

A Cognitive Stylistic Reading of Environmental Sustainability and Degradation in *Life of Pi*

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Abstract

Yann Martel's *Life of Pi* has received little attention since its publication in 2001 despite its critical success and epistemological value. Existing discussions of the novel focus on the theme of religion, either to support the protagonist, Pi Patel, throughout his journey, or as a confusing and ineffectual element of the plot. My own cognitive stylistic research, however, argues that the unconventional presentation of religion and accompanying stylistic patterns in the novel encourages an openness to opposing views and cultures, and reworks readers' schema. In the spirit of these findings, my paper examines the unconventional ecological and stylistic patterns in chapter 92 of the novel, where Pi makes an 'exceptional botanical discovery' (p.256) which similarly attempts to engage the reader, this time to encourage them to reconsider their understanding of the environment. My paper deploys an ecostylistic perspective to examine the unconventionality of Pi's botanical discovery, and centres its analysis on *projection*, to show how readers' expectations of nature in the chapter are subverted and challenged. Projection refers to the ability of a reader to put themselves in the minds of characters, or events of a literary text, and while knowledge on how it occurs is limited, emerging research in stylistics including my own presents it as a strong candidate for enhancing textual analysis. Therefore, in exploring how a projection-based cognitive and ecostylistic analysis can concentrate attention on issues such as environmental sustainability and degradation, my paper aims to offer a new approach into the connection between stylistic devices and the environmental issues.

Keywords: *simulation theory, sustainability, ecopsychology, clinical ecopsychology, metaphor, projection, degradation, immersion*

1. Introduction

Before attending the PALA 2023 conference at the University of Bologna, I spent the preceding months asking colleagues and friends how they thought the climate crisis is being handled. While my question was brief and simple, the overwhelming response from participants was that communication about the climate crisis was poor, largely due to the fact that there is a disparity between what advocates on the environment preached and what they practised. The current scholarly discourse on the climate crisis echoes these comments, with scholars finding a ‘long-standing mismatch between what people say is important to them and what they actually do’ (van der Linden and Weber 2021: 4). The conflict between words and action has led calls for a more ‘salient and tangible’ approach to the environment (Limaye 2021: 1), with contemporary writers drawing on political, sociocultural, behavioural, and linguistic avenues to facilitate action. Ecostylistics has demonstrated that linguistics can offer an alternative approach to the environment, and my paper looks to follow the discipline’s practice of applying stylistic analysis to enlighten our view on the environment by deploying the notion of textual projection.

My research has addressed the relatively unknown, and only recently progressing idea of projection in stylistics. Projection is broadly defined as ‘imagining oneself in the position of another in an imaginative manner’ (OED, *projection*), and in stylistics, projection has been used to describe the process of getting into a literary text, alongside other words such as immersion, absorption or transportation. Research which explores the process of projection in the reading process tends to either centre around the concept of mind-modelling (Stockwell and Mahlberg 2015), which discuss how readers ‘take on’ a ‘character’s life in the reader’s mind’ (2015: 130), or examines how specific linguistic terminologies lead to readers experiencing projection, such as narrative (Stopel 2022), semantics (Oakley 2005) or metaphor (Rasse and Gibbs 2021). Another recent and thriving area of research which has implications for projection is narrative empathy. Narrative empathy regards readers’ engagement with characters in literary and media texts, focusing on the ‘emotional response’ in which ‘mental representations of situation and status’ are created by ‘reenacting, simulating or imaginatively experiencing... states’ (Fernandez-Quintanilla and Stradling

2023: 106). As the previous 20 years suggest, the interest in determining the ways in which readers engage in literary texts has increased, and while these studies are beginning to investigate the between projection and stylistics more rigorously, the research area remains more unknown than known; ‘an increasing number of behavioural studies on transportation, immersion or absorption’ but it remains ‘scarce and inconclusive’ (Jacobs and Willems 2018: 150). My research examines simulation theory as a viable psychological framework to explain how readers project into the people and events of a literary text. Simulation theory first claimed that that readers ‘project’ into ‘the other’s mind’ (Gordon 1986: 162) and has evolved into a mature account of how humans ‘understand ourselves, others and how we identify with feelings and thoughts that compose our daily lives’ (Goldman 2006: 3), whilst being reinforced by empirical cognitive data (Hesslow 2011). The findings of my research thus far will be applied to the ecology in chapter 92 of *Life of Pi*, and will argue that Martel tries to draw readers in and get them to rethink how they relate to the environment.

2. Projection, Ecostylistics and *Life of Pi*

This chapter reviews the different theories and disciplines used to build my paper. At the heart of my paper is cognitive poetics, which takes its parent discipline, stylistics, which concerns the craft of literature, and applies it to cognitive principles to gain an insight into the contextual and biological factors influencing reading. While cognitive approaches have had a profound impact on the discipline of stylistics, one of the areas which remains relatively unexplored are the linguistic and cognitive processes behind textual projection. Speculating where and when readers project themselves into a literary text is a contentious issue in stylistics; while a reader’s ability to enter into the events of a literary text is seen as a universal occurrence in reading, and studies are becoming more attuned to the formal features which may trigger it, the fact that each reader brings a highly personalised experience to reading complicates any definitive claims as to when projection takes place. However, as stated, an increase in research focusing on empathy (Fernandez-Quintanilla and Stradling 2023), attention (Stockwell 2019; Gunn 2023) and studies deploying psychological theories such as simulation theory (Oakley 2005; Cooper 2023) help to advance our understanding of textual projection. Any claims made in my paper regarding when projection may occur in *Life of Pi* consults within and beyond the strands of research above to attempt to accurately suggest when projection may occur, and what inferences stylisticians can draw from its

occurrence. Therefore, a projection-based analysis will be provided in my paper, and shall demonstrate how such an analysis can enlighten stylistics, in this case ecostylistics and discourses regarding the environment.

An example of how projection can benefit stylistic analysis comes from my own research, with Cooper (2023) advancing understanding on projection via a simulation-based cognitive poetic approach. A group of seven participants from varying cultural backgrounds were asked to mark on sections of four cross-cultural literary texts where they felt most and least projected, before entering into a group discussion regarding the decisions they had made. By combining the mark up strategy during reading, and a discussion section after reading each text, results retained the momentary experience of reading so crucial to simulation, while capturing ‘how ordinary readers interpret and evaluate literary texts’ (Swann and Allington 2009: 247). My findings argued that lexis depicting negativity and facial-expressions, dynamic verbs and space builders lead to more reports of textual projection from participants, which were reinforced by empirical data taken from research on simulation theory. Cooper (2023) also found that while these linguistic features may be central to projection, schematic knowledge has some influence on a reader’s ability to enter a literary text. Participants would report that they ‘struggle[d] to understand and immerse in what is actually happening’, (ibid), however, certain stylistic features could overwrite the sense of unfamiliarity and lead to projection, such as space builders and emotive lexis. These are primitive results within an area of research which is ‘yet to be understood’ (Stockwell 2019: 220), and any claims made in my paper regarding projection and its effects require further examination. Nevertheless, from the emerging studies in projection, studies can benefit from a projection-based analysis, starting with ecostylistics.

Ecology takes ‘depictions of natural scenery and discourses about the environment’ to be ‘scrutinised by adopting stylistic paradigms and methods’ and in turn offer a ‘broader view of the environment’ (Adami 2022: 546). For instance, Vermeulen (2022) examines the environment in Isaiah 3, where cities are described as conveying a high frequency of natural features which stands in contrast with the Bible as a whole. These patterns are explored using text-world theory and metaphor to show that the role of nature can transcend readerly expectation, and in doing so, may prompt its readers to reflect on their own relationship with the environment. In turn, ecostylistic analyses can transform linguistic analysis to create commentaries on how humans interact and understand the environment. It is at this cross-section between the linguistic patterns of a text and the environment being described which

my paper looks to explore and derive meaning from, via a projection-based approach. To gain a stronger understanding of the environment, my paper will draw on ecopsychology.

Ecopsychology can augment the analyses we conduct in ecostylistics, and will offer an empirical basis from which my paper interprets the way the environment is presented in *Life of Pi*. Ecopsychology explores the connection between ‘human-caused changes to and destruction of the natural world’ by ‘look[ing] for the roots of environmental problems in human psychology and society’ (Thoma et al. 2021: 3). The discipline has assembled a thorough connection between the mind and the environment around us, forging ‘direct and indirect mental health impacts of the progressing climate change’ and how this can lead to the ‘development of mental ill-health’ (ibid: 2). The extensive work conducted by ecopsychologists can help develop a new layer for ecostylistic analysis, by supplying linguistic analyses on the environment with applicable data from studies on how humans relate to the environment. For instance, my paper acknowledges these ecocritical and psychological discourses and applies them to the interpretations drawn from the linguistic patterns conveying the environment in *Life of Pi*. The final part of my literature review will introduce *Life of Pi*, and why it is primed to reveal an interesting commentary on the environment.

The premise of *Life of Pi*, international bestseller and Man Booker Prize winner, may not be explicitly concerned with nature, but further investigation can reveal a significant environmental commentary. The most contested theme of the novel is religion, with some scholars seeing it as an ‘unabashedly religious’ tale (Bolton 2013: 1), and others a theme which ‘disappears for the majority of the tale’ (Ruparell 2004: 1), yet Cooper (2022) stressed that it was a story motivated by religion based on an encouraged openness to opposing views and cultures, via the unconventional polytheistic faith Pi has. This unconventional multifaith blend of Christianity, Islam and Hinduism is constructed in the first section of the novel, in which readers learn about his childhood in his hometown in India, and specifically his religious upbringing, before in the latter two sections where Pi survives 227 days at sea and finds his way to Mexico, which is where his polytheistic faith manifests and becomes essential to the story. It is a story that will ‘make you believe in God’ (p.x), and does so by getting right at the reader’s pre-established knowledge on how readers understand religion. The reflexivity encouraged in the story of Pi’s faith applies to chapter 92 when Pi makes an ‘exceptional botanical discovery’ in the form of an island (p.256). This island has an

unconventional ecology, which is described with unconventional stylistic patterns, which when analysed together, presents a commentary on the relationship between humanity and nature.

3. Analysis

The focus of my cognitive poetic analysis regards the unconventional presentation of different elements of the island's ecology, and how these patterns prompt readers to reconsider how readers relate to the environment. The 'exceptional' qualities of Pi's 'botanical discovery' (p.256) come through two main ways: the topography of the island and the wildlife found on it. Each of these elements are 'like none I [Pi] had seen before' (ibid), and it is this unconventionality which sparked my paper; the unexpected ways in which the environment in chapter 92 is presented, and how the stylistics of that presentation immerse readers and make them consider how they think about the environment. Therefore, the analysis section is tasked with highlighting the different elements of unconventional island ecology and producing a cognitive stylistic analysis, influenced by projection and simulation, and relate them to the environment. To do so, the analysis section is split into three parts, with the first two constituting the topography of the island and the wildlife upon it, measuring its unconventionality and how Martel uses stylistic devices to draw readers in. Section four ends by focusing on how Pi reacts to these deviational elements of nature, and how in his reaction readers can discern our response to the climate crisis. Altogether, an ecostylistic and projection-based analysis using simulation theory will be presented.

3.1 Island Topography

The opening of chapter 92 immediately focuses on the island's environment, beginning with the island's topography. The arrangement of the physical features of the island, particularly the trees and the ground they are within, first appear in 'the near distance' as a 'forest' which 'stood in a dense mass of vegetation' (p.256-7). What is immediately striking is that these trees are 'growing out of pure vegetation', which Pi later describes as a 'symbiotic relationship' between the trees and the algae to form the base of the island (ibid). The arrangement of the island is unconventional from the beginning, in that trees grow out of an algal foundation, as opposed to soil, and Martel continues to deviate from topographical expectations in how the algae and trees are described. The trees, leaves and algae are

presented as overwhelmingly green throughout the introduction to the island's topography, often through frequent modification, as seen in 'sparkling green', or 'vibrantly green' (ibid). The overpowering sense of green is a unique and defining feature, reflected in the grammatical deviation in word formation via compounding when Pi describes the 'fresh and soothing... greenness', combining morphemes 'green' and 'ness' (p.259). While the colour green stereotypically denotes the environment (Lim et al. 2020), the colour stands out both visually and stylistically, as reflected in the grammatical deviation to compound 'greenness' (p.259). As a result, the resulting initial image of the island is of overwhelming greenness spanning a densely packed mass of trees standing within an algal floor.

My analysis of this unusually green and arranged island now begs the question of why Martel would present the chapter in such an unconventional manner. Research from projection would suggest that the highlighted grammatical markers which describe the island as uncharacteristically green focuses readerly attention on the topography of the island. Readers can, based on the patterns of green, develop an image of the island which Pi finds, and this is achieved by the high frequency of green grammatical units acting as space builders. Stylistics already conceived that space builders act as 'deictic reference points' to 'position the reader... and provide an initial centre from which alternate conceptual structures can be projected from' (Giovanelli 2010: 219-220), and Cooper (2023) finds that space builders seem to be a 'consistent point of projection' as readers rely on 'facts and physical properties to construct images of a text' (2023: 79). The claim is that space builders trigger readers to 'picture things' (Cooper 2023: 70), and this may be based on the fact that humans use words with a 'quasi-visual character' to run simulations about the world around us (Goldman 2006: 149). In that sense, the high frequency of unconventionally green world elements helps readers simulate the image of this unconventional island. Therefore, based on the idea that space builders act as projection points, these green topographical grammatical units projects readers into this overly green, strangely arranged, island.

3.2 Island Wildlife

Section 3.1 claimed that Martel pulls readers into an opening scene of the island which presents an unconventional image of the environment based on overpowering greenness and with trees that grow out of algae. As Pi wades his way deeper into the ecology of the island, the wildlife of the island continues the trend of unconventionality. There are two aspects of

the island which help Martel deviate from Pi's ecological expectations: the trees and the meerkats. The forthcoming part of the analysis will deal with the trees and the meerkats, and reflect how they are once again may be stylistically primed to draw readers into their depictions of the environment and how the unconventional nature of these ecological elements challenges rather than conforms to environmental schema.

3.2.1 Trees

The trees cause a 'disbelie[f]' that prompts readers to reimagine Pi and readers of chapter 92 to reimagine their design. (p.257). The first image readers receive of trees comes when Pi sees the 'dense mass of vegetation' (ibid), with the protagonist expecting 'my eyelids to act like lumberjacks' and destroy the trees (ibid). From 'eyelids' as lumberjacks' readers glean the metaphorical construction EYELIDS ARE TREE-CUTTERS (ibid), which conveys the act of blinking of our human protagonist to cutting down trees. As a result, the relatively subconscious process of blinking, which is a necessity to eye function and therefore sight, is associated with the removal of trees. In other words, a natural human process is used to normalise the cutting down of trees, and elicits an anthropocentric tone depicting the destruction of trees. An analysis of the trees and its metaphor, however, can go deeper from a projection and simulation-based perspective.

Stylisticians have already used simulation theory to elucidate how readers understand metaphor. Current simulation-based metaphor analysis claim that simulation has a significant role in the process of understanding metaphorical constructions (Ritchie 2008; Gibbs 2006), and one of the ways in which simulation theory does this is by relating the simulative capacities of word choices in metaphorical constructions and the understanding of the metaphor itself. In other words, the lexical choices within metaphorical constructions can trigger simulations, which in turn effect a reader's ability to understand the meaning of the metaphor. In the case of 'I blinked deliberately, expecting my eyelids to act like lumberjacks' (p.257), the dynamic verb 'blinked' can add to our understanding of the meaning of the metaphor via simulation theory. Dynamic verbs present physical processes, as opposed to stative types, which convey a state of mind or attitude, and scholars has observed that 'active verbs propel the virtual embodied experience in a maximally vivid... way' (Rule 2017: 33). Dynamic verbs, such as 'blinked' in our construction above help readers to visualise the events, which was reinforced in my study, as 'description[s] of action... stuck out' and are

places in which readers are ‘drawn in’ (Cooper 2023: 74). In that sense, ‘linguistic depictions of bodily movement... help readers construct a mental experience’ via the running of simulations, which feed into producing ‘a rich set of inferences’ (2023: 75). Consequently, readers are simultaneously drawn into a clear visualisation of these trees being cut down, with Martel focusing this section of the text on its anthropocentric themes.

Section three so far has argued that the opening scene of chapter 92 of *Life of Pi* draws its readers into the environment of an island and its anthropocentric themes. Having been drawn into the unconventional greenness of its topography, and then seeing an anthropocentric metaphor emerge from its trees, the remainder of section three now follows how chapter 92 deals with this anthropocentrism. With attention currently on anthropocentric eyelids, and Pi’s expectation is that the trees fall, readers actually discover that the trees instead ‘stand’ (p.258). The decision to make the trees ‘stand’ (ibid) is a significant one, as they deny the anthropocentric expectation that they are to be cut down. In turn, the metaphorical construction shifts from EYELIDS ARE TREE-CUTTERS to TREES ARE AN UPRIGHT HUMAN. The shift between metaphors is termed the ‘elaboration of blended spaces’ (Fauconnier and Turner 1998: 135) as the blended space is developed whilst using the same target domain, which in this case is from anthropocentrism to ecocentrism, as the trees are not cut down and instead stand tall. Pi describes these standing trees as a ‘chimera’ (p.258), that is, ‘an unreal creature of the imagination, a mere wild fancy; an unfounded conception’ (OED, *chimera*). It means that, altogether, the current situation of chapter 92 is that readers have been drawn into the greenness of the island, and then the seemingly anthropocentric removal of its trees, before having ecocentrism preside. In that sense, readers may have been drawn closer to an island which rejects conventional ideas of anthropocentrism and instead to witness a prevailing ecocentrism. My paper will continue to examine the connection between humanity and nature in the next element of chapter 92, the meerkats.

3.2.2 Meerkats

The unconventional island continues with the ‘notable’ meerkats, whose ‘surprising’ nature is matched in the patterns of language which depict them (p.266). Our first description of the meerkats after Pi’s startled introduction is that the meerkats are ‘like chicken in a farmyard’, producing the metaphorical construction MEERKATS AS A FARMED ANIMAL (ibid). This metaphorical mapping takes the meerkats and applies it to a source domain of farming, and

therefore reducing these animals' freedom since they depend on a farmer. The notion of dependency is developed through the remainder of the meerkats' description, with the second metaphor describing them as 'communities waiting for a bus', and hence, A MEERKAT GROUP AS HUMANS WAITING FOR TRANSPORT (ibid). While the meerkats are anthropomorphised, which suggests an increased level of freedom compared to farmed animals in the previous metaphor, there still remains a sense of dependency, this time in waiting for transport to arrive. The next two metaphors continue the passive tone, first as 'children self-consciously posing for a photographer', that is, MEERKATS AS AWARE PHOTOGRAPHED CHILDREN and then as 'patients in a doctor's office stripped naked and demurely trying to cover their genitals', MEERKATS AS VULNERABLE CONVALESCENT (p. 266-267). The metaphorical constructions here, which have bestow unconventional blends and source domains, are all underpinned by the anthropomorphising of the meerkats into scenarios which have the target depend on its source; waiting for a photograph to be taken, or for a doctor to treat them. Indeed, as each metaphor is presented the source domains become increasingly more vulnerable, especially in the final two constructions, as children and as naked and ill patients. Therefore, in their unusual metaphorical mappings, the general trend running through all four of these individually unique metaphors is that these meerkats are dependent creatures on the island.

Just as my paper did in section 3.1 and 3.2.1, it is worth exploring the patterns of textual projection in the scene with the meerkats. Examining the words within these metaphorical constructions more closely using a simulation-based analysis of textual projection, it appears that these meerkats are also designed to grab readers' attention. In the discussion on the trees, it was highlighted that dynamic verbs help draw readers into the events of a literary text as they trigger simulations as readers visualise those events. Indeed, in the meerkat metaphors, there is a shift toward dynamic verbs, that is, from 'waiting' to 'posing' and finally 'stripped' and 'cover' (p.266-268). While these verbs are less explicit in their depictions of action when compared to 'stand' with the trees, the progression from 'waiting' to 'stripped and 'posing' marks a significant change in the display of actions (ibid). A simulation-based analysis of the change in verb type would argue that this shift causes the reader to visualise the situations portrayed in the metaphorical constructions more readily, which is supported by Cooper (2023). Therefore, the dynamic verbs are used get the readers to imagine these unconventional meerkats and their condition on the island, which appears to be a life of

passivity to some external force. The question then is, why does Martel want readers to visualise these meerkats as passive, and what is the dominant force which they depend on?

The answer to these two questions can be found in one final metaphor regarding the meerkats. When Pi finds himself ‘covered from head to toe in a living fur blanket’ which created a ‘nice treetop bedroom’ (p.276), it depicts the meerkats in the metaphorical construction, MEERKATS AS A JUNGLE BEDROOM. The progression from farmed animals, to humans, to increasingly vulnerable humans is now finalised with the meerkats as furniture for the island. In that sense, the meerkats become part of the island, and it would appear that the force they depended on, that they were passive to in the above metaphorical constructions, is the island. This idea continues the dominance of the ecocentric trees found in section 3.2.1, where anthropocentric narratives were quelled by the island. It is also important to note that, like the scene with the ecocentric trees, it could be argued that readers are drawn closer to these events due to the lexical choices within these metaphor. As specified in section 2.1, studies using a projection-based analysis are still primitive, and therefore making concrete assertions on how and when projection occurs for readers, especially considering how each reader brings personalised experiences to literary texts (Bergen and Chang 2003: 5), are contentious. However, the patterns in projection-based stylistics research align with the unconventional patterns of stylistics found in these ecocentric moments. Consequently, my paper uses the projection and simulation-based perspectives, which would draw readers closer to the ecocentric action, to suggest that Martel is confronting readers of chapter 92 with an alternative to anthropocentrism. The final section of my analysis will deal with the idea that Martel is encouraging readers to move away from these anthropocentric narratives by focusing on how chapter 92 concludes.

3.3 Leaving the Island

This paper began by focusing on ‘stand[ing]’ trees which resisted anthropocentric themes, and then followed a clan of passive meerkats, with both instances reflecting ecocentrism. Moreover, a projection-based stylistic analysis has argued that readers are drawn closer to these moments of ecocentrism. Section 3.3 delineates what the impact of drawing readers close to repetitive patterns of ecocentricity has in relation to environmental sustainability and degradation.

After the meerkats, chapter 92 enters a sense of finality with Pi remarking that it was ‘the day before I left the island’ (p. 278), and the conclusive nature of his comments reflect an equally impending message on the environment. On this final day, Pi wades through the forest as dense as the ‘streets of Calcutta’ (p. 278) to arrive at ‘the tree’ (ibid). The tree itself is not ‘the largest... or remarkable in any other way’ (ibid), which contrasts the luminescence found in the ‘shining’ and ‘brilliant’ green at the start of the chapter (p. 256), but is marked out grammatically using the definitive article ‘the’ (ibid). The tree is further differentiated from the island’s other trees in that it grows fruit (p.278). As Pi draws nearer to this tree he ponders, ‘these fruit *must surely* be heavy and juicy’ and ‘what *would* its fruit be like... I *thought*’ to ‘satisfy my curiosity’ (p. 278-279). Fowler (1996) would term words of estrangement, which ‘reinforce [a] narrator’s seeming uncertainty’, and presents what Simpson (2014) terms ‘negative shading’ which ‘foregrounds attempts to find out what is going on’ (2014: 97). As Pi unfolds the fruit to learn more, he discovers that within each piece of fruit is ‘a tooth’ which are ‘stained’ a ‘dull green’ (p.280). The ‘brilliant’ and ‘shining’ green at the start of the chapter has disappeared, and trees, which typically associate with being givers of life, in that they produce oxygen for respiration, is reversed in favour of an island which consumes the animals that live upon it. Faced with what appears to be a carnivorous island, Pi decides to ‘let go’ and leave the island (p.282).

In this moment of departure, with the image of a carnivorous island, it can be argued that readers are drawn closer again. First, in the intertextuality between Pi’s discovery of a fruit which casts him off the island and Adam and Eve in the Garden of Eden. There are parallels between the stories in Genesis 3 and in chapter 92, in which a recipient is lured towards a fruit that brings disastrous consequences. Moreover, there are lexical similarities between both passages, with negative shading in Genesis 3, such as the serpent manipulating God’s word, asking, ‘Did God say, You *shall not* eat of any tree?... [instead] God said, You *shall not* eat of the tree that is in the midst of the garden’ (The Holy Bible: Genesis. 3:16).

Intertextual links such as these, if there are detected by a reader, have been explored in relation to narrative empathy and reader engagement, with Karpenko-Seccombe (2023) arguing that intertextual foregrounding helps to ‘defamiliarise’ a main character and hence ‘triggers empathy’ (2023: 206). Further studies are required to justify the idea that intertextual links lead to reader projection, but the idea that a familiarity, this time via textual comparison, can help reader engage in the events of a text is emerging in projection-based studies.

In addition to the intertextuality, there is a second pattern in the ending of chapter 92 that may project readers into the scene. As Pi leaves the island he splutters, ‘how many dreams of a happy life dashed? How much hope come to nothing? How much stored-up conversation that died unsaid? How much loneliness endured? How much hopelessness taken on? And after all that, what of it? What to show for it?’ (p.282). While there is limited research on the effect rhetorical questions have on textual projection, data emerging from my research does suggest that they project readers into a literary text, with claims such as ‘the rhetorical questions were the kinds of things that stood out... [they] actively challenge you as a reader’ and ‘you engage with it’ (Cooper 2023: 53). Therefore, when presented with a carnivorous island, and in Pi’s departure, at the height of ecocentrism, readers are once again drawn close to the action. The final act of my analysis section is to combine the projection-based analyses provided and suggest why Martel may draw readers close to these moments of ecocentrism.

Based on the reflective and terminal comments made by Pi when he discovers the carnivorous island, my paper argues that the purpose of possibly pulling readers closer to these moments of ecocentrism is to make them consider how they perceive the environment. In the introduction to section 3, my paper claimed that unconventionality is at the heart of Martel’s writing, as ‘in understanding the effort to understand the other, you eventually understand yourself (Sielke 2003: 20). The unconventional linguistic and thematic patterns used throughout chapter 92 to present the island as a force which rejects anthropocentrism, therefore, is argued to be a prompt to reflect on how humans treat the environment. The basis for the claim that the ecocentric island encourages a reflexivity is taken from ecopsychology. Ecopsychologists claim that human experience with nature can create a ‘nondual’ experience, in which ‘separating boundaries no longer isolate one from other expressions of Being’ (Davis 1998: 137). When in a nondual experience, readers enter a ‘self-reflective, pluralistic, and pragmatic world’ (Doherty 2009: 1), and it is in the state of disbelief, created by the separation of boundaries, that leads to personal reflection and growth. In other words, just as Pi aimed to avoid a ‘spiritual death’ (p.283), my paper argues that readers are drawn into these moments repeatedly with Pi to embark on a journey of self-reflection on how they think about the environment. The combination of immersive stylistics and unconventional ecology culminates in one final image, with Pi leaving the island, and this reflects logical reworking across the chapter of getting readers to step out of degradation and into sustainability.

4. Conclusion

An ecostylistic reading of *Life of Pi* using cognitive stylistics and projection reveals a message that directs readers to reconsider how they perceive the environment. The ecology in chapter 92 is unconventional, and based on primitive yet emerging research regarding textual projection, this ecology draws readers in. The claims that Martel uses language to project readers into the ecology are made using simulation theory, which has added a new layer of analysis to elements of stylistics such as metaphor and grammar. In turn, simulation theory and ecostylistics have been partnered in my paper to show how a new angle for literature to be a vehicle to explore the relationship between humanity and the environment. More specifically, simulation and projection can ‘become the baseline for understanding the work of sentences, new ways to emerge to understand and act upon familiar concepts’ (Rule 2017: 34), but further work is needed to get a better grip of how researchers can tap into projection via simulation, attention and empathy. Future research within the field of projection and stylistics should also consider how the highly personalised knowledge readers can bring, perhaps by including alternate cultures in literary reading, which would continue the progress made in cultural analyses in stylistics (e.g. Chesnokova et al. 2017). Nevertheless, the capacity of language to influence the climate discussion, as ecostylistics advocates, is apparent in this analysis of chapter 92 of Yann Martel’s *Life of Pi*.

Bibliography

Primary Source:

Martel, Y. (2001). *Life of Pi*. Edinburgh: Canongate.

Secondary Sources:

Bolton, C. (2013) 'Life of Pi', in *Journal of Religion and Film*, 17(1), pp. 1-3.

Chesnokova, A. et al. (2017) 'Cross-Cultural Reader Response to Original and Translated Poetry: An Empirical Study in Four Languages', *Comparative Literature Studies* 54(4): p.824-849.

"Chimera" *Oxford English Dictionary*. [online]

<<https://www.oed.com/view/Entry/31708?redirectedFrom=chimera#eid>> [accessed 24 June 2023].

Cooper, H. (2022) 'A Cognitive Stylistic Reading of *Life of Pi*', Undergraduate Dissertation, University of Liverpool, Liverpool.

Cooper, H. (2023) 'A Simulation-based Approach to Cognitive Poetics Using Cross-cultural Literature', Master's Dissertation, University of Liverpool, Liverpool.

Davis, J. (1998) 'The Transpersonal Dimension of Ecopsychology: Nature, Nonduality and Spiritual Practice', in *The Humanistic Psychologist*, 26(3), pp. 1-19.

Doherty, T. (2009) 'A Peer-reviewed Journal for Ecopsychology', in *Ecopsychology*, 1(1), pp. 1-7.

Fauconnier, G. and Turner, M. (1998) 'Conceptual Integration Networks', in *Cognitive Science* 22(2), pp. 133-187.

Fernandez-Quintanilla, C. and Stradling, F. (2023) 'Introduction: Stylistic Approaches to Narrative Empathy', in *Journal of Literary Semantics*, 52(2), pp. 103-121.

Fowler, R. (1996) *Linguistic Criticism* 2nd edition. Oxford: Oxford University Press.

Gibbs, R. (2006) 'Metaphor Interpretation as Embodied Simulation', in *Mind & Language*, 21(3), pp. 434-458.

- Gibbs, R. and Rasse, C. (2021) 'Embodiment in the Diversity of Literary Experience', in *Journal of Literary Semantics*, 51(1), pp. 55-66.
- Giovanelli, M. (2010) 'Pedagogical Stylistics: A Text World Theory Approach to the Teaching of Poetry', in *English in Education*, 44(3), pp. 214-231.
- Goldman, A. (2006) *Simulating Minds: The Philosophy, Psychology, and Neuroscience of Mindreading*. Oxford: Oxford University Press.
- Gordon, R. (1986) 'Folk Psychology as Simulation', in *Mind and Language* 1(2), pp. 158-171.
- Gunn, N. (2023) 'The Poetics of Attention in Old English Verse: A Cognitive Stylistic Approach to the Depiction of Grendel in Beowulf', in *Language and Literature*, 32(3), pp. 329-354.
- Hesslow, G. (2011) 'The Current Status of the Simulation Theory of Cognition', in *Brain Research*, 1428(1), pp. 71-79.
- Jacobs, M. and Willems, M. (2018) 'The Fictive Brain: Neurocognitive Correlates of Engagement in Literature', in *Review of General Psychology*, 22(2), pp. 147-160.
- Karpenko-Seccombe, T. (2023) "'The Unlikeliest Twins': The Role of Intertextual Foregrounding and Defamiliarisation in Creating Empathy in "Meursault, contre-enquete"", in *Journal of Literary Semantics*, 52(2), pp. 191-212.
- Lim, D. et al. (2020) 'Colour Effects in Green Advertising', in *International Journal of Consumer Studies*, 44(6), pp. 552-562.
- Limaye, V. (2021) 'Making the climate crisis personal through a focus on human health', in *Climatic Change*, 166(43), pp. 1-11.
- Mellado, M. (2014) 'Narration and Religion in Yann Martel's Novel *Life of Pi*', PhD thesis, Salamanca University, Spain.
- Oakley, T. (2005) 'A Simulation Semantics Approach to Rhetoric Analysis', in *Language and Literature*, 14(3), pp. 295-310.
- Ritchie, D. (2008) 'X is a Journey: Embodied Simulation in Metaphor Interpretation', in *Metaphor and Symbol*, 23(1), pp. 174-199.

- Rule, H. (2017) 'Sensing the Sentence: An Embodied Simulation Approach to Rhetorical Grammar', in *Composition Studies*, 45(1), pp. 1-19.
- Ruparell, T. (2004) *Reflections on Life of Pi* [online] < <http://www.ucalgary.ca/christchair/files/christchair/Ruparell%20on%20Life%20of%20Pi.pdf> > [accessed 27 December 2021].
- Schank, R. and Abelson, R. (1977) *Scripts, Plans, Goals, and Understanding*. New York: Psychology Press.
- Sielke, S. (2003) 'The Empathetic Imagination: An Interview with Yann Martel', in *Canadian Literature* 177(1): pp.12-32.
- Simpson, P. (2014) *Stylistics: A Resource Book for Students*. London: Routledge.
- Stockwell, P. (2019) *Cognitive Poetics: An Introduction*. 2nd edn. Oxford: Taylor & Francis.
- Stockwell, P. and Mahlberg, M. (2015) 'Mind-modelling with Corpus Stylistics in David Copperfield', in *Language and Literature*, 24(2), pp. 129-147.
- Stoppel, B. (2022) 'Prose Fiction', in Hogan, P. et al. (eds.) *The Routledge Companion to Literature and Emotion*. London: Routledge, pp. 356-380.
- Swann, J. and Allington, D. (2009) 'Reading Groups and the Language of Literary Texts: A Case Study in Social Reading', in *Language and Literature*, 18(3), pp. 247-264.
- The Holy Bible. Genesis. 3:16. English Standard Version (2016). Illinois: Crossway.
- Thoma, M. et al. (2021) 'Clinical Ecopsychology: The Mental Health Impacts and Underlying Pathways of the Climate and Environmental Crisis', in *Front. Psychiatry*, 12(1), pp. 586-599.
- van Peer, W. (1986). *Stylistics and Psychology: Investigations of Foregrounding*. London: Routledge.
- van der Linden, S. and Weber, E. (2021) 'Can Behaviour Science Solve the Climate Crisis?', in *Current Opinion in Behavioural Sciences*, 42(1), pp. 1-6.
- Vermeulen, K. (2022) 'Growing the green city: A cognitive ecostylistic analysis of Third Isaiah's Jerusalem (Isaiah 55-66)', in *Journal of World Languages*, 8(3), pp. 567-592.