establishes a deceptive and romanticised re-imagining of WWI's exploitation of nonhumans and war violence. Instead of war trauma and bodily horror, WWI focuses on WWI as a premise for adolescent self-discovery. As the protagonist learns to perceive himself as an ecological member of Leviathan, the weaponised hybrid of his supposed enemy, Alek enacts a model of adolescent development that emphasises integration, versatility, and acceptance. The degree of trauma and violence is reduced, transforming WWI from a narrative of conflict into a narrative of reconciliation through environmental awareness and adolescent growth.

Arguably Westerfeld's representation of adolescent agency is necessitated by the romantic tradition of adventure stories. Jackie C. Horne (2011) explains that the romantic narrative of war and boyhood was popularised during the nineteenth century in the form of adventure stories: "books in which characters are shipwrecked…or in which they are subject to the turbulent political and military events of the distant past through fictionalised histories or historical fiction" (23). To evoke excitement and a sense of danger, conflict and violence are often represented as a masculine rite-of-passage. The individual partakes in activities such as hunting, field sports, and military adventure, overcomes trials and challenges, and emerges as the embodiment of masculinity and the paragon of nationalistic boyhood. The *Leviathan* establishes a similar romanticised vision of boyhood and agency. It uses the Leviathan's mechanistic paradigm to grant the protagonist agency, denoting that as long as he can find his place within the designated sociopolitical realm, he possesses agency to affect the world. The illusion of empowering adolescents through a mechanistic conception of nature mediates a deconstructed and revisionist view of WWI's political machinations:

> If you remove one element—the cats, the mice, the bees, the flowers—the entire web is disrupted. An archduke and his wife are murdered, and all of Europe goes to war. A missing piece can be very bad for the puzzle, whether in the natural world, or politics, or here in the belly of an airship. (*Leviathan* 195)

The distinction between nature and machine blurs, creating an ecological-mechanical system that redefines the protagonist's interpretation of war. According to this integrative perception of WWI, the war came about because something—or someone—disrupted the existing network of ecological connections and failed to see that the downfall of a nation produces a series of butterfly effects

across the whole of Europe. Then, in Japan, where Clankers and Darwinists co-exist, it finally occurs to Alek that just as the countries are connected by underwater fibre, which is made from "mile-long strands of living nervous tissues" and "bound the British Empire together like a single organism" (*Goliath* 226), Darwinist nature establishes a holistic vision of human and nonhuman sociality based on contact and connection. Westerfeld thus presents a romanticised and heroic portrayal of adolescent agency in which the protagonist, despite her youth, becomes a pivotal agent of positive change. Alek admits, "without Deryn Sharp the Ottoman revolution might have failed, and Alek certainly would never have come back aboard the Leviathan[16]. Thus, he wouldn't have met Tesla, and would be no closer to stopping the war" (Goliath 221). Alek and the crew's effort to create peace between Clankers and Darwinists culminates in ending the war in 1915, the success of which reflects Leviathan's ecological sensibility of allowing formative connections to be made between human, nature, and technology.

Although Westerfeld's alternate historical reality is premised on an optimistic vision of human-nature collaboration, there are gaps in the Darwinist world order that suggest a more problematic consequence of mechanising nature. In the second book *Behemoth* Deryn carries out a secret mission that dramatises the ecological paradox of venerating nature's power and ignoring the negative impact of their biological warfare. In order to allow Behemoth, the British biogenetic kraken, to invade the Dardanelles strait, the heart of the Ottoman defences, the British Royal navy instructs Deryn to plant venomous barnacles to melt underwater kraken nets. Out of concern for Dr. Barlow's beasties, Deryn reassures Dr. Barlow that she won't hurt them in her mission, to which Dr Barlow retorts, "Hurt them, Mr. Sharp?" (*Behemoth* 235) Deryn soon learns that the Vitriolic Barnacles are intended to be employed as biological weapons rather than battle companions.

The Vitriolic Barnacles are designed to be introduced into the habitats of the natural barnacles so that they interbreed. In the process, both species struggle "trying to dislodge each other's relentless grip" , which results in the artificial barnacles releasing their toxin that "will tear away at the nets, turning the cables into a stringing paste of metal at the bottom of the sea" (*Behemoth* 236). When Deryn dives underwater for the mission she remembers, "They had to be close enough to create a colony, Dr. Barlow had explained, but not so close that the fighting would start right away" (*Behemoth* 258). The instruction is self-contradictory from an ecological perspective. Dr. Barlow's reminder that the rate of propagation has to be timed to coincide indicates their environmental intervention is politically driven. Yet the Darwinist invention of Vitriolic Barnacles

---

[16] The original italicisation is removed to refer to the airship.

exhibits a complex understanding of oceanic biodiversity and the biology of natural barnacles, which ironically inspired the creation of their biological weapon. Another dimension of the text's irony is that the Darwinists claim that from an ecological perspective, the introduction of vitriolic barnacles is not unethical nor disruptive, since both natural and vitriolic types are simply behaving according to their biological instincts to propagate and fight for territory, yet they neglect the long-term effects on the ecosystem, which frames the attack as a problematic example of biological weaponry. Therefore, *Leviathan* is not radically utopian to the extent that it assumes that bio-engineering is always redemptive.

Just as *Leviathan* uses the Darwinists' destruction of a natural ecosystem to expose the irony of weaponising nonhumans in a war context, there is a counter-narrative alongside the romantic strand of finding one's power and belonging. *Leviathan* uses Deryn's cross-dressing to unveil some of the ways in which the Darwinists' mechanistic conception of nature and society can force individuals to transform. Deryn rebels against societal expectations for women by dressing as a boy to join the ranks, which shows that it is by pushing against restriction that she becomes who she is and thereby carves out a new status for herself on the Leviathan. Deryn brags that "[s]he knew more about aeronautics than Da had ever crammed into Jaspert's attic. On top of which, she had a better head for heights than her brother" (*Leviathan* 24). Her claims to natural talent are proven correct when she meets Alek, who shows genuine envy for Deryn's display of knowledge and bravado. Ironically, he even identifies Deryn as a model of military boyhood. He remarks that he might have "trained in combat and tactics his whole life, but Dylan was a *real* soldier…In a way Dylan was the sort of boy Alek would have wanted to be" (*Leviathan* 327). The unsettling disparity between biological and culturally prescribed identities in Alek's perception of Deryn reveals, as much as the Darwinist society is characterised by receptiveness and flexibility, fundamentally the Darwinist society relies on a principle of biological restriction in order to function properly, which, ironically, compels its members to evolve and transform themselves in unnatural ways in order to fit in.

Leviathan's Revisionist Vision

John H. Morrow Jr.'s *The Great War: An Imperial History* (2005) contains a sobering reminder that I would like to return to as I conclude this chapter. Morrow Jr. states that as cultural historians approach the matter of military armaments with greater nuance and complexity, they begin to shift away from perpetuating the myth that arms races were the cause of war. New evidence uncovered indicates that German motives "stemmed less from aggressive expansionism

and more from a fearful and desperate pre-emption of rising Russian power" (Morrow Jr. 2005, 32). The state of technology might have prolonged the war by causing stalemates, but technological progress is not the deciding factor. Technology creates imperatives. But humans who possess political agency are responsible for exploiting its powers and using them for their agendas. Yet as Morrow Jr. observes, the myth of WWI has continued to operate as the epitome of technological progress's dystopian potential and modernity's destructive tendencies and this is a trend that *Leviathan* reproduces as well as resists, since there seems to be an inherent contradiction in Westerfeld's re-imagining of WWI.

Westerfeld's vision of human, nature, and technology's hybridisation articulates the posthuman thought that technology, despite its dehumanising tendencies, "does not necessitate the obsolescence of the human" nor does it "represent an evolution or devolution of the human. Rather it participates in re-distributions of difference and identity" (Halberstam & Livingston 1995, 10). The narrative's posthuman drive offers the reader an imaginative means to understanding WWI's horrific reality of technology in relation to animals and violence. However, it does not deviate completely from the dominant mode of representing the grotesque and terrible facets of WWI. For example, Deryn's mission to use engineered barnacles as a form of biological weaponry revives the impression that WWI perverts the relationship between human and animal, partly because it desensitises human beings to moral issues related to the animal's autonomy and agency, and partly because its militarisation of animals creates a hierarchical evaluation of life forms based on their utilitarian purposes.

So even though the mechanisation of nonhuman creatures is disturbing because it cultivates a realist view of WWI's militarisation of animals, Westerfeld's reimagining also presents a more complex view of the relationship between human, machine, and animal by allowing elements of resistance and ambivalence to emerge and remain. The Darwinists' instrumentalist conception of agency and sociality becomes a pivotal point in Alek's transformation, since it indicates that both human and nonhuman derive power from their determined position within nature as an interconnected network. Westerfeld shows that this kind of quasi-mechanical-ecological paradigm can actually have a positive influence on the protagonist's subjectivity because it generates a sense of belonging and certainty, which are necessary elements of a stable basis for identity-making. Moreover, Westerfeld uses the Huxley's muteness and the perspicacious loris' articulation of nonhuman intuition to build dimensions of animality that subvert anthropocentric concepts of animal capability and efficacy. The Huxley's silence is an ambivalent reaction to human control since it can be seen as an expression of both programmed subservience and the beastie's

individuated autonomy. The perspicacious loris' intuition disrupts the anthropocentric norm of modifying animal biology to serve human interests and the conventional view of animals as war casualties. Bovril's engineered capability to mimic human speech and be perspicacious becomes the means by which it awakens its human audience to be more attentive to gaps and flaws of human thinking.

Consequently, *Leviathan* projects an ambivalent image of nature and technology in its alternate WWI context that problematises history's anthropocentrism. On the one hand, there is the revisionary impulse to lead the human protagonists into an ecological paradigm of relations. This revisionary impulse is expressed both through the Huxley Ascender's resistance to human dominance and Alek's experience aboard the Leviathan. The Huxley acts as the ontological other that provokes Deryn to reach beyond the limit of her anthropocentric assumptions, while Alek's experience of being assimilated into the Leviathan's ecosystem is an essential phase in his adolescent development, during which he learns to apply ecological interconnectedness to his navigation of WWI politics for working out his desire to find a place of belonging. In addition to *Leviathan*'s ecological and utopian representation, there is the posthuman impulse to infuse the narrative with irony and ambivalence, which is most emphatically embodied in the nonhuman figure Bovril, whose intuition and observation both escape and reaffirm his ontological function as a fabricated beastie designed to serve human military needs. It remains unclear whether Bovril's utterances are according to his biological design or something derived from his nonhuman intelligence, which the Darwinists did not include in Bovril's genetic planning. Thus, Bovril acts as a posthumanist subject that is, in Haraway's formulation, "resolutely committed to partiality, irony, intimacy, and perversity" (1991, 151). Bovril articulates problematic tensions that emerge when nature and culture are reworked, which are ultimately irreconcilable as they persist in disrupting the protagonist's ecological realisation of human-nonhuman engagement.

To conclude, *Leviathan* effectively uses its fantastical devices to push against anthropocentric boundaries that define WWI's use of animals and technology. But the result is not a complete subversion that promotes environmental awareness or the essential significance of the organic in contrast to the mechanical. Instead, *Leviathan* uses its fantastical setting to realise a more deconstructed mode of relations in which technology redefines and enhances nature, the organic fuses with the mechanical, and the animal resists yet represents human interests. Hence, just as neo-Victorian fiction "ensures that the Victorian period continues to exist as a series of afterimages, still visible, in altered forms, despite its irrevocable past-ness, its disappearance" (Mitchell 2010, 7), Westerfeld's historical fantasy releases WWI from its anthropocentric constraints. The imaginary

war operates as an ambivalent realisation of modernity and the militarisation of animal bodies. In this way, the fantastic in *Leviathan* enables the reader to explore WWI's anthropocentric residues in a contemporary society that fears for a nature that is drastically altered by transformative technology, yet anticipates technology's redemptive powers in saving both nature and mankind and bringing them closer together. The fantastic's function thus becomes a matter of animating the interrelatedness between nature, technology and mankind so that our narration of the past cannot be neatly separated into the history of nature and the history of mankind.

Conclusion

> When we look at nature, we receive
> a sort of permission to be alive in the world.
> —Naoki Higashida, *The Reason I Jump*

History has mostly tended to human affairs as the central subject of its narrative. It documents the rise and fall of empires, human mobility across oceans and continents, intellectual (r)evolutions, and intricate details of the human condition. Nature, in the midst of all this, retreats into the background as the physical environment that surrounds human-driven events. This discursive anthropocentric norm has migrated into historical fiction, a genre that portrays the conditions of human life in the past. My investigation of YA historical fantasy is positioned as a critical response to history's inherent anthropocentrism. It makes a contribution to the literary study of historical representations by interrogating historical realism's generic anthropocentrism and unveiling the fantastic as a means of reimagining human-nature relations and recovering nature as a transformative historical subject.

The genre of my study is historical fantasy, which builds fantastical elements and devices into its historical settings. I have chosen historical fantasy because it uses the fantastic to express what lies beyond dominant value systems and to establish alternative paradigms of human-nature relations. Even though history's dominant system is primarily anthropocentric, its ideological manifestation is distinct in each historical period. For example, colonial America and industrialised Europe each maintain a cultural system that objectifies nature, but the discourses that perpetuate a sense of human superiority and depreciate nature are distinct in each setting, having their own nuances and contradictions. Taking this factor of historical diversity into account, my investigation includes four historical periods that have fundamentally reshaped our perception of nature to provide a variety of literary and fantastical responses to anthropocentrism.

These four historical periods are pivotal moments when the dialectical engagement between society and nature becomes problematic in terms of their ideological and ecological ramifications. The first trilogy *The Lotus War* identifies industrialisation as a historical process that consolidates rationalist thinking, which justifies environmental destruction and alienates human beings from the

natural world. *Frontier Magic* is set in an alternative eighteenth-century North America and uses magic to explore colonialism as a discursive framing that defines the settlers' desire to conquer nature and their fear of the wilderness as a source of otherness and savagery. The third trilogy is *Larklight,* a postmodern scientific romance that uses the alien figure to highlight speciesism's role in producing the British Empire's eurocentric and anthropocentric identity. The last trilogy *Leviathan* uses anachronistic technologies to reimagine WWI and to deconstruct the nature/technology binary and the animal's instrumentality in the context of genetic modification and modern warfare.

The texts have been chosen because they use the fantastic to expose and interfere with their respective historical period's anthropocentric norm. Hence, the main feature that sets my investigation apart from other studies of historical fiction and alternative history is this focus on the fantastic's ecological revisionism. Instead of exploring the past in the realist mode as a narrative of human-driven events, this study identifies the fantastic as a key narrative force that vitalises nature in historical settings to resist the historical period's anthropocentric discourse. In order to maintain this critical focus, I orient my study with the following research question: how does YA historical fantasy reimagine the relation between nature and human development? Moreover, I have chosen YA fiction because the genre tends to portray the YA protagonist's growth as a reflection of human development, so that her/his ecological experiences become a platform for examining the complex interrelations between society and nature.

The main research question is supplemented by the sub-question that gives my investigation a more defined goal: to what extent does YA historical fantasy resist history's anthropocentrism? This sub-question is based on Veronica Schanoes' definition of historical fantasy, which I offered in the introduction as a key passage in relation to my theoretical orientation. According to Schanoes, historical fantasy opens up

> alternative ways of understanding how history has worked, both in the sense of providing a 'secret' history…and in the sense that they call into question the distinction between history and fantasy that underlies the legitimacy of historical discourse. (2012, 246)

This notion that historical fantasy provides a 'secret' history is crucial since it identifies the aim of my investigation, which is to uncover the hidden history of nature that has been depreciated and concealed by the anthropocentric tradition of historical fiction. This hidden history is precisely "that which has been silenced, made invisible, covered over and made 'absent'" (Jackson 2009, 2) by history's conventional perspective and discursive framing on human motives and actions. To indicate that nature has a secret history is to be open to narrating nature's life and livingness in the

same way that historical fiction is concerned with the lives and conditions of human beings. György Lukács, while outlining the definition of historical fiction, states that historical fiction's purpose is to bring forth conditions of the past not as a source of "historical curiosity" but myriads of human thoughts and feelings, which can be re-experienced "as a phase of mankind's development which concerns and moves us"(1962, 42). What concerns the reader in historical fiction is the scope and depth of human intentions and emotions that ultimately transform the world. Nature rarely enters the historical narrative in this way.

Hence, the fantastic in historical fantasy is significant because it has the potential to redirect the narrative forces to illuminate this 'secret' history, which reveals details of nature's existence and transformation in the same way that human history unfolds the life and conditions of human beings in the past. This hidden narrative functions as a space to reclaim nature's presence and agency in history. It is the literary ground that enables natural phenomena, nonhuman species, and physical environments to assert their formation of the world and to express their agency as a power that actively reshapes the reality of our shared coexistence. In this way, the fantastic would also open up the critique of history's anthropocentric conventions and the multifarious ways in which they have conformed nature to each historical period's human needs and standards. So as I conclude my investigation, I return to this idea that the fantastic enacts a 'secret' history of nature in order to answer the question of how YA historical fantasy reimagines the relation between nature and human development and to what extent it subverts history's anthropocentrism.

The selected corpus forms a strong defence of the fantastic's ability to transform history from an anthropocentric discursive system into a network of human-nature relations. In each case, fantastical elements and devices are strategically placed to reveal and even magnify nature's presence to inform and impact the narrative of historical change. *The Lotus War* uses Japanese mythology's animistic tradition to reconfigure the historical process of industrialisation. In the context of industrial ecocide, the fantastic enhances the nonhuman protagonist's subjectivity, so that his personal decisions have significant impact on reversing the effects of industrialisation and enabling human survival in ecological crisis. *Frontier Magic* uses magic to heighten the otherness of American wilderness, so that it appears comparably more violent and untameable than its historical counterpart. And just as *The Lotus War* uses a mythical creature to embody the significance of ecological recovery, *Frontier Magic* constructs magic as a metaphor for ethical stewardship to mitigate the effects of ecological collapse. The postmodern scientific romance *Larklight* exoticises the alien other to revive the nostalgic excitement of confronting nature as something strange, romantic, and beyond the horizons of human knowledge. Moreover, the alien

figure destabilises the imperialists' anthropocentric perspective and enacts an ironic and comical representation of human superiority. Lastly, *Leviathan* uses counterfactual thinking to posit a fantastical technological progress leading up to WWI, so that the hybridity of genetically modified creatures deconstructs the protagonist's anthropocentric view of nonhuman instrumentality, creating an alternative ecological paradigm in which the synthesis between the organic and the mechanical becomes the key to resolving political conflict.

Therefore, in response to the main research question regarding how YA historical fantasy reimagines the relation between ecological change and human development, my investigation discovers that the fantastic has ability to reconstruct historical settings to be more inclusive of nature as a narrative force. In historical fantasy's revisionist mode of narration, nonhuman creatures and ecological change feature as a significant stimulus that shapes the world. *The Lotus War* and *Leviathan* demonstrate how the fantastic anthropomorphises and empowers the nonhuman protagonists to undermine history's anthropocentric development. As a result of the fantastic's interference, the historical effects of industrial ecocide, ecological collapse, speciesism, and militarisation of animals appear comparatively less detrimental to nature than the outcomes of known history. As seen in *Frontier Magic,* this is because the fantastic illuminates alternative pathways and compels the human protagonists to choose a less destructive paradigm of coexistence, which values nature's autonomy to live according to its instincts and tendencies, or a more environmental friendly approach to taking care of nature, which encourages the protagonist and the reader to confront nature's fragility without objectifying it. The fantastic's revisionism effectively interweaves ecological change, nonhuman creatures, and geological features into the development of industrialisation, colonialism, and WWI so that nature and mankind become history's co-authors.

My investigation identifies the fantastic as a means of reclaiming nature's presence and agency in historical narratives. But in response to the sub-question regarding the degree of subversion, my investigation finds that it greatly varies. As each text highlights nature's hidden yet expressive qualities in a dominant and anthropocentric paradigm, it also touches upon problematic issues entailed in the assumption that the fantastic offers subversion.

The first issue to come to light is that to perceive historical fantasy as nature's secret history requires a degree of anthropomorphism. This is related to the common understanding that history is the narrative of individuals that possess rich and complex inner worlds. These individuals' thoughts, feelings and motives constitute details of the past that culminate in transformative moments and events. The emphasis is on the person rather than the outcome, which Lukács stresses by stating what matters is not "the retelling of great historical events but the poetic awakening of the people

who figured in those events" (1962, 42). Applying this definition to historical fantasy as a 'secret' history of nature produces ambivalent results that question but do not necessarily subvert history's anthropocentrism.

The nonhuman character Buruu in *The Lotus War* embodies this ambivalence that is inherent to the task of representing nonhuman creatures as historical agents. The fantastic undeniably grants nature a sense of historical agency. It portrays the nonhuman creature Buruu as a historical agent of change that rebels against the corrupt government and reverses the effects of industrialisation. It explores the nonhuman character's complex emotional psychology by using the bond between Yukiko and Buruu to highlight the nonhuman's capacity for intelligent cognition and empathy. The fantastic even preserves Buruu's otherness as an essential quality that characterises his ability to subvert human order.

However, anthropomorphising the nonhuman is a problematic method for granting agency to a nonhuman species because it implies that nonhuman agency is derived from a human-centred perspective of intentionality, power and will. The memorable scene of Buruu kneeling before the General embodies the uneasiness that emerges when the reader simultaneously confronts the nonhuman's powerful and othered subjectivity and the human characters' anthropocentric gaze that subdues it. The result is a conflicted reality where the nonhuman protagonist appears as a historical agent because it is capable of political deception but is also reduced to a public spectacle of human machination. The doubleness of perceiving Buruu as an empowered subject and a spectacle demonstrates that slippages easily occur between portraying the complexity of Buruu's interior subjectivity and confronting the nonhuman as a reflection of human motives and desires. In other words, the fantastic can activate nature's agency but the process cannot escape the system of anthropocentrism, which grants nonhumans creatures agency by making them seem more intelligent and empathetic in human terms.

A postmodern text like *Larklight* attempts to resist this tendency to humanise nature by showing that a virus can transform historical development even without a clearly defined personhood that has its own thoughts and feelings. The virus has no political aim or preference. It is not a "person" nor is it nature personified. Nonetheless, *Larklight* demonstrates the virus's ability to undermine human mobility and alter human bodies. *Frontier Magic* exhibits a similar breakdown of the distinction between "character" and "environment" so that nature appears as a historical subject without being inundated in the rhetoric of anthropomorphism. In the same way that *Larklight* takes a supposedly dormant and invisible part of the environment and activates its ability to reshape the course of human development, *Frontier Magic* awakens the wilderness as an antagonistic force that

causes human agency to be more circumscribed. The landscape, with its inherently mysterious and wild nature, cannot be dissolved completely in the sphere of human knowledge. Geological features such as mountain ranges and water bodies transform into a plane of threatening nonhuman forces, which requires the human protagonist to deepen her sensory awareness in order to participate in and react to environmental change. Hence, *Frontier Magic* and *Larklight* show that it is possible to portray ecological transformation as a narrative concealed by history's anthropocentric tradition without humanising nature. But this kind of ecological representation requires a more open and deconstructed approach to the distinction between "character" and "environment", so that nature's physical materiality can be seen as a transformative force even when it does not manifest visible signs of its subjectivity and intentionality.

YA historical fantasy, in this case, seems to be using the fantastic to redefine nonhuman agency so that history can be more inclusive of nature as a force of historical change. *Frontier Magic* is exemplary of this ecological interpretation of history. But my study of it also reveals a core problem, which is that human-nature dialectics are fundamentally filtered through the protagonist's human-centric experiences. In *Frontier Magic,* the protagonist encounters challenges that implicate her in a heightened awareness of the wild landscapes. She begins to see herself as a part of the more-than-human world that encompasses her. But the learning process also shapes her subjectivity into a prism through which she hybridises environmental discourses and initiates ecological stewardship. The paradox of caring for nature while respecting its agency is a core issue in historical fantasy's reconstruction of the colonial paradigm. As my study shows, the fantastic enlivens animals, insects, plants, rivers, and mountains to affect human lives and livelihood in a colonial setting. The fantastic also illustrates how human decisions and actions can alter animals' migratory patterns and physical features of the land in a dialectical feedback of human and nonhuman forces. However, as *Frontier Magic* demonstrates, even when the goal is a renewed ecological vision of human-nature relations, the representation of the process requires a subjectivity structured by discourses and ideologies that are intrinsically human-centred.

Therefore, my study reveals that the fantastic is an effective means of ensuring nature features as a transformative force in historical settings, even taking on the shape of having its own narrative, such as the tree disease that destroyed an entire colony in *Larklight* and the Mammoth River in *Frontier Magic* that becomes an antagonistic character in its own right. But this subversion does not move away from human subjectivity since it is the prism through which ecological nuances can be negotiated. This fantastic mode of sophisticating the relationship between human subjectivity and ecological recovery in a colonial context shows that we cannot narrate nature in the

past without neglecting or overriding human intentions. The conclusion of *Frontier Magic* shows that it is difficult to identify human decisions as purely anthropocentric or biocentric, since often they can be made for the sake of our mutual survival. Even when the secret history of human-nature coexistence becomes manifest and that a more environmental-friendly path of progress is made apparent, the subversion of anthropocentrism cannot escape the structures of human subjectivity.

Another important aspect of my discovery is that when the fantastic reproduces human mastery, the narrative often uses its tone and style to disrupt the anthropocentric norm. *Larklight* is an effective example of this notion that how we tell the story is just as important as the outcome that the story leads to. *Larklight* falls into the genre of scientific romance, which means that it reproduces most of its anthropocentric and eurocentric conventions, such as the hunter/prey dynamics, exotic landscapes, and the defeat of the alien other. These tropes and devices of scientific romance establish *Larklight*'s paradigm of speciesism that uplifts human imperialists above alien species to the extent that the narrative conforms to the genre's anthropocentric tradition, which portrays the triumph of imperialists as the outcome the conflict between nature and mankind. However, the tone and style of *Larklight*'s reproduction of imperialism are nostalgic, humorous, and sometimes even satirical. For example, *Larklight* articulates the excitement of being immersed in nature but in an intensely exoticised and romanticised mode. This portrayal implies an anthropocentric return to subduing and objectifying nature as a spectacle. But the tone in which *Larklight* evokes the protagonist's delight in the exotic is nostalgic and wistful, which reduces much of the narrative's critical energy and entices the reader to simply enjoy the satisfaction of confronting nature as something strange and out of the ordinary.

When *Larklight* is not activating a nostalgic imagery of exotic nature, it is using postmodern humour to highlight the futility of assuming imperialist power over the other. Admittedly, the ending of each book portrays the triumph of mankind over the alien other, but the method by which imperialists achieve success is often incredible and ridiculous. Myrtle kills the alien spider that pilots the automaton without realising its importance, which casts a shadow of irony over the imperialists' victory. The humans are able to maintain their anthropocentric system and control, but their success is not a sign of their superior power, intelligence, or technology. Instead, their ascendency is the result of a series of accidents and coincidences. *Larklight*'s ironic representation of imperialist mastery reveals that YA historical fantasy does not have a formula for utilising the fantastic to subvert history's anthropocentrism. In fact, the fantastic can also be a means of reproducing anthropocentric conventions and discourses that have traditionally concealed nature's agency. However, the tone and style of the text's narration of the past can then be an effective way

of problematising the return of human mastery, which encourages the reader to view imperialism's anthropocentric tradition and legacy in historical representations with a sense of ironic engagement and self-deprecation. Although this method does not directly produce an alternative ecological paradigm, it certainly raises a keener awareness of our own conflicted views of human mastery in the past and how literary textuality can either suppress or uncover nature's presence and agency.

Although historical fantasy trilogies like *The Lotus War* and *Frontier Magic* show the importance of using the fantastic to contest history's anthropocentric borders, *Leviathan* illustrates that it is just as important to use the fantastic to interrogate whether the anthropocentric borders exist and how they can be deconstructed. Compared to other texts that fall into the trappings of anthropomorphism and exoticising the other, *Leviathan* uses the fantastic to preserve nature's otherness as a potent force and problematises it in relation to WWI's technological progress. Counterfactual reasoning as a method of the fantastic allows the narrative to engage with WWI's tradition of representing animality and technology from a more nuanced and critical perspective. In the universe of *Leviathan,* genetically modified creatures function as instruments of war, which recalls WWI's conscription of horses, canaries, and dogs. But the fantastic also exposes inherent contradictions to instrumentalising the nonhuman. *Leviathan* uses its anachronistic and fantastical technology to create an animality that resists yet represents human interests. The perspicacious loris' instinctive mimicry becomes the basis on which the reader confronts her/his own anthropocentric assumptions about language, animal capability, and human intentionality in genetic designs. It is always unclear if the perspicacious loris' mimicry is an expression of its individuated and autonomous subjectivity that participates in the political machinations of WWI, or if the loris' speech is an expression of human design that utilises and manipulates animal instincts to establish human control over the other.

In this sense *Leviathan* is more invested in evoking hybridity and fluidity in the reader's perception of nature and technology than presenting an alternative ecological paradigm that affirms the importance of nature, leading to the realisation that what matters is not the subversion of human mastery, but rather, a more nuanced perspective of how nature is enmeshed in our history of technological progress. The porous borders exemplify that nature has always been an integral part of our world-making and historical transformations. *Leviathan* reveals that once we allow ambiguity and hybridity to characterise the distinction between nature, technology, and mankind, the narrative can then bring forth nature in history with greater complexity that expresses the ever-shifting dynamism of human-nature relations.

As this investigation comes to an end, the most interesting discovery would have to be that although the fantastic subverts history's anthropocentric discursive system, the fantastic also resides within it. The 'secret' history of nature might have been concealed and distorted, but it is not a narrative outside the human realm. In fact, this is the intrinsic significance of my study, that the fantastic illuminates hidden aspects of nature's agency but historical representations of nature can never completely escape the discourse of anthropocentrism. Moreover, throughout my study, the fantastic's subversion of history's anthropocentric borders is never formulaic. It is a versatile device that operates differently in response to the many facets of anthropocentrism. The result is a more complex and layered approach, which contests, strengthens, exaggerates, satirises and problematises human-nature relations within and beyond the anthropocentric norms of historical writing. The fantastic in historical fantasy articulates a coherence and an ambivalence between nature and mankind that are not traditionally found in historical fiction. It discloses diverse possibilities for nature to exist as a historical subject and uncovers new ways of engaging with the historical discourse. After all, just as anthropocentrism has multiple expressions in history, our literary response to it should be just as varied and complex. The fantastic achieves this by reimagining human-nature relations so that our narration and perception of the past become more rich, nuanced and complete.

Works Cited

Abram, D. (1996). *The spell of the sensuous: Perception and language in a more-than-human world*. New York: Vintage.

Agamben, G. (2004). *The open: Man and animal*. Stanford, California: Stanford University Press.

Alger, J. M., & Alger, S. (2013). Canine soldiers, mascots, and stray dogs in U.S. wars: Ethical considerations. In R. Hediger (Ed.), *Animals and war: Studies of Europe and North America* (pp. 66–104). Leiden; Boston: BRILL.

Anderson, D. G. (2012). Natura naturans and the organic ecocritic: Toward a green theory of temporality. *Journal of Ecocriticism*, *4*(2), 34–47.

Anderson, D. G. (2014). Matter matters: The significance and problems of the Heidegger debate in ISLE. *Interdisciplinary Studies in Literature and Environment*, *21*(3), 600–605.

Appleyard, J. A. (1990). *Becoming a reader: The experience of fiction from childhood to adulthood.* Cambridge: Cambridge University Press.

Ashcroft, B., Griffiths, G., & Tiffin, H. (2003). *The empire writes back: Theory and practice in post-colonial literatures*. London: Routledge.

Bate, J. (2000). *The song of the earth*. London: Picador.

Baudrillard, J. (1994). *Simulacra and simulation*. (S. F. Glaser, Trans.). Ann Arbor: University of Michigan Press.

Beckett, I. F. W. (2014). *The Great War: 1914-1918*. London; NY: Routledge.

Benesch, O. (2014). *Inventing the way of the samurai: Nationalism, internationalism, and bushido in modern Japan*. Oxford: Oxford University Press.

Benjamin, W. (2015). *Illuminations: Essays and reflections*. (H. Arendt, Ed., H. Zohn, Trans.). London: The Bodley Head Ltd.

Bennett, J. (2010). *Vibrant matter: A political ecology of things*. Durham, N.C.: Duke University Press.

Berger, H. (2015). *The Perils of uglytown: Studies in structural misanthropology from Plato to Rembrandt.* NY: Fordham University Press.

Berger, J. (2007). Why look at animals? In L. Kalof & A. Fitzgerald (Eds.), *The Animals Reader* (pp. 252–261). Oxford: Berg.

Bertagna, J. (2008). *Exodus* [Kindle Paperwhite version.] Retrieved from amazon.co.uk.

Bertagna, J. (2008). *Zenith* [Kindle Paperwhite version.] Retrieved from amazon.co.uk.

Bertagna, J. (2011). *Aurora* [Kindle Paperwhite version.] Retrieved from amazon.co.uk.

Bhabha, H. (1984). Of mimicry and man: The ambivalence of colonial discourse. *October*, *28*, 125–133.

Billington, R. A., & Ridge, M. (2001). *Westward expansion: A history of the American frontier*. Albuquerque: University of New Mexico.

Black, J. (2013). *War and technology*. Bloomington; Indianapolis: Indiana University Press.

Blake, W. (2008). *The Complete poetry and prose of William Blake*. (D. V. Erdman, Ed.). Berkeley: University of California Press.

Böhme, G. (2016). *The Aesthetics of atmospheres*. (J.-P. Thibaud, Ed.). London: Routledge.

Bonnett, A. (2010). *Left in the past: radicalism and the politics of nostalgia*. London; NY: Continuum.

Bostrom, N. (2005). In defense of posthuman dignity. *Bioethics*, *19* (3), 202–214.

Bowler, P. J. (2008). What Darwin disturbed: the biology that might have been. *ISIS*, *99*(3), 560–567.

Bradford, C. (2007). *Unsettling narratives: Postcolonial readings of children's literature*. Waterloo, Ont: Wilfrid Laurier Univ. Press.

Braudy, L. (1998). The genre of nature: Ceremonies of innocence. In N. Browne (Ed.), *Refiguring American film genres: History and theory* (pp. 278–310). Berkeley: University of California Press.

Brawley, C. (2014). *Nature and the numinous in mythopoeic fantasy literature*. Jefferson, N.C.: McFarland.

Brown, C. S., & Toadvine, T. (2003). Eco-phenomenology: An introduction. In C. S. Brown & T. Toadvine (Eds.), *Eco-phenomenology: Back to the earth itself* (pp. ix–xxi). Albany: State University of New York Press.

Buchanan, D. C. (1965). *Japanese proverbs and sayings*. Norman: University of Oklahoma Press.

Buckley, J. H. (1966). *The triumph of time: A study of the Victorian concepts of time, history, progress, and decadence*. Cambridge, MA: Belknap Press of Harvard University Press.

Buell, L. (1995). *The environmental imagination: Thoreau, nature writing, and the formation of American culture*. Cambridge, MA: Belknap Press of Harvard University Press.

Buell, L. (2001). *Writing for an endangered world: Literature, culture, and environment in the U.S. and beyond*. Cambridge, Mass.; London: Belknap.

Buell, L. (2005). *The future of environmental criticism: Environmental crisis and literary imagination*. Oxford: Blackwell Pub.

Bunch, M. (2014). Posthuman ethics and the becoming animal of Emmanuel Levinas. *Culture, Theory and Critique*, *55*(1), 34–50.

Butler, C. (2006). *Four British fantasists: Place and culture in the children's fantasies of Penelope Lively, Alan Garner, Diana Wynne Jones, and Susan Cooper*. Lanham, Md.: Rowman & Littlefield.

Butler, C., & O'Donovan, H. (2012). *Reading history in children's books*. Basingstoke: Palgrave Macmillan.

Calinescu, M. (1987). *Five faces of modernity: modernism, avant-garde, decadence, kitsch, postmodernism*. Durham: Duke University Press.

Clark, T. (2014). Nature, post-nature. In L. Westling (Ed.), *The Cambridge companion to literature and the environment* (pp. 75–89). New York: Cambridge University Press.

Commoner, B. (1972). *The closing circle: Confronting the environmental crisis*. London: Cape.

Coupe, L. (1991). Introduction. In *The green reader: Essays toward a sustainable future* (pp. 1–4). San Francisco: Mercury House.

Cronon, W. (1996). The trouble with wilderness: or, getting back to the wrong nature. *Environmental History*, *1*(1), 7–28.

Crutzen, P. J., & Stoermer, E. F. (2000). The Anthropocene. *Global Change Newsletter*, (41), 17–8.

Curry, A. (2013). *Environmental crisis in young adult fiction: A poetics of earth*. Basingstoke: Palgrave Macmillan.

Danta, C., & Vardoulakis, D. (2008). The political animal. *SubStance*, *37*(3), 3–6.

Deleuze, G., & Guattari, F. (2004). *A thousand plateaus: Capitalism and schizophrenia*. (B. Massumi, Trans.). London; NY: Continuum.

Derrida, J. (2002). The animal that therefore I am (more to follow). *Critical Inquiry*, *28*(2), 369–418.

Doležel, L. (1998). Possible worlds of fiction and history. *New Literary History*, *29*(4), 785–809.

Donovan, J. (2011). Aestheticizing animal cruelty. *College Literature*, *38*(4), 202–217.

Driver, F. (1988). The historicity of human geography. *Progress in Human Geography*, *12*(4), 497–506.

Elias, A. J. (2001). *Sublime desire: History and post-1960s fiction*. Baltimore; London: JHU Press.

Ford, A. J. (2015). *Marvel and artefact: The "wonders of the East" in its manuscript contexts*. London: BRILL.

Fouts, R. (1997). *Next of kin: My conversations with chimpanzees*. London: M. Joseph.

Fussell, E. S. (1965). *Frontier: American literature and the American West*. Princeton: Princeton University Press.

Fussell, P. (2000). *The Great war and modern memory*. Oxford: Oxford University Press.

Garforth, L. (2005). Green utopias: Beyond apocalypse, progress, and pastoral. *Utopian Studies*, *16*(3), 393–427.

Gifford, T. (2014). Pastoral, anti-pastoral, and post-pastoral. In L. Westling (Ed.), *The Cambridge companion to literature and the environment* (pp. 17–30). Cambridge: Cambridge University Press.

Glendinning, S. (2007). *In the name of phenomenology*. New York; Abingdon: Routledge.

Glotfelty, C. (1996). Introduction. In C. Glotfelty & H. Fromm (Eds.), *The ecocriticism reader: Landmarks in literary ecology* (pp. xv–xxxxvii). Athens; London: University of Georgia Press.

Goodbody, A. (2014). Ecocritical theory: Romantic roots and impulses from twentieth-century European thinkers. In L. Westling (Ed.), *The Cambridge companion to literature and the environment* (pp. 61–74). New York: Cambridge University Press.

Gosetti-Ferencei, J. (2012). The world and image of poetic language: Heidegger and Blanchot. *Continental Philosophy Review*, *45*(2), 189–212.

Grove, R. H. (1996). *Green imperialism: Colonial expansion, tropical island Edens and the origins of environmentalism, 1600-1860*. Cambridge: Cambridge University Press.

Grzegorczyk, B. (2015). *Discourses of postcolonialism in contemporary British children's literature*. New York; Abingdon: Routledge.

Haar, M. (1993). *The song of the earth: Heidegger and the grounds of the history of being*. (R. Lilly, Trans.). Bloomington, Ind.: Indiana University Press.

Hadley, L. (2010). *Neo-Victorian fiction and historical narrative: The Victorians and us*. Basingstoke: Palgrave Macmillan.

Hailwood, Simon. (2015). *Alienation and nature in environmental philosophy*. Cambridge: Cambridge University Press.

Halberstam, J. M., & Livingston, I. (1995). An introduction: Posthuman bodies. In J. M. Halberstam & I. Livingston (Eds.), *Posthuman bodies* (pp. 1–22). Bloomington; Indianapolis: Indiana University Press.

Hall, M. (2010). Introduction. In M. Hall (Ed.), *Restoration and history: the search for a usable environmental past* (pp. 1–9). New York: Routledge.

Hanes III, W. T., & Sanello, F. (2002). *The opium wars: the addiction of one empire and the corruption of another*. Naperville, Ill.: Sourcebooks.

Haraway, D. J. (1991). *Simians, cyborgs, and women: The reinvention of nature*. NY: Routledge.

Haraway, D. J. (2008). *When species meet*. Minneapolis: University of Minnesota Press.

Heffernan, T. (2008). *Post-apocalyptic culture: Modernism, postmodernism, and the twentieth-century novel*. Toronto: University of Toronto Press.

Heidegger, M. (1954). The question concerning technology. *Technology and values: Essential readings*, 99–113.

Hein, P. (2009). *How the Japanese became foreign to themselves: The impact of Globalization on the private and public spheres in Japan*. Berlin: LIT Verlag Münster.

Hellekson, K. (2001). *The alternate history: Refiguring historical time*. Kent, Ohio: Kent State University Press.

Heller, A. *(1980). Historicity and consciousness. Philosophy & Social Criticism, 7(1), 1–16.*

Heller, A. (1982). *A theory of history*. New York; Abingdon: Routledge.

Higashida, N. (2013). *The Reason I jump: One boy's voice from the silence of autism.* London: Hachette UK.

Hilton, M., & Nikolajeva, M. (2012). An introduction: Time of turmoil. *Contemporary adolescent literature and culture: The emergent adult*, 1–16.

Hokenson, J. (2006). *The idea of comedy: History, theory, critique*. Madison; Teaneck: Fairleigh Dickinson University Press.

Horne, J. C. (2011). *History and the construction of the child in early British children's literature*. Farnham: Ashgate.

Hughes, M. (2003). The struggle between utopia and dystopia in writing for children and young Adults. In C. Hintz & E. Ostry (Eds.), *Utopian and dystopian writing for children and young adults* (pp. 156–162). New York; Abingdon: Routledge.

Hume, K. (1984). *Fantasy and mimesis: Responses to reality in Western literature*. New York: Methuen.

Hunt, P., & Sands, K. (2013). The view from the centre: British empire and post-empire children's literature. In R. McGillis (Ed.), *Voices of the other: Children's literature and the postcolonial context* (pp. 39–54). London; NY: Routledge.

Iovino, S. (2012). Material ecocriticism: Matter, text, and posthuman ethics. *Literature, Ecology, Ethics*, 51–68.

Jackson, Rosemary. (2009). *Fantasy: the literature of subversion.* London; NY: Routledge.

Jagoda, P. (2010). Clacking control societies: Steampunk, history, and the difference engine of escape. *Neo-Victorian Studies*, *3*(1), 46–71.

Jameson, F. (2005). *Archeologies of the future: The desire called utopia and other science fictions*. London: Verso.

Jay, S. (2013). *Of Beast and Beauty.* New York: Delacorte Press.

Jones, M. E. (1998). Daily Life on the Nineteenth Century American Frontier. Westport, CT.; London: Greenwood Publishing Group.

Kalof, L. (2007). *Looking at animals in human history*. London: Reaktion Books.

Karan, P. P. (2010). *Japan in the 21st century: Environment, economy, and society.* Lexington: University Press of Kentucky.

Kareiva, P., & Marvier, M. (2012). What is conservation science? *BioScience*, *62*(11), 962–969.

Kistler, J. M. (2011). *Animals in the military: From Hannibal's elephants to the dolphins of the U.S. navy.* Santa Barbara, California: ABC-CLIO.

Klein, K. L. (1999). *Frontiers of historical imagination: Narrating the European conquest of native America, 1890-1990*. Berkeley, CA: University of California Press.

Kristoff, J. (2012). *Stormdancer*. London: Tor.

Kristoff, J. (2013). *Kinslayer*. London: Tor.

Kristoff, J. (2014). *Endsinger*. London: Tor.

Kuhn, Thomas S. (1996). *The structure of scientific revolutions.* Chicago, IL: University of Chicago Press.

Langer, J. (2011). *Postcolonialism and science fiction*. London: Palgrave Macmillan.

Lassier, M. (2011). Blake, Deleuze, and the emergence of ecological consciousness. In A. Goodbody & Kate Rigby (Eds.), *Ecocritical theory: New European approaches* (pp. 256–269). Charlottesville: University of Virginia Press.

Liu, K. (2015). *The grace of kings*. NY: Simon and Schuster.

Llewellyn, M. (2009). Neo-Victorianism: on the ethics and aesthetics of appropriation. *Literature Interpretation Theory*, *20*(1–2), 27–44.

Love, G. A. (2003). *Practical ecocriticism: Literature, biology, and the environment (Under the Sign of Nature)*. Charlottesville: University of Virginia Press.

Lovell, J. (2011). *The opium war: Drugs*. London: Picador.

Lowenthal, D. (1985). *The past is a foreign country*. Cambridge: Cambridge University Press.

Lowenthal, D. (2010). Reflections on Humpty-Dumpty ecology. In M. Hall (Ed.), *Restoration and history: the search for a usable environmental past* (pp. 13–34). New York: Routledge.

Lukács, G. (1962). *The historical novel*. Harmondsworth: Penguin.

Lyotard, J.-F. (1984). *The Postmodern condition: A report on knowledge*. Minneapolis, MN: University of Minnesota Press.

Mackaman, D., & Mays, M. (2000). Introduction: The quickening of modernity. In D. Mackaman & M. Mays (Eds.), *World War I and the cultures of modernity* (pp. xvii–xx). Jackson: University Press of Mississippi.

Marshall, P. (2015). *Nature's web: Rethinking our Place on earth*. New York; Abingdon: Routledge.

Mayr, O. (1989). *Authority, liberty, and automatic machinery in early modern Europe*. Baltimore: Johns Hopkins University Press.

McCallum, R. (1999). *Ideologies of identity in adolescent fiction: the dialogic construction of subjectivity* (Vol. v. 1094.). New York: Garland Publishing.

McCallum, R. (2006). Young Adult Literature. In J. Zipes (Ed.), *The Oxford encyclopaedia of children's literature* (pp. 214–219). Oxford; New York: Oxford University Press.

McGillis, R. (2000). The opportunity to choose a past: Remembering history. *Children's Literature Association Quarterly*, *25*(1), 49–55.

McHale, B. (1987). *Postmodernist fiction*. New York: Methuen.

McLuhan, M. (2006). The medium is the message. In J. Morra & M. Smith (Eds.), *Visual culture: Experiences in visual culture* (pp. 282–292). London; NY: Routledge.

Middleton, P., & Woods, T. (2000). *Literatures of memory: History, time, and space in postwar writing*. Manchester; NY: Manchester University Press.

Miller, J. (2014). *Empire and the animal body: Violence, identity and ecology in Victorian adventure fiction*. London; NY: Anthem Press.

Mitchell, K. (2010). *History and cultural memory in Neo-Victorian fiction: Victorian afterimages*. Basingstoke: Palgrave Macmillan.

Morris-Suzuki, T. (1995). Sustainability and ecological colonialism in Edo period Japan. *Japanese Studies*, *15*(1), 36–48.

Morrow Jr., J. H. (2005). *The Great War: An imperial history*. London; NY: Routledge.

Morton, T. (2008). Ecologocentrism: Unworking animals. *SubStance*, *37*(3), 73–96.

Mumford, L. (2010). *Technics and civilization*. Chicago: University of Chicago Press.

Munslow, A. (1997). *Deconstructing history*. New York; Abingdon: Routledge.

Murota, T. (2005). Material cycle and sustainable economy. In D. Bell, L. Fawcett, R. Keil, & P. Penz (Eds.), *Political ecology: Global and local* (pp. 120–137). London; NY: Routledge.

Newman, M. (2009). More than human: How deep is ecology in children's fiction? In J. Harding, E. Thiel, & A. Waller (Eds.), *Deep into nature: Ecology, environment and children's literature* (pp. 177–185). Staffordshire: Pied Piper Publishing.

Nussbaum, M. (2007). The moral status of animals. In L. Kalof & A. J. Fitzgerald (Eds.), *The animals reader: the essential classic and contemporary writings* (pp. 30–36). Oxford: Berg,.

O'Connor, J. E., & Rollins, P. (2005). Introduction. In J. E. O'Connor & P. Rollins (Eds.), *Hollywood's west: The American frontier in film, television, and history* (pp. 1–34). Lexington: University Press of Kentucky.

O'Connor, W. (2013). *Dracopedia The bestiary: An artist's guide to creating mythical creatures*. Verona: IMPACT.

Oelschlaeger, M. (1991). *The idea of wilderness: From prehistory to the age of ecology*. New Haven; London: Yale University Press.

Onion, R. (2008). Reclaiming the machine: An introductory look at steampunk in everyday practice. *Neo-Victorian Studies*, *1*(1), 138–163.

Oziewicz, M. (2008). *One earth, One people: The mythopoeic fantasy series of Ursula K. Le Guin, Lloyd Alexander, Madeleine L'Engle and Orson Scott Card*. Jefferson, N.C.: McFarland & Company.

Paris, M. (2004). *Over the top: The Great War and juvenile literature in Britain*. Westport, CT; London: Greenwood Publishing Group.

Parker-Starbuck, J. (2013). Animal ontologies and media representations: robotics, puppets, and the real of *War Horse. Theatre Journal*, *65*(3), 373–393.

Parsons, T. (1999). *The British imperial century, 1815-1914: A world history perspective*. Lanham; Boulder: Rowman & Littlefield.

Pedersen, H. (2011). Release the moths: Critical animal studies and the posthumanist impulse. *Culture, Theory and Critique*, *52*(1), 65–81.

Pick, D. (1996). *War machine: The rationalisation of slaughter in the modern age*. New Haven; London: Yale University Press.

Pieters, J. (2000). New historicism: Postmodern Historiography Between Narritivism and Heterology. *History and Theory,* 39, 21-38.

Plumwood, V. (2002). *Environmental culture: The ecological crisis of reason*. London: Routledge.

Qwill. (2012, Sept 20). Interview with Jay Kristoff, author of *Stormdancer* [blogpost]. Retrieved September 10, 2017, from http://qwillery.blogspot.com/2012/09/interview-with-jay-kristoff-author-of.html

Ransom, A. (2010). Warping time: alternate history, historical fantasy, and the postmodern *uchronie québécoise*. *Extrapolation*, *51*(2), 258–280.

Reeve, P. (2006). *Larklight*. London: Bloomsbury.

Reeve, P. (2007). *Starcross*. London: Bloomsbury.

Reeve, P. (2008). *Mothstorm*. London: Bloomsbury.

Reis, H. (2011). "I pull the parapet's poppy / to stick behind my ear": Nature in the poetry of World War I. In S. Oppermann, U. Özdağ, & N. Özkan (Eds.), *The future of ecocriticism: New horizons* (pp. 324–336). Newcastle upon Tyne: Cambridge Scholars Publishing.

Richards, J. F. (2003). *The unending frontier: An environmental history of the early modern world* (Vol. 1). Berkeley: University of California Press.

Ricoeur, P. (2004). *Memory, history, forgetting*. (K. Blamey & D. Pellauer, Trans.). Chicago: University of Chicago Press.

Rigby, C. E. (2004). *Topographies of the sacred: The poetics of place in European Romanticism*. Charlottesville; London: University of Virginia Press.

Rudd, D. (2009). Animal and object stories. In M. O. Grenby & A. Immel (Eds.), *Cambridge companion to children's literature* (pp. 242–257). Cambridge: Cambridge University Press.

Rusch, K. K. (2012). Alternate history: worlds of what if. In K. Brooke (Ed.), *Strange divisions and alien territories: The sub-genres of science fiction* (pp. 83–111). Houndmills, Basingstoke, Hampshire: Palgrave Macmillan.

Said, E. (1994). *Culture and imperialism*. Vintage: London.

Scarborough, J. (1995). The opium poppy in Hellenistic and Roman medicine. In R. Porter & M. Teich (Eds.), *Drugs and narcotics in history* (pp. 4–23). Cambridge: Cambridge University Press.

Schanoes, V. (2012). Historical fantasy. In E. James & F. Mendlesohn (Eds.), *The Cambridge companion to fantasy literature* (pp. 236–247). Cambridge: Cambridge University Press.

Seaton, Beverly. (1995). *The language of flowers: A history.* Charlottesville; London: University Press of Virginia.

Shaw, C., & Chase, M. (1989). The dimensions of nostalgia. In C. Shaw (Ed.), *The imagined past: History and nostalgia* (pp. 1–17). Manchester: Manchester University Press.

Shearer, Alex. (2013). *The cloud hunters.* London: Hot Key Books.

Slotkin, R. (1992). *Gunfighter nation: The myth of the frontier in twentieth-century America*. Norman: University of Oklahoma Press.

Smith, M. J., & Parsons, E. (2012). Animating child activism: Environmentalism and class politics in Ghibli's *Princess Mononoke* (1997) and Fox's *Fern Gully* (1992). *Continuum, 26*(1), 25–37.

Smith, S. L. (2003). *Orleans*. NY: Penguin USA.

Stableford, B. (1985). *Scientific romance in Britain 1890-1950*. London: Fourth Estate.

Stableford, B. (2009). *Narrative strategies in science fiction and other essays on imaginative fiction*. Maryland: Wildside Press LLC.

Stevens, P. (2016). Churchill's war horse: Children's literature and the pleasures of War. In L. Paul, R. R. Johnston, & E. Short (Eds.), *Children's literature and culture of the First World War* (pp. 11–29). NY; London: Routledge.

Stout, J. A. (2015). *Hell's Angels: The true story of the 303rd bomb group in World War II*. NY: Penguin.

Suzuki, T. (Producer), & Miyazaki H. (Director). (1997) *Princess Mononoke* [Motion Picture.] Japan: Ghibli.

Suzuki, T. (Producer), & Miyazaki, H. (Director). (2001). *Spirited Away* [Motion Picture.] Japan: Ghibli.

Tate, T. (2009). The First World War: British writing. In K. McLoughlin (Ed.), *The Cambridge companion to war writing* (pp. 160–174). Cambridge: Cambridge University Press.

Taylor, A. (2008). Electric sheep and the new argument from nature. In J. Castricano (Ed.), *Animal subjects: An ethical reader in a posthuman world* (pp. 177–193). Waterloo, Ontario: Wilfrid Laurier Univ. Press.

Thomas, K. (1997). *Religion and the decline of magic: Studies in popular beliefs in sixteenth and seventeenth-century England*. London: Weidenfeld & Nicolson.

Thoreau, H. D. (1861). *Walking* [Kindle Paperwhite version]. Retrieved from amazon.co.uk.

Turner, F. J. (2010). *The frontier in American history*. Mineola, NY: Dover Publications Inc.

Verne, J. (2013). *20,000 leagues under the sea* [Kindle Paperwhite version]. Retrieved from amazon.co.uk.

Verne, J. (2017). *Journey to the centre of the earth* [Kindle Paperwhite version]. Retrieved from amazon.co.uk.

Vint, S. (2012). *Animal alterity: Science fiction and the question of the animal*. Liverpool: Liverpool University Press.

Walker, B. L. (2010). *Toxic archipelago: A history of industrial disease in Japan*. Seattle: University of Washington Press.

Weidensaul, S. (2012). *The first frontier: The forgotten history of struggle, savagery, and endurance in Early America*. Boston: Houghton Mifflin Harcourt.

Wells, P. (2009). *The animated bestiary: Animals, cartoons, and culture*. New Brunswick, New Jersey; London: Rutgers University Press.

Wells, H. G. (2016). *The time machine* [Kindle Paperwhite version.] Retrieved from amazon.co.uk.

Wesseling, E. (1991). *Writing history as a prophet: Postmodernist innovations of the historical novel*. Amsterdam: John Benjamins Publishing.

Westerfeld, S. (2009). *Leviathan*. London: Simon & Schuster.

Westerfeld, S. (2010). *Behemoth*. London: Simon & Schuster.

Westerfeld, S. (2011). *Goliath*. London: Simon & Schuster.

White, H. (1992). *Tropics of discourse: essays in cultural criticism*. Baltimore; London: Johns Hopkins Press.

Williams, R. (1977). *Marxism and literature*. Oxford; NY: Oxford University Press.

Wilson, E. G. (2008). *Against happiness: In praise of melancholy*. New York: Farrar, Straus and Giroux.

Wilson, K. (2011). *Re-visioning historical fiction for young readers: The past through modern eyes*. London: Routledge.

Winter, J. M. (2006). *Remembering war: The Great War between memory and history in the twentieth century*. New Haven; London: Yale University Press.

Wolfe, C. (2007). Cognitive science, deconstruction, and (post)humanist (non)humans. *Oxford Literary Review*, *29*(1), 103–128.

Wolfe, C. (2009). Human, all too human:" animal studies" and the humanities. *PMA*, *124*(2), 564–575.

Wolfe, C. (2010). *What is posthumanism?* (Vol. 8). Minneapolis: University of Minnesota Press.

Worster, D. (1993). *The wealth of nature: Environmental history and the ecological imagination*. Oxford; New York: Oxford University Press.

Wrede, P. C. (2009). *Thirteenth child*. New York: Scholastic Press.

Wrede, P. C. (2011). *Across the great barrier*. New York: Scholastic Press.

Wrede, P. C. (2012). *The far west*. New York: Scholastic Press.

Young, D. A. (2009). Bowing to your enemies: courtesy, budō, and Japan. *Philosophy East and West*, *59*(2), 188–215.

Yumoto, T. (2010). Historical perspectives on the relationship between humanity and nature in Japan. In S.-K. Hong, J. Wu, J.-E. Kim, & N. Nakagoshi (Eds.), *Landscape Ecology in Asian Cultures* (pp. 3–10). London; NY: Springer.

Zapf, H. (2012). Absence and presence in American literature. In T. Müller & M. Sauter (Eds.), *Literature, ecology, ethics: Recent trends in ecocriticism* (Vol. 432, pp. 83–94). Heidelberg: Universitätsverlag Winter.

Žižek, S. (2008). Nature and its discontents. *SubStance*, *37*(3), 37–72.