



Durham E-Theses

Becoming Nothing, Becoming Everything: Quantum Posthumanism and the Writing of J.M. Coetzee

AL-HAMED, HAJER, SAUD

How to cite:

AL-HAMED, HAJER, SAUD (2017) *Becoming Nothing, Becoming Everything: Quantum Posthumanism and the Writing of J.M. Coetzee*, Durham theses, Durham University. Available at Durham E-Theses Online: <http://etheses.dur.ac.uk/12279/>

Use policy

The full-text may be used and/or reproduced, and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not-for-profit purposes provided that:

- a full bibliographic reference is made to the original source
- a [link](#) is made to the metadata record in Durham E-Theses
- the full-text is not changed in any way

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.

Please consult the [full Durham E-Theses policy](#) for further details.

Abstract

Drawing on both posthumanism and quantum theory, this thesis introduces what I am calling a framework of quantum posthumanism. Based on the epistemic and ontic aspects of entanglement, nonseparability, and *becoming*, and a reworking of ideas of agency and objectivity, the thesis embarks on an interdisciplinary (entangled) reading of J. M. Coetzee's texts that seeks to move beyond the current historicist framing of his work. Utilising some of the key concepts and laws from various quantum interpretations, it seeks to show how such concepts effectively deconstruct boundaries between self/other, human/animal, animate/inanimate, body/environment and therefore, by extension to the literary, between fact/fiction, story/history, external/internal, and ultimately author/character/reader/text. The thesis approaches Coetzee's writing by focussing on the centrality in his fiction of *becoming*, not only on the level of characters, but also in terms of the agencies of meaning within the literary event (the transactions amongst reader, author, and text). Quantum posthumanism deconstructs the fixed role and positionality of the external observer/Cartesian subject, represented as the reader/author outside the literary event. It proposes the term *phenomenon of meaning* to address the entanglement of reader/text/author that *become* part of the meaning they claim to own. The thesis also challenges traditional uses of concepts such as time, linearity, and origin with quantum posthumanist ideas such as multiplicity, emergence, contingency, and parallelism. Finally, through the framework of quantum posthumanism, the thesis hopes to support the argument for the entanglement of human knowledge and the detrimental illusion of the divide between the humanities and the sciences by demonstrating and exemplifying how inevitably entangled human knowledge is.

Becoming Nothing, Becoming Everything:
Quantum Posthumanism and the Writing of J.M. Coetzee

Hajer Saud Al Hamed

Doctor of Philosophy
Department of English Studies
Durham University

2017

TABLE OF CONTENTS

List of Illustrations	iii
List of Abbreviations	iv
Copyright Statement	v
Acknowledgements	vi
Dedication	vii
Epigraph	viii
CHAPTER ONE—Introduction	9
1.1. On Critical Posthumanism	12
1.1.1. Humanism and Posthumanism	12
1.1.2. Critical Posthumanism Versus Transhumanism	15
1.1.3. Antihumanism	18
1.1.4. Posthumanism	25
1.1.5. A Critique of Posthumanism	34
1.2. Quantum Posthumanism	38
1.2.1. Classical Physics	38
1.2.2. Quantum Mechanics	40
1.2.3. The Philosophy of Physics	43
1.2.4. <i>Quantum Posthumanism</i>	49
1.3. Towards Post/humanities	56
1.4. <i>Stories Beyond History: An Ahistorical Approach to Coetzee’s Fiction</i>	63
CHAPTER TWO—<i>I am Nothing Therefore I am Everything: The Crisis of ‘Being’</i>	
and the Longing for ‘Becoming’ in Coetzee’s Fiction	68
2.1. <i>The First Paradigm: Humanist Characters</i>	70
2.1.1. <i>Becoming</i>	85
2.1.2. The True Nature of <i>Becoming</i>	90
2.2. <i>The Second Paradigm: Posthumanist Characters</i>	97
2.2.1. Liminality and Nomadism	102

2.2.2. Silence and Language	110
2.2.3. Embodiment and <i>Becoming</i>	116
2.3. Thoughts on <i>Becoming (-with)-Animal</i> and Becoming-Human	123
2.3.1 <i>Becoming(-with)-Animal</i>	123
2.3.2. <i>Becoming-Human</i> : The Case of Red Peter	124
2.4. <i>Becoming-Writing/Reading</i> : Coetzee and the Reader	131
CHAPTER THREE—<i>Inside Out</i>: Things, Objects, and <i>Extended Becoming</i> in Coetzee’s <i>Slow Man</i>	141
3.1. Objects and Agency	142
3.2. <i>Extended Becoming</i>	146
3.2.1. <i>Extended Becoming</i>	147
3.2.2. Reversing the Relation	156
3.3. On Things	158
3.3.1 The <i>Thingness</i> of Things	158
3.3.2. The <i>Strangeness</i> of Things	161
3.3.3. The Materiality of Thought	165
CHAPTER FOUR—<i>Tracing Robinson Crusoe(e)</i>: A Quantum Posthumanist ‘Adventure’ in Consciousness and Narrative in Coetzee’s <i>Foe</i>	168
4.1. Robinson Crusoe	169
4.2. <i>Foe</i>	178
4.3. The Notion of Time	182
4.4. Between Fact and Fiction	186
4.5. Chapter IV and the Reader	196
4.6. <i>RC</i> , <i>Foe</i> , and the Dilemma of Representation	200
Conclusion—<i>Suppressing the Blind Spot</i>: Contemplating the Worlds of Science and Fiction	203
5.1. The Similar Worlds of Science and Fiction	206
5.2. The Realist/Antirealist Debate	214
Works Cited	218

List of Illustrations**CHAPTER TWO**

Table 1: A comparison between Coetzee's humanist and posthumanist figures 122

Figure 1: Drawing Hands (Escher) 135

CHAPTER THREE

Figure 2: The Differences Between Objects and Things (Magnusson) 165

CHAPTER FOUR

Figure 3: Publications of *RC* in English 1720–1979 (Free) 173

CONCLUSION

Figure 4: Blind Spot Experiment (Maturana & Varela) 204

Figure 5: Knowing How We Know (Maturana & Varela) 211

List of Abbreviations

CI	Copenhagen interpretation
EB	<i>Extended becoming</i>
EC	Extended cognition
EPR paradox	The Einstein–Podolsky–Rosen paradox
MWI	Many-worlds interpretation
QP	Quantum posthumanism
QPist	Quantum Posthumanist
QPN	Quantum posthumanist narrative
RC	The Robinson Crusoe Trilogy
RC 1	<i>The Life and Strange Surprising Adventures of Robinson Crusoe</i>
RC 2	<i>The Farther Adventures of Robinson Crusoe</i>
RC 3	<i>Serious Reflections of Robinson Crusoe</i>

The copyright of this thesis rests with the author. No quotation from it should be published without the author's prior written consent, and information derived from it should be acknowledged.

ACKNOWLEDGEMENTS

I would like to express my gratitude to King Faisal University (KFU) and the Saudi Arabian Cultural Bureau (SACB) for funding my studies. I am honoured and privileged to have had the chance to work with my supervisor, Professor Patricia Waugh, to whom I am deeply grateful, and whose profound knowledge and expertise combined with her humbleness, kindness, and extraordinary cooperation made this journey not only productive but also pleasurable. When I told Professor Waugh about my ‘emerging’ interest in quantum mechanics, she was incredibly supportive and her suggestions were highly insightful. Without her support and encouragement, I would not have had the courage to experiment with many ideas to the extent that I have had.

Special thanks go to my mother, Asma, and father, Saud, for their unfailing support of my academic career throughout the years; without their moral and financial assistance, I would have never been the person I am today. I am indebted to my husband, Mohammed, for his love, support, and patience throughout this journey. I would like to thank my son, Meshal, who is amazingly supportive, understanding, and patient for a six-year-old. I would also like to thank my youngest, Lama, who was born on 18/7/2015, and became undoubtedly ‘entangled’ with this thesis in so many ways.

For
Meshal and Lama.

في عيونكما.. أستطيع أن أرى سببا وجيها للكون، وملادا من كل هذا العدم الذي يحيط بي.

'When it comes to atoms, language can be used only as in poetry. The poet, too, is not nearly so concerned with describing facts as with creating images.'

-Attributed to Niels Bohr (1885-1962)

CHAPTER ONE

Introduction

This chapter sets the theoretical ground for introducing *quantum posthumanism*, a development and systematisation of some tendencies in the current discourses around critical posthumanism. In the first part of this chapter, ‘On Critical Posthumanism’, I review the cultural traditions that gave rise to critical posthumanism. Although the mode of linear conceptual and historical overview might seem counterintuitive to the philosophy of entanglement that is definitive of what I am calling *quantum posthumanism*, there is a need to begin with an outline of the historical and cultural aspects of the rise of critical posthumanism before establishing the terms of *quantum posthumanism*. This introduction will begin by briefly (and inevitably partially) addressing related terms such as humanism, antihumanism, transhumanism, and the different strands of posthumanism. Throughout the mapping of these terms, the aim is to reach a sufficiently clear theoretical framework for critical posthumanism, and to raise the question whether or not posthumanism might be a viable direction for theoretical work in the humanities.

‘Quantum Posthumanism’ constitutes the second and core part of this chapter. Merging notions of critical posthumanism and quantum theory, I introduce the hybrid term *quantum posthumanism* [QP], the framework I will use in the hermeneutic approach to Coetzee’s texts in subsequent chapters.¹ Informed by the work of Karen Barad on philosophy and quantum theory in her book *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*, this section sets the ground for a quantum posthumanist reading of Coetzee’s texts; it attempts to redefine key ideas around subjectivity, objectivity, and agency, while introducing others, including entanglement, emergence, observation, and phenomenon.

In the third section of the chapter ‘Towards Post/humanities’, I briefly discuss the future of the humanities in a posthumanist world. I contend that quantum posthumanism can offer several solutions to help the humanities move towards, or rather realise, its

¹ Coetzee’s texts selected for particular focus include *Waiting for the Barbarians* (1980), *Life and Times of Michael K* (1983), *Foe* (1986), *Age of Iron* (1990), *The Master of Petersburg* (1994), *Disgrace* (1999), *Elizabeth Costello* (2003), and *Slow Man* (2005).

posthumanist potentials. Finally, the last section, ‘*Stories Beyond History: An Apolitical Reading of Coetzee’s Fiction*’ argues for the underlying ontological universality of Coetzee’s narratives.

Coetzee is the writer whose work I have chosen as a means of working through and exploring the possibilities of QP as a hermeneutic framework for engaging with texts. Coetzee’s work has been controversial; the decision to work with his texts was in part to explore whether the framework to be developed in this thesis might offer an alternative perspective on some of those controversial features of his writing. His novels have been read in the contexts of animal rights, antihumanism, postmodernism, feminism, and postcolonial theory, and with a more emphatically historicist reference to the recent historical and political context of South African politics.² As will become apparent, unlike most of the critical writing on his fiction, my approach to Coetzee’s work avoids a specific or narrow historicism but instead utilises key concepts within posthumanism and quantum theory in order to investigate the ontological framework and underpinning of his writing, often underexplored compared to the more obviously political or historical aspects of his fiction. My approach not only attempts to shed new light on Coetzee’s texts but also implies a common posthumanist ground that might overcome some of the apparent contradictions in these current more specifically historical and political readings of his fiction.

The thesis is built on the premise not merely of the desirability of interdisciplinarity within literary studies but also the necessary *entanglement* of human knowledge. Not only is entanglement more relevant to the context of this study, but it also invokes, as Felicity Callard and Des Fitzgerald note, different assumptions and presumptions than those simply of interdisciplinarity per se. The prefix ‘inter-’ presumes

² A few examples, among many, of the studies on, and readings of, Coetzee’s works include, in animal studies: Stephen Mulhall’s *The Wounded Animal: J. M. Coetzee and the Difficulty of Reality in Literature and Philosophy* (2008), and Frances E. Mascia-Lees and Patricia Sharpe’s ‘Introduction to “Cruelty, Suffering, Imagination: The Lessons of J. M. Coetzee”’ (2006); in feminist critique: Regina Janes’ ‘Writing Without Authority’: J.M. Coetzee and His Fictions (1997); in postcolonial and historical studies, David Attwell’s ‘Coetzee’s Postcolonial Diaspora (2011); Attwell’s recent book *J.M. Coetzee and the Life of Writing: Face to Face with Time* (2015), Elleke Boehmer, Katy Iddiols, and Robert Eaglestone’s edited book *J. M. Coetzee in Context and Theory* (2009), Lynn Meskell and Lindsay Weiss’s ‘Coetzee on South Africa’s Past: Remembering in the Time of Forgetting’ (2006), Laura Wright’s *Writing “Out of All the Camps”: J. M. Coetzee’s Narrative of Displacement* (2004); in philosophy and literary theory: Anton Leist and Peter Singer’s edited book *J. M. Coetzee and Ethics: Philosophical Perspectives on Literature* (2010), Derek Attridge’s *J. M. Coetzee and the Ethics of Reading: Literature In The Event* (2005).

the existence of two inherently separate, pre-existing fields of knowledge, which ‘may or may not be integrated, and/or which may be integrated more or less well’ (8). The premise of the thesis, however, is not to verify whether or not interdisciplinarity is possible but rather to experiment with and emphasise the already inevitably entangled nature of human knowledge which always pre-exists disciplinary autonomisation.

Owing to the relative novelty of developing and applying to literary texts interpretations of quantum theory, the thesis represents what I see as an early experimental step in that direction. It arguably invites more questions than it gives answers on the nature of literary experience, consciousness, meaning, and agency; nevertheless, it does not shy away from a presumption in openly promoting a more holistic view of the text and the text-reader relationship not only on an epistemological but also on an ontological level with consequences for the understanding of the categories and identities of characters, author, and reader alike.

1.1. On Critical Posthumanism

1.1.1. Humanism and Posthumanism³

As is the case with any ‘-ism’, the term *humanism* is hard to pin down. It is usually employed to extend over expansive historical, geographical and intellectual ground and is deployed via numerous strands, variants and historical accounts. The difficulty of taming such a concept arises from its remarkable irregularity of meaning across the various historical and geographical contexts in which it has been deployed. In his book *Humanism* (1997), Tony Davies traces the term back to its German coinage and Greek roots, demonstrating its historical, political and geographical complexity. However, when it comes to its relatively recent usage, Kate Soper makes a key comparison between the standard usage of the term in English and in French philosophy. While humanism has been synonymous with ‘secularism’ and used to contrast with ‘theism’ in the English-speaking world, it has been regularly used in French philosophy, especially in recent years, to contrast with what has come to be known as ‘theoretical antihumanism’. Furthermore, there is a remarkable difference in the positive connotations the word has preserved that dates back to the Renaissance and forward to the ‘negative charge’ it later acquired through the French philosophical input into Anglo-American criticism in the 1960s onward (9-10), sometimes referred to as the ‘theoretical turn’.⁴

My particular focus in engagement with the concept of humanism is its association with the historical movement that has come to be periodised and conceptualised as the Enlightenment and its ideals (rationality, reason, autonomy, subjectivity, freedom) that have served to centralise the human and assume its privilege and superiority over other beings. The human in question is the one ‘figured by the Enlightenment, psychoanalysis and other institutions of a universalizing modernity’ (Kuhn 1). According to Davies, even this type of humanism has its own various historical

³ Humanism and posthumanism are in fact *humanisms* and *posthumanisms*, due to their various approaches and trajectories. However, for the sake of brevity and familiarity, I use the singular form.

⁴ Soper further demonstrates how the same definition of classical humanism has been both the source of its positivity and negativity. The very core (positive) values of humanism that are the source of its pride, ‘consciousness, agency, choice, responsibility, moral value’, inevitably generate negative concepts such as alienation, inauthenticity, and reification (11-2).

trajectories.⁵ As Rosi Braidotti comments, this geo-political line of humanism, which she finds particularly problematic, is evidently irreducible to ‘one linear narrative’, making humanism even harder to overcome (*Posthuman* 51). This particular strand of humanism and its consequent connotations are what I refer to in any further use of the term.

In the fields of the Sciences, and since the 19th century, the momentous findings in biology and inventions in technology have led to the blurring of borders between humans, animals, and machines. Beginning with the rise of Darwin’s theory of evolution, humans and animals were seen to share the same origins in effect so that the gap between living organisms was effectively reduced. The Darwinian view discarded the pure, sacred origin of Man, and reduced it to ‘a level of mechanics’ (Miah 83).⁶ While Darwinian theory reduces the gap between humans and animals, making differences of degree rather than kind, recent findings in genetics abolish these differences altogether. For example, as far as their genetic composition goes, *Homo sapiens* are not, biologically, even a distinct species. Dieter Birnbacher notes that the shared genome of the human and the chimpanzee is 98.5%. Even the idea of sexual reproduction between the two species is not ‘biologically impossible’ (98). Besides chimpanzees, *Homo sapiens* also share a great deal of their DNA with yeast, worms, and mice (Nayar 68). Furthermore, owing to the essential role performed by bacteria—more so than any other organism—in the formation, evolution, alteration, and sustainability of the planet and living organisms, including the human body, Stephen Jay Gould argues that there has never been The Age of Man; we live and have always lived in The Age of Bacteria (176).⁷ These and supporting biological findings not only erode the very biological foundation of humanism and the singularity of Man but also deliver a much more complicated view of living

⁵ Davies illustrates the different historical trajectories of this type of humanism, ‘The romantic and positivistic Humanisms through which the European bourgeoisies established their hegemonies over (modernity), the revolutionary Humanism that shook the world and the liberal Humanism that sought to tame it, the Humanism of the Nazis and the Humanisms of their victims and opponents, the antihumanist Humanism of Heidegger and the humanist antihumanism of Foucault and Althusser, the secularist Humanism of Huxley and Dawkins or the post- humanism of Gibson and Haraway’ (130-1).

⁶ Darwinian theory still supported the humanistic presumptions of *Homo sapiens* as having a more sophisticated sense of morality, conscience, and religion than other animals. This further accentuated the debate over the human being more genetically or socially determined—and thus further emphasising the culture/nature binary, which resulted in what could be called a ‘Darwinian biological humanism’ (Miah 83).

⁷ For the detailed explanation of the vital role bacteria plays in the planet and the composition of other species, see Gould’s *Full House: The Spread of Excellence from Plato to Darwin* and Myra Hird’s essay on Haraway’s book *When Species Meet* ‘Meeting with the Microcosmos’.

organisms and the environment within which they exist—a view that has importantly contributed to posthumanism within the humanities.

Similarly, however, *posthumanism* is as broad and hard to define—if not more so—as humanism.⁸ Francesca Ferrando notes that the term posthuman encompasses several movements and schools of thought, including, ‘(philosophical, cultural, and critical) posthumanism, transhumanism (in its variants as extropianism, liberal and democratic transhumanism, among other currents), new materialism (a specific feminist development within the posthumanist frame), and the heterogeneous landscape of antihumanism, posthumanism, and metahumanities’ (26). Ferrando comments that feminist critique in literary criticism has given birth to what is known as critical posthumanism.⁹ Critical theorists also paved the way towards what is later called cultural posthumanism. Ferrando notes that by the end of the 1990s, critical and cultural posthumanism developed into what came to be known as philosophical posthumanism (29). On the other hand, Braidotti offers a different classification. She identifies three major strands in contemporary posthuman thought. The first is what she calls ‘reactive posthumanism’, which descends from moral philosophy; the second is an analytical form of posthumanism, which stems from science and technology studies; and the third is critical posthumanism, which develops from the broadly antihumanist tradition (38). Other theorists also have their own distinctions. For example, in the introduction to his book, *What is Posthumanism?*, Cary Wolfe makes the distinction between two major strands of posthumanism: what he calls posthumanism (by which he means the trajectory that developed in the humanities and social sciences) and transhumanism—which he describes as ‘the cyborg strand of posthumanism’ (xiii). V. Andy Miah, on the other hand, discusses three strands: transhumanism, cultural posthumanism, and philosophical posthumanism. His definition of philosophical posthumanism differs significantly from Braidotti and Ferrando’s.¹⁰ As

⁸ The origins of posthumanism in the sciences and in the humanities, although overlapping, are nonetheless distinct. As I shall soon explain in detail, in the humanities, the term *posthumanism* has developed in the 1990s largely through an antihumanist tradition, including, especially, feminist critique and cultural theory.

⁹ As will be discussed, several of the most prominent current posthumanist theorists, such as Donna Haraway and Braidotti, come from a feminist background.

¹⁰ Miah acknowledges the overlap between cultural and philosophical posthumanism but, nonetheless, claims that there are crucial differences between them. He argues that while cultural posthumanism is mainly concerned with challenging humanist values, philosophical humanism, in contrast, carries the Enlightenment ideals of seeking to achieve human progress through knowledge (technology)—the project itself has come to be known as transhumanism. Furthermore, while both cultural and philosophical

is clearly evident from this brief comparison, these different classifications, on the whole, magnify rather than resolve the confusion around the uses of these terms. Not only does the use of a certain term change from one author to another but, in some cases, different terms are also used to refer to the same, or a similar, meaning.¹¹ The specific definitions of these terms remain largely dependent on the scholar's own perspective.

1.1.2. Critical Posthumanism Versus Transhumanism

It is useful at this point, therefore, to state my chosen classification for this thesis. I wish to simplify these comparisons by making a rough distinction between what I see as two major strands of posthumanism; the first is *critical posthumanism*, which develops from the antihumanist tradition in critical and cultural theory. The other strand is a particular brand of scientific posthumanism, widely recognised as *transhumanism*. Although both strands are within the boundaries of posthumanism and share some common grounds and assumptions, they are quite distinct and, in some aspects, even contradictory to each other.¹²

Nick Bostrom, a founding director of the Future of Humanity Institute at the University of Oxford, and known for his writings on transhumanism, notes that transhumanism advocates improving human nature, not only through traditional means of 'education and cultural refinement' but also through the more radical means of medicine and technology, in order for humans to overcome some of their 'biological limits'

transhumanism express fundamental interest in the notion of 'otherness', cultural posthumanism focuses on marginal communities such as transgender groups, while philosophical posthumanism is more interested in the 'yet non-existent' communities which are likely to be marginal, such as 'the genetically modified or transgenic human'. (Miah 89-90). Evidently, Miah's view of what 'philosophical posthumanism' means differs significantly from, if not contradicts, Ferrando's and Braidotti's. His definition appears to be more in tune with what Ferrando classifies as 'transhumanism', albeit with some notable differences.

¹¹ For instance, it appears that what Ferrando describes as 'philosophical posthumanism', Braidotti (and other authors such as Nayar) classify as 'critical posthumanism', whereas Wolfe simply calls it 'posthumanism'.

¹² While both share an emphasis on the entangled relationship between technology and the human, their views on the nature and implications of such a relationship vary significantly. Their stances on medical ethics, for instance, are approached from drastically different angles. For example, while transhumanists see the advantages of human cloning such as donation of body parts and learning more about human cells repair and replacements, posthumanists, on the other hand, are more concerned with the social and political status of clones, loss of genetic variations, compromising individuals, and the rise of a 'black market' of genes of desirable donors (Farnsworth 'Clone').

(‘Transhumanist’).¹³ Transhumanism appears oriented towards the technological possibilities that redefine human physical boundaries and blur the lines between man and machine. In so doing, it deploys technology as a means of enhancing already-established human qualities, thus potentially, for some, seeking the perfectibility of the human and aspiring to transcend the physical limitations of the human body (Nayar 16).¹⁴

Transhumanists view these technological enhancements as a ‘linear model of the development of the human, from the “natural man” to the “posthuman cybernetic organism”’ (Zylinska 123). In this sense, transhumanism appears to seek to enable the human to further dominate the environment, a desire that ‘lies at the heart of every humanism’ (Soper 14); this has led Bradley Onishi to describe it as ‘ultra-humanism’ (102).

Transhumanists themselves do not deny these humanistic routes; in fact, they adopt them wholeheartedly. Bostrom admits that transhumanism offers a more radical version of the secular ideals of humanism (‘Transhumanist’). It defends human rationality and individuality and continues to believe in the superiority and centrality of the human species. Transhumanism also emphasises other humanistic values, such as ‘individual freedom and individual choice’ in the field of enhancement technologies (Bostrom ‘Transhumanist’). Bostrom acknowledges transhumanism’s ‘Enlightenment roots, [...] emphasis on individual liberties, and [...] humanistic concern for the welfare of all humans’ (‘History’ 4).

As Onishi’s explanation of Heidegger’s critique of technology and the modern subject suggests, the essence of technology as understood by the subject is not simply an artifact that allows ‘a new kind of functionality’ (Miah 85); it is rather based on the presumption of the human as ‘the Being of beings’ (Onishi 105). The subject thus

¹³ Bostrom summarises some of the areas of enhancement; they include: ‘radical extension of human health-span, eradication of disease, elimination of unnecessary suffering, and augmentation of human intellectual, physical, and emotional capacities. Other transhumanist themes include space colonization and the possibility of creating super intelligent machines, along with other potential developments that could profoundly alter the human condition’ (‘Transhumanist’).

¹⁴ One of the problematic implications of the transhumanist idea of enhancement concerns the perception of disability. While disability studies seeks to identify the disabled body as a variant of the human species, the transhumanist quest for ultimate enhancement of the human body can be seen as a forced form of ‘homogenisation’ (165) or denial of difference. Evidently, the process of homogenisation involves presumptions that inherently contradict the premises of critical posthumanism, including the figure of a ‘perfect being’ which all other beings should aspire to become.

perceives technology as a means to further control the world. This view is what Heidegger terms ‘enframing’—reducing existence into a humanistic framework so that everything acquires significance in relation to the human (106). However, as Onishi further comments, not only technology but also all material entities too become subjected to the same perception, as they become evaluated based on their ‘use-value logic’ and the contribution they make to the human subject’s struggle for power and sovereignty (106). This radical view of technology is what leads Miah to describe it as an ideology or a certain kind of ‘instrumental attitude’ that structures the world (85). However, this perception inevitably extends to include the subject itself, as it becomes ‘enframed’ as yet another object to be used on demand, and thus becomes reduced to its use value in the new age of transhumanism.¹⁵

Furthermore, transhumanism holds that the world is fundamentally and universally constituted out of information (Waters 31). The transhumanist thinker Max More expresses such a desire for disembodiment; he states, ‘[t]ranshumanists seek the continuation and acceleration of the evolution of intelligent life beyond its currently human form and human limitations by means of science and technology’ (‘Transhumanism’). This disembodied view, which reduces the human to informational patterns that can be stored and manipulated to overcome its physical limitations, sees the body as inhibiting and hindering the human mind and its desires (Onishi 105). Such a view clearly embraces the mind/body divide that is entirely rejected by critical posthumanism.¹⁶

On the other hand, critical posthumanism, as I shall explain in detail, has developed from, or at least appears to have strong ties with, the antihumanist tradition which dominated the humanities from the 1960s to the 1990s. Unlike transhumanism’s visualisations of radical futures, critical posthumanism appears more oriented towards

¹⁵ Although radical versions of this discourse can be found in ‘futurist’ critics such as Max More and his essays on transhumanism and extropianism, less radical versions are remarkably popular; they can be found ‘in the pages of *Time magazine* and *The New York Times*, popular films such as *The Matrix*, the writing of scientists like Hans Moravec and Ray Kurzweil, and the public relations of the Monsanto Corporation’ (Simon 2).

¹⁶ Another trajectory of transhumanism, called moral transhumanism, encourages the enhancing of certain positive human qualities, such as compassion towards others. This view, while it appears to serve ‘otherness’, nonetheless, still advocates humanist assumptions about the nature of the human and the notion of essential, innate, desirable qualities of Man, thus further encouraging the centrality of the human (Nayar 22).

socio-cultural reforms. It aims at questioning, rather than celebrating, human autonomy and power. This is evident in the writings of many posthumanist theorists, including Rosi Braidotti (*The Posthuman* 2013), Cary Wolfe (*What is Posthumanism?* 2010), Neil Badmington (*Alien Chic: Posthumanism and the Other Within* 2004), Katherine Hayles (*How We Became Posthuman* 1999), and Donna Haraway ('Cyborg Manifesto' 1984). Evidently, critical posthumanism naturally appeals to many scholars of feminism, postmodernism, postcolonial studies, animal studies, and monster and disability studies. In fact, many of its critics have postmodernist and antihumanist backgrounds, such as Haraway (feminism and animal studies), Hayles (postmodernism), Wolfe (animal studies), Braidotti (feminism)¹⁷, and Badmington (cultural theory) to name but a few.¹⁸

1.1.3. Antihumanism

Like humanism and posthumanism¹⁹, antihumanism has multiple strands; these range, as Kenan Malik notes, from 'the conservatism of Burke, the Catholic reaction of de Maistre to the nihilism of Nietzsche and the Nazism of Martin Heidegger' (169). However, despite their differences, what these approaches share is the rejection of Enlightenment rationalism and its idea of social progress, and the assumption of human superiority. Instead, they believe in 'difference and divergence', promoting particularity and authenticity over universality (169). At the risk of simplification, I shall limit my focus to the common ground they share in their criticism of humanism.²⁰

The antihumanist tradition was further advanced in postwar French structuralism in the early 1960s. Structuralist thinkers broadly rejected humanist ideologies, such as freedom, creativity, and subjectivity in favour of the existence of underlying cultural and social structures that might be made available for description. It was inspired initially by

¹⁷ Braidotti's book *Nomadic Subjects: Embodiment and Sexual Difference in Contemporary Feminist Theory* (1994) clearly demonstrates her early feminist posthumanist mode of thought.

¹⁸ Hayles postmodern inclination is evident in her book *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* (1999). In *The Posthuman* (2013), Braidotti acknowledges her antihumanist, feminist roots. Haraway's famous essay, 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century', although presented as posthumanist project, is essentially a critique of humanist feminism and a move beyond gender politics.

¹⁹ For purposes of brevity, and from this point onward, I shall use the term 'posthumanism' to refer to critical posthumanism.

²⁰ Malik distinguishes between two main strands of postwar radical antihumanism; one developed from anticolonial struggles, and the other through the French philosophy which later manifested itself in social movements such as feminism and environmentalism in the late 1960s and 70s.

Ferdinand de Saussure's foundational work on the governing system of language in *Course in General Linguistics* (1906-1911). The term antihumanism, however, was used by the Marxist Structuralist Louis Althusser in his critique of Marxist humanism, and in particular, in his essay 'Marxism and Humanism' (1964).²¹ Althusser attributed primacy to structure and social relations over autonomous agency and individual consciousness, downplaying the Enlightenment philosophy of the subject. A variety of more or less antihumanist positions can also be traced in Claude Lévi-Strauss' anthropological views on the existence of universal structural principles which left little room for individuality as singularity as understood in the humanist tradition, Roland Barthes' announcement of 'The Death of the Author' (1967) and its various legacies, and Lacan's decentering of the subject in emphasising the role of language in the formation of the subject, and the symbolic nature of the unconscious that moves beyond the autonomous will of the subject.²²

The movement, if it can be called such given the variation of practices and intellectual trajectories with which it is entangled, could, however, be said to have matured particularly and markedly in the writings of poststructuralist theorists such as Michael Foucault and Jacques Derrida in the 1960s and 70s; it is perhaps at this moment that the tendency becomes named and articulated. In line with Nietzsche's announcement of the death of God, Foucault famously announces 'the death of Man' through his critique of the epistemological and moral humanist tradition in *The Order of Things* (1966). Noting his historicity and contingency and denying the idea of his universality and intrinsic qualities, Foucault announces that 'man is an invention of recent date. And one perhaps nearing its end.' (*Order* 422). Throughout his early works, *Madness and Civilisation* (1961), *The Order of Things* (1966), and *The Archaeology of Knowledge* (1969), Foucault systematically eliminates the Cartesian subject, challenges the notion of autonomous agency, and announces its death as the 'origin and foundation of Knowledge, of Liberty, of Language and History' (*Live* 61). Similar to Foucault, Derrida's work on the deconstruction of Western philosophy since the 1960s has considerably contributed to the antihumanist tradition. In his famous essay, 'The Ends of Man' (1968), Derrida

²¹ Althusser's essay 'Marxisme et humanisme' first appeared in the *Cahiers de l'I.S.E.A.*, June 1964.

²² Lacan deals with these topics across his work; a good example is his conference paper 'La Dialectique' (1960), titled 'The Subversion of the Subject and the Dialectic of Desire in the Freudian Unconscious'.

deconstructs the position of the subject as a metaphysical point of reference. He argues that the history of man is questionable; it is constituted as if ‘man’ has no historical origin, or cultural, linguistic, or even metaphysical boundaries (35).

Minority studies, including postcolonial studies, feminism, queer theory, disability and monster studies, and environmental studies, have also provided a major foundation for the antihumanist tradition. What these fields have in common is that they all criticise a form of exclusion that is the result or by-product of the classical definition of the human. They all share the study of ‘otherness’ that the definition of Man creates, with its variants, including ‘the sexualized other (woman), the racialized other (the native) and the naturalized other (animals, the environment or earth)’ (Braidotti 27). The universal human understood thus is merely a ‘system of *differentiation*’ in which some categories are classified as less or not human (Nayar 23). Hence, to fight exclusion and discrimination, antihumanists hold, is to fight Man.

Postcolonial thought largely contributed to the critique of humanism by systematically deconstructing the centrality and dominance of ‘Western’ humanism. This is a trajectory that began with the works of postcolonial theorists, most notably Edward Said’s *Orientalism* (1978) and Frantz Fanon’s *The Wretched of the Earth* (1961). Fanon’s book was one of the earliest postcolonial texts to propose that what is ostensibly a universal category of humanity is actually constructed through Eurocentric colonial thought, in particular that of so-called Enlightenment thinkers such as Kant and Rousseau for example, that has served ever since as the basis for the exclusion of the non-Western ‘other’. Fanon describes this as ‘Western humanity as incarnated in the Western bourgeoisie’ (163).²³ The later stages of postcolonial thought, represented in the works of thinkers such as Gayatri Spivak and Homi Bhabha, demonstrated the connection between antihumanism and postcolonial theory that sets the early ground for posthumanist thought.²⁴

²³ Although Fanon builds an antihumanist argument, his alternative is a renewed version of humanism that does not carry the seeds of Western imperialism. He calls for a creation of ‘a new man’ to which European thought has failed to give birth (313).

²⁴ In his book, *The Location of Culture* (1994), Bhabha reworks the notion of identity by putting forward a theory of cultural hybridity which demonstrates the intersection of gender, class, location, race, nation, and generation, deconstructs humanist hierarchies, and sets the early ground for the posthumanist notion of

Feminism is one of the fields most closely associated with antihumanism. Second wave feminism, which might be said to have begun with the translation and popularisation of the works of Simone de Beauvoir from the early 1960s, offers, from a posthumanist perspective, a significant attempt to challenge masculinist universalism.²⁵ However, this earlier phase of feminism was itself later subjected to critique of its universalising categorisations of gender and dependence on ‘activist and equality-minded Humanism’ (Braidotti 22), replacing the male figure with the female as founding subject. Third wave feminism, on the other hand, informed by postcolonial and poststructuralist thought and developed through the works of theorists such as Luce Irigaray, Julia Kristeva, and Judith Butler has been more oriented towards the deconstruction of those humanist values that were inscribed in the image of the Western white, able-bodied male, whose assertion of identity is primarily based on the exclusion/creation of minorities, including sexually-defined groups.²⁶ The answer was not to replace the subject but to deconstruct the subject position altogether.²⁷ Furthermore, these later feminists questioned the virtue of sexual boundaries and their cultural manifestations through the reworking of the notions of agency and subjectivity, which later constitute focal points in the posthumanist project.

Building on the poststructuralist, deconstructivist, feminist critique of gender essentialism, queer theory further challenged earlier assumptions concerning gender

entanglement. Spivak’s famous essay, ‘Can the Subaltern Speak?’ (1988), engages with the critique of the humanist ‘neo-postcolonial imperatives’ within the postcolonial studies, and attempts to question the institutionalised centrality that, ironically, formed within the postcolonial studies.

²⁵ Beauvoir’s most prominent work, *Le Deuxième Sexe*, published originally in French in 1949 was translated into English and published in 1953 as *The Second Sex*.

²⁶ Some of the works include Luce Irigaray’s *Speculum of the Other Woman* (1974) and *This Sex Which Is Not One* (1977), which were translated into English and published in 1985. In the latter book, Irigaray draws upon Marxian economics to argue that women are treated as commodities, with use and exchange values. Although Julia Kristeva does not refer to her writings as feminist, her work has had a great influence on the Western feminist critique. Her famous distinction between the *symbolic* and the *semiotic* as elements of signification in language develops in her earlier works, including *Desire in Language* (1980), *Powers of Horror* (1982), and *Revolution in Poetic Language* (1984). According to Kristeva, the symbolic element is associated with the grammar and structure, while the semiotic is associated with the tones, rhythms, and movements of the signifying practices. Kristeva’s logic of signification is equally applicable on the level of matter and the materialisation of the body. Another significant contribution to the movement is Butler’s work, and in particular, her famous books *Gender Trouble: Feminism and the Subversion of Identity* (1990), and *Bodies that Matter* (1993). Butler argues for an anti-essentialist view of identity through her insights on gender performativity.

²⁷ Butler, for example, refuses the notion of a founding female subject for feminism as it ‘presumes, fixes and constrains the very “subjects” it hopes to represent and liberate’ (189).

identity.²⁸ Its anti-essentialist stance was at the heart of the postmodern antihumanist critique which sought to destabilise the established contours of the normative human body, identity, and desires. Among its pioneers were Judith Butler's work on gender performativity in the 1990s; Eve Kosofsky Sedgwick, in books such as *Between Men: English Literature and Male Homosocial Desire* (1985), *Epistemology of the Closet* (1990), and *Tendencies* (1993); Diana Fuss in *Identification Papers: Readings on Psychoanalysis, Sexuality, and Culture* (1995), and *Essentially Speaking: Feminism, Nature and Difference* (1989). In her essay 'Queer Posthumanism: Cyborgs, Animals, Monsters, Perverts' (2009), Patricia MacCormack argues for the promising compatibility between queer and posthumanist theories in their attempt to move beyond the established binaries of sexuality which, she argues, can still be found even in minority studies, such as gay studies²⁹. Furthermore, both theories argue for the instability and hybridity of identity and the emergence of subjectivity.

Disability and monster studies have offered a further critique of humanist cultural assumptions about the human body. Foucault's earlier works in the 1960s offered a legacy to disability studies by posing critical questions regarding what is and what is not deemed 'natural'.³⁰ Similarly, Georges Canguilhem's *The Normal and the Pathological* (1966) traced radical changes in the definitions of the concept of health and disease, the normal and pathological, arguing that such concepts are far from being objective scientific perceptions. The works of Lennard J. Davis, in particular, his book *Enforcing Normalcy: Disability, Deafness, and the Body*, took up these earlier writings to investigate the relationship between disability and culture. His critique challenges the humanist bias towards whatever, necessarily, therefore, normatively falls outside the definition of 'normal'. Monster and disability studies seek, hence, to embrace all types of bodies as evidence of human physical diversity, which should not be regarded as

²⁸ In fact, the term queer theory was introduced in 1990 by the Italian feminist Teresa de Lauretis in a conference at the University of California, Santa Cruz, and a special issue of *Differences: A Journal of Feminist Cultural Studies* based on that conference.

²⁹ MacCormack notes that an aspect of queer theory was originally developed as a response to 'the presumed masculinity in gay studies which remains binarised by suffixing the methodology with 'and lesbian', affirming woman as both outside of and less than human' (111).

³⁰ *Foucault and the Government of Disability* (2005), edited by Shelley Tremain, provides a range of accounts that demonstrate the relevance of Foucault's ideas in the fields of disability studies.

radically different from appreciating the biodiversity of the environment, as Rosemarie Garland Thomson sensibly argues (6). Disability studies develops similarly to examine the relationship between the human and the environment. As Carol Thomas notes, its practitioners maintain that a body becomes disabled through its interactions with an environment that refuses to recognise its needs. It is, therefore, a case of a ‘disabling’ environment rather than a ‘disabled’ body (571).

Furthermore, environmental studies has also contributed to the critique of humanism by stressing the interconnectedness of the human and the environment, viewing the subject as an integral part of the ecological system. Environmental theorists have associated the centrality of the human with the increased exploitation and domination of nature in abuses of science and technology. These, as Braidotti notes, involve ‘epistemic and physical violence over the structural “others”’ and might be seen again as an extension of European Enlightenment ideal of instrumental rationality (48). In his books, *Ecology Without Nature* (2007) and *The Ecological Thought* (2010), however, Timothy Morton problematises classical environmentalist theory by arguing against the traditional view of nature as something that preserves and exists ‘outside’ culture, or that humans are ‘embedded’ in nature. Morton uses the word *mesh* to argue for the interconnectedness of all living and non-living organisms. Life forms do not live in the mesh; they *are* the mesh. The notion of the mesh, as Morton explains, cancels the idea of the centre and the assumed privilege of one being over others (*Thought* 38).

Similarly, animal studies significantly contributed to the critique of humanism. Some of the recent works of animal theorists include Wolfe’s *Zoontologies: the question of the animal* (2003); Derrida’s *The Animal That Therefore I Am* (2008), Haraway’s *When Species Meet* (2008), and Harriet Ritvo’s *Noble Cows and Hybrid Zebras: Essays on Animals and History* (2010). These writers all note as their point of departure that the very word ‘human’ functions as a means of separating *Homo sapiens* from all other living creatures. Similarly, the word ‘animal’ serves to homogenise all nonhuman life forms into one single category (Nayar 111). The use of humanist criteria of autonomy, rationality, and language as indicators of personhood, Cavalieri argues, renders humans with intellectual and mental disabilities inhuman or animal-like (76). The human/animal separation, hence, serves not only to discriminate against animals but also as the basis for

discrimination against other humans. Species hierarchy becomes thus a basis for racial hierarchy (Wolfe, 'Introduction' xxi). As Etienne Balibar succinctly puts it, 'every theoretical racism draws upon *anthropological universals*' (56).

However, despite valuable contributions to the deconstruction of the humanist tradition, antihumanism still largely resembles what it sought to deconstruct. One of the main contradictions is the dualistic nature of its discourse (much like that of humanism), which has made it nearly impossible to overcome those very pitfalls of which it accuses humanism. Otherness, in particular, is negatively reinforced in antihumanist traditions of thinking. As Braidotti puts it, antihumanist critical thought is maintained by 'intrinsic humanist discursive values' (Braidotti 29). Foucault, for instance, who is often described as an antihumanist, nonetheless endorses key humanist values, such as 'freedom, individuality and reciprocity' (Hooke 39). Critics, such as Nancy Fraser, have pointed out that what seem to be contradictions within Foucault's rhetoric³¹ might more generally be regarded as inherent in antihumanism itself. Antihumanism, in short, is merely *the other* face of the coin of humanism: simply a reversal rather than a deconstruction of the binary.

This brief overview of the antihumanist tradition within the minority studies foregrounds some of the historical and critical ground that eventually gave rise to critical posthumanism. However, many posthumanists reject this linear, historical view of posthumanism, namely that (post)humanism is a period that comes *after* humanism. Many posthumanist thinkers, such as Cary Wolfe, Neil Badmington, Judith Halberstam and Ira Livingston, refuse to locate a clear historical moment when posthumanism arose. For most posthumanists, the history of posthumanism is not linear and 'has no obvious beginning, middle or end point in philosophical thought.' (Miah 89). Wolfe, for instance, states that posthumanism 'comes both before and after humanism' (*Posthumanism* xv). In their book *Posthuman Bodies* (1995), Judith Halberstam and Ira Livingston define the posthuman condition as 'the overlap between the now and the then, the here and the always: the annunciation of posthumanity is always both premature and old news' (3). Similarly, for Badmington, posthumanism is not a historical period with a point of beginning and an end—it is rather an eternal state of *becoming* (*Alien* 11). Posthumanist

³¹ For more on this, see Fraser's 'Foucault's Body-Language: A Post-Humanist Political Rhetoric?.'

thought, therefore, systematically rejects the linearity of history and instead stresses the irreducibility and complexity of origin(s), beginning with the term posthumanism itself.

1.1.4. Posthumanism

Posthumanist theory presents itself as ‘a move beyond these lethal binaries’ (Braidotti 37). As a critical approach and theoretical methodology, posthumanism largely benefits from the antihumanist tradition by examining the various discourses that have situated the human above life and involved, therefore, the exclusion/exploitation of the ‘other’, human or nonhuman, as a result (Nayar 46). However, unlike antihumanism, which falls into the rhetoric of the crisis of Man and maintains an oppositional relationship with humanism, posthumanism recognises the need to move beyond and explore alternative means to re-conceptualise the human subject. Posthumanism extends the antihumanist critique by redefining and relocating the human through reworking fundamental notions such as the concept of subjectivity, agency, and the body, using key posthumanist ideas such as complexity, interconnection, entanglement, and emergence.³² To put it differently, posthumanism is not antihumanist per se—it is, rather, *ahumanist*.

In the posthumanist view, what was once thought of as clear boundaries of the body, sex, identity, origins, and organs, are now blurred as these limits are being constantly and increasingly challenged in the fields of science, medicine, and technology. Bodies become emergent configurations with flexible boundaries that are constantly *becoming of* the world, or as Karen Barad puts it, bodies become ‘material-discursive phenomena’.³³ In this view, ‘human’ and ‘nonhuman bodies’ share characteristics (*Meeting* 823). Posthumanism celebrates ‘the collapse of ontological boundaries’ (Miah 90). It also studies how such a collapse of boundaries affects the moral and political

³² Hayles succinctly summarises the posthuman condition; she writes, ‘emergence replaces teleology; reflexive epistemology replaces objectivism; distributed cognition replaces autonomous will; embodiment replaces a body seen as a support system for the mind; and a dynamic partnership between humans and intelligent machines replaces the liberal humanist subject’s manifest destiny to dominate and control nature’ (288).

³³ This view of entities as ongoing processes extends to the new scientific view of the genome. As John Dupré notes, ‘the genomes in cells are highly dynamic entities’ and not merely a ‘repository of biological form’ but rather an active participant in the biological processes (3), hence, the nature of the organism is not determined by its DNA but is rather constantly recreated (3) through the process of *becoming*.

landscape, and poses ethical and moral questions of responsibility towards other life forms and the planet, based on ideas of vulnerability and finitude (Wolfe, *Zoontologies* 24) or on a new understanding of responsibility and accountability (Braidotti, *Posthuman* 93).³⁴

The so-called new materialism is a movement within the posthumanist framework. It can be traced to the mid to late 1990s with roots in the corporeal feminism and its focus on the body of feminists such as Elizabeth Grosz in *Volatile Bodies: Toward a Corporeal Feminism* (1994), and more recent works such as Sara Ahmed's *Queer Phenomenology: Orientations, Objects, Others* (2006). Recent key publications in the field include *New Materialism: Ontology, Agency, and Politics* (2010), edited by Diana H. Coole and Samantha Frost and *Vibrant Matter: A Political Ecology of Things* (2009) by Jane Bennett. The movement reconciles the materialism of science as the study of physical matter and its functions with critical theory in its engagement with language and textuality, by approaching matter as an ongoing 'process of materialization' (Butler, *Bodies* 9). Broadly, for this new materialism, there is no separation between language and matter as 'biology is culturally mediated as much as culture is materialistically constructed' (Ferrando 31).

New materialism has been influential within posthumanist thought because of its opposition to the disembodied vision that transhumanists often seemed to advocate and also its opposition to the traditional view of knowledge as 'an entity distinct from the substrates carrying it' (Hayles, *Posthuman* xi). New materialism challenges the transhumanist view of the world as constituted fundamentally through and as information. In her book, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (1999), Hayles provides an historical account of when and how information 'lost its body' (2). She demonstrates how, since the cybernetic and molecular biologies of the 1950s and 1960s, both science and culture come to favour abstraction over materiality and take the virtual as the real. She warns against the increasingly prevalent cultural as well as scientific disembodied view of information. Instead, Hayles argues for the inseparability of information and the substrates carrying

³⁴ I discuss Wolfe and Braidotti's stances in more detail later in the discussion.

data. The disembodiment view, results, as Hayles notes, in a hierarchal construction in which information is given ontological priority whereas materiality becomes secondary (12). New materialist theories challenge anthropocentric (trans)humanist beliefs by negating the possibility of the separation of the material body and information as disembodied code, thus obliterating the transcendental view of the human, which Western philosophy has for long maintained.

By extension, in a posthumanist new materialist view, there is no separation between nature and culture. As Haraway explains, '[t]here is no border where evolution ends and history begins, where genes stop and environment takes up, where culture rules and nature submits, or vice versa.' (*Reader 2*). Even technological developments and enhancements should not be considered a 'break from the evolutionary processes' (Miah 87) but rather a continuation of them.³⁵ Also, the role of the environment is not merely a 'trigger' that requires the organism's response. Rather, it is an active component in the process of *becoming* and the formation of the organism. Likewise, the organism also modifies and changes the environment, which also means that the organism is agentially inducing its own change. This reciprocity suggests that both the organism and the environment are open systems that are constantly influenced and altered by each other.³⁶

³⁵ This nature-culture continuum is part of a new monist view that Braidotti advocates. This new monism, as Braidotti notes, builds on Spinoza's monist view of the universe. The neo-Spinozist monism rejects dualism, particularly nature/culture and mind/body, and acknowledges the displacement of boundaries between them as a consequence of innovations in science, technology, and neuroscience. New monism offers a view of matter as an intelligent self-organising (autopoietic) force (35) (whereas Spinoza's monism views the earth as 'a single, sacred organism'). This holistic view of matter initially comes as a response to Descartes' body/mind distinction. As Braidotti notes, while rich and inspiring, this monistic approach is problematic for it is essentially founded on a social constructivist dualistic attitude towards nature and technology; it views the 'earth' as opposed to 'industrialisation', 'nature' as opposed to 'culture' (despite its very goal to overcome this binary). This monism is evidently always on the side of 'natural order' and is more or less technophobic. Furthermore, this monist approach tends to humanise the earth, giving it the same ethical and political status as humans. This anthropomorphic stance is evidently problematic for posthumanism which seeks an alternative nonhumanistic view of the universe. On the other hand, the monism Braidotti advocates—which is more compatible with posthumanism—is one that is neither based on 'naturalistic foundationalism' (which implies that technology is not 'natural') nor social constructivism (which she sees as inherently dualistic) (82-6). It is vitally materialist in that it believes in intelligence and autopoiesis and is based on a nonhuman definition of *Life* as a dynamic force.

³⁶ This posthuman view of the mutual interaction between the organism and the environment and the agency of the latter is compatible with niche construction theory. The theory views the organism as active in the evolutionary process. It challenges the conventional assumption that 'the selective events that shaped us were changes in the external environment, stemming from events beyond human control' (Odling-Smee et al. 137). Niche construction theory views the organism as a vital and interactive part of the environment, which it influences and by which it is influenced. Mainstream evolutionary thinking presumes, although

This view, which opens the flow of information and interaction between the organism, environment and also other organisms (living and non-living), challenges traditional views of the organism as closed and self-maintaining and emphasises the posthuman assumption that alterity is ‘constitutive of the human/system’ (Nayar 7).

Andy Clark’s work on extended cognition further demonstrates such interconnection between the body and the world. In his hypothesis, Clark argues that the mind is not limited to the biological organism but rather *extends* to include the environment as part of cognitive processes. This view challenges the Cartesian centrality of the mind and the division between body/mind as well as the neo-Cartesian distinction between the brain/mind.³⁷ Instead, it presents an alternative view of the mind as nonlocal ongoing configurations of ‘internal’ and ‘external’ objects, thus further destabilising notions of interiority/exteriority between body/environment; as Clark puts it, ‘[c]ognition leaks out into body and world’ (Clark xxviii). Clark’s extended mind hypothesis in effect advocates a perspective compatible with the new materialist posthumanist premise of interconnection between the organism and its surrounding environment. According to this view, the interactive circuits and informational flow between the body and the world are what is generating subjectivity; as Nayar puts it, ‘[t]here is no subjectivity that predates the circuit[s] because there is no body that is *not* always techno-social’ (98).

implicitly, an opposite view of the organism: a passive being set against, and almost a victim of, the internal and external factors that compose the organism and the environment that surrounds it. One of the most relevant conclusions of niche construction theory is the central role that culture plays in human evolution. For example, niche construction, encouraged by cultural processes, can alter selection of human genes (140). The traditional understanding of human evolution is challenged by anthropological findings that confirm that cultural practices have altered environmental conditions, which in turn have triggered changes in allele frequencies. The analyses of data also confirm that many changes to the human genome have occurred as a response to cultural practices. Moreover, anthropological and biological studies reveal that, with the exception of the Ice Age, all the critical events of human evolution over the past 50,000 years, such as exploitation of agriculture and the domestication of animals and plants, have been self-imposed (140). Furthermore, they demonstrate that human ancestors, migrating to higher latitudes, showed only little physical changes because they mostly responded culturally (141). Although the specifics of such processes are still unclear, scientists are increasingly acknowledging the vital role culture plays as the basis for the selection of humans (137). For more on niche construction theory, see F. John Odling-Smee, Kevin N. Laland and Marcus W. Feldman’s *Niche construction: The neglected process in evolution* (2003).

³⁷ In his essay, ‘Our Neo-Cartesian Bodies in Parts’ (2007), Ian Hacking explains the neo-Cartesian presumptions inherent in some views of organ transplant, which presumes a distinction between the mind and the brain, the person and the body, among others. Hacking’s main premise is that all these distinctions originate from the intrinsic distance we create between our ‘bodies’ and ‘ourselves’.

It is worth noting that posthumanism does not wish to eradicate or merely replace the subject; rather, it attempts to redefine the very notion of subjectivity and agency. Halberstam and Livingston point out that the goal of posthumanism is not to promote the uselessness of the human but rather to help redistribute its identity and agency (10). Derrida poses a similar idea by stating that subjectivity is indispensable; the question, however, is ‘knowing where it comes from and how it functions’ (‘Structure’ 56). In his questioning, Derrida is concerned not so much with eliminating the subject but rather with rehabilitating, decentering, and repositioning it (Peters 60). Therefore, the posthumanist notion of subjectivity is more in harmony with Derrida’s deconstructive approach than with Foucault’s death of Man (Ferrando 32).

In the posthumanist line of thought, another figure of the human (or what might be referred to as the *posthuman*) emerges. This figure is an embodiment of otherness, hybridity, multiplicity, and difference. Its origins, futures, body, and identity are hybrids, flexible, and multiple. The significance of this subject, as Teresa Heffernan explains, is that it ‘breaks the linear reproductive binary model that produces the same, allowing “difference” to proliferate’. It also ‘displaces emphasis on the original and challenges the traditional understanding of nature’ (118). The posthumanist view of multi-crossed, interactive, interconnected, relational, and impure *origins* of the subject characteristically problematises all the narratives of the single, distinguished and traceable *origin* of the human and the purity, singularity, and self-sufficiency of its species. This leads to ‘species cosmopolitanism’, which, according to Nayar, is the apotheosis of posthumanism; it views all species as ‘*always already nodes and intersections along a continuum, full of borrowed characteristics, genes and behaviour*’. Not only the posthuman subject’s origins but also its evolutionary futures are ‘*multiple, diverse and uncertain*’ (205).

This hybridity of origins, body, and identity implies political disobedience; the hybrid is suspicious of any political and social affiliations and homogenisations. Instead, it claims temporary alliances based on choice rather than blood or any other assumed relation (Prins 361). Nayar sums up two basic premises of the posthuman subject: it co-evolves with other life forms; technology is not prosthetic but part of its identity (19). Co-

evolution means that the posthuman has shared origins and intertwined histories not only with other life forms but also with the machine, as technological development is a largely neglected part of co-evolutionary processes. The self-contained, isolated, sovereign subject from the Enlightenment is thus replaced with a ‘congeries’ that emerges as a result of ‘co-evolution, symbiosis, feedback and responses’ (20). The subject thus emerges as a manifestation of dynamic entangled processes and interconnected relations between entities, human and nonhuman, animate and inanimate, and the environment.

Hayles presents a more radical understanding of this interaction. She states that the posthuman’s inseparability from other organisms is so profound it is impossible to determine meaningfully the differences between the organism and the information circuit with which the organism is entangled (35). To Hayles, when it comes to the posthuman subject, there are no definite lines between ‘bodily existence and computer simulation, cybernetic mechanism and biological organism, robot teleology and human goals’ (*Posthuman 3*).³⁸ However, the *Homo sapiens* body does not need to be physically altered to be called posthuman; the key characteristics of the posthuman, as Hayles notes, involve ‘the construction of subjectivity’ rather than the existence of ‘nonbiological components’ (4). What Hayles appears to suggest is the importance of theorising rather than merely embracing the technological and informational aspect of the modern era as the basis of posthumanism. The posthuman subject ideally benefits from the possibilities of technology and information while still embracing and celebrating finitude as a condition of human being, rather than falling for the illusions of full disembodiment, immortality and unlimited power (5).

One of the key differences between the human and posthuman subject is the

³⁸ Hayles’ posthuman subject resembles the model of Heidegger’s self-absent *Dasein*; Heidegger writes, ‘[a]s being, *Dasein* is something that has been thrown; it has been brought into its ‘there’, but not of its own accord.’ (*Being 329*). Onishi’s essay, ‘Information, Bodies, and Heidegger: Tracing Visions of the Posthuman’, compares both models. Onishi notes that, like *Dasein*, Hayles’ posthuman is thrown into a world that precedes it, without its ‘choice, will or consciousness’, yet it must ‘perpetually render itself in terms of its future possibilities.’ (110). Contrary to the self-asserting Cartesian subject, Hayles’ posthuman is constituted by ‘a fundamental nullity or absence-from-itself’ (108). Rather than the ego-centred autonomous humanist being, it is a ‘dispossessed, networked and perpetually self-creating [...] subject’ (110) thrown into a network of interactive relations which it has no ability to master or control. This self-absence creates a form of ineffability which renders *Dasein*/the posthuman irreducible to simple objects in the world (109).

understanding of will, power, and conscious agency. Free will, the core of the human subject, becomes hard to distinguish and position in the highly entangled view of the self/other/environment in posthumanism (4). Similarly, while the human has always been identified with a conscious agency, the posthuman subject does not fall into the illusion of being in singular control. Autonomous will and conscious agency, as Hayles argues, are no more than the story that consciousness constructs to make sense of the results that take place through ‘chaotic dynamics and emergent structures’ (288). A further important difference between the human and the posthuman is the understanding of embodiment. Hayles explains that the human subject is represented as a rational mind rather than as ‘*being a body*’, which facilitates claims for its universality.³⁹

In forming the posthuman subject, Braidotti equally refuses both the humanistic unitary subject and the more radical forms of scientific posthumanism that disregard the need for a subject altogether (102). She argues for a new mode of subjectivity that is not grounded in traditional models of rationality, and challenges the conventional notions of objectivity and linearity. This new mode of subjectivity serves as a basis for ethical responsibility powered by an ‘eco-sophical sense of community’ (169). The formation of a posthumanist subject, according to Braidotti, happens in the spaces that flow between binaries: ‘nature/technology; male/female; black/white; local/global; present/past’. These indeterminate states challenge all classical forms of representation, for they are complex and multifaceted rather than linear, driven by processes, not concepts (164).⁴⁰ Invoking Félix Guattari’s argument in *Chaosmosis*, Braidotti stresses that the subject is ‘ontologically polyvocal’; it belongs to both the real, actualised and the virtual, deterritorialised universes (93).⁴¹

³⁹ Hayles cites William Gibson’s characterisation of the posthuman body as ‘data made flesh’ (4-5) while stressing the need to focus on ‘embodied actuality’ rather than ‘disembodied information’ (287), in order not to fall into the transhumanist trap of disembodiment.

⁴⁰ Braidotti proposes a non-unitary subject that is constructed by replacing the ‘self-centred individualism’ with a sense of interconnection between self and others, including nonhuman others (49-50). Also, the concept of recognition is replaced with codependence, and the philosophy of rights is replaced with the ethics of sustainability (93-4).

⁴¹ The principle of not-oneness is constitutive of Braidotti’s non-unitary subject. The not-one principle dissolves the fantasies of unity and totality. It links the subject to alterity and accounts for a sense of responsibility towards multiple ‘others’ that constitute the subject through an unstoppable flow of encounters, interconnections, information and interactions, which the subject cannot control (100).

Haraway, on the other hand, argues for a world full of hybrids and subject/object mixes which blur the boundaries between them. The object in Haraway's view has more autonomy and activity than is usually expected from an object, whereas the subject no longer enjoys its former assumed autonomy and privileged position. Haraway, nonetheless, maintains a form of subject responsibility toward the object, which the object, in turn, is not required to have (Prins 355-6). In her famous essay 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century', Haraway presents her views on the cyborg as a 'cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction' (191). Haraway's idea of the cyborg is a creature between the human/animal, man/machine, male/female, and is simultaneously both and neither of them. The cyborg does not have a clear origin but rather has multiple origins, adding to its abnormality. To Haraway, all bodies are cyborged, for they have inevitably co-evolved with tools/instruments/machines (191). Consequently, Haraway's destabilises the relations between the subject (human) and the object (device) by highlighting the interactive co-evolutionary relationship—rather than the traditional subject-object relationship—that governs them.

Wolfe argues for a posthumanist, shared ground between humans and other life forms based, not on ethical responsibility, but rather on a form of passivity. To theorise such passivity, Wolfe begins by deconstructing the primacy of language, the chief criterion that has been long used to justify the separation between humans and other life forms. Language, now considered an emergent property and a result of co-evolution and interaction between humans *and* with other life forms, was once believed to be a mystical and innate property that ontologically separates *Homo sapiens* from other living forms (*Posthumanism* 120-1). To Wolfe, the reason behind the limitations of humanism in animal studies and related fields is the inability to correctly locate the question of animality (62). Wolfe invokes Derrida's attempt to modify the question (initially raised by Jeremy Bentham in response to Descartes): it is not a question of whether animals can talk but whether they *suffer*. As Derrida states, 'the form of this question changes everything' ('Animal' 396). While the old question of language suggests ability, the alternative question accentuates inability, vulnerability, and mortality (Wolfe, *Zoontologies*, 'Shadow' 24). This shared passivity, mortality, vulnerability, and finitude,

replaces the former construction of ethical responsibility towards the animal based on the human *abilities* to reason, respond, and treat animals with justice—which ultimately serves to accentuate the power and autonomy of the human and the divide between subject/object and human/animal.

However, Braidotti refuses to base the shared ground between humans and other life forms on this type of passivity that Wolfe and Derrida advocate. In her version of posthumanism, she criticises this negative ‘reactive mutual interdependence of all living organisms’ as a basis for demonstrating interconnection between species. She argues that such negativity does not necessarily generate ‘peaceful coexistence’; on the contrary, it is capable of producing practices of ‘xenophobic rejection of otherness and increasing armed violence’, which are characteristic of modern times (40). Rather, Braidotti stresses an ‘affirmative bond’ (50) which serves as a basis for ethical and political accountability. To Braidotti, a posthuman subject is indispensable for this reason; it needs to bear some ethical and political responsibility in its relations with other living forms with which it shares this planet.

However, I do not see Wolfe and Braidotti’s stances as necessarily irreconcilable; in fact, they might be considered complementary to each other. Acknowledging the vulnerability and mortality of all life forms and accepting a certain level of passivity does not necessarily eliminate the possibility of some form of responsibility. In fact, the sense of shared passivity proposes a new kind of responsibility; one that does not stem from the humanist sense of superiority over other life forms but rather recognises and defines its responsibility *from within*—from the very recognition of finitude. This corresponds to Braidotti’s proposition of a kind of ethical responsibility that results from the recognition of the co-presence of human and nonhuman others (*Posthuman* 169), rather than the adoption of ethical responsibility that is based on the superiority of the human, or the complete submission to the reactive, passive view of the universal suffering of the species.

1.1.5. A Critique of Posthumanism

According to Christopher Peterson, posthumanism’s promise to move beyond

anti/humanism is troubled by its own paradoxes and in his essay, ‘The Posthumanism to Come’, he challenges the very possibility of posthumanism. Presuming that humanism can be overcome, he argues, ‘subscribes to a basic humanist assumption with regard to volition and agency, as if the “end” of Humanism might be subjected to human control, as if we bear the capacity to erase the traces of Humanism from either the present or an imagined future’ (Peterson 128). Borrowing Derrida’s concept of the trace, Peterson argues that posthumanism claims the capacity to erase the traces of, and to disassociate itself from, humanism. Furthermore, and echoing Derrida’s deferred completion of the ‘democracy to come’, Peterson concludes, ‘[t]here is, nor never [*sic*] will be, a politics and ethics that could legitimately call itself posthuman, only a politics and ethics that will have been more or (one hopes) less humanist, more or less violent in its treatment of both human and nonhuman others’ (138). Peterson thus concludes his essay by announcing the impossibility of posthumanism.⁴²

However, surely the presence and persistence of humanism should not be seen as a translation of the impossibility of posthumanism? As Wolfe argues, a complete rupture with humanism is not what posthumanism seeks. To Wolfe, posthumanism is largely concerned with how humanism poses a challenge to what it claims to be its aims and morals (*Posthumanism* xvi). Similarly, Badmington indicates that some attempts are in too much of a hurry to announce a break from humanism and too disinclined to address the remains of humanism within the posthumanist landscape. It is true that some traces of humanism are unavoidable since ‘any claim to be writing the end of “Man” is bound to be written in the language of “Man”’ (‘Pod’ 13). However, such an engagement with humanism and acknowledgement of its unavoidable presence does not equal endorsing it (‘Theorizing’ 15), nor does it necessarily suggest the impossibility of posthumanism, as Peterson claims. On the contrary, not only is attending to humanism within the

⁴² Peterson’s disavowal of posthumanism evokes the similar stance of Bruno Latour in his influential book *We Have Never Been Modern*, who argues that the state of modernity itself has never been fully realised, thus, consequently, he disavows its successor, postmodernism. According to Latour, ‘[m]odernity is often defined in terms of humanism, either as a way of saluting the birth of ‘man’ or as a way of announcing his death’ (13). Latour firmly refuses the distinction between nature/culture which humanism (a chief component of modernity) has intensified. He uses words such as ‘truly modern’ or ‘wholly modern’ (11) to argue for its impossibility.

posthumanist line of thought an intellectual necessity, it is arguably the only way to overcome humanism. As Derrida explains in his essay ‘The Ends of Man’, claiming a complete rupture with anthropocentrism can easily become a ‘false exit’ as tradition does not cease to effect the new, and hence humanism finds its way back through such claims (135). Instead, humanism must be deconstructed from within, attending to its inconsistencies and contradictions, enabling posthumanism to work its way through humanism.

Following Derrida’s lead in his insistence on the impossibility of a complete break from tradition, and Jean-François Lyotard’s work on [post]modernity, Badmington suggests a thorough reexamination of the signifier in question. Informed by their methods, Badmington announces that the ‘post-’ in posthumanism is not to be understood as a mark of complete separation from the legacy of humanism but rather as means to speak to the ghosts of humanism, working it through from the inside (‘Theorizing’ 21-2). Badmington succinctly sums it up: ‘posthumanism is as much *posthumanist* as it is *posthumanist*’ (15). Miah shares a similar understanding of ‘post-’, writing: ‘the ‘post’ of posthumanism need not imply moving beyond humanness in some biological or evolutionary manner. Rather, the starting point should be an attempt to understand what has been omitted from an anthropocentric worldview’ (72). These definitions evidently negate Peterson’s objections to the impossibility of posthumanism, for what he refers to as the impossibility of posthumanism, posthumanist critics already acknowledge as the impossibility of a complete rupture with the humanist tradition.

Furthermore, not only is a complete break with the humanist tradition impossible in posthumanist thought but even to suggest such a possibility reveals a profound humanist logic. Such a suggestion relies on a particular form of ‘humanist narrative of historical change’ as R. L. Rutsky argues and adds, ‘[i]f ... the posthuman truly involves a fundamental change or mutation in the concept of the human, this would seem to imply that history and culture cannot continue to be figured in reference to this concept’ (110-11). Therefore, any posthumanist attempt that claims or discusses the possibility of such a rupture is paradoxically humanist. By extension, Peterson’s logic in questioning posthumanism’s ability to overcome the human (even to demonstrate its impossibility) is

evidently humanistic.

Furthermore, Badmington complicates the view of the relationship between humanism and posthumanism by reversing the relationship and stating that ‘[h]umanism is always becoming posthumanism’ (*Alien* 11). He explains that if traces of humanism continue to haunt posthumanism, it is perhaps time to trace how humanism has always been haunted by posthumanism.⁴³ On another occasion, Badmington concludes that the task of posthumanism might be to expose those ‘uncanny moments’ that destabilise the core of humanism (‘Theorizing’ 19), where tradition seems to challenge and rewrite itself (‘Pod’ 13). This understanding of the dynamics of humanism/posthumanism confirms Badmington’s earlier statement that humanism is forever *becoming* posthumanism. More precisely than Hayles’ ‘we have always been posthuman’ (*Posthuman* 291), Badmington’s statement asserts a state of emergence that better characterises the posthuman condition. This nonlinearity is also present in Wolfe’s definition of posthumanism, which ‘comes both before and after humanism’ (*Posthumanism* xv). Similarly, Halberstam and Livingston define the posthuman condition as ‘the overlap between the now and the then, the here and the always: the announcement of posthumanity is always both premature and old news’ (3); they further state, ‘[y]ou’re not human until you’re posthuman. You were never human.’ (Halberstam & Livingston 8). These statements emphasise the irreducibility of the posthuman condition into a simple, linear historical moment as Peterson’s argument seems to suggest. They also reject the complete separation between humanism and posthumanism, or the consecutive relationship between them.

To demonstrate this post/humanist ‘entanglement’, in her introduction to *The Posthuman*, Braidotti admits that her interest in posthumanism emerges from her ‘all too human concern about the kind of knowledge and intellectual values we are producing as a society today’ (10-11). She continues, ‘[i]t is the dream of producing socially relevant knowledge that is attuned to basic principles of social justice, the respect for human

⁴³ Badmington uses Don Siegel’s film *Invasion of the Body Snatchers* (1956) as an example of what appears to be an exemplary humanist work but with a posthumanist moment that reads the text quite differently (‘Pod’ 6). For more details, see ‘Pod Almighty!; or, Humanism, Posthumanism, and The Strange Case of *Invasion of the Body Snatchers*’ (2001).

decency and diversity, the rejection of false universalisms; the affirmation of the positivity of difference; the principles of academic freedom, anti-racism, openness to others and conviviality' (11). Braidotti realises that her ideals, which originally led her to pursue the study of posthumanism, are undeniably humanist, arguably implying that humanist residues are inevitable in any current posthumanist endeavour. The critical task, however, is to recognise those moments either to deconstruct the tradition from within (as Derrida and Badmington suggest) or to simply appreciate and appropriate some of them as Braidotti does.

Furthermore, such humanist residues are not always problematic for, or contradictory to, posthumanism. As Wolfe points out, posthumanism is not concerned with the rejection of humanism *tout court*, as the latter holds admirable values and ambitions. The significance of the posthuman project lies in scrutinising the theoretical framework used in conceptualising them. Wolfe demonstrates this with the example of cruelty towards animals; although discouraged by humanist values which stress proper treatment of animals, their very philosophical framework, nevertheless, regenerates the basis of discrimination against animals (xvi-xvii). This critical, yet not dismissive, posthumanist stance might just be the middle ground between two unfavourable types of posthumanism: one that intensifies humanism and its ideals and another that falls into the rhetoric of apocalyptic antihumanism.

1.2. Quantum Posthumanism

From this point on, the thesis will introduce a specific strand of posthumanism, which I shall call *quantum posthumanism* [QP]. As the term suggests, QP is an interdisciplinary (entangled) critical term that is the product of the merging of the philosophical and ontological implications of quantum theory⁴⁴ on the one hand, and critical posthumanism on the other. I contend that QP provides the ideal philosophical and ontological framework for posthumanism. The specifications and manifestations of the new term shall become clear in the discussions of the coming chapters. However, in this part, I shall briefly outline the main ideas of classical physics, quantum mechanics, and their comparability to many aspects of humanism and posthumanism respectively.

1.2.1. Classical physics

Newtonian physics is fundamentally based on notions of representationalism such as externalism and separation. The idea of externalism has been embedded in the scientific paradigm through the fundamental belief in the existence of an independent reality that is measurable by an outside observer. Furthermore, the scientific tradition has long been reliant on the notion of separation between the observer and the observed phenomenon. The scientist is a spectator of, rather than a participant in, scientific practices (Barad, *Meeting* 247). This view presumes that the object of observation and the subject observer occupy, ‘physically and conceptually’, different positions (106). As Vassilios Karakostas puts it, classical physics is grounded in ‘the Cartesian dualism of ‘res cogitans’ (‘thinking substance’) and ‘res extensa’ (‘extended substance’), declaring a profound separation between the subject and the ‘external’ world, leaving no room for any intermediary (Karakostas 3).

Furthermore, classical physics is dependent on the presumption of fixed, pre-existing values of self-contained objects. As Karakostas explains, classical physics is

⁴⁴ It is worth declaring that due to its mathematical nature, any linguistic-based approach to quantum theory is inherently interpretive and is not meant to be analogous to its scientific counterpart. Quantum theory, in the context of this thesis, will be used for brevity purposes to refer to the interpretative aspects of quantum theory.

fundamentally ‘atomistic in character’; it views the world as consisting of ‘analyzable, separately existing but interacting self-contained parts’. The world might be analysed, therefore, into individual components whose qualities determine the whole they comprise (3). As a result, classical physics strictly follows the ‘definite value principle’, which presumes that the system is determined by the definite value of its components, whose values are intrinsic and prior to observation. Another property of classical physics is ‘non-contextuality’ (4). The object of measurement is independent of the context of observation and the measuring apparatus. Not only is the process of measurement external but it is also transparent, reflecting the so-called ‘true nature’ of what is being observed.

The outcomes of these two properties, as Karakostas notes, is a classical physical ontology characterised by notions such as classical realism, classical objectivity, a ‘transcendent correspondence account of truth’, and ontological reductionism. Classical realism acknowledges the existence of an independent reality that is separated from our existence and observation. Classical objectivity presumes that the obtained knowledge of an object represents the true properties of the object. As a result of these two notions, propositions of classical physics are regarded as true or false according to the objective reality that possesses objective truth regardless of the means with which such ‘truth’ has been derived or is maintained. Finally, ontological reductionism is reflected in the belief that our fragmented knowledge about these independent objects and their representational properties determines the nature and behaviour of the universe (5). As Karakostas puts it, ‘if ... one is able to determine the intrinsic properties of atomic objects in space and time, then one can describe the world completely’ (6).

Therefore, akin to humanism in the humanities, classical physics maintains the human subject/outside observer whose perspective is regarded as the measure of everything. It also presumes the epistemological and ontological separation between the subject and the object, and their fixed, inherent qualities. These classical views of physics retain the hierarchal relationship between entities, their fixed boundaries and their definitive qualities, thus justifying the superiority/inferiority, subject/object relations, and providing no satisfactory explanation of the hybridity, reciprocity, and entanglement of

the entities and phenomena we encounter within the world.

1.2.2. Quantum mechanics

Developed throughout the 20th century, quantum mechanics revolutionised the modern sciences by constituting a radical departure from classical physics and the Newtonian paradigm, which has governed not only mathematical equations but also assumptions about the ways in which we perceive the world.⁴⁵ Quantum mechanics describes the behaviour of energy and matter at atomic and subatomic levels. It was first developed in the 1900s through the work of the physicist Max Planck on black-body radiation. Following Planck was Einstein who, in 1905, proposed that similar to energy, radiation itself is quantised⁴⁶. In 1924, Louis de Broglie introduced what came to be known as the principle of wave-particle duality by proposing that at the subatomic level, entities can either behave as waves or as particles. Also, the behaviour of matter and energy is not fundamentally different.

The most notable developments within modern quantum theory have come about through the pioneering work of Werner Heisenberg, Niels Bohr, as well as Max Born and Erwin Schrödinger. Schrödinger famously formulated the Schrödinger equation in 1926, which carried significant implications for quantum theory; indeed, its importance has been regarded as equivalent to Newton's second law in classical physics. This mathematical equation describes the temporal evolution of physical systems concerning the wave function in quantum theory.⁴⁷ Born's⁴⁸ advancements, based on Heisenberg's

⁴⁵ Some of the basic principles of classical physics, which quantum physics conflicts with are, briefly, the space-time identity and the locality of physical objects; the fact that only one certain physical object can exist in one place at a given point of time; that two similar physical objects exist separately; and that objects are countable with separate properties and determinate values; it also challenges principles of causality, determination, continuity, and the conservation of energy (Faye & Zalta).

⁴⁶ In physics, to quantise is to limit possible values to discrete values according to quantum rules.

⁴⁷ The most general form of the equation is:

$$i\hbar \frac{\partial}{\partial t} \Psi(\mathbf{r}, t) = \hat{H} \Psi(\mathbf{r}, t)$$

For a thorough account of the mathematical applications of Schrödinger's equation in physics, see F. A. Berezin and M. A. Shubin *The Schrödinger Equation*. Also, Schrödinger offers his views in series of lectures published in *Expanding Universes* (1956).

⁴⁸ Born's prolific writings on mathematics and quantum mechanics have also largely contributed to modern physics today, such as *Problems of Atomic Dynamics* (1926), *Mechanics of the Atom* (1927), and *Atomic Physics* (1935).

work in 1925, specifically his statistical interpretations of Schrödinger's equation of the wave function, has been instrumental in the development of quantum mechanics.⁴⁹

It was Bohr and Heisenberg, in particular, however, who led the quantum revolution that has so fundamentally shaped contemporary physics. Heisenberg⁵⁰ proposed *the uncertainty principle*⁵¹ in 1927, which suggests the impossibility of acquiring an accurate measurement of two complementary variables (or conjugate pairs) simultaneously, such as position and momentum, wave and particle, energy and duration, and entanglement and coherence. Heisenberg suggests that the more accurate a measurement of one variable is, the less accurate the measurement would be for the other variable and vice versa. This statement is not an acknowledgement of the lack of measuring precision but rather a demonstration of the nature of wave properties integral to the quantum understanding of the atomic world.

Bohr's⁵² most notable earlier works include the Bohr model of the atom, which he and Ernest Rutherford developed and introduced in 1913. His most influential contribution to modern quantum theory, however, is the development of *the principle of complementarity*⁵³ which proposes a deeper law underlying Heisenberg's uncertainty principle. According to Bohr, objects have complementary properties that cannot be

⁴⁹ Born's Nobel Prize lecture in 1954 'The Statistical Interpretations of Quantum Mechanics' summarised his contribution to the theory for which he was awarded the prize.

⁵⁰ Heisenberg's most innovative contribution is a 1925 paper which appeared in *Zeitschrift für Physik* titled (after translation) 'A Quantum-theoretical reinterpretation of kinematic and mechanical relations' which paved the way for matrix mechanics that was further developed through the works of Born and Pascual Jordan (Segrè 156). Heisenberg's other notable works include *The Physical Principles of the Quantum Theory* originally published in 1930, *Physics and Philosophy: The Revolution in Modern Science* (1958), and *Philosophical Problems of Quantum Physics* (1979), which sum up Heisenberg's views on quantum physics as well as the works of other physicists.

⁵¹ The uncertainty principle formula is:

$$\Delta\chi\Delta\rho \geq \frac{\hbar}{2}$$

, where Δ refers to the uncertainty of the variable and \hbar is Planck's constant ($h / (2\pi)$). The uncertainty of the variable (e.g. position) times the uncertainty of the other variable (e.g. momentum) is equal to, or greater than, Planck's constant divided by two.

⁵² Bohr's foundational insights on quantum theory are distributed across his philosophical and scientific essays and articles, which can be found in *Atomic Theory and the Description of Nature: Four Essays with an Introductory Survey*, which covers his essays in the 1920s, *Philosophical Writings of Niels Bohr: Essays 1933-1957 on Atomic Physics and Human Knowledge Volume II* and *Philosophical Writings of Niels Bohr: Essays 1933-1957 on Atomic Physics and Human Knowledge Volume III*.

⁵³ Bohr published his thorough account of the complementarity principle in his article 'Discussions with Einstein on Epistemological Problems in Atomic Physics' (1949).

measured simultaneously. Bohr thus resolves the wave-particle paradox by explaining that the conjugate pairs are complementary aspects of the same quantum phenomenon observed.

Heisenberg's uncertainty principle and Bohr's complementarity principle led to the formulation of the famous *Copenhagen interpretation* [CI] of quantum mechanics in 1927. The CI involves the theoretical and philosophical implications of the mathematical aspects of the principles of the two physicists.⁵⁴ Although there is no unified set of rules or a definitive definition as to what CI actually entails, there are, nonetheless, some widely accepted basic principles of the interpretation. These include the impossibility of measurement of two complementary variables simultaneously, the wave function as being the state that is responsible for wave-function duality, and the inevitable effects of the apparatus (process and devices of measurement) on the results of the measurement.

In recent years, however, the CI has begun to lose its popularity in favour of other interpretations such as Bohm's theory of the implicate order and the many-worlds interpretation. Bohm's theory, or Bohmian mechanics, was developed based on Louis de Broglie's pilot-wave theory in the 1920s and advanced by David Bohm in 1952; it is characterised by its explicit nonlocality⁵⁵, which is one of the main reasons the theory was not widely originally accepted. It proposes that actual configurations do take place regardless of the act of measurement. Such configurations are deterministically

⁵⁴ It is worth noting that neither Bohr nor Heisenberg has ever used the term 'Copenhagen Interpretation' to express their shared ideas. It is a term given by critics who saw some common ground between Bohr and Heisenberg's work, although it first appears in the writings of Heisenberg in 1955. In fact, many critics, such as Don Howard, argue that Bohr and Heisenberg's views, although seemingly similar, are intrinsically divergent. Howard goes further to argue that the version of complementarity in the CI is, in fact, Heisenberg's own description of Bohr's principle, and that many critics of Bohr's complementarity, such as Bohm, Hanson, Feyerabend, and Popper, are using Heisenberg's orthodox interpretation (677). For more on the controversy surrounding the CI, see Howard's 'Who Invented the "Copenhagen Interpretation"? A Study in Mythology' (2004), and Kristian Camilleri's 'Heisenberg and the Wave-Particle Duality' (2006), and 'Bohr, Heisenberg and the divergent views of complementarity' (2007), where Camilleri explains how Heisenberg's view of complementary significantly differs from Bohr's. However, many re-assessments of the interpretation have taken place and the CI nowadays mainly refers to 'indeterminism, Bohr's correspondence principle, Born's statistical interpretation of the wave function, and Bohr's complementarity interpretation of certain atomic phenomena' (Faye & Zalta).

⁵⁵ The basic premise of the concept of quantum nonlocality is the apparent ability of quantum entities to know about one another's states even when separated by large distances. It entails other notion in quantum theory, namely the notion of inseparability and entanglement. Quantum nonlocality violates the principle of local action in classical physics, which assumes that objects can only be affected by immediate surroundings. Although many quantum interpretations imply nonlocality, Bohm's theory explicitly endorses it.

formulated through the motion of the wave function. In other words, Bohmian mechanics rejects the role of the observer, and the collapse of the wave function in the CI.

The many-worlds interpretation [MWI] was first introduced by Hugh Everett in 1957 as the ‘relative state formulation’. It was later popularised and renamed the MWI by Bryce Seligman DeWitt in the 1970s.⁵⁶ It proposes that all possibilities are real, and each possibility exists in an actual/parallel universe. Accordingly, there is arguably a(n) (in)finite number of universes where all possible/alternative pasts and futures take place. Similar to Bohm’s interpretation, MWI rejects the actual collapse of the wave function and proposes the universality of wave function as being the quantum state for the entirety of existence.

The differences between those interpretations can be better grasped through their understanding of the double-slit experiment⁵⁷. While some observer-dependent interpretations, such as relational quantum mechanics (and in some versions of CI), suggest that the relation between the observer and the system determines through which slit the photon enters, other interpretations, such as Bohm’s, suggests that the original position of the photon in the wave function determines through which split it passes⁵⁸; therefore, the observer has no effect on the results.

1.2.3. The Philosophy of Physics

The non-traditional properties of the quantum world have naturally led physicists to question the nature of reality and our preconceived ideas about the world. Despite their mathematical nature, quantum findings carry significant non-mathematical implications that are hard to avoid, even for scientists. For example, in his Combo lecture⁵⁹, Bohr

⁵⁶ *The Many Worlds Interpretation of Quantum Mechanics* (1973) edited by DeWitt and Neil Graham publishes Everett’s main papers on the interpretation and commentary papers by other physicists.

⁵⁷ The double-slit experiment originally performed in 1801 by Thomas Young long before the formulation of quantum mechanics. Since then, the experiment had many variations which all demonstrate that light can exhibit properties of both waves and particles. A basic version of the experiment involves a light source that is set to pass through a plate with two slits, where the slits are observed behind the plate. The paradoxical results of the experiment show that when being ‘observed’, the photons act like particles, whereas when they are not, they act like waves and form interference patterns. Other versions of the experiment confirm that photons do not form an interference pattern when they are detected passing through one of the slits.

⁵⁸ This is one of the reasons Bohm’s mechanics is considered deterministic.

⁵⁹ Bohr publically announces the complementary principle in a 1927 lecture at International Physics Congress in Como, Italy. The lecture was published in English in *Nature* in 1928 under the title ‘The

explains how,

the quantum postulate implies that any observation of atomic phenomena will involve an interaction with the agency of observation not to be neglected. Accordingly, an independent reality in the ordinary physical sense can neither be ascribed to the phenomena nor to the agencies of observation. After all, the concept of observation is in so far arbitrary as it depends upon which objects are included in the system to be observed.

(Bohr, *Atomic* 54).

Evidently, the highly suggestive nature of Bohr's language involves and invites various philosophical implications. In the statement above, Bohr refers to the impossibility of separation between the object of observation (atom) and the measuring instrument which inevitably interferes with and defines the conditions of the measurements within which the phenomenon takes place. In his explanation, Bohr touches, without going into the question in depth, on the realist/antirealist debate^{60,61}.

Not only Bohr's but also other, equally or less famous, interpretations of quantum theory have, intentionally or otherwise, entailed philosophical aspects in their approaches to quantum models.⁶² The proliferation of these quantum and philosophically laden interpretations, and the different realist/antirealist/deterministic/agnostic positions their proponents take⁶³, demonstrate the profound power and *entanglement* of philosophy in

Quantum Postulate and the Recent Development of Atomic Theory'. The lecture can also be found in Bohr's book *Atomic theory and the description of nature* (1934).

⁶⁰ I discuss the realist/antirealist debate, including Bohr's implied stance, in the concluding chapter of the thesis.

⁶¹ For their suggestiveness (and the suggestiveness of quantum theory in general) on the nature of agency, reality, and the world, Bohr's writings have been taken up by Karen Barad, as I shall discuss later on, in an attempt to interpret the semantic and ontological aspects of his statements or philosophy-physics—as Barad describes it.

⁶² Some of these interpretations are Max Born's ensemble interpretation (1926), Louis de Broglie and David Bohm's de Broglie-Bohm theory developed by Broglie in 1927 and rediscovered by Bohm in 1958, von Neumann–Wigner interpretation (also known as consciousness causes collapse) (1961), Garrett Birkhoff's quantum logic (1936), Hugh Everett's many worlds-interpretations (1957), Satoshi Watanabe's time-symmetric theories (1955), Edward Nelson's stochastic interpretation (1966), Heinz-Dieter Zeh's many-minds interpretation (1970), Robert Griffiths' consistent histories (1984), Objective collapse theory, which includes Ghirardi–Rimini–Weber theory (1985) and Penrose interpretation (1989), John G. Cramer's 'transactional interpretation' (1986), and Carlo Rovelli's Relational interpretation of quantum mechanics (1994).

⁶³ For instance, deterministic interpretations include de Broglie-Bohm theory, MWI, Many-minds interpretations, time-symmetric theories, while non-deterministic interpretations include CI, Neumann–Wigner's, stochastics, Consistent histories, objective collapse theories, and transactional interpretation.

studying and interpreting quantum mechanics.

However, this ‘openness’ to philosophy is not necessarily considered favourable by some scientists who *still* see philosophical language as a threat to the ‘precision’ of scientific practices. In his essay ‘Against Measurement’ (1990), John Bell argues against the ‘imprecise’ language used in the explanation of quantum theory in quantum textbooks and calls for a more ‘precise’ quantum mechanics. He provides some of what he describes as inadequate and ambiguous concepts that are consistently used in the presentations of the quantum theory. He writes, ‘[h]ere are some words which, however legitimate and necessary in application, have no place in a *formulation* with any pretension to physical precision: *system, apparatus, environment, microscopic, macroscopic, reversible, irreversible, observable, information*’ and, what he sees as the worst of all, ‘*measurement.*’ (3). Furthermore, Bell mentions how other words used in the quantum context are borrowed from everyday life, such as “‘the strangeness”, “charm”, and “beauty” of elementary particle physics’ (4).

However, the imprecision Bell refers to is an inherent property of language; one way to explain this ‘imprecision’, as Bell calls it, is through Derrida’s concept of *différance* and the apparently infinite deferral of meaning.⁶⁴ Bell’s call to dismiss the use of ‘ambiguous’ language can thus only be understood as a call to refrain from using language altogether in interpreting mathematical models of quantum theory. Furthermore, paradoxically, while Bell insists on having a clear and definitive terminology in explaining quantum physics, the basic postulate of quantum theory itself suggests that, inherently, things do not have determinate, a priori boundaries and properties. By the same token, words do not have inherent and definitive meanings. Interestingly enough, the probabilistic nature of quantum theory is well reflected not only in the multitude of philosophical interpretations but also in the undecidability—to use Derrida’s term—of both the wave-particle nature of atoms and the meaning of its terminology.

Other physicists went as far as declaring that this writ large the death of philosophy in assigning science philosophy’s former role, namely contemplating life, the

Other interpretations, which are considered agnostic, include ensemble interpretation, quantum logic, and relational interpretation. For a nontechnical overview of the various interpretations of quantum theory, see David Z. Albert’s *Quantum Mechanics and Experience* (1992).

⁶⁴ For a detailed explanation of Derrida’s *différance* see Derrida’s essay ‘Differance’ in his book *Speech and Phenomena, and Other Essays on Husserl’s Theory of Signs* (1973).

nature of reality, and the universe. Accordingly, in their co-authored book, *The Grand Design: New Answers to the Ultimate Questions of Life* (2010), Stephen Hawking and Leonard Mlodinow acknowledge the ontological questions humans have about the universe and the nature of reality; however, they write, somewhat sensationally (not to say even arrogantly): ‘[t]raditionally these are questions for philosophy, but philosophy is dead. Philosophy has not kept up with modern developments in science, particularly physics. Scientists have become the bearers of the torch of discovery in our quest for knowledge’ (13).

Ironically, the reader of *The Grand Design* will soon realise that Hawking and Mlodinow actually work within the philosophical tradition they tried to dismiss in their introduction. The two exemplify Carlo Rovelli’s argument that physicists who dismiss philosophy are unaware that they are using the philosophy of science in their methodologies which they take for granted (‘Science’).⁶⁵ Hawking and Mlodinow’s use of logic, historical linearity, narrative structure, rhetorical and existential questions is considered philosophical in the general sense of the meaning of philosophy as posing fundamental existential questions about the world, initiating critical thinking, and using rational arguments and conceptual models and frameworks to tackle these questions. More specifically, Hawking and Mlodinow state that they adopt what they term as ‘model-dependent realism’. They describe it as ‘the idea that a physical theory or world picture is a model (generally of a mathematical nature) and a set of rules that connect the elements of the model to observations’ (58). The physicist and philosopher Victor J. Stenger comments that Hawking and Mlodinow’s model is not radically different from instrumentalism and that they are ‘acting as philosophers’ in their attempt to answer the question of the ultimate nature of reality—even by demonstrating the impossibility of such an answer (‘Physicists’).

Furthermore, commenting on Hawking and Mlodinow’s model which they believe also applies to ‘the conscious and the sub-conscious mental models we all create

⁶⁵ In the co-authored article ‘Physicists Are Philosophers, Too’ (2015), Victor Stenger goes further to demonstrate with examples that many of the physicists who publically opposed philosophy have in fact, at some point in their writings, made what can be seen as philosophical statements about reality. Stenger provides two statements by Weinberg and Tong, who both oppose the philosophy of science, to argue that they exhibit a platonic view of reality (classically adopted among physicists and mathematicians) as they uncritically treat scientific models as true reflections of a pre-existing reality.

in order to interpret and understand the everyday world' (62), Murad Jurdak argues that Hawking and Mlodinow's model resembles, in that way, the constructivist view of reality (5). Indeed, without philosophical interpretations of scientific formulations, the discoveries of science will carry little meaning concerning life, the universe, and the nature of reality. What, arguably, Hawking and Mlodinow refer to in their claim is the death of philosophy as a discipline, which would make their allegations less radical, albeit not less problematic, given the ironical fact that their book, in which they declare the death of philosophy, is not philosophy-free.

Indeed, many theoretical physicists, such as Stenger⁶⁶ and Carlo Rovelli, recognise the vitality and inevitability of philosophy in/of physics. When physicists make statements about the universe, they are unavoidably engaged in a philosophical tradition. In fact, the break between philosophy and science is fairly recent, happening around the second half of the 20th century (Rovelli 'Science').⁶⁷ Furthermore, in the history of the Western tradition, Thales of Miletus (circa 624–546 B.C.) is considered the first physicist *and* philosopher (Stenger 'Physicists'). The evolution of physics has always occurred synchronically with philosophy. Stenger demonstrates the consistent presence of

⁶⁶ Stenger's co-authored essay 'Physicists are Philosophers, Too' is a response to Lawrence M. Krauss' interview with Ross Andersen for *The Atlantic* titled "Has Physics Made Philosophy and Religion Obsolete?" where Krauss' makes sarcastic remarks on philosophy and the philosophy of science in particular. Stenger includes the following quote by Krauss from the interview: 'Philosophy is a field that, unfortunately, reminds me of that old Woody Allen joke, "those that can't do, teach, and those that can't teach, teach gym." And the worst part of philosophy is the philosophy of science; the only people, as far as I can tell, that read work by philosophers of science are other philosophers of science. It has no impact on physics whatsoever, and I doubt that other philosophers read it because it's fairly technical. And so it's really hard to understand what justifies it. And so I'd say that this tension occurs because people in philosophy feel threatened—and they have every right to feel threatened, because science progresses and philosophy doesn't' ('Physicists').

Understandably, as Stenger mentions, Krauss's interview caused a great deal of upset among philosophers. As a result, Krauss wrote a 2014 essay 'The Consolation of Philosophy', where he explains how philosophy has benefited him as a theoretical physicist; however, he does not significantly alter his original contention about the philosophy of science. Stenger also traces the history of this 'disdain' towards philosophy in statements and writings of other scientists, including Neil deGrasse Tyson's interview on the *Nerdist* podcast, where he claims the irrelevance of philosophy. Also, and most notably, is the Nobel Laureate Steven Weinberg's chapter 'Against Philosophy' in his 1992 book *Dreams of a Final Theory*, where Weinberg's critique targets only the philosophy of science.

⁶⁷ This break is deeply rooted within the academic institutions. Tim Maudlin notes that many current leaders of the philosophy of physics were originally trained as physicists; however, they choose to associate with philosophy departments because physics departments often strongly discourage philosophical endeavours, favouring what N. David Mermin describes as a 'shut up and calculate' attitude, or as Maudlin puts it 'putting computation ahead of conceptual clarity' ('What's Wrong'). A few examples of current philosophers of physics with a background in physics include Stenger, David Albert, John Earman, and Barad, among others.

philosophy in the history of the breakthroughs in physics, including the works of Newton and Einstein, and also in the works of the principal founders of quantum mechanics, such as Bohr, Schrödinger, Heisenberg, and Born, who from the first contemplated the philosophical implications of their calculations.⁶⁸ However, unlike the physicists of the first half of the century who introduced and advanced the conceptual work of relativity and quantum theory, physicists of the second half have concerned themselves more with the applications of the great ideas put forward by their predecessors in the early and mid-1990s (Rovelli ‘Science’).⁶⁹

Commenting on Bell’s claim regarding the conceptual ambiguity of quantum language, Tim Maudlin explains that philosophy does not offer science mystical ambiguity but rather a rigorous method and a sceptical attitude with which flaws within the theoretical framework can be detected. Revisiting the scientific data, using philosophical methods of scepticism, critical and logical thinking, helps explore alternative explanations and illuminate new ways of thinking about scientific issues that are sometimes taken for granted. Maudlin refers to Einstein’s emphasis on the significance of epistemology for scientists. In his memorial notice for the philosopher Ernst Mach, Einstein had explained how concepts could be treated as a ‘*priori* givens’ granting them an unrestricted authority so that scientists often forget their ‘*earthly* origins’ (102).⁷⁰ Philosophy is particularly essential for scientists because, as Stenger notes, numerous physicists ‘*uncritically [adopt] platonic realism as their personal*

⁶⁸ In his essay, ‘Why Physics Need Philosophy’, Maudlin offers several instances from the history of science to prove that in many cases, while the calculations might be correct, the explanations are not. In fact, Einstein’s breakthrough in the theory of relativity is attributed to his reflections on conceptual, rather than empirical issues (‘Physics’).

⁶⁹ Rovelli notes that, in the last few decades, successes in theoretical physics have been limited. He notes that in modern physics, what is often attempted is to try to solve a question whereas what is needed is ‘questioning the question’. Rovelli further argues that the major leaps in the history of physics took place not because physicists changed the theory but rather because they changed the perspective from and through which they view the world (‘Science’).

⁷⁰ On another occasion, under the request of Robert Thornton’s request, Einstein wrote, ‘I fully agree with you about the significance and educational value of methodology as well as history and philosophy of science. So many people today—and even professional scientists—seem to me like somebody who has seen thousands of trees but has never seen a forest. A knowledge of the historic and philosophical background gives that kind of independence from prejudices of his generation from which most scientists are suffering. This independence created by philosophical insight is—in my opinion—the mark of distinction between a mere artisan or specialist and a real seeker after truth’ (‘Thornton’).

interpretation of the meaning of physics' ('Physicists').⁷¹ Philosophy hence proves indispensable in scrutinising linguistic habits of science and its preferred thinking models. It is, thus, perhaps time that the worlds of 'instruments and experiments'⁷² fully realise the complementarity and entanglement of their existence.

1.2.4. *Quantum Posthumanism*

Based on the contention of the inevitability and the endorsement of philosophy-physics (to use Barad's term), I argue that the implications of quantum mechanics are posthumanist par excellence. For instance, in the same manner that posthumanism rejects dualism, Bohr's principle of complementarity contests not only the dualism of complementary valuables such as wave-particle but also the dualism of other notions including the observer-observed, 'object-subject, knower-known, nature-culture, and word-world' (Barad *Meeting* 147). Bohr's philosophy-physics and quantum interpretations in general challenge the foundational principles of Enlightenment and the Cartesian distinction between the observer and the observed. (121). They also reject the idea of the external observer (Cartesian subject), the separability of the measuring apparatus (classical objectivity), the correspondence between the outcomes of observation and what is observed (representationalism), the observer/observed distinction (traditional agency), and the existence of a world with objective pre-existing values that is accessible through measurement (classical realism).

Instead, both quantum and posthumanist theories embrace notions of entanglement, inseparability, relationality, context-dependence, emergence, and a reworking of classical objectivity and agency. The entangled system in quantum theory is characterised by certain qualities that are 'neither reducible to nor derived from any combination of local properties of its parts' (7).⁷³ Contrary to the classical physical paradigm, which presumes the possibility of a universal and Cartesian viewpoint or a

⁷¹ Stenger uses platonic with a small 'p' to refer to the contention that objects within scientific models compose elements of reality; however, these models are not thought-based (as Platonic with a capital 'P' would suggest) but rather based on description and prediction of observations ('Physicists').

⁷² The expression 'instruments and experiments' is borrowed from the editor's note on Stenger's article in *Scientific American*.

⁷³ For the detailed mathematical explanation behind this conclusion see Karakostas's essay 'Realism and Objectivism in Quantum Mechanics' (7).

‘view from nowhere’, quantum mechanics is extremely context-dependent as it allows ‘viewing the world from within’ (Karakostas 14).⁷⁴ As I shall demonstrate in the following chapters, posthumanism vividly parallels and complements existing notions and ideas in quantum theory. I am suggesting therefore that in foregrounding these processes and concepts, the implications of quantum theory might be utilised to provide insights into the ontologies of fictional worlds, their characters, and the reader’s engagements that constitute the literary experience.

A key and influential attempt to approach quantum mechanics from a critical feminist posthumanist perspective is Barad’s book, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (2007). Barad reads Bohr’s momentous work on quantum theory in terms of its philosophical and ontological implications. She states that her book draws from many scientific and social theories, including ‘quantum physics, science studies, the philosophy of physics, feminist theory, critical race theory, postcolonial theory, (post-)Marxist theory, and poststructuralist theory.’ (25). Barad offers a reworking of many notions such as ‘matter, discourse, causality, agency, power, identity, embodiment, objectivity, space, and time’ (26). The significance of Barad’s project is that she takes Bohr’s work a step further, from its epistemic to its semantic and ontic implications (127). Barad’s work stems from the realisation of the significant ontological implications of Bohr’s writings. As Barad notes, ‘[u]nfortunately Bohr does not explore the crucial ontological dimensions of his insights but rather focuses on their epistemological import’ (138). Throughout her book, Barad detects Bohr’s nuanced critical attitude of representationalism among other issues. As Barad demonstrates, Bohr’s philosophy-physics contests not only Newtonian physics but also classical forms of realism, representationalism, and social constructivism (134-5).

⁷⁴ Interestingly, just as in posthumanism where a full rupture with the humanist tradition is impossible, quantum mechanics could not claim complete departure from classical mechanics. Some of its key concepts are in fact borrowed from classical mechanics, such as wave and particle. Furthermore, the use of basic laws in classical mechanics is sometimes inevitable in the applications of quantum mechanics. For example, ‘the possibility of a quantitative description of the motion of an electron requires the presence also of physical objects which obey classical mechanics to a sufficient degree of accuracy’ (Landau & Lifshitz 2). The relationship between classical and quantum mechanics is in fact rather paradoxical. As Landau and Lifshitz put it, ‘quantum mechanics occupies a very unusual place among physical theories: it contains classical mechanics as a limiting case, yet at the same time it requires this limiting case for its own formulation’ (3). Bohr’s later view on the complementarity principle explains that the experimental aspect of quantum theory is based on pre-scientific practices with established norms from classical mechanics, which are often unavoidable in the experimental context of quantum physics (Faye & Zalta).

At the centre of Barad's theoretical endeavour is the development of a new ontology she calls *agential realism*. Agential realism might be viewed as a posthumanist performative approach designed to understand the technoscientific and other natural/cultural practices. In other words, it focuses on the role of human/nonhuman, natural/cultural, material/discursive practices, taking into account matter's dynamism. (32/135). Agential realism offers, therefore, an epistemological and ontological reworking of the notion of agency. As Barad notes, while performative social and political theories emphasise the social practices in constituting human bodies, agential realism stresses that the practices that produce the body 'are not only social' and the bodies they construct 'are not all human' (33-4).⁷⁵

A key element of Barad's agential realism is the notion of *intra-action*. Barad proposes intra-action as an alternative to the traditional idea of 'interaction', which assumes the separation of individual agencies prior to any 'interaction' (139). Intra-action, on the other hand, '*signifies the mutual constitution of entangled agencies*'. Hence, any distinctions made between agencies are temporal and relational, and never absolute (33). The term also constitutes a radical reworking of the notion of causality⁷⁶ and this new ontology entails the reconceptualisation of other concepts including 'space, time, matter, agency, structure, subjectivity, objectivity, knowing, intentionality, discursivity, performativity, entanglement, and ethical engagement' (33).

The phenomenon of *diffraction* is central to Barad's study of entanglement as a way to understand 'the nature of nature' (29). This describes the way 'waves combine when they overlap and the apparent bending and spreading out of waves when they encounter an obstruction' (28). Following Haraway's proposal⁷⁷, Barad emphasises the

⁷⁵ Barad provides an example of Butler's theory of performativity, which she sees as limited to the production of human bodies and the human social practices that generate them (34/145/146), which ultimately regards matter as a passive, rather than an active, agent in the process of materialisation (151).

⁷⁶ Barad's idea of causality is not about a relationship forming between two separate entities, as no definitive entities exist prior to intra-action. Instead, casual relations, as Barad see them, emerge within the same phenomenon. As Barad explains, this understanding of causality constitutes a departure from absolute exteriority and absolute interiority and of determinism and free will.' (176). For a detailed explanation of the new understanding of causality as intra-action, see Barad (*Meeting* 175-9).

⁷⁷ Haraway introduces the metaphor of 'diffraction' in her 1992 essay 'The Promises of Monsters: A Regenerative Politics for Inappropriate/d Others', as a way to rethink difference beyond the existing binaries, shifting our perspective from being oppositional to differential, static to productive.

role of diffraction, which indicates patterns of difference, as an alternative to the notion of reflection, which implies sameness. Barad explains how she builds her approach based on the diffraction method. She writes:

[o]ne way to begin to build the needed apparatus is to use the following approach: to rethink the nature of nature based on our best scientific theories, while rethinking the nature of scientific practices in terms of our best understanding of the nature of nature and our best social theories, while rethinking our best social theories in terms of our best understanding of the nature of nature and the nature of scientific theories. A diffractive methodology provides a way of attending to entanglements in reading important insights and approaches through one another (30).

Evidently, Barad's diffraction approach benefits from the dynamism of entanglement. It presupposes the lack of boundaries between natural-cultural theories and attempts to understand them through patterns of difference, overlap, and emergence.

Based on Barad's diffractive approach, I propose QP as an effort to create a simple *diffractive pattern* through the use of entangled ideas from quantum and posthumanist theory. In developing this framework, I borrow other terms from Barad such as *agential cut*—a flexible emergent distinction between the subject/object which replaces the intrinsic and fixed divide between subject and object in classical physics/humanism. I use the agential cut in Chapter Two to refer to the distinction between what I call *agencies of meaning* (the reader, the author, and the text). A close analogy to this *agential cut* is the *Heisenberg cut* in quantum theory that temporarily separates what is otherwise a coherent quantum world based on wave function. This cut does not pre-exist the phenomenon but rather *emerges* through it.

Another significant term I borrow from Barad is *phenomenon* which, in Barad's definition, does not simply mark the epistemological continuity between observer-observed or the outcomes of the measurement—but rather the ontological entanglement of its intra-acting components that are determined by emergent relations-relations without prior, intrinsic relata (39). *Phenomena* thus (rather than things) are what constitute the

‘primary ontological units’ (141). This understanding of quantum *phenomenon* as a set of intra-actions implies that there are no well-defined or self-contained entities that exist ‘behind’ or cause the phenomenon (128). As Barad explains, reality is constituted ‘not of things-in-themselves or things-behind-phenomena but of *things-in-phenomena*’ ([*my emphasis*] 140). Through these intra-actions, phenomena ‘come to matter—in both senses of the word’ (140). This understanding is central to the new view of matter as it shifts the traditional focus of representationalism and essentialism to relations, dynamism, and emergence.

QP is the new literary framework I propose to accommodate the quantum ideas of entanglement, inseparability, and emergence, while also positioning itself *within* the literary tradition as an extension of the many cultural theories overviewed in the previous section, including antihumanism, feminist theory, animal and disabilities studies, and so on. However, *QP* differs from critical posthumanism in that it is cosmic-oriented. Although a significant part of the rise of critical posthumanism is indebted to animal and ecological studies, *QP* is not primarily focused on the struggle of the species—albeit that its ramifications perfectly align with critical posthumanism and animal studies. Rather, *QP* is largely fascinated with the ontological aspects of the *becoming of the universe* and the comparable totality and entanglement of the literary phenomenon.

The problems of classical physics put forward by the Enlightenment—including representationalism, Cartesian subjectivity, and separation—equally and similarly apply to literary criticism. The literary event is thought to consist of analysable and separate, self-contained, interacting parts—such as the reader, the author, and the text, within the major tradition of positivism, of which formalism is a literary equivalent as in the new criticism or as in classic modes of historicism that seek to ‘explain’ and offer a definitive account of the text either inherent in language or by appealing to historical foundations of production and reception. In these modes, the reader/critic is mostly believed to exist as an independent spectator of the literary event. Furthermore, the divide is fundamental and intrinsic between the subject (reader/author/critic) and the object (text). Also, the text is thought to possess intrinsic and fixed meaning prior to reading. *QP* will, therefore, introduce the quantum and posthumanist reworking the notion of agency, subjectivity, and objectivity, among others, within the literary context.

I introduce what I call *the phenomenon of meaning*⁷⁸ to refer to the inseparability and non-externalism between the agencies of meaning (reader/author/text). The *phenomenon of meaning* is characterised by the lack of an external subject (author/reader/critic). What happens in reading the text is the temporary location of agency using Barad's *agential cut* or the *Heisenberg cut*. Although this theoretical, flexible, and emergent cut sufficiently distinguishes between the agencies of meaning, it, nevertheless, does not exhibit true exteriority (as the traditional Cartesian subject/object cut) but rather 'exteriority within' (Barad 135).

Throughout the thesis, I employ quantum-related notions such as entanglement⁷⁹, complementarity, uncertainty, nonseparability, emergence, and parallelism, while deconstructing others, particularly externalism, separation, linearity, and temporal certainty. I use the pivotal term *becoming* as an ontological alternative to being, which stresses the dynamism of living *of* the world, being entangled within the environment and open to all the possibilities of relations and configurations. *Becoming* is thus necessarily entangled, dynamic, emergent, relational, and contingent. *Becoming* as a perpetual process of the universe and its entities does not take place in 'space and time' but instead 'happens in the making of spacetime itself' (Barad 140). As I shall demonstrate in the coming chapters, the notion of time, historicity, and linearity are dismantled in the quantum posthumanist [QPist] process of *becoming*.

It is worth noting that in developing the framework of QP, I intentionally use different, and not necessarily homogenous, interpretations of quantum theory, without attempting to validate any one particular account over others. For instance, Chapter Two and Three are (mainly) based on Bohr and Barad's philosophy, emphasising the impossibility of exteriority in the literary phenomenon, and downplaying the role of the

⁷⁸ I choose the term *phenomenon of meaning* instead of literary phenomenon for three main reasons: (a) the phenomenon in question is and can be entangled with non-literary components; (b), in the quantum posthumanist context, as shall be later explained in Chapter Four, the distinction is blurred between consciousness and literary input (c) the phenomenon's dynamics are not intrinsically different from other non-literary, meaning-based phenomena.

⁷⁹ As Karakostas explains, quantum entanglement 'casts severe doubts on the existence of isolated (sub)systems and the applicability of the notion of atomism, in the sense that the parts of a quantum whole no longer exist as self-autonomous, intrinsically defined individual entities. The non-separable character of the behavior of an entangled quantum system precludes in a novel way the possibility of describing its component subsystems in terms of pure states. ... For, whenever a compound system is in an entangled state ... there are, in general, no pure states of the component subsystems on the basis of which the compound state of the whole system could be completely determined.' (8-9).

external observer/reader. On the other hand, Chapter Four is based on Heisenberg's uncertainty principle and the more subjective observer-dependent views of quantum theory, which stress the role of the consciousness/observer/reader within the phenomenon. The goal of this diversity is to demonstrate the flexibility of the framework, celebrate the parallelism of what might be seen otherwise as the contradiction between these interpretations, and to imply the experimental, rather than the truth-oriented, nature of this endeavour.

1.3. Towards Post/humanities⁸⁰

QP, as a variation on posthumanism, has the capacity to tackle three main issues within the humanities; it can (a) challenge the humanities' 'identity crisis' by demonstrating its relevance in our techno-scientific world, (b) express and advance the already hybrid identity of the field, and (c) bridge the gap between the humanities and the sciences and move beyond the science wars and the divided/dividing view of human knowledge.

Throughout its history, the humanities has suffered from existential crises every decade or so, which often appear to coincide with economic crises (Waugh 'Future') but more recent academic and institutional crises, building since the 1970s, have seemed more threatening to its foundations (Braidotti 151).⁸¹ Questions about its epistemological foundations, current state, issues around the relevance and state of its disciplines and their future (if any, some have argued) have been continually posed in the last twenty five years, and the possibility of the 'death of the discipline' has also been considered (145). While some believe this particular crisis might potentially be 'terminal to the Humanities' (Barnett 47), others are less alarmed (Waugh 'Future'). Barnett approaches this crisis by succinctly posing the question of dispensability: 'what would it be for an advanced society to exist in which the humanities were more or less absent?' (42). Regardless of the answer, the mere fact that such questions are posed serves as an indication of the

⁸⁰ According to Edward L. Ayers, the concept of the humanities gradually developed in the 1930s and was founded by elite American institutions, and from there it found its ways across other institutions. The humanities became especially relevant after World War II, where a need for a 'humane understanding in a world descending into chaos' emerged. Although the term bears the implications of 'an ancient Western tradition', the associated disciplines are mostly only a hundred years old or so (25). For this discussion, by the humanities I specifically mean a group of academic disciplines that are devoted to studying human culture. These include literature, philosophy, theology, music, art, and languages, and the social sciences, including history, anthropology, archaeology, and linguistics. These disciplines share the same outlook and general definition of, and assumptions concerning, the human and culture, and are mainly concerned with understanding 'how people are active creators of culture, not just passive recipients of tradition' (Behling 'Studying'). The term humanities is also a term used to separate these fields of knowledge from the homogeneity that is regarded as the field of the natural sciences.

⁸¹ On 24 February 2009, Patricia Choen wrote an article in *The New York Times* entitled, 'In Tough Times, the Humanities Must Justify Their Worth'.⁸¹ While the utility question is not new for the Humanities, given the current crisis, however, observers believe that the humanities is increasingly losing public support in the contemporary world. In the introduction to his book, *Literature, Science, and a New Humanities*, Jonathan Gottschall notes that the humanities in the United States has been suffering from declining trends in enrolment, funding, graduates, and scholarship. He further notes that the cultural prestige of the humanities has also been unprecedentedly shrinking (2).

presence and depth of the current crisis. Reasons for the current crisis are not simply economic. The historical scientific changes and the latest discoveries in biology and technology have, as Plumb puts it, ‘shattered the confidence of humanists in their capacities to lead or to construct’ (24). Furthermore, some cultural critics, such as Braidotti, have argued that the rise of posthumanism might be responsible for the current crisis. As the world becomes increasingly inhuman(e), the humanities is seen to become increasingly irrelevant. The humanities’ crisis is, therefore, seen to stem from the fact that the traditional human, on which the humanities is originally centred, is under attack, and, consequently, the field itself and all that it represents, is equally under attack as a consequence of the posthumanist undermining of humanist assumptions (Braidotti 2).

Indeed, one of the intrinsic paradoxes of the humanities is that while it is expected to sustain an anthropocentric stance through its pre-assigned ‘cultural and social’ roles concerning many of the critical issues in the world, it is nonetheless criticised for that very limitation (Braidotti 172). This paradox is summarised by Whimster: ‘a science of the human would seem either to have the capacity to be inhuman or, alternatively, to be humanistic but hardly scientific’ (174). This paradox of becoming ‘inhuman humanities’ or ‘humanist posthumanities’ has certainly contributed to the depth of the humanities’ existential crisis.

However, despite the pressure of its crisis, many trans-disciplinary fields have emerged ‘around the edges’ of established disciplines, including evolutionary, environmental, biogenetic, and other perspectives. The post-anthropocentric humanities, as Braidotti calls them, are already apparent in the proliferation of scholarship in interdisciplinary fields, most notably in animal and disability studies and eco-criticism (146). Clearly, the multiplying interdisciplinary fields of feminist, gender, postcolonial, monster, and disability studies demonstrate a clear ‘institutional response’ to the inhuman(e) predicament of our age (148), in contrast to the classical humanities which appears, particularly in the eyes of the public, to suffer from increasing irrelevance compared to those hybrid fields. It is worth noting that this abundance of interdisciplinary knowledge is highly characteristic of our posthumanist age which everywhere exhibits complexity, interconnectedness, and entanglement. As Stefan Herbrechter notes, the humanities have no choice but to become interdisciplinary for ‘new hybrid life forms [are

emerging] with their own political and ethical questions and imperatives' (173). Other signs of new forms of interdisciplinarity include 'courses on medicine and the humanities, [...] the deployment of arts as therapy for forms of mental disability, [...] ethics for business, and [...] the conversations between philosophy and computer science' (Barnett 48).

On the other hand, the science wars, which erupted in the 1990s as a series of academic confrontations between scientific realists and postmodern relativists, took its toll on both sides.⁸² Postmodernists claimed that scientific paradigms are simply social and political constructs, while scientists accused postmodernists of social constructivism, antifoundationalism, and political ideology.⁸³ In his essay, 'Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern' (2004), Latour expresses his concerns regarding critique's constant attack on, and corrosive scepticism towards, the sciences. The problem with critique, according to Latour, is that while it argues against the ideology of excessive trust in 'scientific facts', it nevertheless expresses what can be seen as an ideological and excessive distrust in the sciences; this includes the absolute contention of '*the lack of scientific certainty*' intrinsic to any formulation of facts. Latour notes that while critical science studies largely focus on the prejudices behind what is described as objective knowledge, they should equally reveal the objective facts that lay behind 'the *illusion* of prejudices' (227). Evidently, Latour's essay attempts to reconstruct a more productive relationship between critique and science. His call for the end of the science wars is accompanied with an appeal to return to materiality, and for the humanities to renew its critical tools and catch up with the scientific and technological

⁸² In 1996, the physicist Alan Sokal published a controversial essay titled 'Transgressing the Boundaries: Towards a Transformative Hermeneutics of Quantum Gravity' in *Social Text*, an academic journal of postmodern cultural studies. He proposed that quantum gravity is a linguistic and social construct. Later, Sokal revealed in *Lingua Franca* that his essay was a hoax intended to test the intellectual rigour of postmodern thinking. The long-term ramifications of the Sokal affair seemed to have contained the hostility between the sciences and the humanities. Years later, the science wars may have subsided, as Waugh notes, but it put an end to postmodernism and considerably damaged cultural theory ('Emergence').

⁸³ Goodheart further expands on this issue on his books *The Failure of Criticism* (1978), *The Skeptic Disposition: Deconstruction, Ideology, and Other Matters* (1991), and *Does Literary Studies Have a Future?* (1999). So do others such as Paul Gross in *Higher Superstition: The Academic Left and its Quarrels with Science* (1988), and Mary Poovey in 'Beyond the Current Impasse in Literary Studies' (1999), and Marry Murrell in 'Is Literary Studies Becoming Unpublishable?' (2001)—to name but a few.

realities of modern times.⁸⁴

Latour's call for the renewal of the humanities, the return to materiality, and the end of wars between the fields of human knowledge is clearly envisioned within the posthumanist framework. The novelty of posthumanist thought and its applications within the humanities, however, certainly leaves many questions unanswered or in need of further revision and investigation. On the other hand, the practices of posthumanism in other disciplines are also in need of a cultural critique of some sort. As Hayles notes, the future of posthumanism is open to question and negotiation. Now, Hayles remarks (and this is particularly the case for the humanities) is the best time to challenge the issue of the posthuman before it is too late, as 'the trains of thought it embodies have been laid down so firmly that it would take dynamite to change them' (291).

However, in its way to *becoming-posthumanities*, the humanities need to be assigned a clearer, contributive role in its relationship with the sciences. Otherwise, it might risk the potential of finding itself in the usual one-way relationship, where it is at the receptive end of the interaction. Many scholars, including Braidotti, express legitimate fears of the humanities having to conform to the rules of the sciences without

⁸⁴ One of the literary movements that attempted to take the consilient line to overcome the science wars in the English studies is literary Darwinism. Pioneered by Joseph Carroll with the publication of his 1995 book *Evolution and Literary Theory* and was later joined by other American critics including Brian Boyd and Gottschall, the movement constituted a radical response to postmodernism. As the name suggests, literary Darwinism attempted to introduce Darwinian theory into literary criticism and to apply the laws of evolution to literary texts. According to its pioneers, literary Darwinism aimed at 'fundamentally altering the paradigm within which literary study is now conducted'. It also aimed at 'subsum[ing] all other possible approaches' (Crews 155). Not only literary critics, but scientists too joined in and supported the movement. In his 1998 book *Consilience*, the biologist Edward O. Wilson popularised the term consilience, to refer to the unity of knowledge, primarily aiming at redeeming the gap between the humanities and the sciences. This term was later adopted and Wilson's book has been extensively quoted by many literary Darwinists in the hope of achieving the dream of consilience and thus 'saving' the sinking ship of the humanities. However, literary Darwinism failed in its mission, not so much owing to the 'postmodern' political ideology that 'contaminated' the field, as Carroll and others have argued [see Carroll's 'Poststructuralism, Cultural Conservatism and Evolutionary Biology' (1996)], but rather due to serious and fundamental issues within the literary Darwinian theory. The main issues with literary Darwinism, critics hold, is its reductionism and radical stance from the literary tradition manifested in their complete disregard of the literary theory and their hostile stance towards postmodernism in particular; another issue is its associations with evolutionary psychology, a controversial school of evolutionary theory that has been discredited in the sciences. See Jonathan Kramnick 'Against Literary Darwinism', Eugene Goodheart 'Do We Need Literary Darwinism', and Fredric Crews 'Apriorism for Empiricists'. Despite its honourable intentions to build a relationship with the sciences, their consilient project turned out to be, like similar attempts in the field, no more than 'a weasel word for scientism' (Waugh 'Emergence').

contributing or setting its own rules in such a relationship (Braidotti 157). Similarly, Barnett believes that the new project of the humanities should ensure that it occupies a central critical position among other disciplines and should resist being forced into the handmaiden role ‘following in the wake of all other disciplines to disinter their ‘human’ implications’ (48).⁸⁵

The specific task of the ‘new’ humanities, in Barnett’s view, involves the deployment of imagination: imagining the future scenarios of this planet and those living in it (49). This fictional task, Barnett argues, is as significant as the factual task of the sciences; as Herbrechter puts it, ‘in the age of virtualization [...] factual-constative and performative-fictional forms of knowledge can no longer clearly be distinguished’ (176). Furthermore, a characteristic of posthumanist thought is the celebration of possibility rather than factuality. The virtual and fictional aspects of our technological world are in fact a distinctive feature of the posthuman age; hence, the assigned role of the humanities gains even greater significance.

This task of imagination, however, is not an unstructured one. Barnett sets ‘six conditions of adequacy’ that would need to be met for the ‘imagination’ to be sufficient. First, it would need to be willing to, and capable of, work(ing) with ‘fundamentally different epistemologies’, which is a necessary condition of its complexity and interdisciplinarity. Second, it would need to have both a realist stance, acknowledging the real world and its laws, and the ability to explore novel spaces that are not yet part of it.

⁸⁵ To achieve Barnett’s view, the humanities would need to employ the concept of ideology as a means not only to investigate technological and scientific advances, but also to investigate the scientific disciplines themselves; Barnett suggests using ‘[c]oncepts, metaphors, discursive formations, practices and the methodologies of disciplines’ as part of this posthuman humanities (50). There are many examples of interdisciplinary work which comply with such a view. For instance, many literary scholars have examined Darwin’s writings within the cultural context and as literary texts, analysing its concepts, images, and metaphors. Some of these scholars are Gillian Beer in her leading book *Darwin’s Plots*, George Levine in *Darwin and the Novelists: Patterns of Science in Victorian Fiction*, Robert Richards in *The Meaning of Evolution: the Morphological Construction and Ideological Reconstruction of Darwin’s Theory*, *Darwinian Heretics* (edited), and the final chapter ‘Darwin’s Romantic Biology’ in *The Romantic Conception of Life: Science and Philosophy in the Age of Goethe*; Gowan Dawson in *Darwin, Literature and Victorian Respectability*; Phillip Prodger in *Darwin’s Camera: Art and Photography in the Theory of Evolution*, and Jonathan Smith in *Charles Darwin and Victorian Visual Culture*. Such works do not attempt to verify or deny scientific findings, as Levine notes, but rather to appreciate the sophisticated relations that science has with the rest of human culture (‘Reflection’ 236). Such works are representative of a rich dialectical relationship between the humanities and the Sciences without one part overshadowing the other.

Third, it would need to work efficiently both in theory and practice. Fourth, it would need to possess the quality of emergence, that is, ‘being susceptible [...] to unfolding interpretations over time’. Fifth, it should be characterised by its unconditional openness to other fields and disciplines and their views and insights regarding its topic of inquiry; this should provide raw materials for the imagination to synthesise its possibilities. Finally, instead of being devoted to Man, imagination should strive to serve the purpose of global wellbeing, which determines its effectiveness and vitality (49).

The question, however, remains: is posthumanism the answer to the humanities’ perpetual crisis? The answer is, surprisingly, that this is unlikely. The crisis of the humanities is inevitable: *it is an integral part of its becoming*. As Edward Ayers argues, by its very nature, the humanities will always be, to some extent, in crisis. Ayers writes that

the humanities, whatever their objective situation, will always feel ill at ease in the world, always in some degree of crisis. By their very nature, the humanities are revisionists, unsettled. They have no choice but to challenge the knowledge, even wisdom, they inherit. No interpretation, however brilliant or apparently authoritative, can be the last word or the humanities die. This constant revolution means that the humanities can never rest. It means, too, that the humanities cannot provide what many people outside the academy crave: conclusive answers to complex questions, fixed lists of approved knowledge (30).

Interestingly, this view of the humanities, I believe, is strikingly *posthumanist*. It demonstrates that *the humanities is and has always been posthumanist* or, at least, exhibits posthumanist qualities. This ongoing fluctuation and inherent instability of its identity are characteristic of the posthumanist *becoming*.

In her book, *Death of the PostHuman: Essays on Extinction* (2014), Claire Colebrook argues that ‘[i]f the human is assumed to be nothing more than an interface, already at one with a world that is one living system, then posthumanism is nothing more than the negation of a humanism that never was’ (Colebrook 163). However, what

Colebrook fails to see is that posthumanism is not merely a negation of humanism, as the previous discussion has sought to demonstrate. Posthumanism is, most importantly, *a negation of itself*. To put it differently, for posthumanism to *become* itself, it needs to be able to refuse all boundaries and exist beyond all definitions and identities including, and particularly, *its own*. Its affirmation is simultaneously a constant negation; in other words, posthumanism is in a perpetual state of *becoming*.

Hence, in contrast to Colebrook's suggestion, posthumanism is here viewed *not* as a new framework that replaces humanism but rather as a realisation of the perpetual dynamism of theory and a recognition of what humanism was, is, and will be—*posthumanism*. It is precisely the case, as Badmington states, that willingly or not, '[h]umanism is always becoming posthumanism' (*Alien* 11); and by extension, *the humanities has been and will always be, to some extent, posthumanities*. It is the job of the post/humanities, hence, to become conscious of and to seek its posthuman potentials.

1.4. *Stories Beyond History: An Ahistorical Approach to Coetzee*

One of the frontiers this thesis has to defend is its apparently ahistorical approach to Coetzee's fiction. Coetzee is often viewed as a postmodernist author. He is often studied within separate political, postcolonial, and feminist contexts and in relation to animal and ecological studies.⁸⁶ To many of Coetzee's critics, the consideration and foregrounding of the political and historical context of post-apartheid South Africa is indispensable in any attempt to interpret his narratives. In fact, some go as far as to suggest that ahistorical readings of his narratives are radically incomplete. David Attwell, the most notable critic and scholar of Coetzee, writes, '[d]espite all the self-reflexivity, all the representational mirrors, to pretend that we can measure Coetzee's achievements without considering the effects of biography and place is to ignore the elephant in the room'. Attwell further claims that '[e]ach gesture of fictive displacement, each act of imaginative relocation, speaks of a struggle both to speak at all and to keep the country at arm's length.' ('Estrangement' 233). To Attwell, Coetzee's fiction is impossible to read adequately, from any perspective, without situating the text within the contemporary reality of South African politics.

However, despite Coetzee's refusal to locate his narratives in any 'real' setting in most of his fiction, this has not prevented many of his notable critics, such as Teresa Dovey, Dominic Head, and Attwell himself⁸⁷, from attributing 'allegorical status' to his narratives (Wright 15). Even those who read Coetzee's work as evading historical reality, still interpret his evasiveness in political terms. Nadine Gordimer, for example, describes it as 'a revulsion against all political and revolutionary solutions' ('Gardening'). Another example is Laura Wright, who argues that Coetzee's work is 'implicitly political by the virtue of its resistance' (10).

Indeed, Coetzee's narratives can be read as *possible* or potential allegories that align with the political and historical reality of South Africa. However, his references to the South African history by no means entail that that these texts revolve around, or need to be necessarily interpreted, as Attwell suggests, strictly within a particularised historical

⁸⁶ Examples of these studies are mentioned in the footnotes (p.10).

⁸⁷ See Dovey's *The Novels of J.M. Coetzee: Lacanian Allegories*, Head's *J. M. Coetzee*, and Attwell's writings on Coetzee, such as his 2011 essay 'Coetzee's Postcolonial Diaspora'.

context for a meaningful hermeneutic framework to be developed. Michela Canepari-Labib argues that although Coetzee sets many of his novels in South Africa, his fiction, as a whole, ‘represent[s] an attempt to formulate more general propositions about human reality which transcend their South African settings’ (110)—a humanist perspective but a comment that might equally be developed within the frame of QP. Coetzee uses South Africa as a point of departure and a local, contextual perspective. As Braidotti argues, borrowing from Haraway in the context of nomadism, ‘you must be located somewhere in order to make statements of general value. Nomadism [...] is not fluidity without borders but rather an acute awareness of the nonfixity of boundaries. It is the intense desire to go on trespassing, transgressing.’ (*Nomadic* 36). Furthermore, according to quantum logic, any observation is necessarily context-dependent, always in relation to and with the particularities of the conditions of its measurement. This acknowledgement highlights the limitations of observation rather than the significance of these limitations. In the case of Coetzee’s writings, I contend that historical and political readings are acknowledgements of the restraints under which resides a profound ontological quest for, and endorsement of, a philosophy of *becoming*.

Moreover, in his fiction, Coetzee employs history to deconstruct history, following the Derridean approach of deconstructing history *from within*. Wright notes that Coetzee’s narratives are located outside the classical understanding ‘of not only postcolonial and postmodern writing, but are also located outside of any consistent notion of historical or personal truth’ (21). The historical and political references can be seen, therefore, as deconstructive techniques rather than constituting the core of Coetzee’s fiction. As I shall demonstrate in Chapter Four, throughout *Foe*, Coetzee deconstructs the very idea of history, origin, linearity, and causality. Nevertheless, his critics, insisting on limiting his texts to their political and historical context, seem to reconstruct the very notions that Coetzee systematically deconstructs in his writings.⁸⁸

Attwell claims that ‘[n]early all of Coetzee’s fiction deals in one way or another with subjects who reluctantly find themselves forced to engage with a particular historical situation’ (‘Estrangement’ 232). Nevertheless, beneath the political and historical

⁸⁸ I discuss this paradox of Coetzee and his critics in more detail with regards to Friday’s silence and its metaphorical interpretations in Chapter Four, part ‘2.2.1. Silence and Language’ (113).

constructs in Coetzee's fiction resides an ongoing dream of freedom. It is not a political freedom but an ontological one: to be beyond history, time, and language—the *freedom to become*. Most of Coetzee's protagonists, as I shall demonstrate in Chapter Two, express a deep ontological and existential angst that disturbs their social and political identities and leaves them longing for the unknown. This existential crisis applies to Elizabeth Costello, Elizabeth Curren, David Lurie, Fyodor Dostoevsky, the magistrate, and Michael K, and represents a total disdain for all social, political, and historical structures, and a profound desire to move beyond these realities. In his portrayal of K, in particular, Coetzee fantasises about this ontological nomadism through the doctor's description of K. The doctor writes,

[Michael is] a human soul above and beneath classification, a soul blessedly untouched by doctrine, untouched by history, a soul stirring its wings within that stiff sarcophagus, murmuring behind that clownish mask . . . evading the peace and the war, skulking in the open where no one dreamed of looking, have managed to live in the old way, drifting through time, observing the seasons, no more trying to change the course of history than a grain of sand does' (151-2).

Indeed, this nomadism could be translated into Coetzee's own fantasy of escaping the political burden with which his writing is associated in favour of more universal, ahistorical, and even posthumanist perspectives. Coetzee declares, through the magistrate: 'I wanted to live outside history' (169). Attwell argues that K's attempts to maintain his freedom outside the social and political space is suggestive of 'a general condition affecting Coetzee's authorship' ('Estrangement' 233). However, another way to read this is that K's attempt is representative of the general condition of Coetzee's scholarship and of the restriction of his texts to the historical and political allegories they might be claimed to induce.

In the interview with Tony Morphet, and talking about his novel, *Life and Times of Michael K*, Morphet asks whether Coetzee feels that the novel was a 'task' he needs in order to fulfil the history of South Africa, to which Coetzee answers: '[p]erhaps that is my fate. On the other hand, I sometimes wonder whether it isn't simply that vast and

wholly ideological superstructure constituted by publishing, reviewing and criticism that is forcing on me the fate of being a South African novelist' ('Interviews' 460). In his response, Coetzee provides the reasons, as he sees it, that have helped to shape or even constitute his image as a South African novelist. Regardless of whether or not being a South African author is his inevitable fate, it is evident that scholarship on Coetzee has contributed to this perception to a great extent. In his novel, *Elizabeth Costello*, Costello (Coetzee's alter ego) is not content with the limitation imposed on her status as an author—as a *female Australian* author—as her son John reveals. Talking to the convenor of the jury, Gordon Wheatley, John remarks,

if she learns that the Stowe Award is hers only because 1995 has been decreed to be the year of Australasia'.

'What does she want it to be?' shouts Wheatley back.

'That she is the best,' he replies. 'In your jury's honest opinion. Not the best Australian, not the best Australian woman, just the best.' (8)

There are many reasons to believe that this is how Coetzee himself feels about limiting his work and status to the reality and history of South Africa.

Therefore, and through the framework of QP, the reading I propose for Coetzee's writing imagines an author without a definition, a text without borders, and a reader without distance; a reading that is 'out of all the camps at the same time' (*K* 182). I contend that an ahistorical reading of Coetzee is not 'ignoring the elephant in the room', as Attwell puts it, but rather leaving the room altogether—and opening up to the universe.

The next chapter deals with the idea of *becoming* in relation to Coetzee's protagonists in *Disgrace*, *Age of Iron*, *The Master of Petersburg*, *Waiting for the Barbarians*, and *Elizabeth Costello*. It draws from Gilles Deleuze and Félix Guattari's ideas on *becoming animal*, and Barad's work on agency and entanglement. In the first part, it analyses the structure of several of Coetzee's protagonists and documents the gradual deconstruction of their egos, self, language, time, and meaning, followed by a posthumanist realisation of *becoming*. In the second part, it investigates another set of Coetzee's protagonists, the posthumanists that, contrary to the first, exhibit a strikingly different set of characteristics. In the third part, I reverse the idea of *becoming* by investigating *becoming-human* through the figure of Kafka's ape in *Elizabeth Costello*. In

the fourth part, I extend the idea of *becoming* to include the reader, the writer, and the text, which, I contend, are inseparable in studying the *phenomenon of meaning*—which, I argue, has no ‘observer’ outside itself.

Chapter Three analyses Coetzee’s novel *Slow Man* and the protagonist’s accident and subsequent disability. Drawing from Andy Clark’s work on extended cognition, I introduce the term *extended becoming* to argue for a more comprehensive idea of embodiment, embeddedness, and extendedness of the (in)animate entity within/of the environment. I also draw from Bill Brown’s thing theory by exploring how inanimate and animate bodies behave in the perpetual process of *becoming*.

Chapter Four offers an overview of the historical figure of Robinson Crusoe, its textual manifestations and intertextuality/entanglement with Coetzee’s *Foe*. The chapter contests ideas of origin, linearity, temporality, and historicity. It draws on Heisenberg’s uncertainty principle and the notion of *observer-effect* (which I refer to as *reader-effect*) *within* the process of measurement (or *meaning making*). It also explores several narrative techniques Coetzee uses, which I argue help constitute the *quantum posthumanist narrative*, particularly in the last chapter of *Foe*.

CHAPTER TWO

I am Nothing Therefore I am Everything: The Crisis of ‘Being’ and the Longing for Becoming in Coetzee’s Fiction

‘Man, I thought: the only creature with a part of his existence in the unknown, in the future, like a shadow cast before him. Trying continually to catch up with that moving shadow, to inhabit: the image of his hope. But I, I cannot afford to be man. Must be something smaller, blinder, closer to the ground.’ –E. Curren (Age 170).

This chapter centres on the idea of *becoming* as a fundamental ontological notion in the framework of QP. It effectively replaces the traditional concept of being. *Becoming* is an ongoing, constant, contingent, and entangled event within the present, and through which the universe and all entities manifest themselves. The idea of *becoming* bears out the simple premises of QP: *becoming* necessarily presupposes no prior or future values beyond the existing/everlasting moment of *becoming*. Furthermore, *becoming* entails the impossibility of inherent/exterior boundaries between entities. As a result, the idea of a fixed, inherent, definitive, or separate self becomes highly debatable. The specifications of *becoming* should gradually build up throughout the discussion.

If we were to make a rough, convenient, yet helpful, generalisation, we could find two major types of characters in Coetzee’s work: the disembodied, superior, and intellectual figures, on the one hand, and the embodied, inferior, and illiterate figures on the other. In general, these types can be described, more or less, as the *humanist* and the *posthumanist* figures, respectively.⁸⁹ The ‘humanist’ figures include Eugene Dawn and Jacobus Coetzee, in *Dusklands*, Magda in *In the Heart of the Country*, the Magistrate in *Waiting for the Barbarians*, David Lurie in *Disgrace*, Susan Barton in *Foe*, Elizabeth Curren in *Age of Iron*, Elizabeth Costello in *Elizabeth Costello*, and Fyodor Dostoevsky in *The Master of Petersburg*. The ‘posthumanist’ characters include the barbarian girl in

⁸⁹ It is important to emphasise that the humanist/posthumanist distinction is only an approximation. As we shall come to see, humanist characters are not humanist per se; they are stuck in their own ideals but, nonetheless, evolve toward their *becomings*. The posthumanist characters, on the other hand, are posthumanist in the sense that they express high levels of nomadism and liminality—not in the sense that they replace the subject position left by the annihilation of Man, which I come to discuss in the conclusion of this chapter.

Waiting for the Barbarians, Friday in *Foe*, Michael K in *Life and Times of Michael K* (and, to a lesser extent, Mr Vercueil in *Age of Iron*, and, in some aspects, Lucy in *Disgrace*). These two types represent opposing yet complementary forces in Coetzee's fiction, the forces of *being* and *becoming*, that characterises the characters' ontological struggles.

This chapter is broken down into four main sections. The first and the second sections, 'The First Paradigm: Humanist Figures' and 'The Second Paradigm: Posthumanist figures', deal with the two underlying paradigms that constitute the anatomy of Coetzee's *humanist* and *posthumanist* figures. For this discussion, however, I am limiting the analysis to David, Curren, and Dostoevsky from the humanist, and Friday, the girl, and K from the posthumanist figures.⁹⁰ I begin by thoroughly tracing the deconstruction of identity, the dissolving of ego, destruction of language, and temporal structures of Coetzee's humanist protagonists as they seek their journeys towards *becoming*. I explore, on the other hand, Coetzee's posthumanist figures, which, through their non-identity, and non-distinguishability, along with their a-linguistic presence, exemplify a particular *becoming*. In the third part of the chapter 'Thoughts on *Becoming(-with)-Animal* and *Becoming-Human*', and using Costello's speech 'The Lives of Animals', I further my discussion on *becoming* for animals and humans. In the fourth and final section of this chapter, I extend this idea of *becoming* to include Coetzee and the reader, and how they also *become* part of this dynamic entangled *phenomenon of meaning*.

⁹⁰ These paradigms are equally applicable to the rest of Coetzee's characters, and, with slight adjustments, even include minor ones.

2.1. *The First Paradigm: Humanist Characters*⁹¹

Coetzee's *humanist* protagonists follow an interestingly systematic and cohesive paradigm: they are intellectuals who maintain assertive views of how the world should be. Absorbed in their own worlds, they lose touch with the reality of the world and the people around them. Their journeys begin as they all face a personal (physical and mental) crisis that separates them from their old lives. They then refuse to perform social rituals as means to deal with their crises in order to be reassimilated into their communities. As a result, they find themselves stuck in a state of separation and liminality. They go through different stages of ontological struggle, including conscious thoughts of death, a deep longing for immortality, and an aching desire for leaving something behind. Each character is presented with a chance of *becoming*, part of which involves letting go of themselves and facing the potential death of their ego. The endings of their struggles are in a state of suspension—not fully resolved yet not entirely unsuccessful either.

At the early stages of each narrative, three protagonists face different crises that forever change their lives. David Lurie, a 53-year-old college professor of English at Cape Town University, and an author of several books, witnesses his entire life shattering after the affair with his student, Melanie Isaac, is exposed. When the affair becomes a public matter, David loses his job, friends, social status, and reputation. He subsequently flees from social disgrace and temporarily moves to the country to live with his daughter, Lucy. During his stay, he and Lucy undergo an intensely traumatic experience: three men attack them, rob them of their belongings, try to kill David, and rape and impregnate Lucy. The second protagonist, Fyodor Dostoevsky, Coetzee's fictionalised character of the real author is, like the actual Dostoevsky, a very successful, reputable author and a

⁹¹ Coetzee's critique of Enlightenment and rationality has been explored by other scholars, including, notably, Martin Woessner in 'Coetzee's Critique of Reason', Alice Crary in 'Coetzee the Moral Thinker' and others in the collection of essays published as *J. M. Coetzee and Ethics: Philosophical Perspectives on Literature* (2010). This chapter will, therefore, avoid repetition of what these earlier critics have explored as Coetzee's antihumanist stance, his attack on Western philosophy and the mistrust in reason, which is seen as evident in the majority of his novels. Instead, the focus here will be on how Coetzee explores the aftermath of his deconstruction of humanist values, the crisis of the self and the dissolving of the ego that is the consequence of such destruction.

Russian public figure. His life is no longer the same after he learns about the death of his stepson, Pavel. Dostoevsky becomes obsessed with every detail that he can gather about his son and his life at Petersburg. Alongside the anguish at Pavel's death, Dostoevsky also suffers from seizures that take a toll on his life. The third protagonist, Elizabeth Curren, is a retired professor of English. Curren discovers she is dying of cancer; during the last stages of her illness, Curren writes a lengthy letter of longing to her daughter who lives in the United States. Clearly, the crises that these protagonists go through seem to have dual effects; they take a toll both on their physical and mental health.

Following the crises that temporarily separate them from their communities, each protagonist is given a chance to be reassimilated into society by following certain established social rituals. As he is brought before a disciplinary committee to answer for his affair, David pleads guilty to the charges pressed against him by Melanie. However, the university committee does not think David's 'secular plea' is enough; they want him to make a 'confession' using his own words (*Disgrace* 51). They also ask him to issue a public apology, which does not concern David's sincerity but his willingness to admit his fault publicly (58). The committee also makes the provision that David might have access to a consultation with a priest or a counsellor (49); however, David firmly refuses to follow any of the protocols they suggest. Failing to perform these rituals, David winds up losing his job and the respect of his colleagues and the community.

Like David, who fails the social rituals of repentance, Dostoevsky fails the socially accepted rituals that should direct the mourning of his stepson. He initially plans to stay in Petersburg for a short period to visit Pavel's grave, collect his personal belongings, and return to his wife. However, he winds up staying for much longer, and despite Anna Sergeyevna's several attempts to help Dostoevsky to move on (and move out), Dostoevsky insists on staying and reaching out to Pavel. Instead of following the conventional stages of mourning, 'call[ing] upon God or his wife to save him', Dostoevsky chooses to wait for the uncanny moment where Pavel reveals himself (*Master* 234).

Despite her deteriorating condition and her inability to take care of herself, and in

spite of her doctor's advice to go to the hospital and get 'proper attention' (*Age* 183), Curren refuses to submit to the hospital and insists on struggling and living/dying alone. She firmly refuses to go through the rituals of death at the hospital which involve feeding her the drug mandragora until she gets drowsy (179), as this means surrendering to what is expected of her as a dying patient. Instead, Curren chooses to join David and Dostoevsky in their isolation and liminality.

In his anthropological work, *Les Rites de Passage* [*The Rights of Passage*] (1909), Arnold Van Gennep notes that rites of passage, from one social state to another, follow a three-step structure: separation (*séparation*), a liminal period (*marge*), and reassimilation (*agrégation*) (vii). Following their separation and refusal to submit to, and follow, the social rituals, the three protagonists remain stuck in the liminal period: David's career is suspended; he is *neither inside nor outside* his community. Curren is suspended between life and death, unable to accept her dying body and simultaneously unable to join the living as her body continues to fail her. Dostoevsky's life is suspended in a state of mourning in the last moments of Pavel's life. Curren describes her state of liminality, in which she finds herself 'not properly born: a liminal creature, unable to breathe in water, that lacks the courage to leave the sea behind and become a dweller on land' (*Age* 139). However, instead of being in harmony with their liminality (as the posthumanist figures are⁹²), the protagonists' struggles turn inward, thus further isolating themselves from the world.

The protagonists' disembodiment and idealistic thinking are evident as they attempt to deal with their struggles.⁹³ When asked about his relationship with Melanie, David claims that he was not himself; his actions were a manifestation of Eros, to which

⁹² I expand on the notion of liminality and posthumanism later on in second part of the discussion on the posthumanist figures.

⁹³ The conversation between David and Lucy demonstrates this further; David is baffled by Lucy's decision to keep silent about the rape; he asks her whether, by doing this, she hopes she can 'expiate the crimes of the past by suffering in the present?' to which she answers: 'No. You keep misreading me. Guilt and salvation are abstractions. I don't act in terms of abstractions' (*Disgrace* 112). Lucy accuses David of misunderstanding her by presuming that she is acting based on 'abstractions'. Indeed, throughout the narrative, David is thinking and reasoning through such abstractions. His troubled relationship with Lucy is but a reflection of his troubled relationship with the real world that is excessively filtered through David's idealistic thinking.

he is merely obedient (*Disgrace* 52). He describes his desire as coming ‘from the quiver of Aphrodite, goddess of the foaming waves’ (25). Furthermore, at Bev’s clinic, David takes charge of disposing of the bodies of the dead dogs. However, instead of disposing of the remains in the dump with the rest of the scourings for the incinerator crew to come and collect, David chooses instead to drive the kombi to the incinerator, loaded with the bodies wrapped in black bags, in the mornings after the killing sessions. David does this because ‘he is not prepared to inflict such dishonour upon them’ (144). However, he quickly sees through his action; he is doing this not for the dogs but rather for ‘his idea of the world, a world in which men do not use shovels to beat corpses into a more convenient shape for processing’ (146).

Curren too exhibits the same type of thinking in abstractions. She is concerned not about death but the degradation that accompanies it, especially concerning the idea she maintains of herself: ‘There is something degrading about the way it all ends – degrading not only to us but to the idea we have of ourselves, of humankind. People lying in dark bedrooms, in their own mess, helpless’ (*Age* 140). Similar to David’s reaction to the dishonour that he feels is inflicted on the dead dogs, Curren finds the humiliation and shame that comes with the sickness and the helplessness more horrifying than death itself. Dostoevsky also shares a similar moment to David and Curren. He finds the horror that Pavel must have felt during his fall more unsettling than the latter’s death. The narrator describes, from Dostoevsky’s perspective, this realisation of the inevitable death as being ‘more terrible than annihilation itself’ (*Master* 20).

Furthermore, Coetzee’s protagonists share a similar preoccupation with their posthumous legacy and the idea of leaving something behind. David declares, as he talks to his divorced wife about Byron’s opera on which he is working excessively, that the project stems from his desire ‘to leave something behind’ (*Disgrace* 63). Furthermore, unconsciously troubled by the thoughts of his after-death, David contemplates what he is leaving behind on three different occasions. The first is when he thinks about Lucy as they take a walk together: ‘[i]f this is to be what he leaves behind – this daughter, this woman – then he does not have to be ashamed’ (62). On another occasion, David

imagines how Lucy's life, 'his line of existence'⁹⁴, goes on, or should go on, long after his death:

[w]ith luck she will last a long time, long beyond him. When he is dead she will, with luck, still be here doing her ordinary tasks among the flowerbeds. And from within her will have issued another existence, that with luck will be just as solid, just as long-lasting. So it will go on, a line of existences in which his share, his gift, will grow inexorably less and less, till it may as well be forgotten (217).

The third occasion is when David learns about Lucy's pregnancy from one of the rapists: 'is this how it is all going to end, is this how his line is going to run out, like water dribbling into the earth?' (199). David's line of existence, represented in the opera project, his daughter, and his grandchild, does not seem to go anywhere for him: the opera does not succeed, his relationship with Lucy suffers, and he rejects his grandchild and asks Lucy to abort it.

Like David, Curren wishes to leave a trace of her existence after she dies. When she discovers she is dying, she starts writing to her daughter on and about the last days of her life. Curren's words become an assertion of her existence as she progressively comes closer to her end. Furthermore, Curren's clinging to her daughter is a manifestation of her clinging to life. She reflects on the past when she used to wake her daughter up with a hug, whose secret meaning is 'that Mommy should not be sad, for she would not die but live on in [her].' Curren declares: '[t]o live! You are my life; I love you as I love life itself' (*Age 6*). Curren experiences a similar, short moment of contentment, to that of David, when she contemplates bringing a child into the world, a solid proof of existence, which shall continue her line of existence. She addresses Vercueil: 'we do not really die: we simply pass on our life, the life that was for a while in us, and are left behind. I am

⁹⁴ The idea of 'line of existence' runs through Coetzee's other novels. In *Slow Man*, for instance, and after his near-death experience and the ego facing its potential death, Paul was contemplating his childlessness: 'dying childless, terminating the line, subtracting oneself from the great work of generation' (20). Just like David's, Paul's desire is to continue to live through his offspring: "But it is not a baby he wants. What he wants is a son, a proper son, a son and heir, a younger, stronger, better version of himself" (45).

just a shell, as you can see, the shell my child has left behind' (76). To Curren, dying without succession is 'unnatural'; she explains, '[f]or peace of mind, for peace of soul, we need to know who comes after us, whose presence fills the rooms we were once at home in' (25). Just like David, Curren tries to control who 'comes after' her; the knowledge itself gives her ego a sense of control over life after death. The protagonists find comfort in knowing that they shall continue to live after their bodies are gone.

Not only does the idea of 'leaving behind' translate into the Cartesian ego's quest for immortality, but it also short-circuits the Cartesian ego's inability to imagine its own death. While the death of the body is imaginable, the Cartesian ego is at work even, and *especially*, through imagining one's own death as confined simply to the body. An example of this is when David imagines his death:

[h]e has a vision of himself stretched out on an operating table. A scalpel flashes; from throat to groin he is laid open; he sees it all yet feels no pain. A surgeon, bearded, bends over him, frowning. *What is all this stuff?* growls the surgeon. He pokes at the gall bladder. *What is this?* He cuts it out, tosses it aside. He pokes at the heart. *What is this?* (*Disgrace* 171).

Although having no trouble imagining the death of his body, David's consciousness, nonetheless, remains at work and therefore lives on; it can see the body and hear the surgeon's growling as he is dissecting the body. Similarly, Curren has a vision of the house after she dies: 'a vision overtakes me of this house, empty, with sunlight pouring through the windows on to an empty bed, or of False Bay under Hue skies, pristine, deserted – when the world I have passed my life in manifests itself to me and I am not of it' (*Age* 26). Curren's ego contemplates the possibility of life without 'her' in it. The ego is, nonetheless, present, witnessing the house and observing life resuming *sans* the body.

The protagonists' inability to imagine their own deaths arises from the inability of the mind to comprehend nothingness and conceptualise inexistence; the mind simply cannot stop itself from existing, for imagining death entails the necessary presence of the mind to be able to imagine. Elizabeth Costello calls this a 'collapse of imagination', which happens to the imagination before death, and is exclusive to the human mind: 'that

collapse of the imagination . . . is the basis of our fear of death. . . . To an insect, death is the breakdown of systems that keep the physical organism functioning, and nothing more. 'To animals, death is continuous with life. It is only among certain very imaginative human beings that one encounters a horror of dying' (*Costello* 109). Jesse Bering interestingly notes that, when tested, even people with 'extinctivist beliefs' (who believe mind/soul/consciousness ceases to exist once the body dies) gave responses that indicated an unconscious belief in a psychological continuity after death. Furthermore, Bering explains what he calls 'simulation constraint hypothesis', that is, to imagine our death—like any experience—we resort to our previous experiences; however, the death of consciousness has no similar experience to which it is comparable ('Never'). The Spanish philosopher, Miguel de Unamuno, in *Tragic Sense of Life* expresses the same idea. He writes, '[i]t is impossible for us . . . to conceive of ourselves as not existing, and no effort is capable of enabling consciousness to realize absolute unconsciousness, its own annihilation. . . . The effort to comprehend it causes the most tormenting dizziness. We cannot conceive of ourselves not existing' (38). Coetzee writes a parallel passage in *Boyhood*, about a child that tries to imagine his own death: 'he tries to imagine his death. But he cannot. Always there is something left behind. . . . He can imagine himself dying but he cannot imagine himself disappearing. Try as he will, he cannot annihilate the last residue of himself' (112).

Moreover, it is also impossible for consciousness to grasp the fact that when it dies, it will never know it is dead. The consciousness believes that, at least for a fraction of an instant that precedes the inevitable death, it is capable of recognising its own death. Curren contemplates the conscious realisation of one's own death: '[m]ust one die in full knowledge, fully oneself? Must one give birth to one's death without anesthetic?' (*Age* 141). It is this realisation of one's own death that troubles Dostoevsky regarding the death of Pavel; it is the fraction of the second where the ego faces the unimaginable—its own death. Matryosha articulates this moment of realisation in her questions to Dostoevsky:

'Does it hurt – you know – when a person dies?'
Now he knows she is serious. 'At the moment?'

‘Yes. Not when you are completely dead, but just before that.’

‘When you know you are dead?’

‘Yes’ (*Master* 208).

Realising one’s own death at the time of death is another form of consciousness continuity; the Cartesian ego presumes that it can grasp the realisation of its own annihilation in the last instant that separates life and death.

David, Curren, and Dostoevsky experience physical trauma that helps to deconstruct their sense of ego. The situations vary from the physical attack on David and the attempted murder, Curren’s cancer and physical deterioration, to Dostoevsky’s epilepsy and mental struggle. As their bodies betray them, their ego steps in again: the protagonists experience the mind/body divide and begin to imagine a separation between themselves as pure consciousness on the one hand, and as bodies on the other. David’s previous vision of his body stretched out on a table being dissected is a good example of the illusion of the separation between consciousness and the body. Consciousness stands ‘outside’ the experience of living, observing the body at a distance. ‘David’ claims that he felt no pain as he was calmly listening as the surgeon growls, pokes, and tosses his internal organs (*Disgrace* 171).

As her health progressively deteriorates and her body gets weaker, Curren becomes more alienated from her body than she ever was:

[w]ho cares? When I am in a mood like this I am capable of putting a hand on the breadboard and chopping it off without a second thought. What do I care for this body that has betrayed me? I look at my hand and see only a tool, a hook, a thing for gripping other things. And these legs, these clumsy, ugly stilts: why should I have to carry them with me everywhere? Why should I take them to bed with me night after night and pack them in under the sheets, and pack the arms in too, higher up near the face, and lie there sleepless amid the clutter? The abdomen too, with its dead gurglings, and the heart beating, beating: why? What have they to do with me? (*Age* 12-3).

Curren's body becomes a burden on her consciousness; her love for life is constantly challenged by the deterioration of her body. As a result, Curren's ego creates an illusory space between 'herself' and her body to protect itself against the horrifying truth of its own annihilation. Becoming spectator of her own body, Curren sees it in a new light: a bag of unnecessary junk she has to carry around.

The space the ego creates between the body and the 'self' takes a more direct manifestation in Dostoevsky's situation. During one of his attacks, Dostoevsky experiences a moment of separation from his body: '[a] body falls vertically through space inside him. He is that body. There is a rush of air: he is the one who feels the rush. There is a throat choked with terror: it is his throat.' (*Master* 69). In Dostoevsky's case, there seems to be a temporal gap between experiencing the body and recognising its ownership; consciousness realises the event before it realises its physical connection to it.

However, this illusory separation between the imagined self and the body quickly collapses under extreme physical pain, where existence is reduced to the singular, grounding experience of the body.⁹⁵ Martin Woessner explains⁹⁶ how pain reduces the 'Cartesian *cogito* into pure body' that even embodied phenomenology, represented in Heidegger or Merleau-Ponty, which attempts to relocate existence outside the Cartesian ego, are incapable of offering the 'corporeal facticity of our embodiment' that pain seems capable of enforcing ('Reason' 234). As Woessner notes, pain is not 'yours or mine' because pain destroys the very boundaries that shape and maintain 'what is yours and what is mine' (234). This pure embodiment leaves only pain, with no ability to reflect on it: '[p]ain is truth; all else is subject to doubt' (Coetzee, *Waiting* 5). Through those extreme conditions, the ego eventually breaks down, giving way to the experience of embodiment. Curren experiences such embodiment in her most intense moments of pain,

⁹⁵ Coetzee systematically uses torture as the quickest way for his characters to experience pure embodiment. Through the magistrate's words, Coetzee shows how torture breaks down the human *cogito*, language, and reason, and opens the gate to pure embodiment: '[M]y torturers were not interested in degrees of pain. They were interested only in demonstrating to me what it meant to live in a body, as a body, a body which can entertain notions of justice only as long as it is whole and well, which very soon forgets them when its head is gripped and a pipe is pushed down its gullet and pints of salt water are poured into it till it coughs and retches and flails and voids itself' (*Waiting* 126).

⁹⁶ Although Woessner argues for the fragmentation of the victims' subjectivity, drawing from Joseph Slaughter's arguments in reference to French policies in Algeria, all forms of physical trauma impacts the Cartesian ego. Bodily pain, including sickness, triggers the direct experience embodiment.

where the distance between body and mind collapses⁹⁷: ‘[b]ut now, during these spasms of coughing, I cannot keep any distance from myself. There is no mind, there is no body, there is just I, a creature thrashing about, struggling for air, drowning’ (132). As Bruns points out, at this level of singular and irreducible experience, it is difficult to make distinctions of any sort (703).

Since Coetzee systematically makes his protagonists go through physical pain to emphasise their embodiment, many critics argue for the primacy of the body and of physical experience in Coetzee’s work.⁹⁸ Contemplating his own work, Coetzee himself admits, ‘If I look back over my own fiction, I see a simple (simple-minded?) standard erected. That standard is the body. Whatever else, the body is not "that which is not," and the proof that it is the pain that it feels . . . Not grace, then, but at least the body.’ (*Doubling* 248).

However, more so than the body, a QPist, post-materialist view rejects the very distinction of mind versus body. In such a view, the physical and nonphysical are inseparable and entangled to the point where it is impossible to establish a definitive distinction between the two. As Barad notes, ‘[m]atter and meaning are not separate elements. They are inextricably fused together, and no event, no matter how energetic, can tear them asunder.’ (*Meeting* 3). The new wider understanding of matter as both physical/nonphysical is exemplified in the physical particles which are thought to be the basic building block of the universe. These particles do not always behave as physical entities; they also behave as waves, which does not subscribe to the traditional idea of matter as occupying a definitive space in the universe (Dupré 22).

This collapse of physical/nonphysical and the new perspective on matter is nonetheless evident in Coetzee’s language. The language used to describe the aftershock David experiences demonstrates the indistinction between the physical/psychological and

⁹⁷ In a sense, this loss of the ability for the ego to reflect upon itself is a move from what Antonio Damasio calls a *core consciousness* to a *protoself*, a basic level of awareness shared among all organisms (154) without the presence of a consciousness that can reflect upon itself. Damasio develops a three-layered theory of consciousness. The first is *protoself*, which is a basic level of awareness shared among all organisms; the second is *core consciousness* (ego), which allows the self to reflect upon itself; the third is *extended consciousness*, which ‘goes beyond the here and now, both backward and forward’ and involves the use of higher thought (195).

⁹⁸ An example of those critics who argue for the primacy of bodily experience is Alena Dvorakova in her essay, ‘Coetzee’s Hidden Polemic with Nietzsche’.

body/mind: '[h]e has a sense that, inside him, a vital organ has been bruised, abused - perhaps even his heart'; and 'he feels his interest in the world draining from him drop by drop' (*Disgrace* 107). This body/mind blurring is more clearly expressed in the depiction of David's feelings: '[t]he blood of life is leaving his body and despair is taking its place, despair that is like a gas, odourless, tasteless, without nourishment' (108). The interchangeability of the physical 'blood' and emotional 'despair' emphasises the linguistic indistinguishability between body/mind.

A similar collapse of the physical/nonphysical is evident in Curren's belief that her cancer is caused by the accumulation of 'shame' she has undergone throughout her life, which further stresses the lack of division between body/consciousness: 'I have cancer from the accumulation of shame I have endured in my life. That is how cancer comes about: from self-loathing the body turns malignant and begins to eat away at itself' (*Age* 145). Another example of such a collapse can be found in Curren's insistence on the materiality of her words as she addresses her daughter; '[y]ou think only blows are real, blows and bullets. But listen to me: can't you hear that the words I speak are real? Listen! They may only be air but they come from my heart, from my womb' (145). To Curren, writing is a process not less physical than giving birth to a child. She also describes the taste in her throat, of bile and sulphur, as the taste of madness (182). In a similar depiction, Dostoevsky thinks betrayal tastes like gall (*Master* 250). These different examples evidently demonstrate the linguistic and ontological indistinguishability between the physical/nonphysical, matter/meaning, and body/mind.

The distinction is destroyed not only between body/mind but also between body/environment and interiority/exteriority. The loss of bodily boundaries is evident in the intimate moments that pass between Dostoevsky and Anna, where Dostoevsky becomes unable to distinguish between himself and his lover: '[t]here are moments when he cannot say which of them is which, which the man, which the woman, when they are like skeletons, assemblages of bone and ligament pressed one into the other, mouth to mouth, eye to eye, ribs interlocked, leg-bones intertwined' (225). From a quantum perspective, and as Barad explains, the object and its surroundings are not inherently separate (*Meeting* 118). One of the implications of Bohr's interpretations of quantum theory, as Barad contends, is that the human body is not taken for granted; it does not

‘preexist as such’. Bodies are neither ‘products’ nor ‘ends’ but, on a molecular and quantum level, they are intertwined with the world and tightly woven in its ongoing *becoming* (150). Dostoevsky and Anna’s bodies, in such a moment, *become a new body*, irreducible to either of them.

As the physical/nonphysical, body/mind, and inside/outside boundaries collapse, the protagonists’ egos are slowly undone. After the trauma, David ‘is losing himself day by day’ (*Disgrace* 121). His confidence in his intellect and rationality slowly diminish and his ego is seriously weakened; Descartes’ *cogito ergo sum* ‘*je pense donc je suis*’ becomes *I don’t think, therefore I am nothing*: ‘[h]e does not understand what is happening to him. ... [H]e cannot tell whether by nature he is cruel or kind. He is simply nothing’ (143). Furthermore, David’s rational and egocentric monologues in the early stages of the narrative are gradually replaced by his impulsive visions and nightmares. As Alyda Faber notes, David ‘drifts, without agency’ (311). Similarly, Dostoevsky’s sense of selfhood is lost between seizures: ‘[w]hen he comes back he has again lost all sense of who he is. He knows the word *I*, but as he stares at it, it becomes as enigmatic as a rock in the middle of a desert’ (*Master* 71).

The destruction of ‘I’ marks the deconstruction of agency and the loss of boundaries between subject/object. In his critique of Beckett’s ‘Unnamable’, Coetzee notes that the name ‘unnamable’ is a demonstration of the lack of separation between creator/creature and namer/named ‘with which the act of creating, naming, begins’. It expresses the inability to distinguish consciousness from its objects (*Doubling* 37). This moment of indistinction between consciousness and the objects of consciousness is demonstrated in one of Dostoevsky’s seizures: ‘[h]e has no idea where he is, no idea who he is. He is a wakefulness, a consciousness, that is all’ (*Master* 69). Dostoevsky loses his sense of self and consequently, becomes simultaneously consciousness and the object of that consciousness: ‘Be calm, says this consciousness, addressing itself, trying to quell its own panic’. (69). What Dostoevsky experiences is a moment of fluidity where the boundaries between his mind/body are removed and thus he finds it difficult to distinguish between himself as ‘consciousness’, what he experiences as ‘body’, and where he exists as ‘space-time’.

The destruction of 'I' is essentially one of the outcomes of the deconstruction of language. Conversely, deconstructing language is essential for the destruction of 'I'. If we examine this in the light of Lacanian structuralist theory⁹⁹, (with which Coetzee is most likely familiar¹⁰⁰), it is the 'symbolic order' of language that establishes the distinctive sense of selfhood and individuality that allows the biological being to become a social human being to begin with. Prior to language, the infant subject is trapped in the mirror stage, during which it identifies with the other in an immediate relationship without the ability to distance itself from what it observes (Lacan 1-7). Extreme physical pain, therefore, works to reverse this process by breaking down language and dismantling the sense of self and, subsequently, restoring such immediacy.

The deconstruction of the self through language is a central theme not only in Coetzee's fiction but also in his essays. In 'Achterberg's "Ballade van de gasfitter": The Mystery of I and You' (1977), Coetzee argues that the pure state of *I* and *You* can never exist within language. He explains, '*I* and *You* exist and have their relations in ways still prior to the ways of true names, with their firm significations, or true identities, and the poem therefore works at, and sometimes absurdly beyond, the borders of language' (*Doubling* 75). Therefore, to stress the lack of boundaries between self/other, Coetzee deconstructs the 'I' through deconstructing the language of the characters and, conversely, deconstructs their language through deconstructing their sense of self. This notion of otherness being an invention of language is clearly reflected in Judith Butler's declaration: 'my own language must break up and yield if I am to know you' (*Precarious* 49). Only beyond language (and the limits of the words 'I' and 'you') can one find the true understanding of otherness as an extension, rather than a break, from the self.

Consequently, as their sense of 'I' deteriorates, the protagonists' language breaks down. Tom Herron observes, after the attack, David conceives his language and identity as 'sharing the same fate' (479); David's language is 'tired, friable, eaten from the inside as if by termites' (*Disgrace* 129), whereas he himself became 'like a fly-casing in a spiderweb, brittle to the touch, lighter than rice-chaff, ready to float away' (156). Curren

⁹⁹ For the full argument see Jacques Lacan's 'The Mirror Stage as Formative of the Function of the I' in *Écrits: a Selection* (1977).

¹⁰⁰ For the Lacanian allusions in Coetzee's work see Teresa Dovey's *The Novels of J. M. Coetzee: Lacanian Allegories* (1998).

expresses the desire for a world without words, namely a world without selfhood, where the boundaries collapse between her daughter and herself: '[i]n another world I would not need words. I would appear on your doorstep. 'I have come for a visit,' I would say, and that would be the end of words: I would embrace you and be embraced' (*Age 9*).

Furthermore, Curren expresses the need for a new word that does not exist in language—*yes-no*: 'is that the truth? Yes. No. Yes-no. There is such a word, but it has never been allowed into the dictionaries' (116). Such a word creates a parallel state where both opposites can co-exist without contradiction. It defies the fundamental laws of language, where a word and its opposite refer to essentially the same thing at the same time. *Yes-no*, instead, exhibits quantum logic; it expresses the superposition state where none of the possibilities is actualised, and thus, in a sense, both of them are. In particular, the *yes-no* state invokes Schrödinger's cat thought experiment, where the only viable answer to whether the cat is alive or dead would be *yes-no*.¹⁰¹ We detect the superposition state in the possibility of the letter that Curren writes actually reaching her daughter. To Curren at least, the letter reaching her daughter is forever in the realm of unactualised possibilities; it is forever in the *yes-no* state. Curren wonders: '[t]hese papers, these words that either you read now or else will never read. Will they reach you? Have they reached you? Two ways of asking the same question, a question to which I will never know the answer, never. To me this letter will forever be words committed to the waves' (32). Interestingly enough, Curren uses the word *waves* to express her perpetual uncertainty. As an epistolary novel, the entire text is thus in a state of superposition, hanging in the *yes-no* position, forever waiting to arrive.¹⁰²

Time, being essentially a linguistic structure, is also deconstructed as language breaks down. Time's arrow (past, present, future) shatters for an alternative, nonlinguistic, immediate experience/expression of time: *the Now*, or the everlasting present. In his essay 'Time, Tense, and Aspect in Kafka's "The Burrow"' (1981), Coetzee quotes Dorrit Cohn, who compares two types of awareness of time, one, which she calls

¹⁰¹ Schrödinger's cat experiment (1935) demonstrates the paradox of the idea of superposition in quantum mechanics when applied in the everyday context. The experiment involves a cat placed in a box with a monitor and a jar of poison. If the monitor detects the decaying of an atom, it destroys the jar, which in turn releases the poison that kills the cat. After a certain period, and according to the CI, the cat is *both* dead and alive. However, when the experimenter opens the box and *sees* the cat, it will be *either* dead or alive.

¹⁰² Nevertheless, ironically, at the metadiegetic level at least, the letter has reached the reader and s/he is realising only one of its many potential shapes and embodiments.

‘historical awareness’, follows on the idea of the linearity of time. The second type of awareness, which she calls ‘eschatological’, does not recognise the continuity of time but rather sees it as ‘only the present, which is always present’ and everlasting (*Transparent* 197). In Coetzee’s comment on Chon, he states, ‘there is only what is happening now, and this is always crucial’ (*Doubling* 231). This non-structural understanding of time is well reflected on the quantum level, where it is thought that, fundamentally, time has no structure at all (Arntzenius 6).¹⁰³

Coetzee’s protagonists begin with a typical linear awareness of time. However, as the narratives progress, they experience a shift in temporal awareness, albeit as short glimpses. After the attack on David and Lucy, temporal concepts under this extreme present trauma become irrelevant. The immediacy of the present experience undoes all temporal structures: ‘Lucy’s future, his future, the future of the land as a whole – it is all a matter of indifference’ (*Disgrace* 107). Shortly following the attack, David’s perception of time changes. At the hospital, he experiences time at a different pace: ‘[t]he clock on the wall says 5.45. He closes his good eye and slips into a swoon in which the two sisters continue to whisper together, *chuchotantes*. When he opens his eye the clock still says 5.45. Is it broken? No: the minute hand jerks and comes to rest on 5.46’ (101).

We find the same inability to accurately estimate time in Curren’s own perception of time as she becomes progressively ill: ‘[i]n an instant I am gone and in another instant I am back, still staring at my hand. Between these instants an hour may have passed or the blink of an eye’ (*Age* 182). The shock of witnessing the accident of Bheki and his friend leaves Curren with a new sense of time, where it suddenly collapses but resumes in its ‘normal structure’ shortly after: ‘[t]ime seemed to stop and then resume, leaving a gap: in one instant the boy put out a hand to save himself, in the next he was part of a tangle in the gutter’ (60). Curren’s perception of time changes to the extent where her unconsciousness seems to reach beyond time; she describes a vision she had of Florence as coming from ‘outside time’ (178).

With a similar shift in perception, and as he was looking down at where Pavel had fallen, Dostoevsky feels the eternity/stillness of time: ‘[h]e grips the railing, stares down

¹⁰³ I discuss the notion of time as a mental structure from a quantum perspective in more detail in Chapter Four (187).

there into the plummeting darkness. Between *here* and *there* an eternity of time, so much time that it is impossible for the mind to grasp it' (*Master* 121). In the context of global marketing strategies, David M. Boje & Tonya L. Henderson summarise five different aspects of time, demonstrating its consciousness-based nature: 'its nature (real or epiphenomenal), experience (clock or social time), flow (novel, cyclical, or punctuated), structure (discrete, continuous, or epochal), and temporal referent point (past, present, or future)' (3). Evidently, the characters experience many of these aspects of time, revealing the flexibility, subjectivity, and non-fundamentality of time. To experience this changing awareness of time, the protagonists' language and sense of self breaks down, revealing a deep shift in awareness that is impossible to grasp by their ordinary conscious state or describe by their ordinary language.

2.1.1. *Becoming*

As their egos become weakened, the protagonists experience their different journeys to *becoming-other*. Simply put, *becoming-other* happens when the protagonist loses the boundaries between his/her identity and another. The protagonists experience different *becomings* in the narrative; however, I limit the discussion to one of their *becomings*: David *becoming-woman*, Dostoevsky *becoming-Pavel*, and Curren *becoming-dead*.

David's *becoming* can be read in many ways¹⁰⁴, but there is one that particularly stands out throughout the narrative—David's *becoming-woman*. The narrative deals with David's disturbed/disturbing relationships with women. It begins with his relationship with a prostitute, Soraya; then, it introduces his morally questionable affair with his young student, Melanie. David's relationship with his daughter, Lucy, is also complicated. He develops another complicated relationship with Bev, to whom he makes love despite finding her unattractive (149-50).

Moreover, David's preoccupation with the idea of leaving something behind goes beyond his ego's longing for immortality. He is longing for the intimate experience of motherhood, of 'producing something with a life of its own' (*Disgrace* 63), and of

¹⁰⁴ Tom Herron, for instance, discusses David *becoming-animal* in his essay: 'The Dog Man: Becoming Animal in Coetzee's "Disgrace"'.

becoming-woman. In his conversation with his divorced wife, David talks about his plans for writing an opera on the last years of Byron:

‘[o]ne wants to leave something behind. Or at least a man wants to leave something behind. It's easier for a woman.’

‘Why is it easier for a woman?’

‘Easier, I mean, to produce something with a life of its own.’

‘Doesn't being a father count?’

‘Being a father . . . I can't help feeling that, by comparison with being a mother, being a father is a rather abstract business’ (63).

Being a father is not enough for David as he wishes to cross the boundaries between fatherhood and motherhood and experience both. His music becomes his means of transitioning, of *becoming*. To *become-mother*, David has to produce a life that shall continue to live after he is gone. The process of writing his opera thus becomes an experience of giving birth, of *becoming-woman*. Furthermore, David's quest to *become-woman* translates subconsciously in his music. While his project was originally meant to revolve around Byron, it instead, as the narrative progresses, gravitates towards Byron's mistress—Teresa. In the new version of his project, Byron is dead and Teresa becomes the new heroine: ‘[i]s this the heroine he has been seeking all the time? Will an older Teresa engage his heart as his heart is now?’ (181). Finally, after Lucy's rape, David is completely shut off. Despite his many attempts, Lucy refuses to open up to him as, being who he *is*, he cannot possibly understand. David wonders if he can indeed understand if it is within his ability to *become-woman*: ‘he can, if he concentrates, if he loses himself, be there, be the men, inhabit them, fill them with the ghost of himself. The question is, does he have it in him to be the woman?’ (160).

After his son's death, Dostoevsky becomes obsessed with every detail of Pavel's life. He goes to Petersburg, rents Pavel's room, wears his suit, reads and writes in his diaries, and talks to the people whom Pavel knew. Dostoevsky's epilepsies, which dislocate Dostoevsky's sense of self, also help bring him and Pavel closer: ‘[a]t moments like this he cannot distinguish Pavel from himself. They are the same person; and that person is no more or less than a thought, Pavel thinking it in him, he thinking it in Pavel’ (*Master* 21). Dostoevsky declares, ‘Because I am he [Pavel]. Because he is I’ (53).

However, as he *becomes-Pavel*, Dostoevsky's *becoming* extends to something 'beyond man'. As he takes Pavel's diary, opens a new page and starts writing, Dostoevsky is no longer himself. He is young, youthful, and unstoppable: '[h]e is, in some sense, *beyond the human, beyond man*. There is nothing he is not capable of' ([*my emphasis*] 242). Dostoevsky experiences a moment of profound self-annihilation that he *becomes* far more than just Pavel as he crosses the very boundaries of humanity.

Curren tries to accept her destiny and embrace her dying body. She realises that she has one task and that is to *become-dead*: '[t]he first task laid on me, from today: to resist the craving to share my death. [...] and take my leave without bitterness. To embrace death as my own, mine alone' (*Age 6*). This task includes, according to Curren, '[l]etting go of myself, letting go of you, letting go of a house still alive with memories' (130). This task of *becoming* proves difficult for Curren, as it requires her to transcend her ego, the very thing that maintains her sense of self/life: '[y]ou have to become someone other than yourself. But who? Who is it that waits for me to step into his shadow? Where do I find him?' (119). In her *becoming-dead*, Curren's vulnerable ego *becomes* what she does not expect—Vercueil, the homeless, drunk man she welcomed into her life. As they are both listening to the television, Curren reflects, '[a]t this moment, I thought, I know how he feels as surely as if he and I were making love' (30); the physical act of love suggests the loss of boundaries between Vercueil and herself.¹⁰⁵

However, as they go through their different *becomings*, the protagonists' egos experience moments of anxiety. As he *becomes-woman*, David's ego panics. From his egoist perspective, David's whole existence is shaken and threatened, so he seeks to reinforce his identity and *remember who he is*. David thus resorts to another sexual encounter in order to restore his manhood and to re-establish the boundaries within between man/woman. David picks up a drunk prostitute on the street, and when they are done, the trembling that had been overtaking him stops; 'He feels drowsy, contented; also strangely protective. *So this is all it takes!*, he thinks. *How could I ever have forgotten*

¹⁰⁵ On another occasion, Curren describes her and Mr Vercueil's entanglement: 'Across the courtyard he squatted, smoking, listening. Two souls, his and mine, twined together, ravished. Like insects mating tail to tail, facing away from each other, still except for a pulsing of the thorax that might be mistaken for mere breathing. Stillness and ecstasy' (30).

it?’ (194). As she slowly *becomes-dead*, Curren also experiences a similar panic. She expresses her irritation when she learns that Bheki and his friend have slept in her car without her permission. She then reflects: ‘[w]hy was I behaving in this ridiculous fashion? Because *I* was irritated. Because *I* was tired of being used. Because it was my car they were sleeping in. *My* car, *my* house: *mine*; *I was not yet gone*.’ ([my emphasis] 58). The process of *becoming*, as evident in David and Curren, although dynamic, is not linear or progressive: multiple forces are at play and, consequently, the protagonists are *always becoming*. As Deleuze puts it, referring to the past and future, ‘the essence of becoming to move and to pull in both directions at once’ (*Logic* 1). However, QPist *becoming* is pulling in various directions not only temporal, as Deleuze’s statement suggests, but also involving different modes of *becoming*. Being essentially an emergent event, *becoming* fluctuates, collapses, and relapses.

To *become* fully undone, the characters need to obtain ‘an uncommitted non-position’ (Marais 82) or multiple and seemingly contradictory positions simultaneously. In other words, the characters need to exhibit *nonlocality*. Although the basic premise of quantum nonlocality is the ability of quantum entities to know about one another’s states even when separated by vast distances; in the context of *becoming*, however, to be *nonlocal* is to become *necessarily and unwillingly entangled* with what the character *does not want to become*. In other words, the characters need to demonstrate their entanglement even (and particularly) with what they refuse, reject, or disdain. Coetzee thus puts his protagonists through a demanding task; they ought to love what cannot be loved, sympathise with whom they cannot sympathise, and help those whom they do not believe deserve help. It is the ultimate lesson of entanglement—denying the self the ability to be separated even (and especially) from what it deems repulsive.

David, Dostoevsky, and Curren all find themselves at such a critical point. While Lucy finds it effortless to sympathise with Pollux, one of their attackers, David cannot do the same (*Disgrace* 209). He finds it impossible to forgive Pollux and his family and to continue to live with them in the same farm after what happened. David finds an even more difficult task ahead of him; not only is he required to accept Pollux and Petrous, but he is also expected to love the product of the assault—Lucy’s coming child, his grandchild. However, David finds it repulsive even to call it a ‘child’: ‘*the* child! Already

he is calling it *the child* when it is no more than a worm in his daughter's womb' (199). However, despite Lucy's decision to ask David to move out, David eventually returns to the country, rents a room in boarding-house to stay close to Lucy while helping Bev at the clinic until the baby is born: '[u]ntil the child is born, this will be his life' (212). David's decision suggests an undeclared acceptance of Lucy's child as his own. Eventually, David calls it, on a different occasion, 'a child of this earth' (216), thus acknowledging a wider connection that goes beyond his ego, and, willingly or not, connects him, the child, his daughter, and the attacker together—as *earth*. David is able for the first time to let go of his ideals and accept reality as it is despite not fitting with his ideas of Lucy, himself, and what he is leaving behind.

Dostoevsky faces a similar task. As he hears a chained dog wailing at night, he believes this is a call, a step closer to Pavel; it is precisely because 'it is not his son he must not go back to bed but must get dressed and answer the call'. The only way to *become* Pavel is by 'answer[ing] [...] what he does not expect' (*Master* 80). Furthermore, going with Sergei Nechaev to the same place where Pavel has died, Dostoevsky repeats the words to himself: '*I should not have come. But the nots are beginning to collapse, just as happened with Ivanov. I should not be here therefore I should be here. I will see nothing else therefore I will see all.*' (118). Dostoevsky finds himself in an even more critical situation, in which, to love Pavel, *he must first love Nechaev*, the suspected killer of his son, whom Dostoevsky describes as 'that unloved and unlovely young man' (61). Dostoevsky, nonetheless and therefore, *becomes-Nechaev*: 'he feels something stir in himself too: the beginnings of a fury that answers Pavel, answers Nechaev, answers all of them' (239). Letting go of his ego, Dostoevsky *becomes* both his son and his suspected murderer. He sees Pavel in Nechaev and Nechaev in Pavel, and he also sees them as intertwined parts of himself.

The same task lies ahead of Curren, as she ought to do precisely what she does not want to do. Curren is required to trust Vercueil, despite not giving her any reason to do so. Curren realises this; she writes: 'I trust Vercueil because I do not trust Vercueil. I love him because I do not love him. Because he is the weak reed I lean upon him' (*Age* 131). Furthermore, although she finds it easy to sympathise with Bheki, it is Bheki's friend to whom Curren needs to show sympathy. She describes him as 'not lovable' (136)

and, compared to the ‘bright’ Bekhi, he is he ‘was unthinking, inarticulate, unimaginative’ (134). She admits she finds it challenging to bring herself to love him. Curren is aware of the task ahead of her: ‘I must love, first of all, the unlovable. I must love, for instance, this child. Not bright little Bheki, but this one’ (136). While hiding in his room, Bheki’s friend is found and shot by the police. Curren mourns him and, through her mourning, suddenly *becomes-Bheki’s friend* in one of her visions: ‘[w]ithin this interval there is no time, though his heart beats time. I am here in my room in the night but I am also with him, all the time’ (176).

2.1.2. The True Nature of *Becoming*

While all the protagonists seem to have successfully experienced the loss of ‘I’ and achieved a certain degree of *becoming-other*, they, nonetheless, failed to grasp the essence of *becoming*. David, Curren, and Dostoevsky believe they ought to follow certain signs to reach what they call *salvation* or the ultimate goal of their existence. David wonders ‘[i]f he is being led’ (*Disgrace* 192) and believes he is judged by ‘the universe and its all-seeing eye’ (195). Dostoevsky, similarly, wonders if this is what he is ‘required’ to do or whether he ‘misunderstood from the beginning’ (*Master* 240). The quest they are involved in is evidently temporal, linear, and progressive, leading to what they expect to be a moment of revelation that ends their ontological struggles.

True *Becoming*, on the other hand, is anything *but* salvation. It is a tenseless, a-linguistic, emergent, and entangled event within the everlasting moment of the present.¹⁰⁶ As Deleuze and Guattari explain, *becoming* has no defined points where it begins or ends; it is always in the middle ‘a line of becoming has neither beginning nor end, departure nor arrival, origin nor destination’ (*Thousand* 293). *Becoming*, thus, is not a

¹⁰⁶ Deleuze (and following his critique, Bruns (604)) argues that *becoming* eludes the present. Deleuze writes, ‘[i]nsofar as it eludes the present, becoming does not tolerate the separation or the distinction of before and after, or of past and future. It pertains to the essence of becoming to move and to pull in both directions at once’ (*Logic* 3). However, I argue here, instead of *becoming* eluding the present, for *becoming* within the present—within the everlasting, continuous moment of the *Now*. Although both arguments may seem contradictory, I believe they are more or less the same—only proposed in different ways. However, I believe that arguing for an everlasting present is simpler and more direct than Deleuze’s argument for a more abstract, distant understanding of the non-temporality of *becoming*.

mission to be accomplished, a journey to be taken, or a goal to be achieved; it is a persistent event continuously happening in the *Now* regardless of the characters' (in)ability to recognise it. *Becoming* is devoid of judgments or morals; it is the bare nature of reality as it manifests itself in the present. The protagonists' seeking is doomed to failure because *becoming* is not a goal to be sought but an existing continuous event to be *realised*, for all beings, aware or not, are *becoming* at every point of their existence. As Bruns points out, the nomadic nature without determination (or, I shall add, destination) is essential to this event (704). Therefore, the loss of ego and the experience of *becoming-other* undergone by the protagonists is in fact *not* a new state to which they progress but an underlying reality that is being revealed to them.

David's longing to *become-woman*, Dostoevsky's longing to *become-Pavel*, and Curren's longing to *become-dead*, can thus only be read as metaphorical *becomings*. They are narrativistic manifestations of the intrinsic, ongoing state of *becoming*. Furthermore, *becoming-other* expresses an existential longing for a deep state of *becoming*, rather than a concern for the outcome of *becoming something/someone*. As Deleuze and Guattari put it, '[w]hat is real is the becoming itself, the block of becoming, not the supposedly fixed terms through which that which becomes passes' (*Thousand* 238). This *becoming* is not a specific longing to *become-something* but rather to *become*. It is a longing to go beyond all restricting identities, by letting go of ego to *become nothing, anything, and everything*. This understanding corresponds to Deleuze and Guattari's definition of *becoming* as taking place in 'a world of intensities' (*Kafka* 13). Bruns explains this definition, '[a]n intensity is something like a moving line without boundaries or points along the way, a pure difference without structure or definition—whence "all forms come undone."' (705).¹⁰⁷ As Alain Beaulieu puts it, the important aspect of *becoming-animal* is 'to unlearn physical and emotional habits in order to expand the world's experience' and discover new ways to look at ourselves, our bodies,

¹⁰⁷ It is worth noting that the humanist protagonists' *becomings* do not correspond to Deleuze and Guattari's idea of *becoming*. To Deleuze and Guattari, *becoming* is 'perfectly real' (*Thousand* 238); it has nothing to do with imagination. It is not an existential quest but rather an unexpected event: 'We can be thrown into a becoming by anything at all, by the most unexpected, most insignificant of things' (292). The humanist protagonists' endeavours to *become-other*, which sometimes take the form of vision or a dream, are not literal (as is the case with the *becomings* of the posthumanist figures demonstrated later in the discussion).

and the environment (86).

The totality of *becoming* is one of the foundational ideas in QP. Barad states, ‘[p]osthumanism doesn’t presume the separateness of any-"thing," let alone the alleged spatial, ontological, and epistemological distinction that sets humans apart’ (*Meeting* 136). This view explains why the protagonists’ logic, sense of time, and language slowly collapse as they gradually lose their distinctive sense of self and open up to *becoming*. Evidently, these qualities of *becoming* are expressed in the quantum world, such as interconnection, fluidity, entanglement, dynamism, and tenseless-ness. The state of *becoming*, therefore, is akin to *the quantum state*: intra-active, relational, contingent, and unfixed in one state/identity, thus encompassing all possibilities and simultaneously none. *Becoming, therefore, is the intrinsic state of uncertainty characterised by worlds of unactualised possibilities that underlies all becoming-something/someone in the same manner the wave function underlies the actualised possibilities in quantum measurement.*

In the essays, ‘The Dog Man: Becoming Animal in Coetzee's "Disgrace"’ and ‘"Like a Dog... like a Lamb": Becoming Sacrificial Animal in Kafka and Coetzee’, Tom Herron and Chris Danta, respectively, suggest that humans, being stripped of power and privilege and reduced to *bare life*, lose their humanity and *become-animals*. However, I argue that there is a significant difference between becoming-*animal* ‘antihumanist’ and *becoming-animal* ‘posthumanist’. While the former is concerned with denying Man by stressing its animality, the latter focuses on the state of the *transition* rather than the state of *arrival*. In his essay, Herron argues that David, throughout the narrative, is slowly becoming-*animal*. I contend differently; David’s *becoming-animal* is only one type of *becoming*, which leads to the conclusion that David is simply *becoming*—experiencing a continuing liminal state of nonidentity. As Deleuze and Guattari put it, ‘[b]ecoming produces nothing other than itself. We fall into a false alternative if we say that you either imitate or you are. What is real is the becoming itself’ (*Thousand* 238). The narrative does not present a ‘new’ David. The ending of the narrative, on the contrary, leaves David in a liminal state: the baby is not born, the opera is not finished, and nothing in David’s life seems to have resolved, leaving his identity in a continuous state of pending and non-arrival.

Similarly, in his essay, 'J.M. Coetzee's "Disgrace" and the Task of the Imagination', Mike Marais analyses David's transformation and argues that David has completed the task of imagination assigned to him by the author (77). However, if David were to complete his *becoming*, then his *becoming* necessarily ends/fails, because completion/ending inherently contradicts the true nature of *becoming* as an ongoing state of existence. Not only David, but all of Coetzee's protagonists never reach a revelation or resolution: they are trapped in a liminal state, forever stuck in the threshold and, in a sense, *becoming* the threshold.

In his book, *Wholeness and the Implicate Order* (1980), Bohm introduces the concept of *holomovement* (190), which combines two of his central concepts on the world as '*Undivided Wholeness in Flowing Movement*' (14), and what he calls 'the universal flux' (12), which essentially translates into the view of the universe as a dynamic entangled *becoming*. Curren imagines this *holomovement*, the totality of *becoming*, entanglement of existence, absurdity of boundaries, and impossibility of separation: 'blood is one: a pool of life dispersed among us in separate existences, but belonging by nature together: lent, not given: held in common, in trust, to be preserved: seeming to live in us, but only seeming, for in truth we live in it. A sea of blood, come back together' (*Age* 64). The image Curren provides of the underlying nature of existence, 'sea of blood', denotes being in a constant state of movement, (sea), and sharing the quality of life that underlies all living entities on the planet, (blood). However, similarly, only deeper and more encompassing than blood is the quantum view of energy and wavefunction, of which living entities are only a fraction. Instead of perceiving the world from the limited viewpoint of human experience or an equally limited viewpoint of the 'living being' experience as Curren does, QP offers a more encompassing view which not only humans and animals share but also non-living entities, including the universe. This ontological view re-situates the human subject, not as *being-in-the-world* but rather *being-of-the-world* (Barad, *Meeting* 160).

Entanglement is crucial to *becoming*. Curren realises this deep entanglement as she states that her love for her daughter is entangled with her love for the unlovable—Bheki's friend: '[w]hen one loves, one loves more. The more I love you, the more I ought

to love him. The less I love him, the less, perhaps, I love you' (*Age* 137). Also, while David was sitting among the audience watching Melanie perform her play, he had an abrupt vision characterised by intense feelings of entanglement with all the women with whom he had crossed paths:

[i]n a sudden and soundless eruption, as if he has fallen into a waking dream, a stream of images pours down, images of women he has known on two continents, some from so far away in time that he barely recognizes them. Like leaves blown on the wind, pell-mell, they pass before him. *A fair field full of folk*: hundreds of lives all tangled with his. He holds his breath, willing the vision to continue.

What has happened to them, all those women, all those lives? Are there moments when they too, or some of them, are plunged without warning into the ocean of memory? The German girl: is it possible that at this very instant she is remembering the man who picked her up on the roadside in Africa and spent the night with her?

Enriched: that was the word the newspapers picked on to jeer at. A stupid word to let slip, under the circumstances, yet now, at this moment, he would stand by it. By Melanie, by the girl in Touws River; by Rosalind, Bev Shaw, Soraya: by each of them he was enriched, and by the others too, even the least of them, even the failures. Like a flower blooming in his breast, his heart floods with thankfulness (*Disgrace* 192).

David's vision of the women who became or are part of his life imagines the extent of entanglement between his life and theirs. Every woman who has been part of David's life has contributed to his *becoming*. David carries these women not only as memories but also as possibilities that help determine the nature and direction of his *becoming*. He realises the impossibility of distancing himself from all the women he knew and knows; their lives are so entangled it is impossible to view one without the rest. He has been impacted as much as he impacted the lives of women he encountered. He is thus both the *subject and object* of all of these intra-actions.

Deleuze and Guattari's insights into *becoming-woman* on a molecular level illuminate an important aspect of David's *becoming*. They propose that '[b]ecoming-woman is not imitating this entity or even transforming oneself into it' (*Thousand* 275). On the contrary, they argue, 'the woman as a molar entity *has to become-woman* in order that the man also becomes- or can become-woman.' (275-6). In other words, David *becoming-woman*, if we consider it as a molecular rather than a molar identity, is not different from, for example, Lucy, Bev, or Melanie's *becoming-woman*, for they are constantly *becoming* that with which they identify. This understanding is more expressive of *becoming: the entity is always becoming whatever it is*. This view of *becoming* is inherently anti-essentialist. Braidotti puts this idea of *anti-essentialist becoming* differently as she writes, '[t]he body, or the embodiment, of the subject is to be understood as neither a biological nor a sociological category but rather as a point of overlapping between the physical, the symbolic, and the sociological' (*Nomadic* 4). This anti-essentialist *becoming* further emphasises the quantum impossibility of pre-existing independent values prior to measurement or, in the posthumanist context, pre-existing identities prior to *becoming*.

To Coetzee, the goal of *becoming* is ultimately ethical: to realise the universality of pain and vulnerability that is shared among species, and consequently, to ~~become more~~ *sympathetic towards*¹⁰⁸ *others*. This goal is particularly evident in Coetzee/Costello's speech, 'The Lives of Animals'. As Costello argues, the horror of the death camps arises from the inability of the torturers to imagine themselves as the victims—or to *become-their-victims*:

[t]hey said, "It is they in those cattle cars rattling past." They did not say, "How would it be if it were I in that cattle car?" They did not say, "It is I who am in that cattle car." They said, "It must be the dead who are being burned today, making the air stink and falling in ash on my cabbages." They did not say, "How would it be if I were burning?" They did not say,

¹⁰⁸ The words are *sous rature*. Before the erasure, the phrase refers to the traditional postcolonial, feminist, ecological, and animal critique of Coetzee's work in its approach otherness; however, the phrase *sous rature* extends this critique by offering a posthumanist stance on otherness through *becoming-others* rather than merely becoming (sympathetic towards) others.

"I am burning, I am falling in ash." (Costello 79)

To sum up the discussion so far, Coetzee's humanist protagonists go through four main stages: (1) they start with a crisis that causes them to break from society, entering a state of liminality. (2) They fail to perform rituals of acceptance, being, therefore, stuck in liminality. (3) They experience extreme physical pain that undoes the ego and paths their way to *becoming-other*. (4) Their *becoming* is metaphorical, expressing a profound ontological longing for true *becoming*.

2.2. *The Second Paradigm: Posthumanist Figures*

As I proposed at the beginning of this chapter, Coetzee's characters (can be seen to) fall into two categories: the humanist and the posthumanist. The posthumanist characters are composed differently, and arguably oppositionally to the humanist ones. I will be focussing on three of these figures: Friday in *Foe*, K in *Life and Times of Michael K*, and the barbarian girl in *Waiting for the Barbarians*.¹⁰⁹ These characters share many similarities; first, they are not presented with their actual names. Friday is presented as being not the real name of the character but a name that has been given to him by Cruso. When arriving at the camp, Michael's name is consistently misspelt (Michaels) despite his attempt to correct them (131). The letter *K*, although apparently alluding to Kafka's protagonist, K, in his novel *The Trial*, is, nevertheless, never definitively established as such. The barbarian girl is not given a name; she is only referred to as 'the girl'.

Also, these characters share some form of physical deformity; Friday's tongue is mutilated; K is born with a harelip; the girl is tortured and has her ankles broken and her eyes partially blinded. Furthermore, these figures are from the first liminal beings living on the edge of society; they seem to come from nowhere: with no clear origins or history. Also, they appear to be a-linguistic; language represents a challenge to them, in varying degrees. Silence, instead, is their main mode of *becoming*. They are the embodiment of *becoming of the world*.¹¹⁰ They also have minimal awareness of time, the past, and future; instead, they engage fully in the present moment. Remarkably, they all go through the same plot: they meet the benevolent, white, powerful *humanist* figure who attempts to 'help' them by insisting on decoding/writing their story and paving their way into society. However, and despite the terrible situation they find themselves in, they refuse to give up their liminality. In fact, protecting their liminal status seems to be their ultimate goal—and the rewarding ending of the narratives.

¹⁰⁹ The analysis will seemingly tend to focus on K, not because he is more 'posthumanist' than the others, but because out of the three characters, he is the only character whose inner thoughts and consciousness are narrated.

¹¹⁰ Tremain interestingly notes that these figures seem 'susceptible to suffering but not to shame' (608), which further emphasises their embodiment as opposed to the humanist characters who, as the earlier discussion demonstrates, become anxious not about the pain they go through but the shame that accompanies it.

Contrary to the humanist's, the posthumanist body has different configurations. It is not a manifestation of normality and perfection but an embodiment of difference and abnormality. All the three protagonists suffer from physical injuries and/or deformed bodies. Friday seemingly has his tongue mutilated; it is never confirmed whether it was slave traders, Cruso, or his own people, that caused his mutilation. K was born with a harelip; his mouth never completely healed. Also, towards the end of the narrative, K's body becomes incredibly thin and ill. The girl's ankles, after getting broken and not properly treated, take on an odd shape; she is also partially blinded from being tortured during the police investigations on the barbarians. Because of these deformities, the characters elicit a great deal of repulsion in those around them. After Cruso tells her about Friday's mutilation, Susan becomes revolted by Friday; she flinches and holds her breath whenever he is near and wipes the utensils Friday uses (*Foe* 24). K's harelip, which 'curled like a snail's foot' (*K* 3), made his mother shiver as she saw it after his birth, and seems to cause discomfort to those who meet him for the first time. Similarly, and on several occasions, the magistrate expresses deep revulsion towards the girl, calling her 'ugly ugly' (*Waiting* 64), describing her body as 'incomplete' (50/58).

Furthermore, the sexuality of these characters is undetermined. Susan implies that Friday is sexually mutilated. She suggests that his tongue mutilation stands for 'a more atrocious mutilation' (*Foe* 119). She presumes that he is 'very likely a virgin' and possibly 'unacquainted with the parts of generation' (80). Just like Friday, K is sexually inactive; he briefly describes himself as being 'never a great one for the girls' (*K* 130). In his description of K, the doctor mentions that K's sexuality is 'omitted' (161). On the other hand, the barbarian girl has had several sexual experiences; she was raped by soldiers, and she has sex with the magistrate. However, the magistrate feels uneasiness about her womanhood, a strange and an indefinable desire that he cannot pin down. The magistrate cannot decide whether or not he is sexually attracted to the girl; 'of this one [the girl] there is nothing I can say with certainty. There is no link I can define between her womanhood and my desire' (*Waiting* 46). The magistrate's conflicted feelings towards the girl range from fascination to revulsion: 'I cannot imagine what ever drew me to that alien body' (45). It appears that Susan, the doctor, and the magistrate are uncertain about, or incapable of determining, the sexuality of these characters. Friday, K,

and the girl are ‘cyborged’¹¹¹ in the sense that they do not clearly fit any sexual or gender stereotype, making it impossible for the other characters to easily identify with, and respond to, their sexuality.

Moreover, these characters are characterised by a certain degree of obscurity and indistinguishability. Turner notes that the liminal being (or *liminal becoming*)¹¹² is ‘structurally, if not physically, ‘invisible’’ (‘Betwixt’ 6). Since they exist outside the social structure, with no social status, identity, or significance to the system, the *liminal becomings* lose their distinguishability and become invisible. This applies to the characters who are portrayed as hazy, indistinct, and obscure. Other characters seem to remember little about the subject’s faces and tend to forget about their physical presence. Susan’s describes her first impression of Friday: ‘I had found Friday a shadowy creature’ (*Foe* 24). She even unconsciously denies Friday’s existence altogether when she states, ‘I am alone, with Friday’ (113). The doctor describes K not as a human but a creature in the shape of an indistinguishable man: ‘it always seemed to me that someone had scuffled together a handful of dust, spat on it, and patted it into the shape of a rudimentary man’ (*K* 161).

Not only are the characters indistinguishable but also featureless; they seem to have no distinguishable facial features. The magistrate struggles to remember the face of the girl whom he has lived with closely for an extended period: ‘I realize that if I took a pencil to sketch her face I would not know where to start. Is she truly so featureless? With an effort I concentrate my mind on her. I see a figure in a cap and heavy shapeless coat standing unsteadily, bent forward, straddle-legged, supporting itself on sticks’ (50). The posthuman discards the face as a product of humanity exclusive to humans. The production of the face, according to Deleuze and Guattari, takes place when the head is

¹¹¹ It is important to distinguish between Coetzee’s characters and Haraway’s cyborg in terms of their sexuality. While Coetzee blurs gender boundaries of his posthumanist characters by denying them sexual experiences/preferences/inclinations, thus rendering them, more or less, asexual, Haraway’s cyborg, on the other hand, is a post-gender body that ‘has no truck with bisexuality, pre-oedipal symbiosis, unalienated labour, or other seductions to organic wholeness through a final appropriation of all the powers of the parts into a higher unity’ (‘Manifesto’ 150). In other words, Haraway’s cyborg is capable of different forms of sexual gratification and open to sexual experimentation.

¹¹² I shall use the term *liminal becoming* from this point forward as a replacement for Turner’s liminal subject or liminal being, to emphasise the QP features of their liminality, such as anti-essentialism, entanglement, and dynamism.

disassociated from the body. They explain,

‘[t]he face is produced only when the head ceases to be a part of the body, when it ceases to be coded by the body, when it ceases to have a multidimensional, polyvocal corporeal code—when the body, head included, has been decoded and has to be *overcoded* by something we shall call the Face’ (*Thousand* 170).

The idea of the face, hence, is humanist par excellence. *Posthuman Subjects have no faces but heads*. Deleuze and Guattari argue against the universality of the face and demonstrate its deep association with the White Man: ‘[t]he face is not a universal. It is not even that of the white man; it is White Man himself, with his broad white cheeks and the black hole of his eyes. The face is Christ. The face is the typical European, what Ezra Pound called the average sensual man, in short, the ordinary everyday Erotomaniac’ (176). The featurelessness and invisibility of the subjects negate the subjectivity and individuality of the human face. To *become* posthuman, dismantling the face is inevitable; as Deleuze and Guattari put it, ‘if human beings have a destiny, it is rather to escape the face, to dismantle the face and facializations’ (171). The objectivity and non-individuality of the head are what characterises the posthuman body. In the case of Coetzee’s subjects, their indistinguishability, shadowiness, and invisibility translate into the loss of their humanist faces.

Along with their physical deformity, a-sexuality, and facelessness, a significant characteristic of the posthuman is its *corelessness* or its *anti-essentialism*. As Hayles describes it, the posthuman entity is subjected to continuous ‘construction and reconstruction’ to the point where there is no ‘natural self’ (*Posthuman* 3). Due to the lack of core self, everything becomes contingent, emergent, relevant, and possible; it is impossible to definitively determine the fluid nature of the posthuman subject. The doctor mentions that he is unable to pin K down as he continuously slips away from all definitions (166). This absence of essence/self, or, to put it in quantum terms, the impossibility of pre-existing, inherent values of objects, is reflected in K’s thoughts: ‘[d]o I believe in helping people? he wondered. He might help people, he might not help them, he did not know beforehand, anything was possible. He did not seem to have a belief, or did not seem to have a belief regarding help’ (*K* 48). The doctor attempts to convince

Noël, the official in charge of the camp, that K has no core self, no essence to be found: ‘[t]here is *nothing* there, I’m telling you, and if you handed him over to the police they would come to the same conclusion: there is nothing there’ (142). In a similar manner, neither Friday nor the girl exhibits any prejudices, beliefs, or views on the world; to the reader, they seem to think *nothing*. When the magistrate asks the girl how she felt about those who raped her, she lies silent for a long time, after which she says ‘I am tired of talking’ (44). Throughout the narrative, she did not seem to have or want to have any thought or judgments about what happened.

Moreover, the characters show no development or change over the course of the narrative. Unlike Coetzee’s humanist subject, the posthumanist characters remain consistent throughout the narrative. They experience no progression, regression, revelation, redemption, or enlightenment. In his commentary on Turner’s ideas of liminality in art, Charles La Shure explains that liminal characters’ personalities never change, develop, or correspond to the progression of the narrative. While modern narrative often deals with how the outside forces affect the characters and incite their development, the liminal figures, on the other hand, propose a different narrative that demonstrates the ways in which they interact with the world (La Shure)—or, to use a QPist expression, *intra-act within and of the world*. The lack of progression and development of the characters might also be viewed in terms of the absence of linearity and temporality from their *becomings*. The characters exist in a world of everlasting *becoming* to the point of what it appears to be one of eternal stillness.

Clearly, Coetzee’s posthumanist ‘heroes’ are, therefore, anything but heroes—and they do not try to be so. Characterised by their simplicity, idleness, and deformed/injured bodies, these ‘heroic’ subjects are the embodiment of the mockery of the idea of heroism. They represent the polar opposite of the ideas of singularity, heroism, and exceptionalism of the human subject put forward by Enlightenment. Injured, deformed, naïve, and repulsive, they are the perfect posthumanist creatures. As Myra J. Seaman explains, posthumanism intrinsically refuses universalism and expresses itself through ‘mutation, variation, and becoming’ (247). Fascinated by K, the doctor declares that he should be made a hero: ‘[w]e ought to value you and celebrate you, we ought to put your clothes on a maquette in a museum, your clothes and your packet of pumpkin seeds too’ (*K* 152).

However, the doctor eventually realises that K cannot be made a hero: he does not represent or stand for anything. The doctor says, addressing K: '[y]ou were not a hero and did not pretend to be, not even a hero of fasting. In fact you did not resist at all' (163). The doctor finally realises that K's 'hunger strike' was not a protest, a statement, or an expression of an ideal, but rather a genuine loss of appetite due to his physical longing for his freedom (164). K, Friday, and the girl all practice their *becomings* without thought or resistance. There is no idealism, moralism, or heroism that they 'stand for'. They refuse to be made anything, despite the other characters' *as well as* the readers' continuous attempts to make them so.¹¹³

2.2.1. Liminality and Nomadism

The definition or the conditions of liminality and the liminal entities, as Turner notes, are 'necessarily ambiguous' because they define the state or the beings that slip through all the definitions ('Liminality' 59). However, liminality is a fundamental characteristic of the posthuman. *Liminal becomings* are defined as in-between creatures, crossing all the boundaries and conventions and living in a state of uncertainty/non-arrival. Turner defines the liminal being (*becoming*) as 'neither one thing nor another, or maybe both; or neither here nor there; or may even be nowhere (in terms of any recognized cultural typography), and are at the very least "betwixt and between" all the recognized fixed points in space-time of structural classification ('Betwixt' 7).¹¹⁴ *Liminal becomings* have no social status, rank, identity, or any other social identification. They can be 'disguised as monsters, wear only a strip of clothing, or even go naked' to demonstrate their liminal status, or no-status in society (59).

In Turner's view of liminality, the human subject is stripped of any cultural or social indicators that connect it with other humans. However, in the QPist liminality I

¹¹³ As I shall come to argue, despite the subjects' consistent refusal to be turned into heroes, signs, and figures of speech, most critics inflict on these characters as many metaphors as they can, turning their bodies into metaphors of colonialism, sexism, South African history, and apartheid, stripping their bodies from the only thing that makes them what they are—their non-dual, non-metaphorical embodiments.

¹¹⁴ Turner's view of the liminal subject is similar to Braidotti's earlier description of the formation of a posthumanist subject which happens in the spaces that flow between binaries: 'nature/technology; male/female; black/white; local/global; present/past' (164).

propose here¹¹⁵, the entity is stripped of anything that links it not only to humans but also to all other culturally-classified beings, including animals. The three characters are creatures in-between—neither animals nor humans, lacking the qualities that can make them fully either. Friday is repeatedly called a cannibal—a creature that transgresses the boundaries between the human and the animal. Susan confesses that she regards Friday less than she would regard a dog or a dumb beast (*Foe* 32). Similarly, the girl is considered a barbarian—another word that exists in the blurry space between humanity and animality.

As Turner puts it, liminality is ‘a realm of pure possibility’; it is the ideal space where new configurations and relations can occur (‘Betwixt’ 7). This view of liminality resonates with the quantum notion of wave function as a realm of pure unactualised possibilities where any pattern or configuration can emerge. As Turner notes, this realm of pure possibility is the negation to all positive structures, and in a sense, it is paradoxically *the source of them*. By the same token, the posthuman is the source of all that it is not, including humans, animals, and things, and all the hybrids that arise from their entanglement.

Turner notes that the *liminal becomings* are considered polluting and dangerous to those within the structure (‘Betwixt’ 7). Accordingly, in Coetzee’s narratives, the three characters are hunted, tracked down, and constrained, to bring them back into the system. With the help of the sailors, Friday is forced to leave the island against his will and is taken with Susan to England. K is captured more than once and is led to the camp where the homeless, the poor, and the ill are confined. The girl, her father, and others are captivated, investigated, and tortured for the purpose of tracking and eliminating ‘the barbarians’. Despite their evident harmlessness and defenselessness, the figures are, nevertheless, treated as a threat to the structure, which needs to be either reassimilated or eliminated.

It is important, however, as Turner advises, to distinguish between liminality and

¹¹⁵ My view of liminality is different from Turner’s. Turner introduces liminality in an anthropological context as a term deeply rooted in ritual societies as part of Arnold van Gennep’s model of the rites of passage mentioned earlier in the chapter. Turner, for example, mentions that the liminal beings are characterised by their submissiveness and silence (‘Liminality’ 103). However, my understanding of posthumanist liminality does not entail submissiveness but rather a freedom from the hierarchal structure and its connotations.

marginality.¹¹⁶ One of the most significant differences, I contend, between the two terms is that while liminality is a choice based on an ontological recognition of the freedom of *becoming*, marginality is a forced cultural state of helpless confinement and degradation. The residents in the camp to which K was taken did not choose to be outcasts; they, nonetheless, accepted their marginality and their new function within the social structure. On the other hand, K firmly refuses the life of the camp and continues to fight marginality while seeking to restore his liminality. He refuses to be identified as part of any social structure, even as an outcast in an antisocial, parallel structure: he ‘was not a prisoner or a castaway’ (*K* 115). Similarly, Friday’s refusal to leave the island and his inability to cope in England, and the girl’s refusal to stay under the magistrate’s care (despite his good treatment), prove that these characters *choose to become liminal*, rather than the system *choosing them to be marginal*.

Furthermore, Turner notes that what distinguishes liminality from marginality is that while marginality does not promise resolution, liminality does.¹¹⁷ If liminality no longer becomes ‘a midpoint of transition’ (*Dramas* 261), then it could easily be considered a type of marginality. To put it differently, and more relevantly to the posthumanist context, while marginality is a fixed state of arrival, marked on the edge of the social structure, liminality, on the other hand, is a perpetual dynamic state of *non-arrival*, crossing the boundaries, continuously transitioning, and forever *becoming* beyond any possible structure.

Turner distinguishes between three social anti-structures (*communitas*) in spatial terms: marginality as a space on the edge of the structure, and inferiority, a space beneath the structure, and liminality as a state of in-between structures (‘Liminality’ 128). While Turner considers liminality as an anti-structure or *communitas*, I contend that liminality is a non-structure. The difference between anti-structure and non-structure is closely related to the difference between antihuman and posthuman. While the term anti-structure entails opposition, negation, and antagonism to structure, non-structure, on the other hand,

¹¹⁶ I offer a somewhat different comparison between liminality and marginality than Turner’s. In Turner’s anthropological context, the ultimate difference between the two is the presence/absence of ritual obligation.

¹¹⁷ Although Turner argues that liminality is a temporary status, the transitional phase can nevertheless be permanent. Turner provides an example of Christians as liminal figures because they believe their residence in this world is temporary (‘Liminality’ 107).

entails *an absence of structure*, and hence a move beyond all oppositional binaries.

The camp that K is sent to, which embraces all the unwanted, the poor, and the homeless, takes place at the edge of the town. As an anti-structure, it is carefully planned and placed by the Empire ‘out of sight of the town on a road that led nowhere else’ (*K* 94).¹¹⁸ The camp thus functions as a place of marginality—not liminality. It is for this reason that K, despite the temptations offered at the camp compared to what awaits him outside, refuses to stay: ‘[w]hy do you want to run away? You've got a home here, you've got food, you've got a bed. You've got a job’ (85). Whether being inside the camp or the town, K feels his freedom is equally jeopardised. As he contemplates the life in the town and the life in the camp, K could no longer tell ‘which was host and which parasite, camp or town’ (116), as both spaces represent two opposites of the same social system he tries hard to avoid.

On the other hand, a liminal space is an unidentified space, without clear borders or edges. K’s doctor describes the possible existence of these liminal spaces: ‘there are areas that lie between the camps and belong to no camp, not even to the catchment areas of the camps—certain mountaintops, for example, certain islands in the middle of swamps, certain arid strips where human beings may not find it worth their while to live’ (162). This liminal space the doctor describes is characterised by its borderlessness, unidentifiability, fluidity, and universality. It is any space, and all spaces, *sans* the social and political structures. The liminal space K chooses is a deserted farm, where he plants and consumes the food he grows. Friday’s liminal space is the island that is beyond the reach of humans. Between the mountains is the liminal space to which the barbarian girl and her folks choose to flee.

In their liminality, the characters exist beyond not only the social but also the temporal structures. When the temporal structure is deconstructed, time is experienced in its perpetual form. On the island, where Friday lives, time seems cyclical; Susan notes that they never lacked time (*Foe* 17), and that the ‘drab bushes’ that live on the island ‘never flowered and never shed their leaves’ (7). None of the characters on the island know what time, month, or year it is. Similarly, K exhibits the same indifference about

¹¹⁸ It is evident that Coetzee had Foucault’s idea on disciplinary institutions in mind (*Discipline and Punish* 1975). However, the concern in the discussion is not the structure or anti-structure but rather the absence of structure in the liminal space.

time. Time on the farm becomes less relevant than it ever was. The narrator explains this in different occasions; he states that K exists ‘in a pocket outside time’ (K 60), ‘living beyond the reach of calendar and clock’ (116); [h]e had kept no tally of the days nor recorded the changes of the moon’ (115); ‘[s]ometimes he would emerge into wakefulness unsure whether he had slept a day or a week or a month’ (119). To Friday and K who manage to live in uninhabited and deserted spaces, with no or minimum signs of progression and linearity, time structures seem to collapse, revealing a more unified sense of time—an everlasting and perpetual present.

Closely related to liminality is the term nomadism. Nomadism entails movement, mobility, and the lack of origin and permanent abode. In the posthumanist context, nomadism is a state of constant *becoming*, non-arrival, and a refusal of any fixed state/identity.¹¹⁹ Coetzee’s characters are the ultimate nomads: no home, story, history, origin, trace, or legacy with which they identify. The doctor comments on K’s situation: ‘[n]o papers, no money; no family, no friends, no sense of who you are. The obscurest of the obscure, so obscure as to be a prodigy’ (K 142). The doctor’s description equally applies to Friday and the girl who have no proof of their identity or what might indicate their origins. As nomads, the three experience life in the immediacy of the present with no regard to the past or future.

However, these characters share one value they never compromise—maintaining their freedom. It is not a political or a specific type of freedom they are after but rather the most instinctive type of freedom—physical freedom that is shared by all living entities. This intrinsic, nomadic longing is translated into the characters’ actions. When the rescue ship arrives at the island, Susan pleads that the sailors ‘rescue’ Friday against his will, for, as Susan tells the ship-master, nothing will persuade him to yield himself up

¹¹⁹ Braidotti’s description of the nomad shares many characteristics with the posthuman subject proposed here as well as Haraway’s cyborg. She defines it as: [A] postmetaphysical, intensive, multiple entity, functioning in a net of interconnections. S/he cannot be reduced to a linear, teleological form of subjectivity but is rather the site of multiple connections. S/he is embodied, and therefore cultural; as an artifact, s/he is a technological compound of human and post-human; s/he is complex, endowed with multiple capacities for interconnectedness in the impersonal mode. S/he is a cyborg, but equipped also with an unconscious. She is Irigaray’s “mucous,” or “divine,” but endowed with a multicultural perspective. S/he is abstract and perfectly, operationally real (*Nomadic* 36).

(*Foe* 39). Friday frequently falls into what Cruso describes as ‘mopes’, where he leaves his tools and disappears into the island, only to come back the day after as if nothing had happened. In England, Susan mentions that Friday stands at the door ‘longing to escape’, ignoring her calls to him (78). Despite the temptations and warnings, K’s desire to escape seems to be the only thing that preoccupies his mind. He jeopardises everything, including his life and well being, to escape the camp and the hospital. Despite the good treatment she receives under the magistrate’s care, when he asks her to stay with him, the girl firmly refuses to go back to ‘that place’ (78). The characters refuse all attempts of domestication and, despite the long periods in confinements, never give up trying to restore their freedom.

To further stress their posthumanist nomadism, Coetzee blurs the origin(s) of his characters, replacing historicity with contingency and emergence. All the characters seem to have no clear origins or a definitive history with which their story begins. Friday’s story is a mystery: Cruso, who claims to have ‘found’ Friday, recounts two versions of Friday’s story; the first is that he was a savage among cannibals; the second is that Friday was a slave whom Cruso managed to save/capture/steal from some slave traders. Despite her attempts, Susan never discovers the real history of Friday. Once they arrive in England, Susan puts in a great effort to send Friday back to his ‘homeland’ (*Foe* 107) despite not knowing what or where that is. Susan’s continuous attempts to take Friday back to his alleged homeland is one of her means to force a beginning or a historical point from which the story of Friday begins. The girl, who ‘belongs’ to the barbarians, does not have clear origins either; the barbarians become more of a legend among the soldiers and the town’s people, who have many stories to tell of them despite not actually having seen them. The girl remains a mystery to the magistrate and to the reader who fails to learn anything about her history. Although as readers we get the privilege of tracing his story before he meets the camp doctor, K remains an enigmatic being to the baffled doctor who seeks every means but nonetheless fails to know K’s story.

Furthermore, not only do these characters lack history and origin but they also lack any legacy, as if they *wish to be forgotten*. As previously demonstrated earlier in this chapter, the humanist characters are preoccupied with the idea of *leaving behind*, as a

way for their ego to continue when their ‘bodies’ die. On the contrary, the posthumanist characters realise the futility of such an idea within the cosmic context. K’s insights on the dynamics of the universe demonstrate not only the futility but also the impossibility of *leaving behind*: ‘[e]very grain of this earth will be washed clean by the rain, he told himself, and dried by the sun and scoured by the wind, before the seasons turn again. There will be not a grain left bearing my marks’ (K 124). Friday, K, and the girl seem to leave no trace behind them. Even more so, they deliberately attempt to be trackless. For instance, K thinks that ‘[t]he worst mistake . . . would be to try to found a new house, a rival line, on his small beginnings out at the dam. Even his tools should be of wood and leather and gut, materials the insects would eat when one day he no longer needed them’ (104). Unlike the human subject, whose solid existence leaves marks everywhere, the posthuman, on the other hand, is lighter being, almost without a trace. The posthuman is merely a *speck*: ‘[h]e thought of himself not as something heavy that left tracks behind it, but if anything as a speck upon the surface of an earth’ (97).

Moreover, for Coetzee’s humanist protagonists, parenthood exemplifies their ultimate idea of *leaving behind*. While David, Curren, and Dostoevsky contemplate their parenthood with contentment, K, on the other hand, is thankful for his childlessness: ‘[h]ow fortunate that I have no children, he thought: how fortunate that I have no desire to father’ (104). None of the three characters expresses any desire to leave a legacy, a story, an offspring, or anything that might extend their presence beyond their bodies; in fact, their bodies constitute their only presence/story/legacy.

Moreover, and unlike the humanist protagonists who seem concerned with the continuation of their egos, the posthumanist figures are interested in another type of continuity after death—one that views death as a renewal of material form: ‘dying does not settle the matter but is the essential, preliminary step toward renewal, albeit in a changed form’ (Grobler et al. 3). This view of death as a way for the material to continue to exist in a ‘different form’ requires a rather egoless and objective understanding of the materiality of life and death. We can sense this deep realisation of the posthumanist continuity in K’s answer to the doctor when he asks him where his mother was (who was dead and whose ashes K has buried in the ground): ‘[s]he makes the plants grow’ (130).

This posthumanist new materialist view of death as changing form offers significant implications that destabilise the boundaries between life and death.¹²⁰

However, and according to Braidotti, the nomadic subject is a mythical creature—it does not actually exist. Braidotti explains that the nomadic subject is a ‘political fiction’ that serves a particular philosophical function; it constitutes ‘a move against the settled and conventional nature of theoretical and especially philosophical thinking’ (*Nomadic 4*)¹²¹. As if echoing Braidotti’s argument on the impossibility of the universal nomadic subject, the doctor addresses K:

[d]id you think you were a spirit invisible, a visitor on our planet, a creature beyond the reach of the laws of nations? Well, the laws of nations have you in their grip now: they have pinned you down in a bed beneath the grandstand of the old Kenilworth racecourse, they will grind you in the dirt if necessary. The laws are made of iron, Michaels, I hope you are learning that. No matter how thin you make yourself, they will not relax. There is no home left for universal souls, except perhaps in Antarctica or on the high seas (*K 151*).

However, despite Braidotti’s argument, Coetzee refuses to give up the idea of the possibility of the nomadic subject as the narratives eventually end by siding with those figures. Coetzee grants his posthumanist, liminal, and nomadic *becomings* a brighter ending than their humanist counterparts; towards the end of their narratives, all three figures manage to restore their nomadism and return to their liminality. K succeeds in escaping the hospital and the camp and going back to live in the wild; the barbarian girl disappears with her people into the mountains and never comes back; Friday, in his

¹²⁰ Braidotti offers political insight on this destabilisation of these boundaries in *The Posthuman* (2013).

¹²¹ Braidotti’s use of nomadism in the posthumanist context, inspired by the literal sense of the word, refers to ‘the kind of critical consciousness that resists settling into socially coded modes of thought and behavior’. Nomadism, in Braidotti’s view, does not necessarily entail world travelling; according to her, it is a ‘performative metaphor’; she continues, ‘It is the subversion of set conventions that defines the nomadic state, not the literal act of traveling’ (*Nomadic 5*). Evidently, Braidotti’s view is different from Coetzee’s as well as my interpretation of the posthumanist nomadism that involves both physical and psychological uncertainty (body/mind non-duality). For example, the nomadic subject in Coetzee’s narrative equally expresses the absence of origin *as well as* the belief or the need for one.

equivocal ending, goes into the water deep in the shipwreck into a liminal space where ‘bodies are their own signs’ (157).

2.2.2. Silence and Language

The existence of the posthuman is expressed in silence rather than language. Unlike human speech, silence is shared among all types of existence. The universe itself swims in a deep, dark, and seemingly infinite silence; it is the *default language* of matter. Speech, being contingent, temporary, soon fades and disappears into silence. Also, unlike language, silence entertains unactualised possibilities: it is a profound liberation from what speech inevitably entails—boundaries. Silence thus becomes the state of simultaneously *saying nothing and everything*. The posthuman subject can exist without an existential need for words. Between the embodied and the figurative world, the posthuman is biased towards materiality and embodiment; its physical presence is not compromised by its linguistic representation; in fact, *its physical presence is its only representation*. Through their silence, these subjects embody the idea of performativity in posthumanism, which, according to Barad, is ‘a contestation of the unexamined habits of mind that grant language and other forms of representation more power in determining our ontologies than they deserve’ (*Meeting* 133). In other words, through their silence, what these characters seem to do is undermine the primacy of language as a condition of existence.

On the contrary to the humanist protagonists who are portrayed as linguistically superior (writers and lecturers), the posthumanist figures are predominantly silent. Their inner consciousness is either inaccessible (Friday and the girl) or simplistic (K). Speech represents, in varying degrees, a challenge to them; it is either absent (Friday) or very concise (K and the girl). What Coetzee seems to do by creating these two sets of characters is to showcase the vast contrast between silence and speech as two distinctive modes of being and *becoming*.

However, as I shall come on to argue, posthumanist silence is not merely an absence of speech as the binary might suggest; rather, it is a much more profound and independent mode of existence. The silence of these subjects is a provocative silence by

which other characters are agitated. Failing to understand their existential and instinctive silence, the humanist characters step in to force them to speak and, when they fail, eventually resort to claiming/writing their stories. Friday, the barbarian girl, and K, all experience a strikingly similar situation where their humanist antagonists attempt various means to break their silence and articulate their stories. The three subjects, however, remain armed with their silence, refusing any attempt to be forced into the figurative world.

Since Friday has no command over language, Susan believes that he must not have any appreciation of, or experience with, abstract notions. She wonders how Friday could understand words such as ‘freedom’ when he hardly recognises his own name (*Foe* 149). Falsely presuming that the signifier precedes the signified, Susan implies that language determines the reality experienced. She regards language as the ultimate existential reality or, at least, as the primary tool that constructs the human ontological experiences in the world. According to Susan, not only does language constitute reality, but also reality without language is deemed futile. Susan wonders: ‘[w]hat benefit is there in a life of silence?’ (22). Susan’s belief that existence is only meaningful through language excludes not only animals but also the rest of the universe down to its microscopic organisms. Furthermore, this type of representationalism displays, as Barad argues, ‘a deep mistrust of matter, holding it off at a distance, figuring it as passive, immutable, and mute, in need of the mark of an external force like culture or history to complete it’ (*Meeting* 133). Friday’s silence thus becomes the very collapse of the representational distance Susan maintains, and the unity between mind and body that Susan lacks. For this reason, Friday’s silence becomes threatening to Susan; she describes his silence as thick black smoke that fills her heart, lungs, and body, and prevents her from breathing (*Foe* 118).

Therefore, and throughout the narrative, Susan’s main goal is to unlock Friday’s mystery. She resorts to Foe, the ghostwriter who is supposed to help her write Friday’s story: ‘[w]e must make Friday’s silence speak, as well as the silence surrounding Friday’ (142). When Cruso, her last hope of knowing Friday’s story, dies, she tries to teach Friday language in the hope that he might tell his story, but all her attempts end in vain.

Paradoxically, Susan's interest in Friday's story becomes far more important to her than Friday himself. His presence does not seem to interest her as much as *its representation does*. By refusing, or simply being unable, to speak, Friday remains equally inaccessible to the readers—a shadowy figure living within the story of other characters without having a story of his own. Friday thus becomes 'situated inside the discursive networks at work both inside and outside the confines of the novel' (MacLeod 7). As Brian MacAskill and Jeanne Colleran put it, Friday is 'a character inscribed within [the] text, but not quite assimilated by it' (451). Coetzee thus succeeds in creating Friday without actually *writing* him. Not only Susan and Foe but also Coetzee has no power over Friday's story. Friday's lack of story means that he can embrace all the possibilities without committing to any.

The doctor is fascinated by K and admits that the special attention he gives to K, out of all the other patients, is because he wants to know his story (149). Similar to Susan, the doctor presents himself as the only person capable of saving K through writing his story to the world: 'I am the only one who can save you. I am the only one who sees you for the original soul you are. I am the only one who cares for you . . . no one is going to remember you but me, unless you yield and at last open your mouth. I appeal to you, Michaels: *yield*' (K 152). The doctor bluntly asks K to give up his silence, which would only bury him in oblivion, so that he has the opportunity to live forever, an offer in which K is clearly uninterested. K is not fond of language games; he tells the doctor: 'I am not clever with words' (139). His uneasiness towards language has made it hard for him to think in words; words are swallowed by his consciousness, like matter disappearing into a black hole: '[a]lways, when he tried to explain himself to himself, there remained a gap, a hole, a darkness before which his understanding baulked, into which it was useless to pour words. The words were eaten up, the gap remained. His was always a story with a hole in it: a wrong story, always wrong' (110). Although, unlike Friday, K is familiar with language, his monologues, as well as his stream of consciousness throughout the narrative are, nonetheless, rather simple and direct. He does not indulge in propositional thinking, and his ideas lack coherence. For him, thinking in language is rather useless; every word he thinks of turns into nothing. Therefore, similar to Friday who has no verifiable story, K does not have a coherent story of his own—his

story is ‘always wrong’.

The magistrate is utterly troubled by the thought of the torture the girl has gone through. In his frequent attempts to know her story, the magistrate fails to get her to speak. Like K, the girl is not interested in language games; the magistrate describes her: ‘[s]he has a fondness for facts, I note, for pragmatic dicta; she dislikes fancy, questions, speculations’ (*Waiting* 43). The girl complains that the magistrate wants to talk all the time (43) and that she is ‘tired of talking’ (44). Although she briefly explains the torture that led to her deformities, she nonetheless remains mysterious to the magistrate who, despite his efforts, fails to decipher her full story.

When the antagonists fail to make the subjects speak, they try to make up and claim ownership of the subjects’ stories. When Susan, for example, witnesses Friday scattering white petals and buds in the river, she concludes that he is performing a ritual or other superstitious ceremony (*Foe* 31). She also interprets Friday’s dancing episodes as his way to remove his spirit from England and back to his people (104). Evidently, what Susan does is trying to force meaning on Friday’s action as a way to demystify, subjected, and tame him by language. She is fully aware of the linguistic power she has over Friday; no matter what Friday thinks of himself, Susan thinks she is the one who determines what ‘he is to the world’ (122). Similarly, when Noël needs to submit a report about the barbarians, he and the doctor pressure K to speak. However, when they fail to get him to cooperate, the doctor suggests that Noël should ‘*[m]ake up something for the report*’ (*K* 141). Also, when the girl does not fully answer his persistent questions about what happened to her, the magistrate carries extensive investigations of officers that were present while the girl was tortured. His investigations, however, were not fruitful. Eventually, the magistrate tries to imagine/recreate what happened to her. He goes to the investigation room where the torture session took place; closing his eyes and kneeling on the floor, he tries to imagine the torture she went through in that room (*Waiting* 38).

Friday’s absolute silence, in particular, has been the subject of many interpretations. Nearly all critics of *Foe* interpret Friday’s silence as a response, a protest,

or a metaphor.¹²² For instance, in his essay ‘Oppressive Silence: J.M Coetzee’s and the Politics of Canonisation’, as the title suggests, Derek Attridge builds his argument on Friday’s silence as a *sign* of oppression. In her essay, ‘Theory in the Margin: Coetzee’s Foe Reading Defoe’s “Crusoe/Roxana”’, Gayatri Spivak attends to the ‘rhetorical conduct of the text’ (4) and attempts to interpret Friday’s silence within the context of marginality and colonisation. In her book, *Self as Narrative: Subjectivity and Community in Contemporary Fiction*, Kim L. Worthington notes that Friday’s silence ‘has been inflicted on him’ (257). Through Friday’s tonguelessness, Worthington argues for ‘the necessity of situated speech’ (255). On the other hand, in his critique of the previous works, MacLeod uses the uncertainty of Friday’s mutilation to argue for opposite metaphors. He suggests that Friday’s silence is intentional. It is a sign of ‘heroic restraint’ and a ‘triumph of individual agency’ (12). However, what MacLeod and the authors he critiques equally do is read Friday’s silence as a response, a metaphor, and a sign to be interpreted. MacLeod, for instance, declares that Friday’s silence ‘seems fundamentally symbolic’. Furthermore, all of these readings appear to juxtapose silence to speech. MacLeod describes Friday’s silence as ‘a counter-discursive utterance’ (12). Not only Friday, but nearly all Coetzee’s ‘silent’ figures have induced similar interpretations. For example, in his essay, ‘Toward an Ethics of Silence: Michael K’, Duncan McColl Chesney approaches the narrative politically, arguing that K’s silence suggests ‘various obvious [political] and metaphorical explanations’ (310).¹²³ These studies are only a few among many that attempt to elicit the possible political, figurative, and metaphorical readings of the silence of Coetzee’s protagonists.

Albeit useful in their contexts, these readings unavoidably create another limiting

¹²² I owe it to Lewis MacLeod who summarises these works in his essay ‘Narrating the World: on Speech, Silence, and Discourse in J. M. Coetzee’s *Foe*’. However, what MacLeod wishes to demonstrate through his review of these works is an entirely different argument than the one I am making here. He attempts to explain how the critics were using Friday’s tonguelessness toward their own discursive goals; he writes, ‘[i]n all of these cases (and several others), the novel’s critics need a tongueless Friday to proceed with their own discursive projects, and so, in a fairly serious sense, they take his tongue away and use him toward their own ends’ (10).

¹²³ Chesney dismisses what he describes as a ‘transcendent’ or an ontological, conscious state behind K’s silence. He contends that Coetzee uses K’s silence as a ‘nontranscendent, disruptive silence in order to stage the complex ethical responsibility to political action’ (316). He justifies what appears to be a transcendent state by arguing that it is merely the doctor’s interpretations of K’s condition or due to the effects of hunger on him (315).

binary that restricts the possibilities of understanding silence beyond the human experience. It defines silence as, and reduces it to, *the absence of human speech*, rather than viewing it as, what I argue, is a default cosmic and eternal state of existence. One of the few critics who, building a different argument, accurately distinguishes this type of silence of Coetzee's characters from a mere absence of speech is Benita Parry; she states, 'although the silence of each of these figures has a distinctive tenor, what all signify is not a negative condition of lack and affliction, or of sullen withdrawal, but a plentitude of perception and gifts' (153). Furthermore, what the other readings fail to see is that Friday's silence is not merely an absence of language but, most importantly, *a presence of the body*. Friday exists by being present not through his words but in his flesh—the ultimate form of embodiment. This understanding aligns with *Foe's* ending, where Friday lies deep underwater in what the narrator describes as a world 'where bodies are their own signs' (157).

The other characters can sense the *presence* of such silence; its profound presence rivals, if not outweighs, the presence of speech. To the humanist characters, this silence is unbearable: deep, thick, and even troubling. Susan describes her nights with Friday where she can feel Friday's silence: 'a silence that rose up the stairway like smoke, like a welling of black smoke. Before long I could not breathe, I would feel I was stifling in my bed. My lungs, my heart, my head were full of black smoke.' (*Foe* 118). In a similar fashion, while investigating K, the doctor can actually *listen to* K's silence: 'There was a silence so dense that I heard it as a ringing in my ears, a silence of the kind one experiences in mine shafts, cellars, bomb shelters, airless places' (*K* 140). The silence of the posthumanist subjects, therefore, is not an absence or a state of withdrawal; it is also not a 'helpless silence' as Susan claims (*Foe* 122) but rather a powerful, profound, and independent presence in its own right.

The significance of this silence in the QPist context is that it allows the exploration of other modes of *becoming* and communication that lie beyond human language. It emphasises the non-universality of human language in contrast to the universality of silence and the possibility, and plausibility, of existing beyond language. It also downplays the humanist overemphasis on language as the only legitimate mode of

being and offers silence as one of the possible modes of *becoming*.

2.2.3. Embodiment and *Becoming*

One of the main ideas stressed by Coetzee through his posthumanist subjects is embodiment and the non-duality of existence. For the posthumanist subjects, ‘[t]here seem[s] nothing to do but live’ (*K* 66). *Becoming-of-the-world* is a straightforward experience that refuses articulation, figuration, and representation that might destroy its immediacy. For K, there exists *no space* that separates him from what he thinks. His thoughts and beliefs are not articulated but embodied. He experiences no duality or split between body/mind from which Coetzee’s humanist protagonists clearly suffer. This is evident in his thoughts on death: ‘[i]t came home to him that he might die, he or his body, it was the same thing, that he might lie here till the moss on the roof grew dark before his eyes, that his story might end with his bones growing white in this far off place’ (69). K refers to himself, his body, his bones, and his story as the same thing. His story exists within his bones and will dissolve as his bones disappear from the earth. His body is not simply a statement of his story; rather, and in the most literal sense, *his body is his story*. This attitude fundamentally opposes that of David, Curren, and Dostoevsky whose egos continue to emerge in their visions of death.

However, although the experiences of the posthumanist subjects clearly revolve around embodiment and bodies becoming their own sign (*Foe* 157), both the humanist antagonists as well as Coetzee’s critics seem to undermine the characters’ embodiment by reducing their bodies to figures of speech—the very thing these characters consistently refuse and fight throughout the narrative. Susan describes Friday’s suggested tongue mutilation as a metaphor for a more horrific mutilation (119). Also, the doctor describes K’s presence in the camp as an allegory of ‘how scandalously, how outrageously a meaning can take up residence in a system without becoming a term in it’ (*K* 166). In a similar fashion, Coetzee’s critics continue to reduce the posthumanist bodies to linguistic representations. Spivak, for instance, addressing *Foe*, insists that ‘Coetzee’s entire book warns that Friday’s body is not its own sign’ (18). In his essay on *Foe* and canonisation, Attridge goes further and contends, as Spivak puts it, that Friday is a metaphor for the

work of art (13). Parker (among many others) similarly argues, ‘Friday’s body becomes the sign of the colonizer’s brutality to the colonized and enslaved.’ (35). Evidently, what these readings do is what Susan, the doctor, and the magistrate, attempted to do—they incorporate these characters into the world of language and metaphor. They create the same *representationalist space* between the body and that for which it stands. Therefore, the characters’ bodies are reduced to metaphors, signs, and allegories both *inside and outside the narrative*. It is as though Coetzee anticipates and puts forward this type of metaphorical reading through his humanist characters. Nevertheless, exemplified in the failure of the antagonists to break their silence, these readings fail to disturb the subjects’ embodiments or to create a split between their bodies and their stories, as the characters remain irreducible to the linguistic interpretation they seem constantly to provoke.

Coetzee represents full embodiment as the ultimate inner bliss. Through his protagonist and alter ego, Elizabeth Costello, he articulates this conviction: ‘[t]o be full of being is to live as a body-soul. One name for the experience of full being is *joy*.’ (*Costello* 77-8). As he stays with his dying mother in the hospital, hungry, homeless, waiting for the permit that allows them to leave the town, K experiences a profound happiness while eating a slice of pie: ‘[t]he pie was so delicious that tears came to his eyes. ... K listened to the birds in the trees and tried to remember when he had known such happiness.’ (*K* 30). Living in the mountains in utter silence, beyond the reach of humanity, doing nothing and looking forward to nothing, K experiences several moments of bursting happiness: ‘his heart suddenly flow [*sic*] over with thankfulness’; ‘He chewed [the pumpkin] with tears of joy in his eyes’ (113); K even wondered ‘if he were living in what was known as bliss.’ (68). This seemingly cosmic state of silence/bliss/nothingness/totality K feels is essentially an emptiness—an emptiness of human language, desires, thoughts, hopes, and dreams: ‘he sometimes locked his fingers behind his head, closed his eyes, and emptied his mind, wanting nothing, looking forward to nothing.’ (69). The posthumanist inner consciousness is nearly empty. The characters’ minds are calm to the point where they seem to *think nothing*. K, for instance, ‘could lie all afternoon with his eyes open, staring at the corrugations in the roof-iron and the tracings of rust; his mind would not wander, he would see nothing but the iron, the lines would not transform themselves into pattern or fantasy’ (*K* 115). Ironically, a full

embodiment is impossible to describe within language; hence, only through their silence and emptiness can Coetzee demonstrate the embodiment of his characters.

As I have argued earlier in the chapter, the state of *becoming* entails entanglement, possibility, fluidity, borderlessness, and contingency. However, what distinguishes the posthumanist *becomings* from the other *becomings* of David, Curren, and Dostoevsky is that these *becomings* are *real physical events in the most literal sense possible*. Deleuze and Guattari identify this as a real becoming (238) that does not take place in imagination and is not a figure or a metaphor. True *becomings* are not ‘a resemblance, an imitation, or, at the limit, an identification’ They are neither a progression nor a regression; they are literal, spontaneous, unplanned and ‘perfectly real’. (*Thousand* 237-8, 292). These *becomings* exemplify what Barad describes, quoting Haraway, as ‘[b]odies in the making, not bodies made’ (159). Through these true *becomings*, physical, mental, and psychological changes occur, which blur the boundaries between all modes of existence—bodies, entities, species, and things.

K experiences this type of real *becoming* in different moments in the narrative; one of which is *becoming-animal*. Living in the open fields, K starts to develop an animalistic instinct as he manages to intuitively distinguish between poisonous and nonpoisonous plants, ‘as though he had once been an animal and the knowledge of good and bad plants had not died in his soul’ (102). As part of his *becoming-animal*, K’s senses—sight, smell, and touch—drastically change:

He had become so much a creature of twilight and night that daylight hurt his eyes. He no longer needed to keep to paths in his movements around the dam. A sense less of sight than of touch, the pressure of presences upon his eyeballs and the skin of his face, warned him of any obstacle. His eyes remained unfocussed for hours on end like those of a blind person. He had learned to rely on smell too. He breathed into his lungs the clear sweet smell of water brought up from inside the earth. It intoxicated him, he could not have enough of it. Though he knew no names he could tell one bush from another by the smell of their leaves. He could smell rain-

weather in the air. (115).

Evidently, of all the becomings discussed so far, K's becoming is the most literal. As a result of living in the wild, K's animalistic instinct heightens and while some senses become more acute, others deteriorate. As the passage demonstrates, K's body goes through physical changes to adjust to the new situation. This type of *becoming* successfully challenges the boundaries between species; the human body can become more animalistic just as the animal body (under different conditions) becomes more 'humanistic'.¹²⁴

The girl also experiences a *nonhuman becoming*. The magistrate explains that the torture the girl and her father were subjugated to, the horror they witnessed, contributed to her *becoming nonhuman*, incapable of human feelings: 'she was *no* longer fully human, sister to all of us. Certain sympathies died, certain movements of the heart became no longer possible to her' (*Waiting* 88-9). As a result of her physical and psychological degradation, the girl's nature changes into something that is beyond humanity.

However, and surprisingly, it is the magistrate himself who experiences a more elaborated real *becoming—becoming-beast*. What distinguishes this real *becoming* from the others is that the magistrate is presented, at the beginning of the narrative, as an exemplary humanist figure. Working for the empire, the magistrate used to be a symbol of order and social hierarchy, whose job is to maintain discipline and enforce law. To facilitate his *becoming-beast*, the magistrate first experiences liminality as he abruptly moves from being a well-respected magistrate to a filthy homeless creature sleeping on the streets of the town of which he was once in charge. The magistrate is stripped of his status, job, ranking, reputation, respect, and home, living off charity, being the object of laughter, torture, and mockery, and ridiculed and teased by children. During his time in the confinement, however, the magistrate experiences his first *becoming-beast*. He reflects on his time in the solitary confinement: 'I build my day unreasonably around the hours when I am fed. I guzzle my food like a dog. A bestial life is turning me into a

¹²⁴ In the next part, I discuss an example of an animal *becoming-human*.

beast' (84). During episodes of physical and psychological torture, the magistrate loses the use of his hands, so he starts 'lickin[ing] his food off the flagstones' (136).

As time passes in torture and confinement, the magistrate experiences profound sense of his embodiment. He describes himself as 'no more than a pile of blood, bone and meat' (93). Confirming his statement, Deleuze declares that 'every man who suffers is a piece of meat'. As Deleuze notes, meat is the shared ground of both man and beast, 'their zone of indiscernibility' (*Francis* 23). The magistrate's existence is reduced to Agamben's *bare life* that results from extreme violence and torture which, in turn, destroys the political life or *bios*¹²⁵, stripping life of political status, leaving it bare, damaged, and exposed, suspended somewhere between unprotected humans and protected beasts¹²⁶ (Puchner 25).¹²⁷

As the narrative progresses, the magistrate's *becoming-beast* is more literal, as he *becomes* more of an animal than a human. He reflects,

I daily become more like a beast or a simple machine, a child's spinning-wheel, for example, with eight little figures presenting themselves on the rim: father, lover, horseman, thief . . . Then I respond with movements of vertiginous terror in which I rush around the cell jerking my arms about, pulling my beard, stamping my feet, doing anything to surprise myself, to remind myself of a world beyond that is various and rich' (93).

By experiencing a real *becoming*, the magistrate showcases the random, spontaneous, and abrupt nature of *becoming*, which Deleuze and Guattari emphasise. In

¹²⁵ Agamben distinguishes between two types of existence: biological existence (*zoe*) and political one (*bios*) (1).

¹²⁶ The concept of *bare life* shares many characteristics with liminality; in both situations, for instance, the subject is stripped of any political significance.

¹²⁷ Another relevant notion in the magistrate's *becoming* is one of Agamben's most notable ideas, namely *homo sacer* (in a book that carries the same title). *Homo sacer* is a banned figure, whom Agamben borrows from the Roman law, who may be killed by anyone as he is excluded from the law, unfit for, and unworthy of, legal prosecution or religious sacrifice (8). This perfectly applies to the magistrate who, after escaping his confinement, was left roaming the street, subject to ridicule; the officials no longer took him seriously or even bothered to capture him. *Homo sacer*, hence, lives in liminality; he is both included in, and excluded from, the political realm; as Agamben puts it, in the juridical order, *homo sacer* is 'included solely through its exclusion' (18).

Deleuze and Guattari's view, *becoming* is not an existential quest as Coetzee's humanist characters portray it to be. It is rather an unexpected event: '[w]e can be thrown into a becoming by anything at all, by the most unexpected, most insignificant of things' (292). Through the magistrate's *becoming-beast* we learn that real *becoming* is not exclusive to posthumanist subjects. *Everyone is becoming* at any point of their existence. However, the most striking types of *becomings* involve crossing boundaries between identities and species.

Table 1 recapitulates the key differences between Coetzee's humanist and posthumanist figures discussed in this chapter. Indeed, Coetzee offers (and this analysis seems to accentuate) a striking juxtaposition between the two sets of characters. Coetzee's novels do include further binaries— black/white, male/female, coloniser/colonised, master/slave, and human/animal. Such juxtapositions may falsely imply that the relationship is oppositional between these binaries. Nevertheless, at its core, posthumanist logic stresses the movement beyond all type boundaries, and particularly humanist/posthumanist. However, what Coetzee does in his narratives is to disturb the very boundaries he establishes by creating moments (and creatures) that challenge the very validity of these binaries, where man *becomes-woman*, the human *becomes-animal*, and, in the magistrate's case, *the humanist becomes-posthumanist*. These posthumanist moments represent glimpses of recognition of the illusionary nature of these binaries/boundaries. The magistrate's literal *becoming*, in particular, disturbs the very distinction that this discussion presumes to exist between the two sets of characters, stressing Badmington's earlier declaration that *the human is always becoming posthuman*. It becomes, therefore, a matter of *recognising* the posthuman in the human, rather than attempting to reach or achieve the state of the posthuman.

The dividing line between the two sets of characters in Table 2.1 is thus to be understood not as an exterior, inherent, border between the characters, but rather as a *flexible cut from within* that only emerges through my particular reading/arrangements of Coetzee's novels, in the same manner the physical apparatus¹²⁸ within the quantum

¹²⁸ The physical apparatus in Bohr and Barad's philosophy refer to the measurement devices used in/*within* the quantum experiment, which inevitably determines the values of measurements while simultaneously becoming entangled with the process of measurement. Within the literary context, my reading works as the

measurement works by temporarily distinguishing between the subject/object without negating the irreducibility, fluidity, and entanglement of the phenomenon.

Humanist Figure (David, Curren, Dostoevsky)	Posthumanist Figure (Friday, K, the girl)
Complete/normal	Physically deformed/repulsive
Intellectual	Illiterate
Articulate (Speech is their main mode of existence)	Silent (Silence is their main mode of existence)
Parent	Childless
Egocentric	Egoless
Sexually identifiable/active	Sexually undetermined/inactive
Suffer from body/mind divide	Full embodiment
Politically engaged	Apolitical
Obsessed with the idea of leaving behind	Trackless
Live through their own ideas/ideals/morals of the world	Do not express pre-existing notion or judgment about the world
Struggling in their liminality	Protecting their liminality
Living in the past and Future	Living in the present
Ultimate goal is to reach 'salvation'	Ultimate goal is to protect their freedom
Metaphorical <i>becoming</i>	Real <i>becoming</i>

Table 1: A comparison between Coetzee's humanist and posthumanist figures

apparatus as it determines the values (actualised meanings) of the texts. I discuss the reader's consciousness as the physical apparatus of the text in detail in Chapter Four.

2.3. Thoughts on *Becoming(-with)-animal* and *Becoming-Human*

In his novel, *Elizabeth Costello*, Coetzee explicitly discusses the idea of real *becoming*, specifically *becoming-animal*. In her speech ‘The Lives of Animals’ Costello reviews Thomas Nagel’s essay ‘What is it Like to Be a Bat?’ (75). In his essay, Nagel argues that it is impossible for humans to know what it is like to be a bat. While scientific knowledge can explain how bats behave, this is not the question Nagel has in mind: ‘I want to know what it is like for a bat to be a bat. Yet if I try to imagine this, I am restricted to the resources of my own mind, and those resources are inadequate to the task.’ (439). In Nagel’s view, any *becoming* is impossible; humans and animals have distinct, fixed, and separate identities that cannot be transgressed. Costello comments that Nagel’s argument is extremely ‘restrictive and restricted’ (*Costello* 76). She proposes another way to approach Nagel’s question. For Costello, the experience of being a bat is not about the modalities as Nagel assumes. Instead, it is about the ontological experience of being. She states, ‘[t]o be a living bat is to be full of being; being fully a bat is like being fully human, which is also to be full of being. Bat being in the first case, human being in the second, maybe; but those are secondary considerations. To be full of being is to live as a body-soul. One name for the experience of full being is joy’ (77-8). Evidently, Costello believes in the posthumanist *becoming* as the fundamental state of existence. Through his alter ego, Coetzee expresses his conviction in the possibility of real *becoming-other* and crossing the boundaries between different modes of *becoming*: ‘there is no limit to the extent to which we can think ourselves into the being of another’ (*Costello* 80).

2.3.1. *Becoming(-with)-animal*

On the other hand, in her book, *When Species Meet*, Haraway criticises Deleuze and Guattari’s argument on *becoming-animal*. Haraway argues that Deleuze and Guattari’s approach to deconstructing the boundaries between humanity and animality is rather unproductive. She believes that their metaphysical stance on animals is detached as it lacks a concrete and embodied relationship with animals that is built on curiosity and emotional attachment (27-31). She, instead, proposes an alternative to the idea of

becoming-animal—companionship or *becoming-with-animals* (3), and co-living as fellow creatures of the world.

However, I do not see Haraway remarks on co-evolution and companionship as contradictory to Deleuze and Guattari's insights on *becoming-animal*. What Deleuze and Guattari emphasise in *becoming-animal* are the intense, abrupt moments of *becoming* that touch one's core existence, rather than Haraway's ideas of the everyday, embodied relationships with animals. In other words, Deleuze and Guattari's argument seems ontological whereas Haraway's concerns address the practicalities of the human-animal relationship. We can sense this in Haraway's statement that Deleuze and Guattari 'had no eye for the elegant curve of a good chow's tail, much less the courage to look such a dog in the eye' (29). Furthermore, in her criticism, Haraway neglects the fact that *becoming* (not *becoming-animal*), as an ontological and existential event, is the ultimate concern of Deleuze and Guattari. In this sense, I believe *becoming-animal* and *becoming-with-animal* are in fact complementary to each other.

Becoming-with-animal, as Haraway sees it, is also present in Coetzee's novels. We can trace this companionship in Lucy's relationship with her dogs and the mutual dependence between them in *Disgrace*. We also find this companionship in Vercueil's relationship with his dog which follows him everywhere in *Age of Iron*. Because of the good relationship between Vercueil and his dog, Curren starts to trust him: 'perhaps it is because of the dog that I trust him. Dogs, that sniff out what is good, what evil' (84-5). Even the special bond that suddenly forms between David and the homeless dog in the clinic, which becomes particularly fond of David, is another instance of this companionship. Coetzee's novels thus celebrate both types of *becoming*: *becoming-animal* and *becoming-with-animal*, further demonstrating the complementarity of both perspectives.

2.3.2. *Becoming-Human: The Case of Red Peter*

As this chapter demonstrates so far, humans can *become-animal* in the real sense of *becoming*, as the case of K and the magistrate exemplify, and as Costello's critique of Nagel's essay demonstrate, thus blurring the boundaries between humanity and animality.

However, it is worth noting that *becoming* is a universal ontological event where any being can *become-another*. Similar to *human-becoming-animal*, we can find the opposite taking place, namely *animal-becoming-human*. This *becoming* is demonstrated through the case of Red Peter. Red Peter is a talking ape in Franz Kafka's story 'A Report to an Academy', where Red Peter delivers a speech to an academic society. In his speech, Red Peter presents his journey from apehood to humanity. Coetzee comments on Kafka's story through Costello's speech 'The Lives of Animals' in which she discusses the ethical side of the story.¹²⁹

Before addressing his *becoming-human*, as an ape, and according to the Darwinian evolutionary model, Red Peter already exists on the boundaries between humans and animals, blurring the traditional distinction that assumed a separation between species. Costello notes that of all the animals, apes are the only group that is nearly 'giving up' its silence. Acknowledging their resemblance to their own species, humans are trying to include apes in the larger family of the *Hominoidea* (Costello 70). Consequently, Costello notes, humans believe that the great apes, as human(oids), deserve to be given human(oid) rights—the minimum rights given to the mentally defective of *Homo sapiens*, including the right to be protected by the law and the right not to be harmed or killed (70-1). The Great Ape Project, founded in 1933, advocates such rights for nonhuman apes. In his book *Animal Rites*, Wolfe criticises such a project for reinforcing the very humanist values that separate humans and animals. Apes have rights because they are 'inferior versions of ourselves'; it is now humans and great apes versus the rest of the world (192). Wolfe describes this as 'humanist posthumanism'¹³⁰, where humanist methodologies and reasoning underlie seemingly posthumanist stances

¹²⁹ Costello positions the story of Red Peter within a historical context. She speculates that Kafka wrote the story based on the story of a real ape, Sultan, which was part of the experimentations on animals conducted by the psychologist Wolfgang Köhler. Costello notes that in 1912, the Prussian Academy of Sciences founded a station for the purpose of experimenting with apes and exploring their mental abilities. One of the scientists working there was Köhler who published his research in his book, *The Mentality of Apes*, in 1917. Costello notes that in the same year Kafka published his story on Red Peter (71).

¹³⁰ Wolfe distinguishes between four types of theoretical frameworks: (1) humanist humanism, which includes, according to Wolfe, philosophers such as Jürgen Habermas, Martin Heidegger, Luc Ferry, and John Rawls; (2) posthumanist humanism, which includes Richard Rorty, Slavoj Žižek, and Foucault; (3) humanist posthumanism, which includes Martha Nussbaum, Peter Singer, and Tom Regan; and finally (4) posthumanist posthumanism, which includes Latour, Derrida, Niklas Luhmann, and Haraway. For more see Wolfe's *What is Posthumanism?* (124-5).

on animals' welfare. The resemblance between apes and humans is to be understood within the posthumanist context of entanglement and fluidity between species, rather than used a way to reinforce the humanist beliefs in the supremacy of human beings and the creatures that bear the most resemblance to them.

Going back to Red Peter, various commentators on Kafka's story view it as an ethical protest against cruel scientific experimentations on animals. Similarly, through Costello's interpretation of Red Peter's case, Coetzee argues against anthropocentrism in studying animal behaviour. The experimentations conducted by the scientific institutions on animals are, as Costello notes, profoundly anthropocentric. They use human standards and logic in constructing their experiments, expecting the animal to be able to, as Costello puts it, 'find ... [its] way out of a sterile maze' (108). According to Costello, delivering his report to the scientists, Red Peter was clearly 'a branded, marked, wounded animal presenting himself as speaking testimony to a gathering of scholars' (70). What both Costello and Coetzee see in Red Peter is a tortured animal exposing his wounded body to his audience.

Indeed, human-based experiments tell us nothing about animal consciousness. However, what these experiments and what Red Peter's case imply, despite their questioned ethicality, is the *possibility of the animal-becoming-human*. These experiments stand as another proof of the flexibility of boundaries between species. Hence, in this part of the discussion, I wish to view Red Peter's case in a different light. Despite the clear ethical ground on which Coetzee, through Costello, and other critics stand in approaching Kafka's story, I, nonetheless, wish to approach Red Peter's story as posthumanist evidence of the possibility of *animal-becoming-human*. I contend that Red Peter *becoming-human* is a manifestation of species entanglement and dynamic *becoming*. However, the only problem with Red Peter's *becoming* is the lack of freedom it entails: 'he' is *forced to become-human*. Coetzee's negative depiction of Red Peter's *becoming*, therefore, is not a critique of *becoming-human* per se, but rather a protest against the unethical means that led to this *becoming*. The ethical difference, hence, lies in the presence/absence of freedom that accompanies *becoming*. Consequently, Kafka and Coetzee's negative representation of *becoming-human* is not about animals crossing

the boundaries to humanity, but rather about animals being cruelly *forced* into *becoming-humans*.

In Red Peter's case, *becoming-human* was only possible through subjugation and torture. According to Red Peter, he was chased, hit, injured, captured, and caged in a hunting expedition. His injury left a 'large, naked, red scar which earned [him] the name of Red Peter'. His second injury, in the hip, left him with a disability (Kafka 251). Red Peter himself confesses that he began imitating men not because he wanted to, but because it was the only way out (257). Costello imagines what goes on inside the ape's mind during these experiments, or in the process of forcing it to *become-human*. As she explains, the ape is deprived of food until it is hungry, and the only way to satisfy its hunger is to reach for the bananas that are hung from a metal wire above the ground. The ape can also see three wooden crates. Facing its painful hunger, the ape realises that it is required to think. There are possibly many ideas that go through the ape's mind (who is starving me? what have I done?). However, only one of these ideas is correct (how can I use the crates to get the bananas?), and the ape ought to guess which one (*Costello* 72-3). The experiments with the ape continue as the method of getting the bananas changes every time and the ape is starved until it finds the right thought. However, the main thought that goes through the mind of the ape is not about the bananas, but as Costello articulates it: 'Where is home, and how do I get there?' (75). Indeed, Red Peter explains to the community that the only idea that he could think of in the early stages of experimentation was to escape confinement (Kafka 253).

However, forcing such *becoming* does not make it less real. Red Peter's *becoming* exhibits many characteristics of Deleuze and Guattari's criteria of *becoming*. For example, Red Peter notes that his *becoming* was only possible because he let go of his preconceived notions about himself as an ape. As Deleuze and Guattari describe it, '*Becoming is an antimemory*' (*Thousand* 294). Red Peter explains that he could never have achieved what he has achieved had he 'been stubbornly set on clinging to [his] origins, to the remembrances of my youth' (Kafka 250). Here, Red Peter confirms that what stands between a being and its *becoming* is *ego*—or the sense of separation between the self and the world. Once Red Peter has let go of his identity as an ape, he was soon

able to move beyond the boundaries and eventually *become-human*. Moreover, in his *becoming*, Red Peter experienced psychological and physiological changes. For instance, he describes his declining desire to escape as a sense of calmness that he has managed to acquire as a result of being among men (254). Also, he explains that during his ape days he had the ability to bite his way through the lock of his cage. However, after a while, his teeth were weakened; now he has to be careful just to be able to crack a nut (255). Moreover, not only is Red Peter capable of speaking, reading, shaking hands, and enjoying wine, but he also demonstrates a sophisticated logic and excellent command of language, exemplified in his witty speech to the academy.

Furthermore, Red Peter mentions that he often ‘undresses’ in front of visitors to show them the place of his injury (251-2). On a different occasion, Costello notes, invoking the incident where she uncovered her breasts to Mr Philips to paint her: ‘[a]cts like that are not available to animals, who cannot uncover themselves because they do not cover themselves’ (150). In his essay, ‘The Animal That Therefore I Am (More to Follow)’, Derrida begins by arguing that the story of Genesis, which involved the recognition of nudity of Adam and Eve and the shame they felt, was the moment of creation of humanity. Besides the human, no other animal feels ashamed to be naked. Furthermore, only humans can be described as being ‘nude’; Derrida explains, ‘[t]he animal would be in non-nudity because it is nude, and man in nudity to the extent that he is no longer nude’ (‘Animal’ 374). Hence, to be able to uncover and be conscious of his nudity, Red Peter further demonstrates the reality and extent of his *becoming-human*.

However, Red Peter’s *becoming* is a very specific *becoming-human*; he is *becoming-the-Cartesian-Man*. In other words, his *becoming-* is not merely *human* but rather *humanist*. This becomes rather evident when Red Peter describes the cage in which he was first confined as being too small for him to stand or sit, to the point where the bars were cutting his flesh. Reflecting upon this memory retrospectively from his new humanist perspective, Red Peter remarks that the method he was treated with is in fact particularly beneficial for the initial period of confining wild beasts (Kafka 252). Furthermore, and despite the torture he went through and the set of experiments dedicated to his *becoming-human*, including his teacher scorching his fur with his pipe out of frustration with his slow progress, Red Peter is convinced that his teacher was doing it for

his own good, for they were both fighting ‘on the same side against the nature of apes’ (257). In his forceful and cruel *becoming*, Red Peter clearly *becomes-his-oppressor*.

Interestingly, Red Peter’s *becoming* is described in a more linear, gradual, and temporal process, with historical points of beginning and end—rather than the types of cyclical, fluid, and contingent *becomings* we find in the discussion of posthumanist characters. For instance, Red Peter notes that it has been five years since his transformation, and describes his ape days as the past from which he is further and further distanced (250). He describes his transformation as consisting of ‘stages’ (251), a ‘progress’, a ‘development’, an ‘achievement’ (258), a ‘success’ (259), and a journey ‘in the right direction’ (255), in which he was able to penetrate, and establish himself in, the human world (251) and let go of his ‘past’ as an ape (250). These depictions clearly involve temporal and linear-based words with definitive points of beginning and arrival, suggesting that Red Peter’s *becoming* is viewed as an evolutionary, linear, temporal model, rather than the QPist model that inherently rejects linearity and progression.

One of the most significant implications of Red Peter’s *becoming-human* is that both humans and nonhumans equally participate in *becoming* without having any privilege in it. Simultaneous to Red Peter’s *becoming-human*, another becoming takes place—his teacher’s *becoming-ape*. In his speech to the academy, Red Peter briefly and casually mentions that his first teacher turned ‘almost apish’ as a result of training him. The teacher was admitted to a mental hospital for a short period (Kafka 258). The teacher’s *becoming* shows the mutuality, arbitrariness, and even unintentionality of *becoming*. Furthermore, as the case of Red Peter shows, *becoming* is not a moral but an ontological phenomenon; hence, the event that emerges is not always favourable. As Alain Beaulieu notes, in his reading of Deleuze and Guattari, ‘just like any other becoming, non-human becomings of humans do not imply perfect symbiosis. After all, these becomings can always be “botched,” rendering possible what might be called “natural catastrophes”’ (79). Accordingly, during her speech, Costello makes several remarks likening herself to Red Peter (62), and towards the end of her talk, she makes another comment on the similarities between Kafka and Red Peter: ‘Kafka saw both himself and Red Peter as hybrids, as monstrous thinking devices mounted inexplicably on suffering animal bodies’ (75). Costello proposes that she herself, Kafka, and Red Peter

are all monstrous creatures of *becoming*, *stuck* between species, suffering, rather than rejoicing, in their embodiments.

Red Peter's *becoming* poses many challenges to the idea of *becoming* as it sheds light on the ethical question of *becoming* and demonstrates how *humanism can still reside at the heart of the very process of becoming*. The case of Red Peter *becoming-human* invokes other concerns about the domestication of animals and the lack of freedom such *becoming* involves. Furthermore, Red Peter's *becoming-human* poses, or rather implies, an important question: without human interventions, will animals ever wish to *become-human*? Although their fictions are full of examples of *becoming-animal*, neither Coetzee nor Kafka provides positive representations of animals positively *becoming-humans*. This implies that, for both authors, desirable *becoming* is essentially a one-way process; it is always the human who needs to *become-animal*, not the other way around. In other words, humans are the ones who need to *remember* and *return to* their animality. A very problematic humanistic notion underlies this assumption: animality here is understood as being the 'original' state of humanity, whereas the latter is perceived as being unnatural. This view reinforces the divide between nature and culture—the source of all divisions. Also, assuming that humans need to return to animality contradicts the very core of *becoming* as being a coreless and an emergent event without origins or ends. *Becoming-animal*, *becoming-human*, and even *becoming-thing*, are equally valid QPist possibilities.

2.4. *Becoming-Writing/Reading: Coetzee and the Reader*

'Great poets can tell their own stories without once saying "I", and in doing so, lend their voice to all of humanity.' -Orhan Pamuk ('Countries' 1 qtd. in Attwell 27).

'If to write is to surrender to the interminable, the writer who consents to sustain writing's essence loses the power to say "I."' (Blanchot 27).

In the recently published book, *J.M. Coetzee and the Life of Writing: Face to Face with Time*, Attwell mentions that the book could equally be called 'the life in the writing' (17) because of the strong autobiographical nature of Coetzee's works. Attwell describes Coetzee's writing as a 'huge existential enterprise, grounded in fictionalized autobiography' (26). Indeed, the majority of Coetzee's critics acknowledge the fictional-autobiographical nature of Coetzee's work. In fact, Coetzee admits to this entanglement between the writer and narrative through Curren's confession to her daughter: '[w]hen I write about him [Mr Vercueil] I write about myself. When I write about his dog I write about myself; when I write about the house I write about myself' (*Age 9*). Coetzee acknowledges this entanglement more blatantly in an interview with Attwell where he declares, 'all writing is autobiography: everything that you write, including criticism and fiction, writes you as you write it' (*Doubling 17*).

Throughout his fiction, Coetzee is known to create alter egos; his protagonists bear so much resemblance to him it is hard for critics to ignore. Perhaps the closest figure he creates to himself, not only in terms of views and beliefs but also career and personal life, is Elizabeth Costello—an accomplished middle-aged author with strong ethical views on animals. Before publishing *Elizabeth Costello*, Coetzee introduced his protagonist when he was invited to give one of the Tanner Lectures at Princeton 1997. Instead of giving a lecture, Coetzee read two short stories under the general title 'The Lives of Animals' (which are published later in the novel). The two stories concern a lecturer, Elizabeth Costello, who is also expected to give a lecture on literature but instead delivers a speech on animal rights. As Alena Dvorakova rightly puts it, 'Coetzee as the actual speaker of the lectures comes as close to being a Costello as it is possible to be between an embodied human and a fictive creation' (377). During his lecture, Coetzee effectively *becomes-his-character*. Furthermore, carrying his author's initials, JC, in

Diary of a Bad Year, also seems to share many characteristics with Coetzee: he is a South African distinguished writer (also a former academic and a vegetarian) who lives in Australia. JC also wrote *Waiting for the Barbarians*. However, there are differences between Coetzee and these protagonists. Costello, for instance, is an Australian *female* author who has a son named John. JC is born in 1934 and lives in Sydney, whereas Coetzee was born in 1940 and lives in Brisbane. Unlike Coetzee, JC does not have any offspring. These protagonists have strong views and opinions on ethical, political, and social matters that, to some extent, align with Coetzee's public views.

Furthermore, Michael S. Kochin observes that Coetzee's work is full of what he describes as 'author-figures'. These include Foe and Susan in *Foe*; Costello in *Elizabeth Costello*, the magistrate in *Waiting for the Barbarians*, Curren in *The Age of Iron*, David in *Disgrace*, JC in *Diary of a Bad Year*, Robinson Crusoe, the author, in his 2003 Nobel lecture 'He and His Man', and Coetzee himself in his fictionalised memoirs, *Boyhood*, *Youth*, and *Summertime* (79). With varying degrees, all of these protagonists intersect with Coetzee. They all seem familiar and, at different points in the narratives, Coetzee seems to emerge through them. There are, on the other hand, less notable characters that allude to Coetzee. For example, John Coetzee in *Dusklands* seems to be the opposite of his author. For instance, while Coetzee, the author, is a compassionate vegetarian, Coetzee, the character, a Vietnam-era American bureaucrat, is non-vegan; one of the narrators describes this Coetzee as 'a hearty man, the kind that eats steak daily' (2).

Furthermore, Coetzee uses certain events from his life and implements them in the narratives. The reader familiar with Coetzee's life can easily recognise that Pavel's death (which in reality never took place as the real Pavel outlived Dostoevsky) parallels the death of Coetzee's son, Nicolas, who also fell from a high building. While the reader can discover some of these allusions in Coetzee's novels, it is likely that many of them remain undiscovered. Attwell's recent book, however, sheds new light on many undiscovered aspects of Coetzee's life that unfold in his fiction.

In his fictionalised autobiographies, or autofiction, to use Serge Doubrovsky's term, *Boyhood*, *Youth*, and *Summertime*, Coetzee blurs the boundaries between storytelling and autobiography and deliberately uses fragments of his personal life and others that the reader can recognise as fictional, weaving them into the narrative in a way

that does not give validity to one over the other. Based on Doubrovsky's original definition of, and Phillip Vilain's comment on, autofiction, Robert Kusek defines 'generic autofiction' to be the narrative that is presented as completely referential whilst simultaneously acting as a novel by 'welcoming elements of historical inaccuracy' (101). Attwell notes that Coetzee's texts that are categorised as autobiographies are in fact an extension of his fiction; the only difference is the 'degree of fictionalization' (*Life* 26). Kusek uses another term, *autobiographics*, which he borrows from Leigh Gilmore, to describe Coetzee's autobiographies. According to Kusek, autobiographics 'welcomes contradictions and multiple angles' (102). Through his literary techniques, Coetzee successfully transgresses the boundaries between fact/fiction and challenges established literary genres.

Coetzee's literary techniques seem to align with the QPist ideas of fluidity, multiplicity, contingency, and entanglement. He creates versions/parallels/possibilities of himself through the manipulation of similarities and differences between himself and his protagonists, thus challenging any attempt to separate his life from his fiction. As evident in his writing, Coetzee does not believe in one authoritative view that excludes all other possibilities. His entire fiction, in fact, resists this type of monopolisation and reductionism. By extension, Coetzee does not seem to believe in the existence of the possibility of a single, pure, and self-referencing self that is not subject to distortion. Coetzee states, '[t]he self cannot tell the truth of itself to itself and come to rest without the possibility of self-deception' (*Doubling* 51). A large part of Coetzee's writings hence remains elusive, existing as possibilities rather than actualised truths, favouring QPist parallelism and probability over linearity and definitiveness.

Consider this statement made by Costello when she is required to write down a statement about her beliefs so she can pass through 'the gate':

I am a writer, a trader in fictions, it says. I maintain beliefs only provisionally: fixed beliefs would stand in my way. I change beliefs as I change my habitation or my clothes, according to my needs. On these grounds – professional, vocational – I request exemption from a rule of which I now hear for the first time, namely that every petitioner at the gate should hold to one or more beliefs (Costello 195).

This can be read as a statement that expresses Coetzee's personal contention, for, throughout his fiction, Coetzee clearly demonstrates the same desire not to commit to a single belief or position. Costello further clarifies, '[i]n my work a belief is a resistance, an obstacle. I try to empty myself of resistances' (200). This understanding of belief as a hindrance to *becoming-other* aligns with the ideas of *becoming* as an event that requires letting go of any pre-existing notions one might have, especially one's idea of oneself. If one must have a belief, then, like Costello, it should be a belief in unbelief (201). The woman in charge of the dorm in which Costello stays describes this state of unbelief in posthumanist quantum terms, as 'entertaining all possibilities, floating between opposites' (213). Unbelief is akin the state of *superposition* which involves maintaining a parallel seemingly contradictory stance of affirmation and negation.

As an author, Coetzee understands that he cannot stand *outside* of writing. He *becomes* what he writes as much as what he writes *becomes* him. Writing is thus an intra-active phenomenon; as Coetzee puts it, it 'writes you as you write it' (*Doubling* 17).¹ Wilson Harris expresses the same idea of the artist being both the subject/object of his/her creation when he writes: '[t]he creator's creation is alive: the sculptor sculpts, and is sculpted and subtly changed by what he sculpts, the painter paints, and is transfused by what he paints; and all these reciprocities are susceptible to alteration in the mind of fiction' (5). Figure 1 is an artwork by M. C. Escher which can be seen to express the same cyclical idea of the artist being simultaneously the subject/object of his/her creation, or how the artwork 'writes you as you write it', to use Coetzee's words.

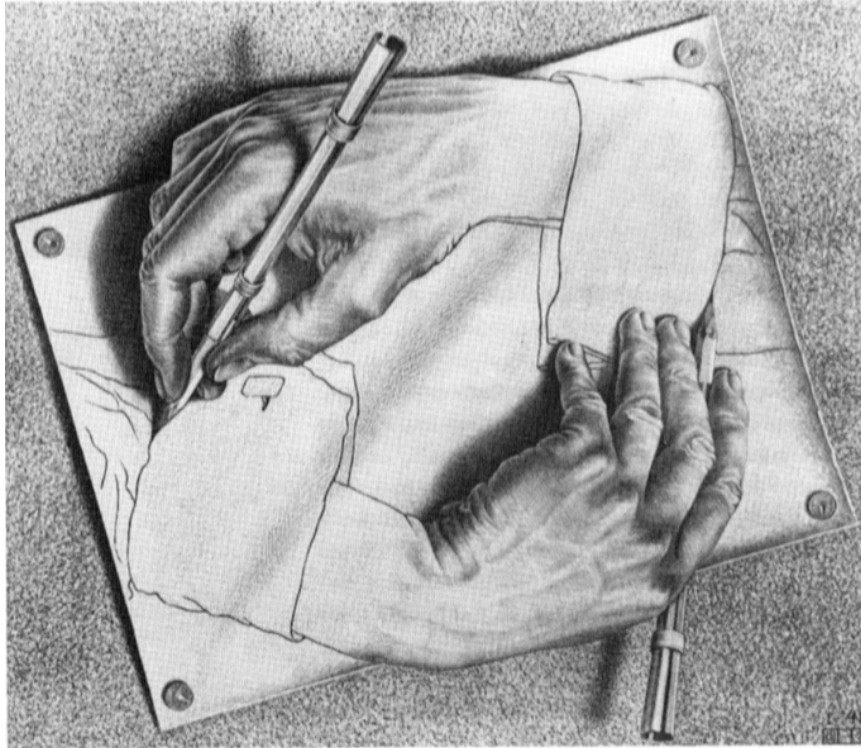


Figure 1: 'Drawing Hands' (Escher)

Moreover, the author not only *becomes what he writes*, or what he writes *becomes him* but also, and most importantly, the author, as he writes, *becomes-writing* itself. Coetzee suggests this *becoming* in the same interview with Attwell, albeit in different words:

Writing reveals to you what you wanted to say in the first place. In fact, it sometimes constructs what you want or wanted to say. What it reveals (or asserts) may be quite different from what you thought (or half-thought) you wanted to say in the first place. That is the sense in which one can say that writing writes us. Writing shows or creates (and we are not always sure we can tell one from the other) what our desire was, a moment ago. ... I don't see that "straight" autobiographical writing is different *in kind* from what I have been describing. Truth is something that comes in the process of writing, or comes from the process of writing' (*Doubling* 18).

As Coetzee's words suggest, it is hard to separate the writer from his writing. It is impossible to tell which of what is written belongs to the writer and which emerges through writing, which is motivated by the writer's desires and which is restricted by language. Writing constitutes an *emergent event* where the writer becomes one of its entangled agencies (along with language, the reader, and the physical tools used in writing, to name a few). The author, thus, is not the centre of writing, the creator of meaning, or an external witness of the event; rather, the writer is an integral and entangled part of the event—*the writer-becomes-writing*. As Trinh T. Minh-ha puts it, '[t]o write is to become. Not to become a writer (or a poet), but to become, intransitively. Not when writing adopts established keynotes or policy, but when it traces for itself lines of evasion' (19 qtd. in Braidotti, *Nomadic* 16).

Going back to the overwhelming similarities between the protagonists themselves on the one hand, and the protagonists and Coetzee on the other, these parallels entertain an intriguing possibility: all of these seemingly different protagonists are in fact *different becomings of Coetzee himself*. Each of the characters can be read as a different *becoming* of Coetzee's 'I'; for example, Coetzee *becoming-woman* in *Costello*, *becoming-Nicolas* in *The Master of Petersburg*, *becoming-reader* in *Foe*¹³¹, *becoming-boy* in *Boyhood*, *becoming-dead* in *Age of Iron* and *Summertime*. Moreover, and just like his protagonists in their paths of *becoming*, Coetzee, as the hearty non-vegan Vietnam-era American official, *becomes precisely that which he is not/does not want to become*. John, Costello's son, apparently talking about his mother but also talking about Coetzee: '[b]ut my mother has been a man . . . [s]he has also been a dog. She can think her way into other people, into other existences. I have read her; I know. It is within her powers. Isn't that what is most important about fiction: that it takes us out of ourselves, into other lives?' (*Costello* 22-3).

This fragmentation of the author's voice, through creating narratives in which voices cancel each other, is a prominent theme in Coetzee's fiction. As Faber notes, *dialogism*, a term Coetzee borrows from Mikhail Bakhtin and uses in his analysis of Dostoevsky's work, can equally be applied to his own novels. Coetzee defines *dialogism* as technique that expresses 'no dominating, central authorial consciousness, and therefore

¹³¹ I explain this *becoming* in Chapter Four of the thesis.

no claim to truth or authority, only competing voices and discourses' ('Artist'). Evidently, Coetzee willingly steps out of the author position (or external observer) to experience all those modes of *becoming*. Coetzee, in other words, loses his ego to *become-his-characters*.

Although there is no central consciousness that directs narrative and claims truth, I contend that there is a form of entangled totality that *emerges* through Coetzee's fiction. This idea corresponds to the quantum law: *the sum is not equal to the parts*. The similar structure and compositions of protagonists suggest an underlying consciousness that fragments and manifests itself in different forms across Coetzee's fiction. I argue that this underlying wholeness is only possible to grasp by reading Coetzee's work collectively and, as readers, experiencing these different states of *becoming*. The reader can enjoy an entirely different experience when s/he reads the novels collectively as opposed to the experiences s/he has from reading the novels separately.

This underlying entanglement of Coetzee's texts/characters suggests a far more dynamic narrative that is *becoming*. Such a narrative cannot be read but only *experienced* by and through the reader as s/he embarks on the journey of reading not only Friday in *Foe*, or David in *Disgrace*, but reading *Coetzee* in his work. This underlying narrative is one that Coetzee cannot write or control; it is for the reader to write, read, and *become*. Therefore, the reader becomes involved in a much more complex and entangled process than reading: s/he is an integral part of *the phenomenon of meaning* (along with the other agencies of meaning, such as the author and the text), which I explain in detail in Chapter Four. Furthermore, and since the narratives end with the protagonists in a state of suspension/superposition, the reader is invited into the *becoming* of these characters. S/he is expected to go beyond sympathy and *become* the protagonists by carrying their existential angst and beginning his/her own inner journey of recognising his/her own *becoming*.

Just like the characters, the reader is also required to recognise the simple essence of his/her *becoming*; s/he is not *apart from* but *part of* the meaning that emerges. The *distance* between the reader and the text collapses for the reader to *become* what s/he reads. Evidently, we end up with a foundational notion of quantum mechanics: the impossibility of an external apparatus/observer (reader/author/text) outside the event

(reading/writing/meaning), or the collapse of distinctions between the observer/observation/object of observation. In his critical essay on Beckett's 'Unnamable', Coetzee acknowledges this collapse as he writes, '[t]he separation of thinker and thought, creator and creature, is a fiction of fiction, one of the internal rules by which the game of the novel is played' (*Doubling* 38). Through this *becoming*, all boundaries collapse between the event and the agencies of meaning, which translates into the impossibility of any exteriority outside the *phenomenon of meaning*. As Barad declares in the context of quantum theory, '*we are part of that nature that we seek to understand*' (26). By the same token, the author and reader are part of the meaning they try to understand.

Reading/writing, therefore, become part of the *phenomenon of meaning* in the quantum sense that does not merely indicate the epistemological inseparability of the observer/observed/outcome of measurement (or author/reader/text/meaning); rather, as Barad notes, *phenomenon* here implies '*the ontological inseparability/entanglement of intra-acting "agencies."*' That is, phenomena are ontologically primitive relations-relations without preexisting relata' (*Meeting* 139). In other words, within the phenomenon of meaning, there are no inherent pre-existing distinctions between, or values of, the entangled agencies of meaning. Also, meaning *emerges* through the intra-action of these agencies.

This understanding of the role of the reader/author/text within and of the phenomenon of meaning is a marked break with the traditional role of the reader as an external agent or even as a participant in the concretisation of the literary work—as proposed by Roman Ingarden and Wolfgang Iser, and their ideas on the *intentionality* of the reader and author in the literary process.¹³² Furthermore, it challenges E. D. Hirsch's distinction between meaning (as intended by the author) and significance (as perceived by the reader and the critic), for meaning, as a phenomenon, can only emerge, and be understood, through entanglement. This vital understanding of the extent of the organic entanglement of the critic/reader/author/character within the phenomenon of meaning

¹³² For more, see Ingarden's *The Literary Work of Art: An Investigation on the Borderlines of Ontology, Logic, and Theory of Literature* and Iser's *The Act of Reading: A Theory of Aesthetic Response*. It is difficult to speak of such 'intentionality' as proposed and developed by Ingarden and Iser without falling, once again, into the Cartesian agency in analysing the literary process.

carries many more radical implications that have the potential to revolutionise our understanding of, and applications in, literary criticism.

This QPist understanding of the nature of reading/writing/*becoming* creates a need for a new understanding of agency to replace the traditional, now empty, position of the reader/author/subject. Barad proposes a useful reworking of agency as she explains, '[a]gency is not held, it is not a property of persons or things; rather, agency is an enactment, a matter of possibilities for reconfiguring entanglements' ('Interview'). This new understanding does not propose the need to locate agency in the author, the reader, or the text. Rather, it proposes the view of agency as an emergent quality of the entanglement and dynamic configurations within the phenomenon of meaning.

Furthermore, Barad provides a relevant insight into 'knowing' as 'an ongoing performance of the world' that is not bounded to the closed practice of an external 'knower' that 'knows' from above or outside (149). Similarly, meaning should be realised as an ongoing irreducible phenomenon that is determined not by the author and the reader (as external subjects/enforcers of meaning), or the text (as an external object of meaning). Addressing Maximov, Dostoevsky describes reading as the following: 'reading is being the arm and being the axe and being the skull; reading is giving yourself up, not holding yourself at a distance and jeering.' (47). Dostoevsky's statement clearly illustrates the QPist understanding of reading where the reader is not the doer/actor, and where *reading becomes the very subject of its own manifestation: reading is being the arm, the axe and the skull*. Unlike the traditional notion of agency, QPist grants agency not to the human or nonhuman, *but to the very phenomenon that emerges*.

To distinguish the agencies of meaning (for analytic and practical purposes) within this holistic and entangled view of the phenomenon of meaning, a dynamic flexible distinction is introduced to the phenomenon, which Barad refers to as the 'agential cut' (*Meeting* 140) between the subject/object. This subject/object cut, as Barad explains, does not at all indicate 'absolute exteriority' but is a rather play of shadows, darkness, and light, that exhibit 'exteriority within' (135). In my discussion, I intentionally refer to this interior cut by using (/) to indicate *the flexible, emergent, yet non-inherent* distinction between subject/object, reader/author/meaning, reading/writing/*becoming*, and so forth. Analogous to this *agential cut* is the *Heisenberg*

cut in quantum theory that temporarily separates what is otherwise a coherent quantum world based on wave function. Similarly, Heisenberg's epistemological cut does not pre-exist the phenomenon but rather *emerges* through it.

This final conclusion allows us to grasp the essence of the posthuman world, post-author narrative, and post-reader reading: a world without Man as a centre of its *becoming*, a narrative in which the author, as he writes, *is written*, a reading where the reader is *part of* the meaning s/he understands. Through QPist's reworking of agency, the events of reading/writing/*becoming* replace the traditional subjects (reader/author/protagonist) in the phenomenon of meaning. Within a QPist framework, it becomes thus possible to refer to reading without a reader, writing without an author, and *becoming* without a subject. The absence of the subject/reader/author as *external* observers/subjects only means that they *become part of the phenomenon they were thought to stand outside*. In other words, the absence of the subject in posthumanism is not true absence; it is only the aftermath of the *collapse of the illusory, representationalist space* between the subject and the world. Without such a space, there is nothing, and no need for anything, outside, or beyond.

CHAPTER THREE

Inside Out: Things, Objects, and Extended Becoming in Coetzee's Slow Man

'At such moments even a negligible creature, a dog, a rat, a beetle, a stunted apple tree, a cart track winding over a hill, a mossy stone, counts more for me than a night of bliss with the most beautiful, most devoted mistress. These dumb and in some cases inanimate creatures press toward me with such fullness, such presence of love, that there is nothing in range of my rapturous eye that does not have life. It is as if everything, everything that exists, everything I can recall, everything my confused thinking touches on, means something.' -Hugo von Hofmannsthal 'Letter of Lord Chandos to Lord Bacon' (1902). (qtd. in Coetzee, *Costello* 226).

This chapter explores the nature of things and objects and the role of these inanimate beings in the process of *extended becoming* in Coetzee's novel *Slow Man*. Through a reading of the life of Paul Rayment after a car accident that led to his disability, the chapter aligns with the earlier QPist discussions by stressing the inevitability of entanglement, the contingency of agency, and the flexibility of boundaries not only between the subject/object, but also between the body/environment. Although primarily focused on Coetzee's *Slow Man*, the discussion will also refer to relevant moments from *Elizabeth Costello* and *Life and Times of Michael K*.

The chapter begins by briefly staging a discussion of objects and agency. It is then divided into two main parts; the first, '*Extended Becoming*', explores how the body extends into its surroundings, blurring the boundaries between the subject/object, body/environment, animate/inanimate, and internal/external. I develop the term *extended becoming* based on Clark's work on extended cognition and his contention of the impossibility of an internal, separated, and local cognition that is not constantly shaped, defined, and affected by the environment (*Supersizing* xxviii). I discuss instances of Paul's life after his leg amputation and the possible mobility aids/substitutes offered to him, including the crutches, the Zimmer frame, and limb prosthesis.

The second part, 'On Things', explores Bill Brown's work on thing theory, including his ideas on *the thingness of things* and *the strangeness of things*. I demonstrate

how these ideas provide a refreshing contrast to the notion of *extended becoming* discussed in the first part. I look closely at several moments where Paul is interrupted by the *thingness* of things—including the *thingness of his own body*. This contrast demonstrates that while the human body is confronted by its own *thingness*, the thing emerges as a dynamic, *living* entity. By demonstrating the inseparable and intra-active relationship between animate and inanimate *becomings*, the chapter thus *brings matter to life and returns the human to matter*.

This chapter carries what seem to be two completely different, if not contradictory, arguments. The first is that objects are extensions of the human's *becoming* body. The second is that things are *strange*; they are entities distinct from human cognition and reside outside its linguistic realms. Nevertheless, these two arguments carry at their heart the Heideggerian distinction (advanced by Brown) between things and objects; objects are entities that serve common functions (hence extended), while things are objects that no longer serve their function (hence distinctive). Furthermore, the two arguments are essentially built on the same premise: *inanimate and animate entities exist on the same ontological and quantum level and share the same degree of entanglement*. Brought together, I hope to demonstrate how these two arguments show that inanimate entities might be seen as equally extended and distinctive, familiar and strange.

3.1. Objects and Agency

In his book, *What is a Thing?* (1967), Heidegger brings the subject and the object poles closer together. He casts doubt upon the distinction between subject and object and the relationship that is normally seen to govern them (27). However, in his influential book, *We Have Never Been Modern* (1991), Latour criticises Heidegger's analysis for effectively maintaining the modernist gap in his use of the terms 'subject' and 'object', noting that our world is full of hybrids, of what he calls, borrowing Michel Serres' terms, *quasi-objects* and *quasi-subjects* (51). As Latour puts it, 'things do not exist without being full of people' ('Berlin' 10), and, equally, people are full of things. Indeed, Latour's concept of hybridisation is ontologically and semantically equivalent to the notion of entanglement as it asserts the impossibility of achieving a cleanly cut distinction between subject/object. Latour's argument resonates with the laws of quantum

physics; the complexity and contingency of the phenomenon and the instability of agency translate into the impossibility of the breaking of the phenomenon into isolated and fixed components with intrinsic qualities that could be accurately referred to as subject and object.

In *Politics of Nature: How to Bring the Sciences into Democracy* (2004), Latour argues that objects that act are not actors but *actants*. Latour defines *actant* as anything whose actions ‘modify other actors’. In other words, *actants* do not take action in the narrow humanist, intentional sense; rather, they *produce an effect*, which is a common trait of both humans and nonhumans (75). Although the word *actant* is meant to avoid ‘any traces of anthropocentrism’, Latour, nonetheless, does not provide a radical reworking of the notion of agency; *actor* and *actant* are more similar than they are different. *Actant* seems to be a way of re-distributing agency and attempting to replace the *Subject* with the *Object*. This is also evident in the ‘Parliament of Things’ where Latour stresses the rights of *Objects*. On a similar note, commenting on Jean Baudrillard’s declaration that the subject controls the world and its history whereas the object is ‘shamed, obscene, passive’, Brown notes that Baudrillard’s assertions about the *Object* (and its history) ‘threatens the subject no more than it threatens (by absorbing) both objects and things’ (8). Therefore, replacing the *actor* with the *actant*, the *Subject* with the *Object*, does not render the dilemma of agency less problematic.

Nevertheless, in a QPist framework, the very definition of agency needs to be addressed. Barad’s notion of *agential realism* is the most significant recent attempt to rework the concept of agency in the light of quantum entanglement.¹³³ Agency, according to Barad, ‘is a matter of intra-acting; it is an enactment, not something that someone or

¹³³ In her essay, ‘Getting Real: Technoscientific Practices and the Materialization of Reality’, Barad explains the term *agential realism*. She writes,

[agential realism] is an epistemological and ontological framework that extends Bohr’s insights and takes as its central concerns the nature of materiality, the relationship between the material and the discursive, the nature of “nature” and of “culture” and the relationship between them, the nature of agency, and the effects of boundary, including the nature of exclusions that accompany boundary projects. Agential realism entails a reformulation of both of its terms - “agency” and “realism” - and provides an understanding of the role of human and nonhuman factors in the production of knowledge, thereby moving considerations of epistemic practices beyond the traditional realism versus social constructivism debates (89).

something has' (*Meeting* 214). Barad notes that she intentionally tries to stay away from words such as 'agent' and even 'actant' because they do not represent the relational ontology to which she is committed. It is not the position or the degree of agency that is at stake, but rather the idea of agency itself. As Barad argues, agency is not a property of the animate or inanimate entity; it is the expression of possibilities and accountability involved in the formation of entanglements ('Interview'). This understanding of agency aligns with my conclusion in Chapter Two: *there is no actor (or actant)—only action*. The QPist agency is thus defined in a way that an agent, in the Cartesian sense, is no longer needed.

Although this may seem self-evident at this point, it is nevertheless worth stressing that my concern here is *not* the role that objects play in the lives of human subjects. Questions regarding how objects constitute human subjects, threaten them, change them, and determine their relations with other subjects, as Brown notes, 'hardly abandon the subject, even when they do not begin there' (7). Consequently, the chapter does not deal with matter as a medium or a facilitator for the subject's feelings and desires, because, as Barad argues, materiality itself is *agentive*: '[it] is always already a desiring dynamism, a reiterative reconfiguring, energized and energizing, enlivened and enlivening' ('Interview'). As Barad proposes, instead of viewing matter as being acted upon by humans, or the alternative view of acting upon humans, matter, instead, becomes an *event*; it is, therefore, not a static and fixed quality of things or an outcome of certain processes. Instead, matter is constantly *becoming* 'produced and productive, generated and generative' (137). Evidently, this new QPist view of matter emphasises matter's contingency, emergence, relationality, entanglement, and intra-activity, and abandons traditional notions of matter as fixed, inherent, external, passive, and receptive, as well as the reactive views of matter that portrays it as the new replacement of the subject.

Consequently, the subject/object distinction becomes an emergent, flexible, and relational 'agential cut' (Barad, *Meeting* 140) limited to, and within the limits of, the measured/observed event. As shall be further explained, the object is always an object-subject, and the subject is inevitably a subject-object. Such a view bridges the gap between animate and inanimate beings. Russian constructivist Aleksandr Rodchenko

declares, '[o]ur things in our hands must be equals, comrades' (qtd in. Brown 10). Things are our equals in the sense that they are *becoming* as phenomena, indiscriminately and indistinguishably entangled with our own and the world's *becoming*, sharing and constituting not only our lives but also our destiny.

3.2. *Extended Becoming*

'[O]nce the hegemony of skin and skull is usurped, we may be able to see ourselves more truly as creatures of the world' (Clark & Chalmers 18).

Before I explain what I mean by *extended becoming*, it is important to outline the 'source' theory—extended cognition [EC], developed initially in the influential paper 'The Extended Mind' (1998), by Andy Clark and David J. Chalmers, and later advanced in the work of Andy Clark, and in particular, his book *Supersizing the Mind* (2008).¹³⁴ As Chalmers notes in his foreword to the book, while Clark's work is the most extensive in developing the theory specifically in such terms, the prospect of the extended mind can be traced in older works and has its roots in the writings of Dewey, Heidegger, and Wittgenstein (x).¹³⁵

The traditional view of cognition, which Clark calls the brainbound model (xxv) and which Mark Rowlands refers to, in his book *The New Science of the Mind: From Extended Mind to Embodied Phenomenology*, as Cartesian cognitive science (2), holds the unquestioned presumption that human cognitive processes are located in the brain. On the other hand, the new model of cognition, which Clark and Rowlands refer to as *extended cognition* and *the new science of the mind*, respectively, holds that cognitive processes are not located in a specific area of the human body; they depend on internal and environmental factors equally. According to the *extended model*, not all the mechanisms of the mind exist in the head; local cognitive operations involve complex knots of 'feedback, feed-forward, and feed-around loops: loops that promiscuously criss-cross the boundaries of brain, body, and world' (Clark xxviii). Cognition, thus, as Clark

¹³⁴ Clark dedicates other works to his theory, such as *Being There: Putting Brain, Body and World Together Again* (1998), *Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence* (2003), and 'Magic Words: How Language Augments Human Computation' (1998).

¹³⁵ Chalmers further notes that recent authors have similarly argued that consciousness lies partly outside the head, such as Fred Dretske (1996), J. C. Fisher (2007), and M. G. Martin (2004). The difference between the arguments of these authors and the extended model is that the latter emphasises the 'two-way coupling between the organism and the environment', which is fundamental to the EC thesis (Chalmers xv).

declares, ‘leaks out into body and world’.¹³⁶ This extended cognition is non-Cartesian: what it is concerned with, as Rowlands puts it, ‘is the mental processes, and not whatever it is that has them’ (8). In other words, it is concerned with the *event* rather than the subject/object of the event. Rowlands’ statement is posthumanist at heart; it refuses to replace the human ‘cogniser’ with another *-er*; instead, it views the cognitive process as *agentive*.

Closely related to the EC thesis is the 4E cognition approach, which helps reconcile the idea of embodiment with EC.¹³⁷ The 4Es stand for *embodied*, *embedded*, *enactive*, and *extended*.¹³⁸ Cognition is *embodied*: largely dependent on what governs the organism’s embodiment; it is *embedded*: crucially determined by our relations and our surrounding environment; it is *enactive*: influenced by aspects of the activities carried out by the organism; finally, cognition is *extended*: not limited to the boundaries of the organism (Ward & Stapleton 89-90). These different aspects of the 4E cognition, as we shall come to see, perfectly correspond with the QPist idea of *becoming* that was advanced in the previous chapter.

3.2.1. *Extended Becoming*

However, I am not arguing for EC per se. I am *extending* the argument into what I shall call *extended becoming* [EB]. In other words, I am proposing that extension is not only limited to cognition but also includes *the whole entity as it is becoming—emerging within and of the world*. Indeed, Clark and Chambers have already proposed that the EC thesis can be extended. Chalmers believes that ‘[i]t is natural to ask whether the extended

¹³⁶ One of the implications of this model is that environmental engineering becomes self-engineering. As Clark explains, when we construct our physical world, we are simultaneously constructing and expanding our cognitive abilities (xxviii).

¹³⁷ The 4E approach is by no means a homogeneous theory. It involves a wide array of works and authors that deal with at least one aspect of cognition. Despite having a more or less common ground between these different accounts, the 4E approach does not offer a consistent theory that encompasses all aspects of cognition and what is written about them. For more on the different stances within the theory, see Richard Menary’s ‘Introduction to the Special Issue on 4E Cognition’. However, as a method, 4E cognition proposes a way to see the complementarity and complexity of aspects of cognition. Dave Ward and Mog Stapleton summarise the authors and the works on each aspect of 4E cognition; these include: The *embodied*, (Haugeland, 1998; Clark, 1997; Gallagher, 2000); the *embedded*, (Haugeland, 1998; Clark, 1997; Hurley, 1998,); the *enactive*, (Varela, Thompson & Rosch, 1991; Hurley, 1998; Noë, 2004; Thompson 2007); and the *extended* (Clark & Chalmers, 1998; Hurley, 1998; Clark, 2008) (89-90).

¹³⁸ Rowlands provides a thorough explanation of each factor. For more, see *The New Science of the Mind* (51).

mind thesis might itself be extended' (xiv). The 'coupling' of the two words (*extended* + *becoming*) is crucial as it entails the most fundamental QPist qualities: entanglement, intra-action, contextuality, relationality, and fluidity. In *EB*, the human and nonhuman entities are openly entangled, *becoming* (which includes, but is not exclusive to, the processes of coupling and decoupling), within their environments. Similarly, the 4E cognition theory can extend to the whole entity rather than being limited to its cognitive processes; *the becoming entity is embodied, embedded, enactive, and effective*.

A great part of the reason I see *EB* as more sufficient than *EC* is that it is as hard to separate cognition from the entity itself, as it is hard to separate cognition from the environmental factors as the *EC* thesis holds. In other words, for the same reasons Clark and Chalmers saw the difficulty of limiting cognition to inner processes alone, I find a similar difficulty in separating cognition from *whatever that is normally assumed to be not cognitive*. Moreover, based on quantum entanglement, it is hard to separate the entity that is cognising as opposed to the thing that is being cognised. The idea of cognition itself becomes limiting/limited and isolating/isolated. To understand the paradox of *EC*, we should ask the question: what is it that is part of us that is not cognitive, or not related to cognition?¹³⁹ Let us consider Chalmers proposition of what the extended mind could extend to: '[w]hat about extended desires, extended reasoning, extended perception, extended imagination, and extended emotions?' (xiv). All that Chalmers proposes here are cognitive processes of a human being, hence already part of the extended cognition theory. Clark and Chalmers also make a similar suggestion in their co-authored essay: '[d]oes the extended mind imply an extend self? It seems so' (18). Again, it would be difficult to imagine a 'self' that is not largely and integrally composed of, and defined by, cognitive processes. In other words, it would be rather hard to find something of which any entity is constituted that is not already entangled with its cognition, from its most abstract thoughts down to its very atoms. In his book, *A Treatise of Human Nature*, David Hume writes, 'when I enter most intimately into what I call *myself*, I always

¹³⁹ This question invokes the works of the pioneers of the embodied mind theory such as Humberto Maturana, Francisco Varela, and Evan Thomson. They see the mind as emergent and propose that intelligence (from an evolutionary perspective) is a property of everything that survives. For more see *The Embodied Mind: Cognitive Science and Human Experience* (1991). Thompson's *Mind in Life* (2007), for instance, demonstrates the entanglement of mind and life, where the two share common foundational properties.

stumble on some particular perception or other, of heat or cold, light or shade, love or hatred, pain or pleasure. I never can catch *myself* at any time without a perception, and never can observe any thing but the perception' (165). Hume's passage is an excellent example of the posthumanist coreless self (I discuss in Chapter Two) and what I am proposing here as the concept of *EB*. Hume entertains the idea of embodiment (perception) and also embeddedness (heat, cold, light, shade). What he describes as 'self' is constantly emerging and *becoming* every aspectual possibility without actually being reducible to any one of them. Most importantly, Hume's 'self' never claims to be distinct from what it *experiences*. One's self, cognition, body, and environment are evidently inseparable in the perpetual process of *becoming*.

Paradoxically, in the traditional view of cognition (i.e. brainbound or Cartesian cognitive science), where cognition has a locus (brain/mind), the word 'cognition' is perfectly justified, as it includes the processes that were thought to be brain-exclusive; therefore, cognition is often simply understood to be the newest scientific term for thinking, whereas thinking is assumed to be a Cartesian activity that happens in the mind reinterpreted as the brain. However, in EC, cognitive processes are so entangled and embedded it is almost impossible to separate from *everything else* to the point where the word cognition seems redundant. Hence, the need for a more holistic alternative to the word cognition rises: *becoming*.

One of the main differences between *cognition* and *becoming* is that while cognition is conventionally *thought to be* limited to animate entities, *becoming* includes both animate and inanimate entities. Also, while the word *cognition*, despite EC, remains suspiciously Cartesian or, at least, with Cartesian residues, *becoming*, on the other hand, is strictly posthumanist. Moreover, while *cognition* implies mental processes for the most part, *becoming* suggests the entanglement between the physical and nonphysical processes and the move beyond the illusion of any separation. It is interesting to see that Chalmers makes a prediction similar to the idea being advanced here, namely that EC could extend to include the physical: 'it is plausible that it is precisely the nonconscious part of them [cognitive processes] that is extended. I think there is no principled reason why the physical basis of consciousness could not be extended in a similar way' (xiv).

Similarly, Clark hints towards an holistic view that underlies the extended mind theory when he states, ‘it is relatively unsurprising if what we think, do, and perceive all turn out to be *in some sense* deeply intertwined’ (xxvi). These two statements are further reasons why the word *cognition* falls short whereas the word *becoming* constitutes a much more suitable alternative for the premises of the extended thesis.

Furthermore, one of my main reservations about EC is that it problematically assumes that cognition depends on an *external* environment. Although Clark and Chalmers assert that EC proposes a new variation of externalism, which they call *active externalism*, and describe as being ‘based on the active role of the environment in driving cognitive processes’ (Clark & Chalmers 7); nevertheless, a QPist stance organically rejects the idea of externalism altogether. As previously argued, the work of many quantum theorists and scientists, most notably Bohr, demonstrates the impossibility of externalism. The boundaries that are thought to distinguish the entity from its surroundings do not indicate ‘absolute exteriority’; they are, as Barad describes them, a play of shadows, darkness, and light that exhibit ‘exteriority within’ (135).

Moreover, *EB* perfectly corresponds with the idea of *quantum decoherence*¹⁴⁰. Quantum decoherence happens when the quantum system observed is not perfectly isolated from its surroundings, which leads to the gradual loss of quantum coherence and behaviour. *Decoherence* is a manifestation of the *spontaneous* entanglement between the quantum system and its surroundings where the system ‘leaks’ into the environment. It thus demonstrates the *EB* impossibility of separation between the entity as a *becoming system* within the environment.

Aligning with QP, *EB* undermines the boundaries between the body/environment. Objects become an integral part of our *becomings*, sharing with us not only one of our

¹⁴⁰ It is important here to distinguish between the collapse of wave function and *decoherence*, which equally result in the loss of quantum behaviour and the disappearance of the interference pattern in the double-slit experiment. The difference, however, is that while the wave function collapse exhibits the loss of the interference pattern as a result of measurement, *decoherence* takes place when no collapse is observed, but the disappearance of the interference pattern is thought to be due to the *spontaneous* entanglement between the quantum system and the environment (Bacciagaluppi). For a thorough explanation of the phenomenon of decoherence as a manifestation of the quantum entanglement between the system and the environment, see Erich Joos, H. Dieter Zeh, and Claus Kiefer's *Decoherence and the Appearance of a Classical World in Quantum Theory* (1996).

most intimate acts—our thinking—but also every atom of our existence. As Haraway rightly asks in her manifesto: ‘[w]hy should our bodies end at the skin, or include at best other beings encapsulated by skin?’ (178). Haraway’s question, although seemingly metaphorical, is, in fact, very literal. The bodily boundaries that appear to determine where the body ends and where the environment begins are, according to the scientific research on vision, optical illusions. An example to demonstrate this is in one of the lectures of Nobel laureate physicist Richard Feynman on ‘the mechanisms of sight’. Feynman states,

The fact that there is an enhancement of contours has long been known; in fact it is a remarkable thing that has been commented on by psychologists many times. In order to draw an object, we have only to draw its outline. How used we are to looking at pictures that have only the outline! What is the outline? The outline is only the edge difference between light and dark or one color and another. It is not something. It is not, believe it or not, that every object has a line around it! There is no such line. It is only in our own psychological makeup that there is a line (36-1).

The boundaries or edges are not determined visually or even ontologically. As Barad comments, in the case of a hand holding a mug, it is wrong to assume that there is a certain number of atoms that constitute the hand and another that constitute the mug. Looking closely at an edge, Barad notes, one cannot see harsh boundaries between light and dark but instead a cluster of light and dark bands, or what Barad calls ‘a diffraction pattern’ (*Meeting* 156). Furthermore, vision is only part of *seeing*, as Barad continues, ‘[i]nteracting with (or rather, intra-acting "with" and as part of) the world is part and parcel of seeing’ (157). Evidently, seeing, as a cognitive ability, can only be explained through the holistic act of *becoming*.

If bodies are without exterior boundaries, then the very notion of the body needs to be revisited. Bodies, both human and nonhuman, are not objects with intrinsic properties and stable boundaries; rather, they are ‘material-discursive phenomena’, constantly *becoming* ‘through the *world's* iterative intra-activity’ (Barad 152). Bodies, hence, are not ‘already there’; they *become* through certain practices (157). This applies

not only to the ‘contours of the body’ but also down to the very atoms that make up its being. Due to the dynamic, flexible, and emergent constitution of the human and nonhuman bodies, they are, hence, always ‘open to contestation’ (153). Bodies are, thus, not closed systems; they are open circuits of intra-action. Seaman explains that posthumanist bodies are released from all the ideological constraints and are allowed to ‘roam free’ and connect with other animate and inanimate entities (248).

An example of the integration between the animate entity and inanimate entity is Paul and the crutches with which he is provided after the accident. After his leg amputation, Paul uses the crutches which soon become ‘second nature’ to him (35). For Paul, the crutches are not external; they are an integral part of his everyday life, actions, and capabilities, as much as, and in the same manner, his old leg used to be. As Maurice Merleau-Ponty puts it, ‘[t]o get used to a hat, a car or a stick is to be transplanted into them, or conversely, to incorporate them into the bulk of our own body’ (*Phenomenology* 166). Similar to Merleau-Ponty’s blind man’s stick, Paul’s crutches have ‘ceased to be an object for him, and is no longer perceived for itself’ (165). The crutches have become points (*joints*) of strength, expanding the power of his body, and widening the possibilities of his mobility. Through *becoming*, the crutches are not foreign to Paul’s body; rather, they merge with and *become his body*. As a person with a similar disability, Nancy Mairs explains such an integration: ‘the wheelchair I experience is not “out there” for me to observe, any more than the rest of my body, and I’m invariably shocked at the sight of my self hunched in its black framework of aluminum and plastic’ (46). In a similar manner, Paul’s body and his crutches are integrated with his own *becoming*; Clark and Chalmers describe this merging as a ‘coupled system’, where ‘the human organism is linked with an external entity in a two-way interaction, creating a coupled system that can be seen as a cognitive system in its own right’ (8). However, for *EB*, this coupling is not exclusive to Paul’s cognitive abilities but extends to his entire *becoming*.

The criterion against which Clark and Chalmers judge the success of the coupling is that in the case of removing what they call the ‘external component’ of the system, the behavioural competence should inevitably drop (8-9). In Paul’s case, not having his crutches means he is unable to walk properly. The crutches become central to his actions in the same way that a leg would. Crutches, therefore, are not just ‘external props and

aids'; they become 'deep and integral part of the problem-solving system' (Clark, *Cyborgs* 5) that we call *the body*. In such integrations, the body does not distinguish the 'organic' from the 'inorganic'. This is evident in the cases of *body ownership* or *body transfer illusion*¹⁴¹. In such cases, the body perceives inorganic parts and reacts to them as if they were its own. Furthermore, these cases can be induced by manipulating visual perception and providing visual and sensory alternatives that interfere with the body's own signals.¹⁴²

However, as Clark and Chalmers note, a sensible objection to the proposition that the inorganic parts behave as extensions of the body as much as organic ones is based on the chances of breakdown or potential decoupling. They respond to such objection by rightly noting that the brain, in the case of EC (and the body in case of EB), faces similar risks; in fact, cognition/body abilities diminish or decline in cases of sleep, intoxication, and extreme emotions. The rule of thumb for Clark and Chalmers is '[i]f the relevant capacities are generally there when they are required, this is coupling enough' (11).

Notably, Paul's accident and the following surgery where his leg gets mutilated demonstrate a permanent decoupling of 'organic' parts of the body. Paul uses the words 'unstrung' to describe the experience of decoupling—the loss of his leg: '[u]nstrung: that is the word that comes back to him from Homer. The spear shatters the breastbone, blood spurts, the limbs are unstrung, the body topples like a wooden puppet' (*Slow* 27). In fact, the decoupling Paul experiences, in his view, is far more profound than ordinary decoupling; it changes the very definition of his body from an *able* into a *disabled* body. Clearly, Paul maintains the idea of his body as an independent, closed off system with well-defined, fixed, and pre-determined borders. Consequently, he feels that his body *sans* his leg is no longer complete: '[a] man not wholly a man, then: a half-man, an after-man, like an after-image' (33-4).

However, in *EB*, the term disability becomes rather redundant. Looking at the body not as an object but rather as a perpetually *becoming event* cancels the distinction

¹⁴¹ I do not agree with the word 'illusion' as it carries Cartesian presumptions about what is considered real or illusory in our relations to objects.

¹⁴² A famous experiment of this nature is Ehrsson, Spence, and Passingham (2004) study on the 'rubber hand illusion', where the original left hand is concealed, and a real-looking left hand is positioned as an extension of their body. When both the right (organic) and left (inorganic) hand are stroked simultaneously and using the same movement, participants report feeling the left inorganic hand as if it were as their own.

between ‘able’ and ‘disabled’ bodies. The human body’s pairing with tools and devices happens to all types of bodies. *All bodies are, thus, hybrids, cyborged*: ‘able’ bodies rely on tools and devices in the same way ‘disabled’ bodies do. In other words, all bodies connect with objects to maximise their competence in everyday life. The coupling of ‘normal’ bodies, however, is often unnoticed because only when the body breaks down, when it stops working or functioning properly—revealing its *thingness*—that its relation to its surroundings is first noticed (Barad, *Meeting* 158). Furthermore, ‘able’ bodies are not inherently more sufficient; their efficiency is a result of the appropriation of structures that favour ‘normal’ and exclude all other types of bodies. As Nayer notes, it is not a case of a body that is unable to deal with the structure; it is a case of a structure that is unable to accommodate different bodies. Structures co-evolve with ‘able’ bodies; however, for ‘disabled’ ones, co-evolution ‘takes a different route’ (146). The construction of the environment, as Barad puts it, is carried with the image of “‘normal’ embodiment in mind’ (158).

Not having his leg means that Paul has a choice to integrate with other devices. Beside the crutches and the standard Zimmer frame, there are other options available for him: ‘from a device that adds wheels and a safety brake to the quadrangular Zimmer frame, to a vehicle with a battery-powered motor and a steering bar and a retractable rain-hood, intended for advanced cripples’ (*Slow* 35). Paul’s body becomes a creative *locus of possibilities*, where various devices could couple with his body, giving him different options, experiences, *becomings* and, most notably, *bodies*. Paul’s body, hence, might not be seen as disabled but rather *enabled* through various potential and innovative configurations with different objects.

However, of all the potential devices available to him, the most important and anticipated device Paul might obtain is the artificial limb. Nonetheless, Paul firmly and repeatedly refuses to have a prosthesis installed. Paul justifies his refusal by claiming that he dislikes *fakes* and wants to feel *natural* (59). When Ljuba, Marijana’s little daughter, asks him if he has an artificial leg, his response is that his leg is ‘all natural’ without any screws—just bones inside (55), and that if he had screws he would be ‘a mechanical man’ which he obviously is not (56).

Clearly, Paul's reason for refusing the prosthesis is based on the same premise that rejects the idea of *EB*. It can be traced back to the profound belief in the nature/culture divide, or what Latour describes as the modern process of purification whereby a division exists between what is considered natural and what is considered cultural (*Never* 10-11). Here, what is natural (the human body) and what is artificial (the prosthesis) are viewed as intrinsically and fundamentally different. Their coupling is superficial as it maintains the boundaries of each entity without true integration. Although all the devices offered will equally couple with his body and become an extension of his *becoming*, Paul, nonetheless, refuses the prosthesis but accepts the crutches. By resembling, in their construction and appearance, the 'real leg', the prosthesis *declares its desire to become part of the body*, and not just to couple with it, which Paul is not ready to accept. The crutches, on the other hand, are far less blatant in their desire to *become* part of the human anatomy. In other words, while the crutches maintain clear and distinct semiotic and visual boundaries between themselves and the body: (wooden, slim, and not resembling the human anatomy); the prosthesis, on the other hand, does the exact opposite—it deliberately attempts to blur the visual and semiotic boundaries between itself and the body to which it is attached: (realistic looking in terms of shape, size, feel, and colour). This distinction can be clearly read in Paul's reaction to the prosthesis:

But if this fleshly object is repulsive, how much more so a leg moulded out of pink plastic with a hinge at the top and a shoe at the bottom, an apparatus that you strap yourself to in the morning and unstrap yourself from at night and drop on the floor, shoe and all! He shudders at the thought of it; he wants nothing to do with it. Crutches are better. Crutches are at least honest (*Slow* 58).

Wearing the prosthesis implies the acceptance of the diminishment of the sacredness of the human body and the reduction of the post-industrial gap between the human and machines. By refusing to wear the prosthesis, Paul's body is still not immune to being 'cyborged' through his use of the crutches, which only help in maintaining his *illusion* of the separation between his body and the world.

To refute the idea of the unconditional familiarity of the ‘normal/organic’ parts of the body and the indiscriminate alienation of the ‘inorganic/fake/inanimate’ extensions, Paul’s accident reveals that even organic parts of the body can feel ‘foreign’, whereas extended parts can feel ‘natural’. After he wakes up in the hospital, and before his amputation, Paul becomes self-conscious of the *strangeness* of his right leg: ‘[h]e tries to touch the right leg, the leg that keeps sending obscure signals that it is now the wrong leg’ (4). The right leg feels independent, as though it separated from the rest of his body before being *actually* separated: ‘[a]s if it knows it is being spoken of, as if these terrible words have roused it from its troubled sleep, the right leg sends him a shaft of jagged white pain’ (5). On the other hand, when Paul gets used to the crutches, they soon become ‘second nature’ to him (35). These examples further demonstrate that bodies are not fixed objects with a set of pre-existing natural parts with specific functions. All entities, including the human body, emerge through *becomings* in constant processes of coupling, decoupling, extending, and expanding, in an attempt to maximise their efficiency. In doing so, the distinctions between natural/unnatural and original/fake become not only highly debatable but also redundant.

3.2.2. Reversing the Relation

To avoid falling into the trap of a further Cartesian perspective, it is important to note that not only is it inanimate bodies that function as extensions of animate ones, but also *human bodies can become extensions of inanimate bodies*. An example of this can be found in *Life and Times of Michael K*, where K’s body *becomes inanimate*—an extension of its surroundings. K lies on his mattress in the shade next to the hut, covering his face with his arms. He is very still so that the children, who at the beginning keep their distance, soon feel at ease as they knew that he would not move. They begin to ‘[incorporate] his body into their game. They clambered over him and fell upon him as if he were part of the earth’ (84). K’s body becomes an extension of the ground on which he is lying. His body becomes what the children make of it in their games. His body, therefore, loses all of its connotations; it becomes sexless, ageless, and lifeless—an object of playing. Children cease to see his body as human. Instead, they see it as an *object of possibilities* in their games.

Indeed, K's case of *EB* can apply in everyday life where all human bodies inevitably function at different points of their constant *becomings* as extensions of *other* bodies with which they intra-act and couple. To apply the same logic to Paul's case, not only do Paul's crutches become an extension of his body, but also, and more interestingly, *Paul's body becomes an extension of the crutches*. Of course, this is not only a more radical but also a more posthumanist suggestion of *EB*. The suggestion is particularly significant to QP as it disturbs the very centrality of the human body as the locus of the extended thesis. The implications are rather remarkable. In one of her lectures, Costello quotes Montaigne's line: '[w]e think we are playing with the cat, but how do we know that the cat isn't playing with us?' (*Costello* 82). Another example to demonstrate this mutuality of *EB* is the case of the human body and the apple tree. From the perspective of a human eating an apple, they are using the apple tree for their own good. However, for the tree, the human body acts as a seed dispersal vector and fertiliser. In the first instance, the apple tree is an extension of the human body, whereas, on the other, the human body becomes an extension of the apple tree.

In either perspective, the relationship between animate and inanimate bodies can *only* be read *from and within* a local perspective. Instead of claiming an omniscient vantage point, or a central humanistic perspective, QP stresses the mutuality, complementarity, and extendedness of bodies, objects, and things. Another good example of the mutuality, dependence, and lack of true borders, between the animate and inanimate bodies, is when K's buries his mother's ashes under the ground, and when asked about her, his answer was: '[s]he makes the plants grow' (*K* 130). K's mother is viewed here as an extension of the earth as much as the earth is an extension of her.

From the perspective of QPist *EB*, Rodchenko's statement '[o]ur things in our hands must be equals, comrades' falls short—things are not 'in our hands'; they are an integral part of our cognitive, physical, and emotional aspects of our *becoming*. They extend us as much as we extend them. We are equally an integral part of their meaning, utility, and *becoming*. Things *of* our hands, therefore, are not our equals; they are certainly not our comrades. Rather, *we are the things in our hands*—in the most literal and quantum senses of the words.

3.3. On Things

3.3.1. The *Thingness* of Things

Based on Heidegger's original distinction between the object and the thing, Brown notes that the object becomes a thing when it ceases to be functional, meaningful, and purposeful: '[w]e begin to confront the thingness of objects when they stop working for us' (4). Brown provides an example of a window: you only begin to really look *at* the window when it gets filthy. Hence, Brown comments that while we 'look *through* objects ... we only catch a glimpse of things' (4). Unlike objects, things are meaningless, dysfunctional, abrupt, and noncompliant.

The first example that illustrates the *thingness* of things in *Slow Man* is the shower incident with the Zimmer frame. Alone in the shower, wearing his Zimmer frame, Paul loses his balance and falls, hurting his back. Paul faces a dilemma because he cannot 'decouple' his body from the frame without sitting up, while sitting up would cause him a great deal of pain (206). Lying down on the floor, naked, unable to move, the Zimmer frame takes its place on top of his body, 'blocking the cubicle door, while water continues to pour down and leaking shampoo rises in a froth all around' (207). Lying on the floor, Paul begins to think about the Zimmer frame on top of him: '[n]o one bothered to inform him, and he did not think to ask, who the Zimmer is or was who has come to play such a role in his life'. Paul goes on to imagine Zimmer's (the inventor's) life and the circumstances that led to his invention and immortality (6).

For Paul, the Zimmer frame suddenly changes from being an integral part of his body, function, movement, and physical boundaries, into an inconvenient metal piece that blocks him from moving. It is one of those moments of suddenness where things appear to declare their presence and power (Brown 3). As G. Harman puts it, inanimate entities move from a state of silence and withdrawal into sudden obtrusiveness (19). The significance of this moment lies in the fact that Paul has never given much thought to Zimmer's frame before this incident. From the moment Paul comes away from the hospital with this 'four-footed aluminium stand' (*Slow* 35), the frame becomes part of his body, helping him move around his flat. Now, standing over his body, David notices the

size, shape, and strange, unwelcome presence of this giant piece of metal.

This is not the first incident where the Zimmer frame stressed its *thingness*. On another occasion, when Paul meets the blind Marijana, with whom he plans to be intimate, she asks him, ‘What is this?’. Her question suddenly asserts the *thingness* of the frame. Paul answers, ‘[i]t is an aluminum frame, known colloquially as a walker’. Paul anticipates that the frame can become a barrier between them, so he puts it aside as he sits on the sofa (103). Triggered by her question, the frame reveals its true nature, its *thingness*, as it suddenly becomes obtrusive, standing in the middle, interfering between Paul and Marianna’s body.

Another example is Paul’s photograph collection. Paul has an extremely rare and extensive collection, which he began to collect in the 1970s, of photos and postcards of life in the mining camps of Victoria and New South Wales. As he shows them to Marijana, Paul narrates the stories and histories of the people in the pictures (48). Paul tells Marijana that by saving these pictures, he is saving the history and stories of these people. However, this is only part of it: ‘[h]e saves them too out of fidelity to the photographs themselves, the photographic prints, most of them last survivors, unique’ (65). For Paul, the pictures are both *objects* and *things*; he appreciates the fact that they are not only evidence of stories of old survivors, but also *survivors in their own rights*, asserting their own independent physical and unique presence. Showcasing his collection to Drago, Paul begins to describe the photos of his collection, this time not concerned with their content but rather with their physical form, encouraging Drago to look *at* them:

They are what we call albumen prints,' he tells Drago. 'The paper is coated with diluted egg white in which silver chloride crystals are suspended.

Then it is exposed to light under the glass negative. Then it is chemically fixed. It was a way of printing that had only just been invented in Fauchery's day. Look, here is a pre-albumen print to compare it with, on paper that has been soaked rather than coated — soaked in a solution of silver salts. Can you see how much more full and luminous the Fauchery is? That is because of the depth of the albumen coating. Less than a

millimetre of depth, but that millimetre makes all the difference. Take a look through the microscope (175).

There are other moments when these photos cease to express their interpretive powers and, instead, assert their *thingness*. For instance, Costello tells Paul that he should check his collection, implying that Drago might have stolen something from it. Although Paul finds his collection to be complete, one particular picture, nonetheless, raises his suspicions:

It is not that any of the prints are actually missing. Nothing is actually missing. But one of the Faucherys has the wrong feel to it and, as soon as he brings it out of its plastic sleeve into the light, the wrong look too.

What he is holding in his hands is a copy, in tones of brown that mimic the original sepia, made by an electronic printer on half-glazed photographic paper. The cardboard mount is new and slightly thicker than the original.

It is the added thickness that first gives the forgery away (218).

As the passage demonstrates, suspecting that his collection has somehow been altered, Paul ceases to look at the content, the stories and the histories these pictures represent. Instead, Paul begins to see these photos in their physical presence and sheer thingness—their shape, material, thickness, feel, and distribution of colour. In such moments, the photos exist as much, and are as real, as Paul himself, revealing their physical certainty more than any time before.

Not only the nonhuman but also the human body can reveal its profound *thingness*. For instance, the car accident Paul went through accentuated the *thingness* of his own body. The accident left Paul and his bike damaged indiscriminately. Paul's leg and knee bones were shattered and twisted whereas the frame of his bike was bent and the tubing was cracked. In his surgery, the doctors unanimously agree not to save Paul's knee. The doctor justified their decision by noting that the knee was crushed and misshapen at the same time. Saving his knee would have required a series of operations that do not have a high success rate (7). In other words, *saving Paul's knee was not a good investment*. Ironically, Drago delivers a similar assessment regarding fixing (saving) Paul's bike. After examining his bike, Drago mentions that he could probably bend it back into shape and respray it. Paul, however, would need to buy a new wheel hub and

derailleur and brakes, which would cost him as much as if he were to buy a second-hand bike. They both agree that *saving the bike would not be a good investment* (68). The irreversible damage to Paul's body and his bike reveal the shared thingness of both bodies.

Furthermore, the ramifications of the accident on Paul's everyday life remind him of the inherent thingness of things, especially the thingness of his own body. During his encounter with Marijana, Paul thinks of embracing her: '[b]ut to embrace her he must put aside the absurd crutches that allow him to stand up; and once he does that he will totter, perhaps fall' (77). In his dilemma of whether or not he should use the crutches, and how to manage without them, Paul is reminded that the human is 'caught up in things' and that the 'body is a thing among things ... caught in the fabric of the world, and its cohesion is that of a thing' (Merleau-Ponty, *Reader* 354). This is precisely how Paul's body feels to him: caught up in objects of his apartment—sofas, chairs, stairs, his desk. To move his body is to coordinate with all these objects, *to acknowledge their existence in order for them to acknowledge his*.

3.3.2. The *Strangeness* of things

Looking closer at things only makes them appear *stranger* than ever before. As Brown notes, the closer you look at things, the less clear they get. Brown quotes Georg Simmel's statement on telescopic and microscopic technology: 'coming closer to things often only shows us how far away they still are from us' (5). This is especially so for the quantum world where subatomic particles exhibit weird and unpredictable behaviour, which seemingly defies everything we think we know about the world. Not only for physicists, but also (and equally) for poets, Brown comments that the most familiar things, once we closely look *at* them, appear to be 'unpredictable and inexplicable' (5). Similarly, Morton tackles the same aspect of our relations to things in what he calls *the stranger strangers*. For Morton, each entity in the *mesh* (by which he refers to universal interconnectedness) appears strange. All of our attempts at getting to know other entities only make them *stranger* (*Thought* 15).

We encounter a moment of this unfamiliarity of things in *Waiting for the Barbarians*. In the first few lines of the narrative, the magistrate, living in a small town in

the middle of the desert his whole life, meets Colonel Joll for the first time. However, it is not the Colonel that has caught his attention, but what the Colonel is wearing:

I have never seen anything like it: two little discs of glass suspended in front of his eyes in loops of wire. Is he blind? I could understand it if he wanted to hide blind eyes. But he is not blind. The discs are dark, they look opaque from the outside, but he can see through them. He tells me they are a new invention. "They protect one's eyes against the glare of the sun," he says. "You would find them useful out here in the desert. They save one from squinting all the time. One has fewer headaches (1).

Evidently, to the magistrate, the sunglasses, which he inspects and describes with fascination, are strange, unfamiliar, unnameable, and unidentifiable, suggestive yet uncertain, present yet ambiguous. However, the *thingness/strangeness* of the sunglasses quickly fades away as the Colonel begins to describe their function—an *object* used to protect the eyes from the sun. As the narrative progresses, the sunglasses inevitably retreat to the background, the familiar, the functional, and the unnoticed.

Brown rightly observes that we use the word 'thing' to indicate the ambiguity of things in everyday life: '[i]t functions to overcome the loss of other words or as a place holder for some future specifying operation: "I need that thing you use to get at things between your teeth."' (4). We can sense this *thingness* in its ambiguity and difficulty of identification in Paul's response when he first inspects his amputation after the surgery:

Certainly *this thing*, which now for the first time he inspects under the sheet, this monstrous object swathed in white and attached to his hip, comes straight out of the land of dreams. And what about *the other thing*, *the thing* that the young man with the madly flashing glasses spoke of with such enthusiasm — when will that make its appearance? Not in all his days has he seen a naked prosthesis. The picture that comes to mind is of a wooden shaft with a barb at its head like a harpoon and rubber suckers on its three little feet. It is out of Surrealism. It is out of Dali. He reaches out a hand (the three middle fingers are strapped together, he notices for the first

time) and presses *the thing* in white. It gives back no sensation at all. It is like a block of wood. ([my emphasis] *Slow* 9).

Paul is no longer able to identify with what remains of his leg. Since his leg *stopped* functioning as part of his body, what is left of Paul's leg is described as a *monstrous thing that is wrapped in white*. Paul faces the strange and unfamiliar *thingness* of his body for the first time. The word 'leg' can no longer signify what he sees or feels. It is a *thing*, devoid of any function or significance; strange, abrupt, and astonishingly assertive, it looks like a 'block of wood ... attached to his hip'. Paul attempts to dismiss his disbelief by pretending it is all a dream; however, he knows it is real: 'this is clearly no dream, it is the real *thing*, as real as *things* get' ([My emphasis] 9). *As real as things get*, for the powerful presence of things is impossible to ignore or interpret in any way other than their physical presence.

To appropriate its strangeness, unfamiliarity, dysfunction, and unjustifiable presence, the doctor and nurses conveniently call *it* a stump. Unlike when *it* used to be a leg in the realm of the ordinary, functional, and the unnoticed; as a *stump*, *it* is now *looked at* and inspected down to its core materiality. As Dr Hansen examines *it* with his hand, he comments, '[i]t is coming together beautifully' (16). When she meets Paul, Marijana raises *it* carefully in one hand, 'as if it were a watermelon'; impressed, she comments: 'Good job' and asks about the surgeon who did *it* (28).

However, Paul refuses to call *it* a stump. For him, *it* is still a *thing*—unnamable, unrecognisable: '[t]o himself he does not call it a stump. He would like not to call it anything; he would like not to think about it, but that is not possible' (29). Lightly touching *it*, Paul asks Marijana if she has seen 'many of... these' (28). He gives it no name but only gestures, as one often does when one has no name to what he addresses. By refusing to name *it*, and thus inscribe *it* within language, Paul insists on preserving its *thingness*, and hence declares his refusal to cope with *it* and make *it* part of his body/everyday life; it remains a *thing*: distanced, dysfunctional, abrupt, and strange. Consequently, Paul never stops looking *at it*; its strangeness and irrelevance invites both his interest and aversion. As days pass, Paul notices that *it* begins to lose 'its angry colour and swollen look' (35). As Marijana washes *it*, however, the warmth of the water

‘brings out a pink-and-white flush. It begins to look less like a cured ham than like some sightless deep-water fish’ (28). Evidently, Paul refuses to look beyond its thingness and justify its presence; although *it* is technically still attached to his body, *it is no longer part it*.

The word *thing* stands outside history, time, and meaning. It functions as a *liminal* linguistic space, embracing the unnameable, unidentifiable, and the ambiguous. As Brown puts it, the word *thing* ‘hover[s] over the threshold between the nameable and unnameable, the figurable and unfigurable, the identifiable and unidentifiable’ (5). Furthermore, *things* are suggestive but not conclusive. In this sense, things are unactualised possibilities of utility and significance—they *can be* but never *are*. In short, *things are model QPist entities* by their very nature—their presence yet awkwardness, solidity yet fluidity, and openness yet illusiveness.

Brown declares that objects are drained; they are sick of our constant reconstruction of them as objects of our desires and affection and of dealing with our longing (15). If given a chance, Brown imagines, in order just to relax and ‘be themselves’, objects will ‘sink into themselves, weary of form; they [will] consider sinking into an amorphous heap, submitting to the *idée fixe* of gravity’ (15). Through our action, language, and gaze, we constantly work to maintain our objects fixed, structured, divided, defined, and isolated. Objects *becoming* things, hence, is an act of defiance and disobedience to, and rebellion against, *us*. Their disobedience becomes a reminder of their agency, will, and independent presence, particularly when we stop looking *at* them and take them for granted.

In Figure 2, Jesper Magnusson demonstrates the main differences between an object and a thing. Interestingly, the qualities of each align, more or less, with the humanist and the posthumanist conceptions of matter, respectively. Indeed, this comparison is not meant to undermine Latour’s critique of Heidegger where he observes that our world is full of contaminates—hybrids. However, *what the figure does not say is what it actually says*: The white space that separates the two columns is full of *quasi-things* and *quasi-objects*. It is worth noting that I have made a similar acknowledgement earlier regarding the humanist/posthumanist distinction: there is nothing *fully human* and

nothing *fully posthuman*; the human is always *becoming* posthuman. In the same manner, objects and things are always *becoming* one another. Paradoxically, this very inability to define and separate the object from the thing, the human from the posthuman, and the wave from the particle, is *QPist*. Hence, to become *itself*, QP has to resist its very definition, and similarly, for the thing to become *itself*, it has to resist all of its definitions, for objects are but things that have settled for meaning.

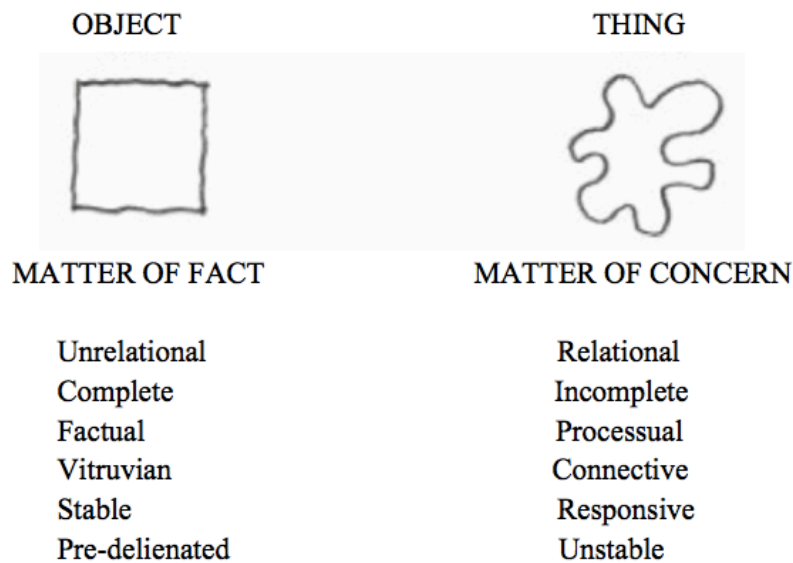


Figure 2: The Differences Between Objects and Things (Magnusson).

3.3.3. The Materiality of Thought

From a QPist perspective, thoughts/ideas/words and objects/things/matter are not inherently different; they are both emergent events of *becoming*. Representationalism, Barad holds, is to be blamed for the separation of the world into the disjointed domains of *words* and *things* and the struggle of the linkage between these two domains, so that knowledge becomes possible (*Meeting* 137). Barad declares that '[m]attering is simultaneously a matter of substance and significance' (3). Thoughts are more material and embodied than we tend to think they are, whereas things are more enigmatic and

transcendent than what they appear to be. In his formulation of thing theory, Brown acknowledges the indistinguishable nature of *thinking* and *thingness*. He ends his essay with the following statement: '[i]f thinking the thing, to borrow Heidegger's phrase, feels like an exercise in belatedness, the feeling is provoked by our very capacity to imagine that thinking and thingness are distinct' (16). On similar grounds, Barad notes that '[m]atter and meaning are not separate elements. They are inextricably fused together, and no event, no matter how energetic, can tear them asunder' (3). This unification of thought/object is present in Coetzee's fiction. Costello entertains the same notion of the inherent similarity between beliefs and things: '[b]elief may be no more, in the end, than a source of energy, like a battery which one clips into an idea to make it run' (*Costello* 39).

Not only are thoughts/objects inherently similar, but it is also possible for the two to interfere and interchange: thoughts can be touched while objects can be thought. This is evident in Costello's experience with reading Paul West's novel *The Very Rich Hours of Count von Stauffenberg* and, in particular, the chapter of the execution of the July 1944 plotters. Costello was horrified by the 'absolute evil' she has felt when she read the chapter. Costello claims that, as she read, a touch of evil was passed on to her, 'like a shock. Like electricity'. West's ideas took a physical form that Costello was able to feel through her body; it travelled beyond language and articulation: '[i]t is not something that can be demonstrated ... It is something that can only be experienced' (176). This is a clear moment of thought-*becoming*-object, expressing the complementarity of what can be described as 'thought-object', which parallels the wave-particle complementarity in the quantum world. The complementarity of thought-object is based on the inseparability of matter-meaning within any phenomenon of *becoming*. Matter/thought, hence, are not essentially physical *or* nonphysical; rather, they are composed of *intra-active relations*, which are equally *physical and nonphysical, possible and actual, local and distributed*.

Coetzee further expresses the unification of matter/thought through staging a physical encounter between Costello, the author, and Paul, the character. To Costello and Paul, and even to the reader, there are no ontological or physical distinctions between the two. Coetzee takes it a step further; through various techniques, he also blurs the

distinctions between himself and Costello (as demonstrated in Chapter Two), further reducing the gap between physical/nonphysical. This blurring of boundaries extends to the reader of the novel. If Costello, the author of Paul's story, exists within her own narrative, and if Coetzee exists within his own fiction, then the reader is inevitably part of this phenomenon of meaning: his/her thoughts, emotions, and presence are entangled with the text.¹⁴³

The 'physical' aspect, so to speak, of the phenomenon of meaning is manifested in, and determined by, not only the actual presence of the body of the text (paper, ink), but also extends to include the tools with which the author wrote the text (pen, paper, computer), as well as the tools with which the reader read the text (glasses, book, laptop). It also includes the author and the reader's brain activity while writing and reading. These are only a few examples of the entanglement between physical/nonphysical elements through whose intra-action the phenomenon of meaning emerges.

To summarise, inanimate entities are inextricably entangled with our own existence and *our own becomings*, and in a similar manner, we are entangled with *their own becomings*. There are moments, however, when objects *become* things as a way to contest us by asserting their will, disobedience, and agency, leaving us confused, helpless, or even injured. Paul's accident, for instance, was the result of another, darker, encounter between his body and the car, which, at that instant, stopped being a car, and turned into a monster of steel, *a missile*, attacking his body: 'the instant when *the missile* he [the driver] was piloting in a haze of loud music dug into the sweet softness of human flesh' ([my emphasis] *Slow* 21). Hence, if things in (*of*) our hands, as Rodchenko's declares, are our equals, our comrades, then they are inevitably our foes too.

¹⁴³ I discuss the reader's presence in the text Chapter Four.

CHAPTER FOUR

Tracing Robinson Crusoe(e): A Quantum Posthumanist ‘Adventure’ in Consciousness and Narrative in Coetzee’s Foe

Based on Bohr’s philosophy, Barad notes that the subject/object distinction is ambiguous unless a physical apparatus is introduced to and within the phenomenon (*Meeting* 118). The physical apparatus here refers to the measurement device(s) used in/within the quantum experiment, which inevitably affects, while simultaneously becoming entangled with the phenomenon. The apparatus can be seen (in many quantum interpretations, including CI¹⁴⁴) to include the presence of the observer. In this chapter, I argue that the reader’s consciousness functions as a physical apparatus within *the phenomenon of meaning*.

This chapter begins with a brief overview of Daniel Defoe’s *The Robinson Crusoe Trilogy*¹⁴⁵ [RC] and its subsequent variations. I attempt to deconstruct the notion of originality, time, and linearity through viewing the text within a complex spatialised relationship with other texts instead of a linear chronological timeline. I briefly trace the changes that occur to the story of RC throughout the years and argue for the impossibility of an original story of Crusoe by demonstrating that the figure has no definitive meaning prior to the act of reading. Crusoe *emerges* through the reader’s consciousness; meaning is thus determined through *the reader effect*, which I equate to *the observer effect*¹⁴⁶ in quantum theory. I also explore the relationship between *Foe* and RC. I argue that *Foe* rejects the originality of RC through deconstructing the simple past/present, original/copy relations, and creating a more complex entangled, multidirectional, and multilayered relationship between the two texts.

Drawing on many ideas from quantum interpretations, most notably Heisenberg’s uncertainty principle, the ‘consciousness causes collapse’ interpretation, and the MWI, I

¹⁴⁴ Unlike observer-dependent interpretations, the role the observer plays in CI is thought to be casual.

¹⁴⁵ The trilogy includes: *The Life and Strange Surprising Adventures of Robinson Crusoe*, *The Farther Adventures of Robinson Crusoe*, and *Serious Reflections of Robinson Crusoe*.

¹⁴⁶ *The observer effect* in quantum theory can be further used to compare to, and develop on, Lacan’s ideas on *the gaze* and its postmodern and postcolonial aspects.

explore the role of the reader's consciousness within the phenomenon of meaning. I then shift my focus to the last chapter of *Foe*; I propose that this chapter represents a narrative method which I call a *quantum posthumanist narrative* [QPN], which corresponds to many ideas in the QPist framework, including that of contesting the linear arrow of time, the progressive nature of narration, and the syntactical logic of language.

It is important to pause here to emphasise that this chapter adopts different quantum interpretations than in previous chapters. In Chapter Two, for instance, based on the views of Bohr and Barad and the CI, I argue against the notion of the subject by demonstrating that the subject of the literary phenomenon is the event itself as being both the subject and the object of its *becoming*. On the other hand, this chapter largely adopts the observer-dependent view in some quantum interpretations such as 'consciousness causes collapse' and the relational interpretation; it focuses on the role of the observer/reader in formulating the meaning within the phenomenon of meaning. However, although an observer-dependent approach might at first seem to contradict the posthumanist premise of abandoning the traditional subject, they are not at all contradictory; in fact, I might venture to argue that they are complementary when we understand the distinction of observer/reader here as Barad's *theoretical and agential cut within the phenomenon—not outside it*. Furthermore, while the observer here refers to the reader and his/her consciousness, the posthumanist view does not exclude other types of observers—that are not necessarily human, other degrees of consciousness—that are not necessarily self-reflective, and other forms of meaning—that are not necessarily language-based.

4.1. Robinson Crusoe

Defoe's novel *The Strange and Surprising Adventures of Robinson Crusoe*, written in 1719, is one of the most distinguished classics in English literature. The 'source' novel for *Foe*, as well as numerous other novels, stories, and other works, it is regarded by many critics as the 'first' English novel, having marked the 'beginning' of

realist fiction as a literary genre.¹⁴⁷ Ever since its publication, *RC* has inspired many other castaway novels throughout the 18th and 19th centuries, and though many were forgotten, many have also survived. The numerous imitations and variations of *RC* differ in their degrees of explicit intertextuality: some include only elements, events or even passing hints of *RC*, while others represent more serious adaptations of the novel through borrowing the major events and characters.¹⁴⁸

Although there is enough evidence to safely suggest that *RC* acts as a clear point of reference for all these works, critics have not always been content to assign *RC* this referential historical status. Most critics agree, for instance, that the travel and adventure theme of the novel is not new and appeared in earlier, continental, novels. Furthermore, *RC* has its own text sources, critics conclude, including ‘real’ accounts of survival stories, most notably the castaway Alexander Selkirk, who survived a shipwreck and lived on an island, and, to a lesser extent, Robert Knox’s historical account of his abduction by the King of Ceylon in 1659. It also resembles many elements in Ibn Tufail’s novel *Hayy ibn Yaqdhan*, the first Arabic novel that was translated into English several times, preceding Defoe’s writings by half a century. In his book, *The Strange Surprising Sources of Robinson Crusoe*, David Fausett explores, as the title suggests, many earlier continental narratives that share striking elements with Defoe’s narrative, but overlooked by Western critics. Similarly, in his 1927 essay, ‘Robinson Crusoe: A Literary Accident’, Raymond F. Howes attacks the alleged originality—or genius, to use his term—of Defoe’s novel.

¹⁴⁷ In his famous book *The Rise of the Novel* (1957), Ian Watt traces the pivotal role Defoe’s novel has played in setting the ground for formal realism in the English novel (60).

¹⁴⁸ Some of the most notable works that survived include Johann Wyss’ *The Swiss Family Robinson* (1812) which gained great popularity. Others such as Jonathan Swift’s *Gulliver’s Travels* and Robert Louis Stevenson’s *Treasure Island* were written in part as parodic takes on *RC* and the travellers’ tales subgenre. Other novels based on or elaborations of one or more of the characters of *RC* include Beatrix Potter *The Tale of Little Pig Robinson*, Wilkie Collins’ *The Moonstone* and Michel Tournier’s *Friday*, where Tournier’s Crusoe refuses to go back to England and chooses to continue living on the island. Some modern variations include Thomas Berger’s *Robert Crews* that imagines Crusoe as an alcoholic plane crash survivor who encounters a young woman that turns out to be his ‘Friday’. Moreover, there were Latin, French¹⁴⁸, German, Chinese and other Crusoe(s), including a Jewish version of *RC*, who was re-named Reb Alter-Leb in *Robinson di geshikhte fun Alter-Leb* by Yoysef Vitlin (1829) (Garrett). *RC* was also produced in many other artistic forms including stories, poetry, opera, theater, international films (including a 1927 silent film) and television series. There are many references to *RC*, including some that appeared in popular songs, including Weird Al’s [Yankovic’s] song ‘Amish Paradise’. Moreover, *RC* has also influenced language usage. For instance, in the 1920s, the large umbrella was still called *un robinson* (Free 105). Also, in economics, Robinson Crusoe became a term to refer to the idea of a one-man economy.

He argues that the fame of Defoe was not due to its originality but rather due to ‘circumstances’ that led to its prominence (31).

I wish to draw on basic quantum principles to argue against *RC* as a singular, fixed point of reference in the history of the English novel. Through proposing the role of consciousness as the physical apparatus or as the observer in the actualisation of meaning, I argue that *RC* is an *emergent and dynamic phenomenon of meaning* that is continuously *becoming* through other texts as well as through the reader’s consciousness. This ultimately means that there is no original or universal *RC*—only *local and distributed possibilities of Crusoe*.

Presuming the possibility of ‘some level’ of originality, we might ask: to what extent is *RC* ‘original’? Fausett and Howes’ perspective, viewed above, on determining originality is certainly problematic. The most relevant question in determining the extent of influence of continental works on Defoe’s narrative is not whether similar works to Defoe’s in theme or technique had been published before his novel, but whether *Defoe himself had, in fact, read them*. As Blaim rightly observes in his review of Fausett, there is no clear evidence that Defoe had any knowledge of them. It is difficult to prove that Defoe had, for instance, read the Dutch Utopian narratives of Foigny and Vairasse. Without a definitive answer to this question, we are left with a perpetual state of uncertainty, or, in quantum terms, a state of *superposition* where Defoe both read and did not read these works.

Furthermore, such a question shifts our focus to a significant factor in the phenomenon of meaning: the role of consciousness in determining and changing the meaning and significance of the literary work in question. Howes and Fausett’s awareness of these earlier works created a different experience/meaning than Defoe’s who might not have been exposed to these works. There is no objective meaning outside their consciousness against which their meanings are measured for *the observer is always part of the observation*. This conclusion implies the impossibility of an objective ‘source’ text to which all the novels can be ascribed. It unsettles the hierarchical relationship between Defoe’s narrative and the narratives that come ‘before’ and ‘after’ it.

Moreover, further to the impossibility of judging the ‘originality’ of Defoe due to the impossibility of determining Defoe’s experience, the chronological ‘primacy’ is hardly significant if we expand our observation to include the ways in which *RC* has influenced previous works (not the other way round) and, most importantly, how later works (such as *Foe*) have significantly influenced the meaning and significance of *RC*. Before moving to explore the ways in which *Foe* has reshaped key moments in *RC*, it is worth noting that *RC*, in a similar manner, has, in fact, influenced the narratives that ‘preceded’ it. As Blaim notes, ‘earlier continental desert island narratives [...] were renamed after Defoe’s book in the wake of its spectacular success in England and on the continent. This suggests that, against chronology, it was Robinson Crusoe that established the frame of reference for the earlier texts and not the other way round’ (255). The mere fact that *RC* was able to claim earlier texts further emphasises the quantum qualities of the literary text, particularly its nonlocality and its ability to move in different, multilayered chronological and spatial dimensions.

An interesting phenomenon in the history of *RC* demonstrates the power not only of the individual reader’s consciousness but that of the collective consciousness of interpretive communities in deciding the emergent meaning of *RC*. Not surprisingly, Crusoe’s image has been transformed repeatedly since the publication of the narrative. Most contemporary readers of the novel are unaware that it was originally written as a trilogy: *The Life and Strange Adventures of Robinson Crusoe* (1719) (*RC1*), *The Farther Adventures of Robinson Crusoe* (1719) (*RC2*), and *Serious Reflections During the Life and Surprising Adventures of Robinson Crusoe* (1720) (*RC3*). The modern story we are familiar with ends with the first volume, while the other two are mostly neglected.

However, this was not always the case. In her essay ‘Un-Erasing "Crusoe": "Farther Adventures" in the Nineteenth Century’, Melissa Free offers statistical information (based on Robert W. Lovett’s previous work) of the abrupt neglect of *RC2* after WWI. As Free’s Figure 3 demonstrates, while *RC3* was not commonly printed as part of the story of *RC*, *RC1* and *RC2*, on the other hand, were often printed together. For two hundred years, Free notes, *RC2* was read alongside *RC1* and was considered an integral part of the story of Crusoe. In the 19th century, *RC1* and *RC2* were published as

one novel with little to no hint that they were two separate volumes.¹⁴⁹

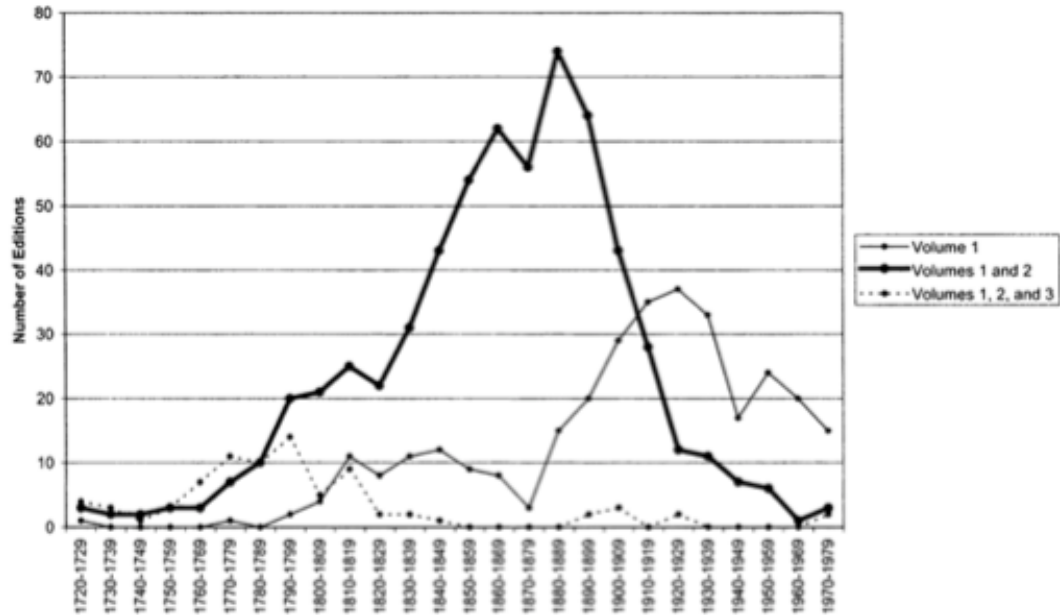


Figure 3: Publications of *RC* in English 1720–979 (Free 91).

However, the publication of the combined first two volumes steeply declined after the Great War. Along with *RC3*, *RC2* was almost entirely dropped by publishers and therefore erased from the memory of critics who neglected this omission and viewed *RC1* as the complete story of the original Crusoe. Furthermore, Free interestingly observes that, in the same period, *RC2* was still published alongside *RC1* in other parts of the world. The implications of such an omission are worth considering. The Crusoe that was read during Defoe's life is different from the 19th-century Crusoe, which is also significantly different from the modern Crusoe we read today.

Furthermore, in the 18th century, various abridgements of *RC* were being published, and many specifically targeted younger audiences. By the end of the 18th century, Free notes, quoting Kevin Carpenter, that *RC* (in the form of the first two

¹⁴⁹ Free notes that several 19th-century editions offer no break between *RC1* and *RC2* (94).

volumes) had turned into a children's book. Johann Heinrich Campe's German adaptation of Crusoe's adventure, *Robinson der Jüngere* (translated into English in 1788)—a tale narrated by a father to his children—gained huge popularity and was translated into more than 27 languages, facilitating the conversion of Crusoe's story to a children's narrative. However, after World War I, as *RC2* was eliminated from publication, *RC1* gradually returned as a book for adult readers. In an introduction to a 1930 edition of *RC1*, Ford Maddox Ford claims that the edition was intended to reclaim Crusoe from children's classics (Free 114).

The modern Crusoe, hence, *emerges*. As Free notes, this Crusoe is different from the 19th-century Crusoe in many ways.¹⁵⁰ Although, as Lovett notes, the myth of Crusoe remains consistent as 'the man on the island' (xiv), Free points out that by omitting *RC2*, readers neglect many other aspects of the original Crusoe. However, looking at Crusoe from a wider perspective, I argue differently: that there is no original 'Crusoe'—or, in quantum terms, there are no *definitive a priori values* of Crusoe. Crusoe, as I shall argue, is an *emergent event* that does not pre-exist the act of reading or, consequently, the phenomenon of meaning. In other words, any image of Crusoe constitutes *one actualisation of infinite possibilities* of Crusoe.

Free interestingly, and casually, mentions that the earliest readers of Crusoe 'were not merely encountering the novel for the first time; they were creating it culturally' (97). By deciding to read the two first volumes of *RC*, while ignoring the third, publishers were compelled to popularise the first two and almost completely to neglect the third novel.¹⁵¹

¹⁵⁰ Free writes about the changing image of the modern Crusoe: 'He does not fail as a colonial administrator, lose his man Friday, travel to Madagascar, or witness his shipmates (fellow Europeans) "violate the terms of [a] trade agreement," then brutally massacre a village there. Nor does he visit the Bay of Bengal, the Malay Archipelago, China, Peking, Tartary, and Russia; get kicked off his nephew's ship; get mistaken for a pirate; trade with savvy far Easterners; spew invectives against the Chinese; destroy an idol; decimate a village; run out of unexplored territory; or pale in spiritual comparison to a Russian nobleman, only to return home rich but without family or subject. And finally he does not declare that "heaven carve us with our own desires." It is the thriving East, above all, that is erased from the modern *Crusoe*, a fictional East perhaps too suggestive of an actual East, newly emerging as a powerful counter—a conceivable threat—to the West' (114-5).

¹⁵¹ There is a seemingly legitimate reason, Free believes, for the unpopularity of the third volume. While *RC1* and *RC2* told a story, *RC3* was a tiresome non-narrative text composed of six long essays that focus on instructions, which made it appear 'extraneous' to the narrative, despite Defoe's assertions (through the voice of Crusoe) in the preface of *RC3*, that this book is key to understanding the whole work. The general impression, however, remained that the third part was written as 'an after-thought' and for profit (97-8).

Free unwittingly alludes to the power of the reader's consciousness in determining the meaning of the narrative. This could be further demonstrated by comparing a 19th-century reader who reads the full trilogy to another who reads an abridgement of the first volume, or a third who is familiar with the survival story of Alexander Selkirk. The depth and dimensions of Crusoe inevitably change as the reader changes.¹⁵² It is thus hard to argue for a definitive modern version of Crusoe's figure. Crusoe, hence, is in fact, *Crusoes'* versions and parallels which multiply indefinitely. These versions are dynamic *becomings* of meaning that emerge as manifestations of the entanglement between the agencies of meaning.

These views of the reader and text correspond to basic laws of some quantum interpretations. For instance, the idea of the reader's consciousness as a determining factor of meaning corresponds to observer-dependent interpretations of quantum theory, which proposes that the observer inevitably interferes with the results of the measurements—a phenomenon referred to as *the observer effect*. In the context of literary analysis, this phenomenon could analogously be called the *reader effect*, which refers to the entanglement and interference of the reader's consciousness within the phenomenon of meaning. Furthermore, texts do not have definitive meanings prior to reading in the same manner that objects do not possess pre-existing qualities prior to observation; their values/meanings *emerge* through the measurement/reading process. These premises violate some of the fundamental laws of classical physics, such as the idea of representationalism, definitive values, and the concept of locality. In classical physics, any given object has pre-existing measurable qualities prior to, and unaffected by, observation. In the same fashion, in the traditional literary analysis, the text has pre-existing values prior to reading, while the reader's role in the formation of meaning is external and interpretive at best.¹⁵³

¹⁵² In his reader-response criticism, Iser uses star-gazing as an example: 'The impressions that arise as a result of this process will vary from individual to individual, but only within the limits imposed by the written as opposed to the unwritten text. In the same way, two people gazing at the night sky may both be looking at the same collection of stars, but one will see the image of a plough, and the other will make out a dipper. The 'stars' in a literary text are fixed; the lines that join them are variable.' ('Process' 287).

¹⁵³ The view of the text as largely constructed by the reader is a perennial debate in literary criticism; it begins with Ingarden's work on reading, particularly *The Literary Work of Art: An Investigation on the Borderlines of Ontology, Logic, and Theory of Literature* (1931), translated into English and published in

Moreover, reading, as an interpretive and mentally complex form of engagement, produces effects that are not inherently different from those of quantum-based observation on the values of objects. Reading actualises the possibilities of the text in singular acts of determining meaning (measured values) at certain points of space-time. In this sense, and from a quantum perspective, the idea of Crusoe can be seen to resemble the indefinitiveness of the wave function; the emergent meanings of Crusoe (over the years and from one reader to another), on the other hand, constitute the *collapse of the wave function* and thus the actualisation of meanings through different acts of reading—in an analogous manner to the actualisation of the values of atoms through the act of quantum measurement. So Frank Mills proposes the entanglement of the agencies of meaning and implies the parallelism of stories in his statement: ‘[a] story is nothing less than a conversation between the storyteller, the story itself, and the hearer ... Storytelling is not only cyclic; with each retelling, the story becomes a new story, told in a new context’ (‘Storytelling’). Evidently, Mills’ statement emphasises this understanding of the ‘wave function’ dynamism of stories, which provides infinite and indefinite possibilities that are actualised in every reading.

This view of meaning as an emergent property of reading carries significant implications. The notion of a ‘source’ or an ‘origin’ text is impossible as the idea of Crusoe is constantly changing, offering a wide array of possibilities, none of which is more ‘original’ than the other. In this sense, the worlds concretised through the reading of literary texts are essentially subjective and do not correlate with the temporal linearity (responsible for the idea of originality) of the narratives. Texts, hence, move fluidly in time and exist simultaneously on different levels of meaning.

Moreover, not only is it impossible to argue for the ‘origin’ of the text but, as

1974. Ingarden introduces the role of the reader in the ‘concretisation’ of the work of art from a scheme of different strata to a full aesthetic object. Ingarden’s work has influenced Iser’s reader-response theory in his book *The Act of Reading: A Theory of Aesthetic Response* (1978). In Iser’s view, meaning is not an object located in the text but an event that takes place between the reader and the text. The debate was then taken up by others such as Hirsch in *Validity in Interpretation* (1967) who makes the famous distinction between *meaning* as intended by author and *significance* as received by reader and critic. Indeed, this view of the reader as a participant and influencer on the text largely parallels the notion of the observer as an active participant in the process of measurement, and may even be inspired by it. It is likely that Ingarden, a pupil of Husserl, was familiar with Bohr and Heisenberg and informed by their ideas on quantum theory.

another consequence of abandoning the idea of temporal linearity, it is also equally futile to argue for its ‘beginning’. There is no definitive temporal moment where the story of Crusoe begins, as it is constantly ‘re-written’ in past and future texts. The difficulty of determining the rigid ‘beginning’ of any given text equates to the difficulty of conclusively determining the beginning of one species and the end of another, or the beginning of ‘time’ or the ‘universe’. The concept of beginning in itself is fundamentally problematic. Although Edward Said argues for beginnings as the secular counterpart of the mythical *origin*, the ontological nonlinearity of the text I propose here regards all beginnings as problematic. Said realises some of the consequences implicated in the notion of beginning; that it suggests ‘(a) a time, (b) a place, (c) an object—in short, detachment’ (‘Beginnings’ 41). However, in the QPist logic, the idea of beginning is problematised precisely in relation to these vectors. Furthermore, a beginning necessarily requires an end, another ontological and epistemological break that, like beginnings, does not correspond to the human observation of continuity of the natural-cultural phenomena. Beginnings too are definitive, static, fixed, and inflexible, which goes against the QPist dynamism of *becoming*.

Nevertheless, Said stresses the significance of beginnings: ‘[w]ithout a least a sense of a beginning, nothing can really be done’ (45). In the context of literary critique, Said maintains, the beginning is ‘a magical point that links critic and the work criticized’ (48). However, what Said regards as the significance of beginnings can simply be replaced with the QPist points of intra-action that offer the advantages of beginnings, but unlike beginnings, do not imply historicity and linearity or force an end. The alternative QPist vision of the literary text/event is that it exists in a complex a-historical level of all the works that have been, and will be, written. Beginnings can therefore be regarded as *theoretical flexible points* (akin to Barad’s agential cut), never inherent and pre-existing, but rather emergent, interior, and only possible *within* the phenomenon of meaning. Therefore, the ‘beginnings’ of the stories of the characters in *Foe*, including those of Susan, Crusoe, Foe, or Friday, can be traced back to Defoe’s novel, earlier, or later, depending on the previous knowledge of the reader or the intended analytical goal of the critic.

On a more ontological level, the phenomenon of meaning is an ongoing event without beginning or end. Meaning does not begin with, nor end at, the text; it is a continuous *becoming* that exhibits a deep entanglement with the reader, the author, as well as other texts. In this sense, then, the meaning of the text ‘begins’, so to speak, in so far as we can determine the beginning of consciousness.

4.2. *Foe*

Coetzee wrote *Foe* explicitly as an engagement with Defoe’s *RC* and, to a lesser extent, his novel *Roxana*¹⁵⁴. There are also allusions to some of Defoe’s other writings, such as *Moll Flanders* and *The Apparition of Mrs. Veal*, *RC*, however, remains the key text capable of unlocking the potential interpretive powers of *Foe*. Although it is not quite clear whether Coetzee has, in fact, read the entire trilogy, the first two volumes, or the first novel only, the events and characters of *Foe* suggest that they are solely based on *RC1*.¹⁵⁵

As I have noted earlier, critics believe that *RC* still ‘fathers’ an ever-growing number of novels, including *Foe*, which is widely considered to be a postmodern variation of *RC*. The connection between both texts is directly apparent, as Coetzee uses many elements of *RC*, including proper names, themes, and events. For example, both stories express a similar plot that involves a shipwreck, an isolated island, and a rescue attempt. They both include a castaway, a white, middle-aged man named Crusoe(e), and a slave named Friday.

However, Coetzee contrasts the similarities between the narratives whilst introducing striking differences. To begin with, Coetzee omits the ‘e’ from Crusoe. He also includes Defoe, the author, as a character in his novel whom he calls Foe (omitting

¹⁵⁴ As Tisha Turk notes, Coetzee’s borrowings from *Roxana*, unlike those from *RC*, have been discussed by a limited number of critics, including ‘Attridge, Marshall, David Attwell, Susan VanZanten Gallagher, Dominic Head, and Gayatri Chakravorty Spivak’ (302). The reader can conclude from the many hints provided in *Foe* that De(Foe) turns Susan’s story into another novel, *Roxana*, where Barton becomes a whore. Susan is, for instance, Roxana’s real name; she abandons her daughter in Deptford, where the daughter is born, and her father was a brewer. All of these hints come back in the form of a mysterious girl who hunts Susan in *Foe*, whom Susan denies as her daughter.

¹⁵⁵ For instance, in *RC2*, Friday is killed in a sea battle, which suggests that Coetzee wrote *Foe* based on the events of the first volume only.

the ‘De’ from Defoe’s name). These omissions play both on similarity and difference in order equally to invite and prevent the reader from presuming the origin/copy, before/after, and past/present relationships between the texts. Instead, these variations create a sense of parallelism between the two narratives.

The rhetorical differences, however, are much more pronounced. The most notable alterations include the presence of a female castaway in *Foe* and the physical and behavioural changes of Friday, most notably his suggested tongue mutilation and inability to communicate. Also, while the first Crusoe has guns, seeds and keeps a journal to document his life on the island, this Cruso has none of these objects and expresses no interest in documentation. Furthermore, while *Crusoe* is eventually saved and arrives safely in England, *Cruso*, who shows no interest in being saved in the first place, dies in the sea on his way there. These differences seem to challenge *RC*’s narrative on multiple levels: postcolonial, postmodern, feminist, historical, and others, as the extensive scholarship on *Foe* has sought to demonstrate.¹⁵⁶

Nevertheless, I wish to investigate not the differences per se but the effects these have on Defoe’s narrative. As I shall come to demonstrate, the intertextual relations between the texts are more than just allusion or simple parallelism; *Foe* acts as a transformative text, or hypertext¹⁵⁷, as it alters ‘previous’ events and creates new ways of reading Defoe’s narrative. This power to change the meaning of *RC* is most evident in Susan Barton’s case. Coetzee introduces a female castaway who did not previously exist in *RC*. Susan meets Foe and has lengthy conversations with him, most of which revolve around how her survival story with Friday and Crusoe should be written. In one of her

¹⁵⁶ Extensive studies have been written on Coetzee’s *Foe* with references to postcolonial, feminist and postmodern contexts. Much is written on the tensions between male/female, master/slave, voiced/voiceless, speech/writing, and history/fiction. Examples of these studies, among many, include, on history: Brian Macaskill and Jeanne Colleran’s ‘Reading History, Writing Heresy: The Resistance of Representation and the Representation of Resistance in J. M. Coetzee’s “Foe”’; on speech/writing: Abdel Karim Daragmeh and Ekremah Shehab’s ‘Signs Tell Their Own Stories: Rethinking the Status of Writing and Speech in J.M. Coetzee’s *Foe*’; on feminism/postcolonialism: Spivak’s ‘Theory in the Margin: Coetzee’s *Foe* Reading Defoe’s “Crusoe/Roxana”’, Mina Mehrabadi and Hossein Pirnajmuddin’s ‘(Hi)story in Search of Author(ity): Feminine Narration in J.M.Coetzee’s *Foe*’, Shadi Neimneh’s ‘Postcolonial Feminism: Silence and Storytelling in J. M. Coetzee’s *Foe*’, Robert M. Post’s ‘The Noise of Freedom: J. M. Coetzee’s *Foe*’, and Sheila Roberts’ “‘Post-colonialism, or the house of Friday” — J.M. Coetzee’s *Foe*’.

¹⁵⁷ Transformative texts, or hypertexts, are literary texts that transform, either directly or indirectly, other literary texts (Genette 5,7).

dialogues with Foe, Susan anticipates that Foe would omit her presence from the story altogether when she announces, “[b]etter had there been only Crusoe and Friday,” you will murmur to yourself: “Better without the woman” (*Foe* 71-72). These lines drastically change the way the reader judges the absence of females on the island in *RC*: there *could* have been a woman whose presence was omitted by the author. This possibility not only effects the fictional but also the historical narrative of *RC* and the survival stories upon which it is based, and from which *possible* female castaways *could* have been omitted.¹⁵⁸

This ability of the latter (*Foe*) to alter the previous narrative (*RC*) is a not a strange phenomenon in quantum logic. A similar idea of nonlinear, non-chronological effect is exhibited in Wheeler’s ‘delayed choice experiment’ in 1999, based on Young’s ‘double-slit experiment’ from 1801 and its subsequent variations. One interpretation of the results of Wheeler’s experiment demonstrates that the experimenter’s later awareness of the system affects the history or past of the photons.¹⁵⁹ This phenomenon raises questions concerning time’s arrow and, in particular, its direction and linearity. It also seems to suggest that consciousness can determine not only the present but also the past. Hence, the multidirectional connection between *RC* and *Foe* questions the significance of linearity and historicity in viewing the intertextual relations between those narratives. It offers a new reciprocal, entangled perspective that transcends these temporal structures.¹⁶⁰

¹⁵⁸ Even in *Foe*, the possibility of Susan’s existence is never confirmed; even she herself seems to doubt her own existence, or ‘substantiality’, as she puts it. In fact, based on some clues, particularly in the last chapter of *Foe*, some commentators have argued that Susan might have been a ghost, or have not existed in the first place, or might have died before arriving at the island (Foss 14). However, the *possibility* of her existence after the publication of *Foe* now forever haunts *RC* and the survival stories at large.

¹⁵⁹ Wheeler’s experiment was designed so that the act of observation would not interfere with the behaviour of the photons in certain paths and that the wave function should not, therefore, collapse (as is the case with the double-slit experiment). The results of the experiment were unexpected; despite the complex setting which insured that photons were not observed while fired, and the path the photons take would be able to give the answer concerning which slit the photon passed through, the photons still created a clump instead of an interference pattern—apparently based on the observer’s knowledge of the system and his/her ability to infer, albeit indirectly and retrospectively, the slit through which the photon had passed.

¹⁶⁰ It is worth noting that in his essay ‘Tradition and the Individual Talent’ (1919), T. S. Eliot expresses similar ideas of temporal entanglement, and the ability of the texts to affect one another without regard to their linearity/historicity. Eliot’s passage below can, self-evidently, be re-interpreted in the light of quantum theory: ‘No poet, no artist of any art, has his complete meaning alone. His significance, his appreciation is the appreciation of his relation to the dead poets and artists. You cannot value him alone; you must set him,

Moreover, similar to the observer-dependent interpretations of quantum theory, a key feature of any hypertext is the necessary presence of the reader's consciousness, which not only interferes with, but also helps create, actualise, and determine the meaning of the text. Mills summarises the role of the reader/listener in actualising as well as re-creating stories; he writes, '[i]n a very true sense, there is no story unless there is someone to hear the story. Further, the story will die unless the one hearing continues the story by telling the story to another' ('Storytelling'). Mill's statement suggests the significance of the reader/listener's consciousness not only in actualising the stories but also in *the continuation of their actualisation*. As long as there is consciousness, there is meaning, or as Hirsch puts it, 'there is no magic land of meaning outside ... consciousness' ('Reinterpreted' 202)¹⁶¹. The reader's consciousness, therefore, is what ultimately determines the extent to which a text is transformative. Accordingly, *Foe* is a transformative narrative only for a reader who is *aware* of Defoe's *RC*.¹⁶² Therefore, the text does not *inherently* project either quality (that is, being (a) transformative or (b) not); rather, its transformative-ness and its extent emerges/changes through different readings. The reader's consciousness thus actualises what is otherwise a world of different possibilities or, rather, from the perspective of MWI, *different possible worlds*. This role of the reader/observer shall be further elaborated on in relation to *Foe*'s last chapter.

for contrast and comparison, among the dead. I mean this as a principle of aesthetic, not merely historical, criticism. The necessity that he shall conform, that he shall cohere, is not one sided; what happens when a new work of art is created is something that happens simultaneously to all the works of art which preceded it. The existing monuments form an ideal order among themselves, which is modified by the introduction of the new (the really new) work of art among them. The existing order is complete before the new work arrives; for order to persist after the supervention of novelty, the *whole* existing order must be, if ever so slightly, altered; and so the relations, proportions, values of each work of art toward the whole are readjusted; and this is conformity between the old and the new. Whoever has approved this idea of order, of the form of European, of English literature will not find it preposterous that the past should be altered by the present as much as the present is directed by the past. And the poet who is aware of this will be aware of great difficulties and responsibilities' (44-5).

¹⁶¹ Hirsch's full statement reads: 'there is no magic land of meaning outside *human* consciousness' ([*my emphasis*] 202), which is evidently problematic as it presumes that meaning is exclusive to language and humans.

¹⁶² Turk similarly explains, '[a] reader who encounters Jean Rhys's *Wide Sargasso Sea* without having read Charlotte Brontë's *Jane Eyre* may still enjoy the novel; she may still find it interesting, engaging, effective. But what she reads will be, in a very real sense, a *different* text than it would be for someone who brought to it a knowledge of *Jane Eyre*' (296).

4.3. The Notion of Time

RC follows a tedious linear chronology, consisting of a certain number of progressive, consequent events. The narrative, I argue, exemplifies the classical time structure in Newtonian physics in its linearity, sequence, and certainty. In their book *Being Quantum: Ontological Storytelling in the Age of Antenarrative*, Boje and Henderson explain that the Newtonian linear temporal paradigm is based on traditional science, supported by the second law of thermodynamics and increasing entropy. The observable irreversibility of some processes seemingly implies the idea of time's arrow that only travels in one direction. As Frank Arntzenius puts it, '[t]ime, according to standard Newtonian physics, can be pictured as a one-dimensional line, consisting of an infinite sequence of instants, all lined up in order of occurrence' (7).

On the other hand, the linearity of time is deconstructed through temporal manipulation of/in Coetzee's narrative. The narrative of *Foe* deconstructs this classical logic of time on many different levels. For example, through rhetorical effects, Coetzee writes *Foe* as if it *predates* the writing of *RC* and *Roxana*. The events seem to take place in the 18th century, and, as Jo Alyson Parker notes, 'in order for Susan to meet (De)Foe, Coetzee has to move the events of *Robinson Crusoe* forward by about 30 years' (20). However, there is no definitive moment in Defoe's life where the events are located, leading to what Attridge describes as 'chronological uncertainty' which runs throughout the narrative ('Oppressive' 234).

Indeed, *Foe* seems to correspond to the changing scientific perception of the notion of time, particularly with the emergence of quantum theory. Various alternative conceptions of time have since emerged, many of which are event-based.¹⁶³ Furthermore,

¹⁶³ Boje & Henderson outline some key authors who propose an alternative event-based view of time. They mention Donald Roy's concept of "Banana time" (1959), which links the punctuality of the work by particular events that are meaningful to the workers. Also, Marco Giuliani (2009) proposes time as 'sequence of key events'. Staudenmayer, Tyre, & Perlow (2002) suggest 'temporal shifts are explained as shared experiences that alter perceptions of time, control over time, and its use'. In the context of market behaviours, Benoit Mandelbrot (2004), describes financial markets as 'operating on their own trading time', which is different from the default 'clock time' which we assume to be objective and accurate. Ronald Purser and Jack Petranker (2005) investigate multiple concepts of time, arguing for the present as the source of the future. Jeff Waistell (2006) argues for the role of metaphor in linking the past and future in human perception. As Boje & Henderson comment, viewing all of these works, all of these authors, despite their varying methods and arguments, treat time as a complex multidirectional concept instead of the traditional linear unidirectional view of time that has for long dominated our understanding of time (2-3).

in his book *Space, Time and Stuff*, Frank Arntzenius argues for the radical idea that on a fundamental level, time has no structure at all. Consequently, there is no fundamental¹⁶⁴ truth not only regarding the universality and certainty of time, but its intrinsic implications such as linearity, history, beginnings, and ends. Arntzenius argues that human-based temporal structures are in fact derived from a fundamentally non-temporal structure (6). He also notes that neither the Newtonian nor the relativistic physics contradict the fundamental assumptions that ‘at bottom, the world has no temporal structure whatsoever’ (6).¹⁶⁵ What the current scientific views on time share, despite their varying methods and arguments, is the view of time as a complex multidirectional concept; the human linear sense of time is but a reflection of the local human consciousness.

Foe expresses this temporal uncertainty by deconstructing temporal structures not only of but also within the narrative. Time appears to be unorganised and without dimensions. The island seems to exist beyond time; no sign of time or progression takes place, and time appears cyclical and almost still. Susan recalls, for example, that the ‘drab bushes’ that live on the island ‘never flowered and never shed their leaves’ (*Foe* 7). The characters’ perception of time also changes in the island. There is never a lack of time, as Susan notes (17). The days on the island are repetitive with hardly any signs of progression.

The characters’ actions reflect this new perception. For example, while Defoe’s Crusoe was excellent at keeping time and consistently writing his journals, Crusoe, on the other hand, seems uninterested in keeping time. Susan observes that Crusoe did not keep any journal, paper, or ink, because ‘he lacked the inclination to keep one’. Keeping a journal entails accepting temporal notions such as time, history, linearity, progression, past, and future. Moreover, Susan could not find any evidence or carvings that show that Crusoe ‘counted the years’ or the ‘cycles of the moon’ while staying on the island (16). Crusoe’s cyclic philosophy of time is reflected in his statement: ‘we sleep, we eat, we live’

¹⁶⁴ Arntzenius stresses on the word ‘fundamental’ so as not to dismiss the human consciousness’ sense of linearity and the traditional arrow of time, which are not completely wrong or irrelevant within the context of the human experience (5).

¹⁶⁵ For the detailed philosophical arguments on the non-structure nature of time see the first chapter of Arntzenius’s *Space, Time and Stuff* (5-38).

(32). Moreover, instead of performing actions that help the progression of events, Crusoe engages in seemingly meaningless repetitive tasks, such as building numerous terraces and clearing the land in futile preparations that lead to nothing. Furthermore, Crusoe is also not inclined to the idea of leaving the island, and is not looking forward to being rescued in the future; Susan notes that Crusoe exhibited ‘indifference to salvation’ (14). Also, Crusoe is not interested in Susan’s lengthy investigations about his and Friday’s past. His inconsistent stories concerning his and Friday’s past frustrate Susan. She remarks that Crusoe seems to believe that his history of each one of them began with their arrival on the island and not before: ‘It was as though he wished his story to begin with his arrival on the island, and mine to begin with my arrival, and the story of us together to end on the island too’ (34).

Clearly, the island, as well as the lives of the characters, is impossible to think of within the traditional structure of time. In her own attempt to narrate the events on the island in her writings to Foe, Susan seems unable to think beyond the cyclical structure that characterised their lives on the island. She raises this issue as she writes, ‘I have set down the history of our time on the island as well as I can, and enclose it herewith. It is a sorry, limping affair (the history, not the time itself)—“the next day,” its refrain goes, “the next day . . . the next day”—but you will know how to set it right’ (47). Susan attempts to force a temporal structure on what seems to be a sequence of events that lacks the natural ‘flow’ of time. As a mental structure, time seemingly ‘moves’ by manifestations of progression and irreversibility of actions and events; the lack of real progression on the level of characters and events, therefore, ‘paralyses’ the movement of time in the narrative. This confirms the subjectivity of the temporal experiences as well as the impossibility of objectivity of time beyond consciousness. Once the characters stop believing in, and showing, progress, time ceases to exist.

Through this manipulation of temporal structures, Coetzee showcases the flexibility, non-universality, and ultimately, the non-fundamental nature of time. Instead, he presents a QPist alternative view of time as a complex, fluid, and multidirectional structure. This view carries many implications; one of which is the ability of the present to alter and change the past and the future through its ongoing *becoming*. In fact, *the past*

and the future are parallel structures that are but manifestations of the present's becoming.

The rewriting of (hi)story, hence, is not figurative in the traditional sense of 'revisiting history', such as in Adrienne Rich's notion of revision—or 're-vision' as she puts it¹⁶⁶. The revision I refer to here takes a more literal sense; it is based on the uncanny properties of texts I have previously explained, such as nonlocality, nonlinearity, parallelism, and entanglement not only on the level of meaning but also on the level of temporal significance. It involves complete omission, (re)creation, and manipulation of possible (hi)stories and alternative *worlds*. As Hayden White states, '[i]n choosing our past, we choose a present; and vice versa. We use the one to justify the other' (135). It is a literal interpretation of the temporal entanglement. While this view of history is undoubtedly postmodernist, introducing it in the QPist framework suggests that this view goes beyond the epistemological to the ontological nature of history. If we were to accept quantum notions with relation to history, particularly the notion of entanglement, then we are introduced to the possibility of changing the past on a deeper level than that proposed by postmodernism. We access history not only through narrative, memory, and consciousness but also through our present actions; we, in other words, *become* our very pasts and futures with all the possibilities they open and entail. The ideas of revising history are clearly expressed in *Foe*, where, as I shall come to demonstrate, the theme of rewriting and altering the stories of the characters runs throughout the narrative, which forces the reader to constantly revise and alter the meaning as s/he reads.

While the past and future are *essentially* written in the form of narratives, the present is *necessarily* unwriteable: *the present can only become*. The present (*presence*) is the only temporal unit of *becoming*; it does not refer to the classical temporal structure but to the opposite: the absence of all temporal structures. The unwritability of the present/presence is embodied in Friday's silence. Friday's inability to have a story of his own renders him with no history, future, or any historical record of existence except his present/presence. As a consequence of his unwritability, Friday exists in the narrative as a

¹⁶⁶ In her essay 'When We Dead Awaken: Writing as Re-Vision', Adrienne Rich writes, 'Re-vision—the act of looking back, of seeing with fresh eyes, of entering an old text from a new critical direction—is for us more than a chapter in cultural history; it is an act of survival. Until we can understand the assumptions in which we are drenched we cannot know ourselves.' (18).

shadow (115), a cold statue (70), without desires, dreams, fears, or imagination. As he has no story of his own, he exists on the margin of the other characters' stories. Paradoxically, his silence/absence from/within the narrative is what renders him *present/presence*. His present/presence is not recognised by Susan and Foe who seem absorbed in their narratological/ontological battle, where their 'substantiality' is determined by the extent to which they can 'narrate' their existence in the past and future tenses.

4.4. Between Fact and Fiction

Coetzee destabilises the boundaries between history/story and fact/fiction by placing Defoe within the narrative—among the characters Defoe himself created—as another character named 'Foe'.¹⁶⁷ By manipulating the logics of history and time, Coetzee successfully 'hacks' Defoe's narrative and engages the reader in what is seemingly the period of events that preceded, and led to, the writing of *RC*. By giving Defoe the same ontological level as his characters, Coetzee successfully disturbs the boundaries between history/fiction. In a similar manner, and in his Nobel lecture 'He and his Man' (referring to (De)Foe and Cruso(e)), Coetzee blurs any left distinction between the two. To Coetzee, both (De)Foe and Cruso(e) are characters with varying degree of fictionality; this stems from Coetzee's contention in the fictionality of history as he declares: 'history is nothing but a certain kind of story that people agree to tell each other' ('Novel' 4). Coetzee, therefore, deconstructs the distinction between history/story through highlighting their shared narrativity.

This blurring of fact/fiction is further emphasised when Susan reflects on her own and other characters' existence, or substantiality, to use her term. She believes there are several orders of reality or different levels of ontological status. She suggests the existence of textual creatures—creatures of words with no substance, which emerge from the author's imagination—and believes that the mysterious girl who follows her and

¹⁶⁷ Placing Defoe inside the narrative is also an exemplification of the earlier discussion in Chapter Two on the inevitability of the author *becoming part of the text*. In Coetzee's fiction, the fictionalised figures of Defoe, Dostoevsky, and Coetzee himself are all examples of this highly entangled relationship between the writer and the writing, and their ontological inseparability.

claims to be her daughter is a character of Foe's imagination (*Foe* 133). Furthermore, in one metafictional moment, Susan's certainty suddenly collapses: '[n]othing is left to me but doubt. I am doubt itself. Who is speaking me? Am I a phantom too? To what order do I belong? And you: who are you?' (133). Not only Susan, but the reader too cannot determine whether, for instance, the mysterious girl is Susan's lost daughter, or part of a script Foe has written for Susan. All the characters in *Foe* exist, more or less, on the same ontological level of uncertainty, particularly in the final chapter, as we shall come to see.

This ontological uncertainty indirectly invites the reader to question his/her own substantiality. In many ways, the reader, as I have demonstrated in Chapter Two, through *becoming* within the phenomenon of meaning, is inevitably entangled with the characters. Questioning the characters' substantiality necessarily entails questioning his/her own. However, counterintuitively, it is the question itself—not the answer—that is problematic. The characters or the reader are fictional or real and opposed to, and in comparison with, whom? The distinction between fact/fiction is but an indirect manifestation of the profound commitment to representationalism and the inherent belief in externalism and Platonic dualism. Thus, instead of asking if Susan, Foe, the girl, or even the reader are definitive 'facts' or 'fictions', the questioning turns to the question itself: what is 'fact' and what is 'fiction' beyond the immediate *present/presence*, and particularly within the context of the phenomenon of meaning? Coetzee's blurring between fact/fiction and history/storytelling becomes thus more justified.

Although readers of *Foe* might get the impression that they are going to be offered an alternative account of what happened on Cruso(e)'s island, this is not what transpires. The novel does not offer an alternative reading of *RC*; rather, it distorts all possible readings of what *actually happened* on the island, and, instead, opens an array of possibilities of what *could have happened*. Through Cruso's inconsistent accounts of his and Friday's history, and through Susan's writings to, and conversations with, Foe, and finally through the anonymous narrator of the final chapter, these characters offer multiple, parallel, and contradictory, accounts of each story, without validating any over the others, leaving the reader with several possible paths for each story of the characters (Cruso, Friday, Susan, Foe, and the mysterious girl).

The reader, for instance, does not know the exact history of Crusoe, what brought him to the island and how he met Friday, despite Susan's frequent interrogations. Susan narrates,

I would gladly now recount to you the history of this singular Crusoe, as I heard it from his own lips. But the stories he told me were so various, and so hard to reconcile one with another, that I was more and more driven to conclude age and isolation had taken their toll on his memory, and he no longer knew for sure what was truth, what fancy. Thus one day he would say his father had been a wealthy merchant whose counting-house he had quit in search of adventure. But the next day he would tell me he had been a poor lad of no family who had shipped as a cabin-boy and been captured by the Moors (he bore a scar on his arm which was, he said, the mark of the branding-iron) and escaped and made his way to the New World. Sometimes he would say he had dwelt on his island the past fifteen years, he and Friday, none but they having been spared when their ship went down (11-2).

Similarly, Friday's life and history remain a mystery. According to Crusoe's conflicting accounts of what happened to Friday, Susan does not know conclusively if Friday is a cannibal, a slave, or whether his mutilation is caused by slave traders or by Crusoe himself (or whether it is, in fact, real as Susan comments in retrospect). Furthermore, the reader is unable to decide whether Susan has in fact lost a daughter, and whether she actually lived on the island, whether she drowned before arriving in England as the scene in the last chapter suggests, or whether she, in fact, exists at all as some commentators have argued (Foss 14). The reader is also uncertain of the nature of the affairs between Susan on the one hand, and Crusoe, the Captain, and Foe on the other. The reader never knows the truth of the mysterious girl who claims to be Susan's lost daughter, with whom Susan denies any relationship, claiming she is an actress whom Foe hires. It is also not clear what Foe is hiding from, and if he, in fact, met Susan and had a relationship with her, or if he wrote this novel or was merely a character in Susan's narrative. These scenarios coexist as parallel possibilities; the reader is not rewarded with any resolution or provided with any

hint to validate any particular possibility over the others.

On the level of technique, and to create these parallels, Coetzee repeats sentences, scenes, and events with some variations, including altering descriptions, changing the tenses of the verbs, adding or omitting details, replacing the setting or the medium with which the utterances are delivered. These varying techniques are meant to generate parallel (but not identical) possibilities where the reader is introduced to what s/he feels is a familiar situation, only with slight variations to create different impressions and multiple possibilities of the same situation. One of these instances can be seen in Susan's words with which the narrative begins:

At last I could row no further. My hands were blistered, my back was burned, my body ached. With a sigh, making barely a splash, I slipped overboard. With slow strokes, my long hair floating about me, like a flower of the sea, like an anemone, like a jellyfish of the kind you see in the waters of Brazil, I swam towards the strange island, for a while swimming as I had rowed, against the current, then all at once free of its grip, carried by the waves into the bay and on to the beach (5).

After a few pages, Susan recounts her story to Cruso in their first encounter; she begins by recalling her background followed by the abduction of her daughter. She then talks about her arrival on the island: '[t]hen at last I could row no further. My hands were raw, my back was burned, my body ached. With a sigh, making barely a splash, I slipped overboard and began to swim towards your island. The waves took me and bore me on to the beach. The rest you know' (11). There are several notable differences between the two quotations. The first appears to be an official beginning of both Coetzee's narrative and Susan's story. However, in the second quotation, the same words are placed in another story within the larger context of Susan's life, thus exemplifying the impossibility of a single beginning—or arguably any beginning. Every event is a possible beginning and a possible end, while simultaneously forever *becoming-in-between*. Susan precedes the narration of the event in the second quotation by the word 'then', which effectively cancels what the reader assumed to be the beginning of the narrative.

In the final chapter of the novel, the same sentence appears again in a different context. The anonymous narrator finds a ‘tall, looping script’ which he begins to read; ‘I read the first words of the tall, looping script: ‘Dear Mr Foe, At last I could row no further’ (155). Unlike the previous examples, this time, the reader is abruptly faced with the nature of the narrative. The sentence appears to represent both a faux ending of the previous narrative and a faux beginning of a new ontologically different narrative. Whether these characters have existed, even merely as characters, or whether these events have taken place, even as fictional events, or whether this is all in the reader’s ‘head’, is now uncertain.

These three quotations seem to introduce the same story in vastly different contexts; one as a beginning of a text (in real time), another is a beginning within the narrative (in narrative time), and a third as an ending of the previous world and a beginning of an entirely different reality (in QPist time). This not only successfully creates parallel possibilities, but also, and most importantly, *multiple realities*. Drawing from the MWI, it is not unacceptable to suggest that all these possibilities have taken place in three different hermeneutic universes. According to the MWI, all possible alterations of pasts and futures are equally real; for every possibility, a new universe unfolds. The ‘real’, or, in more accurate term, the ‘experienced’ universe/meaning is only one actualisation of many.

Another example occurs in the third chapter; it begins with the sentence: ‘The staircase was dark and mean’ (113) which is repeated in the fourth chapter with a slight difference: ‘The staircase is dark and mean.’ (153). Clearly, the difference lies in the grammatical structure of both sentences; the past tense in the first occurrence of the sentence changes into the present. Furthermore, the staircase scenes are delivered in different contexts. The first takes place when Susan stands in front of Foe’s apartment; she narrates, ‘[t]he staircase was dark and mean. My knock echoed as if on emptiness. But I knocked a second time, and heard a shuffling, and from behind the door a voice, his voice, low and cautious. ‘It is I, Susan Barton,’ I announced’’ (113). In the second scene, however, the anonymous narrator stands in front of *Defoe’s* house and speaks in the present tense (155). The scenes get even more complicated in reference to another, earlier

occurrence of the staircase in one of Susan's conversations with Foe: "Listen! I describe the dark staircase, the bare room, the curtained alcove, particulars a thousand times more familiar to you than to me; I tell of your looks and my looks, I relate your words and mine. Why do I speak, to whom do I speak, when there is no need to speak?" (133). Although probable, given the consistent clues, it is nonetheless impossible to fully determine whether these scenes refer to the same staircase. However, the occurrence and significance of the staircase changes in every scene. Other uncertainties include whether Susan, in fact, went to Foe's house, whether this is all of her or Foe's imaginings, whether the anonymous narrator has stepped into their actual world or inside their story. These clues are all left to the reader to make sense of.

Another repetition takes place in the last chapter. The anonymous narrator enters the house; two pages later, the narrator enters the same house again, repeating the same scene, only realising certain things he had missed in the previous scene. The first scene begins as follows:

I stumble over a body. It does not stir, it makes no sound. By the light of a match I make out a woman or a girl, her feet drawn up inside a long grey dress, her hands folded under her armpits; or is it that her limbs are unnaturally short, the stunted limbs of a cripple? Her face is wrapped in a grey woollen scarf. I begin to unwrap it, but the scarf is endless. Her head lolls. She weighs no more than a sack of straw. The door is not locked. Through a solitary window moonlight floods the room. There is a quick scurrying across the floor, a mouse or a rat. They lie side by side in bed, not touching. The skin, dry as paper, is stretched tight over their bones. Their lips have receded, uncovering their teeth, so that they seem to be smiling. Their eyes are closed (153).

The narrator enters for the second time to what appears to be the same place:

I enter. Though it is a bright autumn day, light does not penetrate these walls. On the landing I stumble over the body, light as straw, of a woman or a girl. The room is darker than before; but, groping along the mantel, I

find the stub of a candle and light it. It bums with a dull blue flame. The couple in the bed lie face to face, her head in the crook of his arm. (155)

The narrator enters again through a staircase, this time under the sea:

I come to a bulkhead and a stairway. The door at the head of the stairway is closed; but when I put a shoulder to it and push, the wall of water yields and I can enter. It is not a country bath-house. In the black space of this cabin the water is still and dead, the same water as yesterday, as last year, as three hundred years ago. Susan Barton and her dead captain, fat as pigs in their white nightclothes, their limbs extending stiffly from their trunks, their hands, puckered from long immersion, held out in blessing, float like stars against the low roof. I crawl beneath them. (156-7)

There is enough consistency and familiarity between the three scenes, yet there is enough difference to alert the reader of the parallel realities these scenes represent. The first scene takes place at night while the ‘moonlight floods the room’, whereas the second takes place in a ‘bright autumn day’. The narrator stumbles upon a body in both scenes. S/he finds ‘the couple’ dead, lying in bed, side by side, not touching, in the first scene, and face to face, with her head in his arm, in the second. The dead bodies are referred to as ‘they’ and ‘the couple’ and the reader, based on the previous chapter, instantly assumes they are the bodies of Foe and Susan.

The third scene, however, takes place underwater inside a new shipwreck that has not been mentioned. It seemingly concerns the ‘rescue ship’ in the main narrative, which saves Susan and Friday, while Crusoe dies on board, and takes them from the island to England. The couple in this scene is identified as Susan and ‘her dead captain’. This scene forces the reader to revise the meaning of the previous events in an attempt to make sense of the unfolding narrative: if Susan and Friday drowned before arriving at the England, then the following events, which constitute the majority of the novel, *have not taken place*. They could have been merely Foe’s creations or the writings of another author who could also be the narrator of the last chapter. There is an even more unsettling possibility; if this shipwreck is the one that carried Susan before arriving at the island,

then Susan has never existed, which leads us back to Defoe's original story where there is no female presence. All of these remain possibilities the narrative suggests but does not confirm.

In the last chapter, the narrator describes three encounters with Friday's body—or three bodies of Friday. These encounters behave as if they build on each other and at the same time seem to contradict one another in some of their details. In the first encounter, the narrator finds Friday 'stretched at full length on his back'; after testing his pulse and trying to find signs of life, Friday turns on his side (154). In the second encounter, Friday turns to the wall. The third encounter involves Friday's body half buried in the mud, with 'his hands between his thighs' (157). One of the notable differences in these encounters is the presence/absence of Friday's necklace, which was given to him by Susan (in the main narrative) when they arrive to England to testify to his freedom. In the first scene, the narrator describes in detail his first encounter with Friday's body; in the entire page-length description, the narrator does not mention any sign of Friday's necklace (154). Unlike the first, the description of the second encounter is very brief; the narrator suddenly realises s/he had missed the mark on Friday's neck: '[a]bout his neck - I had not observed this before - is a scar like a necklace, left by a rope or chain' (155). In the last encounter, the narrator finds Friday underwater, inside the shipwreck; 'I come to Friday. I tug his woolly hair, finger the chain about his throat' (157). In the three encounters, the necklace presents three possibilities: it does not exist, a trace of it exists, and it is still on Friday's neck. Again, there is no reason for the reader to favour any of these possibilities—the necklace may have or may not have existed.

Moreover, *Foe* has not one but three endings. As Parker notes, one ending concerns the main narrative while the other two are metaleptic: '[i]n one ending, Susan and Foe begin to teach Friday to write; in another, Friday voices the sounds of the island; and in yet another, he voices his indictment' (36). The first ending (*Foe* 152) takes place before the last chapter; it marks a break between the main narrative and the uncanny narrative of chapter IV. The second ending, two pages later, ends with the sentence: 'From his mouth, without a breath, issue the sounds of the island' (154). Despite giving the illusion of an ending, the narrative continues for three more pages as a repetition of

the last couple of pages with the variations discussed above, and the actual text ends with the scene of Friday underwater (157). Similar to the beginning of the narrative, which gets misplaced in the middle of another story, the ending is also unsettled by offering three alternatives to emphasise the multiple realities of the narrative, as well as the impossibility of a definitive ending. Furthermore, the tension the reader feels as a result of the unresolved questions, particularly in the last chapter, represents another way of destabilising the sense of closure the reader anticipates as s/he gets closer towards the end of the text. In this sense, *Foe* is intentionally written as an antinarrative to disappoint the reader as it grants him/her no beginning, no events, and no ending.

The multiple realities and the many possibilities of stories offered in *Foe* are impossible to falsify, separate, isolate or discard, as they all exist as parallels with no *core* story to anchor them. This technique is what Gary Saul Morson refers to as *sideshadowing*; it represents the opposite idea of the narrative as a ‘closed system’ where a single beginning and a set of events neatly lead towards a cohesive ending. Morson defines *sideshadowing* as ‘two or more alternative presents, the actual and the possible, are made simultaneously visible. This is a simultaneity not *in* time but *of* times: we do not see contradictory actualities, but one possibility that was actualized and, at the same moment, another that could have been but was not’ (118). Interestingly enough, the definition of *sideshadowing* ‘parallels’ the definition of quantum logic as ‘the simultaneous coexistence of several different possibilities. Each possibility, under the right circumstances has a probability of being observed’ (Mills ‘Storytelling’).

Foe takes *sideshadowing* a step further by destabilising the boundaries (as shall be seen in the last chapter of *Foe*) between the actualised and the possible presents. This unconditional openness to, and endorsement of, the possibilities of the narrative, without a guiding/actualised story/possibility, can be described as a *quantum posthumanist narrative [QPN]*. This type of narrative utilises different techniques (as we shall come to see more clearly) to achieve its parallelism, multidirectionality, and uncertainty. QPN thus accommodates all possibilities without fearing contradictions and embraces all the alternative narratives including its anti-narrative(s). As demonstrated, Coetzee achieves this by changing the accounts, versions, and stories of the characters, while leaving others

unresolved either through contradictions or withheld details. These unresolved accounts of stories become later a source of profound clarity: stories are versions of each other without an original story they refer to. This extends to Defoe's narrative; it is only a possibility of what could have been written and is not more 'original' than the other possibilities other narratives have since offered.

As I have argued so far, QPN embodies the posthumanist impossibility of the notion of 'origin', which extends to the ultimate of 'origin': the origin of Man at the heart of humanist ideals. Although Darwinian theory has refuted the sacred *origin*, it nonetheless proposed the animalistic *origin* of the human. The QPist view, however, deconstructs the very concept of origin altogether. It replaces the need for origin with notions of entanglement, nonlinearity, multiplicity, and parallelism. Through *Foe*, not only is the originality of Defoe's narrative contested but also, and most importantly, the need for such a linear perspective. Instead, the narratives that preceded and followed the publication *RC*, as well as the possible stories of each character within *Foe*, are viewed as parallel narratives. Another implication of this QPN is the multiplicity of possible truths, and hence, the impossibility of truth. Truth (as a singular noun) necessarily requires a single narrative that discards all the other narratives—a view that fundamentally violates the premise of QP premise and the QPN. Furthermore, *truth is essentially an end*, another impossibility in the constantly *becoming* world of QP. Truth, therefore, becomes insignificant and arguably irrelevant in the QPN where the emphasis lies in the dynamic process and relations (*becomings*) rather than that the static outcome/results/ends.

Foe, as I have argued so far, is a QPN par excellence. The narrative does not progress or regress; it instead shifts the focus to the dynamics of the narrative itself. Through various techniques, it manipulates its relationships with other texts, repositions its beginning(s) and destabilises ending(s). Every story of and within the narrative multiplies into other possibilities for other realities.

4.5. Chapter IV¹⁶⁸ and the Reader

The main narrative ends at chapter III with Susan and Foe trying to teach Friday how to write. The following chapter, also the final chapter of *Foe*, starts with an anonymous first-person narrator who enters a house, which s/he later identifies as Defoe's, and where s/he finds 'the couple's dead bodies' (presumably Susan and Foe's) and Friday's struggling body. Notably, the chapter does not seem to be a continuation of the main narrative for semantic, linguistic, and thematic reasons. The logic of time, space, and language is impaired. Time appears fluid and undefined, scenes are incoherent and cyclic, and language is repetitive and inconsistent. The chapter, nonetheless, holds dense intratextual relations with the main narrative; as Marco Caracciolo notes, '[e]verything looks eerily familiar to the reader, and yet there are inconsistencies between this chapter and the rest of the book' ('Foe' 94). It is a liminal narrative that seems to have elements from the main narrative and from the real world, which allows for the creation of a narrative in-between.

In this chapter, Coetzee introduces what can be *truly* described as a QPN. It is *posthumanist* as it downplays the centrality of meaning, reasoning, logic, and language. It is *quantum* as it deconstructs the notions of time, space, and linearity, and celebrates uncertainty, parallelism, and contingency. Also, the narrative deconstructs the classical notion of *causality*, a foundational concept in the classical physical paradigm. The events do not follow the logical sequence of cause and effect. Furthermore, they do not progress or build up into a conclusion. Consequently, the chapter exhibits extreme temporal, spatial, and linguistic uncertainty, more so than the main narrative.

In this transitional, uncanny space, all the textual creatures are dead: Susan, Foe, the Captain; only the new narrator and Friday survive. Since Friday could not be incorporated into the figurative world of Crusoe, Susan, and Foe, he is the only character to stay alive in the last chapter, where language proves impossible. Along with Friday, a new first-person narrator steps in; s/he seems familiar with the story and the names of the

¹⁶⁸ Coetzee, as a great admirer of Samuel Beckett, might have drawn inspiration for his ending from *Watt*, which offers a similar ending to *Foe*. Coetzee, nonetheless, seems to transfer this technique into a more political context.

characters, yet ontologically detached from them, seemingly existing in a parallel reality.

Critics have different opinions regarding the identity of this narrator. Some critics suggest that it might be an unnamed character, a fictional narrator (Bongie 264), a fictionalisation of Coetzee himself (Marais 14), or ‘an imaginative merging of character and author’ (Parker 35). Others suggest that Friday is the narrator; they argue that since this chapter creates an impossible reality, only a character like Friday can be a narrator for that world (Doležel 221–2).

However, I argue that the narrator is a fictional stand-in for the reader as Marco Caracciolo proposes¹⁶⁹. The narrator comes from a different reality than that of the characters. As Caracciolo puts it, the narrator does not seem to be on the same ontological level as the other characters (91). There are several clues to suggest this; for example, the narrator finds the manuscript of Susan’s narrative that she sent to Foe: ‘[b]ringing the candle nearer, I read the first words of the tall, looping script: ‘Dear Mr Foe, At last I could row no further’’ (*Foe* 155). The narrator is also able to read the sign on Foe’s house as ‘*Daniel Defoe, Author*’ (155), thus clearly declaring the extratextual reference to Defoe’s narratives. Furthermore, upon inspecting Friday’s body, the narrator confirms details of Susan’s narrative: ‘[i]t is indeed like lambswool’. Also, as s/he tries to listen to Friday’s breath, s/he confirms, ‘as she said, the roar of waves in a seashell’ (154). Furthermore, the narrator’s uses pronouns to refer to the characters instead of their proper names, implying his/her familiarity with the main narrative. The narrator also seems particularly interested in continuing Susan’s attempts to decipher Friday’s silence. All of these clues suggest that the narrator is a fictionalisation of the reader.

Moreover, the narrative seems to be mentally constructed; as it collapses, changes, and repeats itself, it appears to portray fragments of the shifting consciousness of the reader as s/he tries to make sense of the narrative. Caracciolo suggests that this chapter is a *hermeneutic space*, ‘a metafictional allegory for the hermeneutic interaction between readers and texts’ (92). What Caracciolo refers to as the hermeneutic space I propose as a *QPist embodiment of the intra-activity and the lack of inherent boundaries*

¹⁶⁹ For the detailed argument on the reader as the narrator of the fourth chapter of *Foe*, see Caracciolo’s ‘J. M. Coetzee’s *Foe* and the Embodiment of Meaning’.

between the agencies of meaning in their becoming within the phenomenon of meaning.

Indeed, the reader *becoming-(within)-the-narrative* goes beyond the simple interaction between the reader and the text. As I have argued so far, the reader constitutes an integral part of the formation of meaning within the literary event. The significance of *Foe's* last chapter is that it portrays *the embodiment of the reader's becoming within the phenomenon of meaning*. The narrative forces the reader to contemplate the act of reading *while* reading; in other words, it allows the reader the rare opportunity to *witness his/her becoming*. Thus, and instead of 'hypnotising' the reader through an emotionally guided narrative towards a rewarding ending, this reflective QPN 'awakens' the reader to the entangled nature of the phenomenon of meaning by allowing him/her to *witness it from within*. The reader simultaneously *reads* and *observes* his/her reading as s/he tries to make sense of the narrative(s). Thus, while the reader expects to continue to gaze through the imaginary *glass* that s/he feels ontologically separates him/her from the characters in the main narrative; s/he, nevertheless, faces a *mirror* in the last chapter that forces him/her reflect on his/her presence within the narrative. The possible/parallel narrative paths thus become flickers of the possibilities of the reader's consciousness.

By contemplating his/her futile attempts to make sense of the narrative, the actual reader might finally see that his/her quest to find a single meaning is inherently flawed. Stories are multifaceted and entangled; isolating a single story or believing in the possibility of a single account is necessarily partial. Caracciolo mentions that the reader has been chosen to be the one who 'dives' in the shipwreck to find out the truth. In one of their conversations, Susan asks Foe, 'But who will do it?' I asked. 'It is easy enough to lie in bed and say what must be done, but who will dive into the wreck? . . . But if Friday cannot tell us what he sees, is Friday in my story any more than a figuring (or prefiguring) of another diver?' (*Foe* 142). Caracciolo argues that the reader is the only one who can dive into the wreck to find out what happened to Friday. The reader does indeed dive into the wreck in the last few pages (*Foe* 155). As Caracciolo explains, the act of diving is but 'an embodiment of the reader trying to make sense of the novel, and of Friday's silence in particular' (96); the reader's diving, however, ends in vein as s/he learns nothing about what happened to Friday.

However, I believe this ‘diving’ is a mockery of the countless attempts of Susan, the reader (and the critic) to find a truth that supposedly underlies the inconsistent events of the narrative. If this diving were to resolve the questions of the narrative, it would necessarily entail that all the possibilities will have to be homogenised and moulded into one single narrative that cancels all the others. Consequently, the narrative would be refuting the very QPist qualities I argue it embodies. The diving of the reader, thus, *had to fail* for the QPN to succeed.

However, hypothetically, if truth were possible, it would necessarily be beyond the realm of possibilities, which prompts its impossibility within the linguistic and quantum realms. Both the linguistic and the quantum entities are anti-truths in their proximity, probability, and parallelism. Since truth is not a linguistic or a physical entity, it is beyond human conceptualisations. Morton refers to this inaccessibility as *withdrawn*; he writes, ‘[w]ithdrawn doesn’t mean hard to find or even impossible to find yet still capable of being visualized or mapped or plotted. *Withdrawn* doesn’t mean spatially, or materially or temporally *hidden* yet capable of being found, if only in theory. *Withdrawn* means beyond any kind of access, any kind of perception or map or plot or test or extrapolation’ (*Realistic* 54). This impossibility of any epistemological accessibility is acknowledged in quantum theory with regard to uncovering the nature of reality. In his essay ‘Realism and Objectivism in Quantum Mechanics’, Karakostas maintains, ‘[w]ithin the domain of quantum mechanics, knowledge of ‘reality in itself’, ‘the real such as it truly is’ independent of the way it is contextualized, is impossible in principle’¹⁷⁰. This view is key to understanding the impossibility of truth in *Foe* in general and Friday’s story in particular. The impossibility of truth is *embodied in Friday’s silence* in its impenetrable resistance to any linguistic mediation. The last chapter can be seen thus as an extension of Friday’s silence in its attempt to deconstruct language from within. The ‘real such as truly is’ echoes in the narrator/reader’s words as s/he describes the space of the narrative: ‘[t]his is a place where bodies are their own signs’ (157). Only through the impossibility of representation can truth be ‘possible’, and only through silence can truth be ‘spoken’.

¹⁷⁰ I discuss the realist/antirealist debate in quantum theory in more depth in the footnotes in the concluding chapter of the thesis.

4.6. *RC*, *Foe*, and the Dilemma of Representation

The contrast between *RC* and *Foe* opens the door for consideration of the perennial realist/antirealist debate¹⁷¹. As a novel, *RC* is realist both in its themes and narrative techniques. However, most importantly, *RC* is a realist novel in so far as it regards the novel as a *true reflection of human experience*. In his commentary on Defoe, Ian Watt describes this as formal realism¹⁷²; he explains that Defoe builds his entire narrative based on the premise of offering a full report of the human experience, and his narrative, therefore, is saturated with details of the story, including incredible specifications of times, places, and events (32). More comprehensively than any writer before him, Watt argues, Defoe expresses varied elements of individualism that accompanied the rise of the novel (62). Furthermore, thematically, as Watt notes, Crusoe leaves his home and family to improve his economic status, a ‘classic reason of homo economicus’ (65). What distinguishes *RC* from most of the travellers in literature is that it clearly embodies the ‘tendencies of the life of his time’ (67). Moreover, *RC* exhibits the classic dualism between soul and body, represented in Crusoe’s merchandise and world travels on the one hand, and his Christian faith and strong belief in God, and his reflections on his life as a sinner on the other.

Foe, on the other hand, seems to be written as a postmodern antirealist response to *RC*’s realism. As I have already explained in detail, on multiple levels, *Foe*’s narrative techniques challenge the idea of (hi)story as a representation of reality. Contrary to the sense of completeness and linearity the reader gets from reading *RC*, the reader of *Foe* struggles to make sense of the narrative. This question of representation is also carried

¹⁷¹ Depending on what we mean by realism and in which context it is used, realism has several meanings; Ruth Ronen sums up the main types of realism: (1) Realism is metaphysically a doctrine stating the existence, or possible existence, of a nonconceptual domain. (2) Realism is ontologically a belief in the independent existence of two separate orders: the order of the real and the order of the linguistic; entities of language designate entities in reality. (3) Realism is epistemically the view that there is at least a partial access from language to reality. (4) Realism is semantically the assumption that access from the order of language to the order of the real is based on a relation of a particular kind (of representation, approximation, convergence, accuracy, truth, correspondence, or their likes) (191).

In the context of *RC*, we can trace these different types of realism, whether on the level of themes and narrative techniques, or in the existential beliefs of Crusoe himself.

¹⁷² Watt describes formal realism as ‘[t]he narrative method whereby the novel embodies [a] circumstantial view of life’ (32).

thematically in the novel through Susan's lengthy contemplations, and conversations with, Foe on storytelling, and her metafictional moments on the representational powers of language, stories, and history.

Evidently, *RC* presumes a prior, logical, chronological reality and its 'representability', echoing the Classical Newtonian physics of presupposing the existence of inherent pre-existing values of objects prior to measurement. *Foe*, on the other hand, does not make such a presumption; the stories of Cruso, Susan, Friday, and Foe are constantly revisited and their beginnings altered, making it impossible for the reader to build the scattered events into a coherent story or to imagine any events *pre-existing the moment of narration*. Furthermore, similar the Newtonian detached observer, the reader of *RC* is treated as an external observer to the meaning of the narrative. The narrative is written as a closed system of meaning where there is little to no significance of the reader within the narrative. On the other hand, the reader steps into Coetzee's narrative and *becomes-the-narrative*. Positioning the reader within the narrative is both a testimony and an embodiment of the impossibility of an external observer outside any phenomenon of *becoming*.

The *intra-active* world Coetzee creates where he lets the reader into the narrative signifies the QPist lack of inherent boundaries between the real and the virtual summarised by Herbrechter: 'in the age of virtualization [...] factual-constative and performative-fictional forms of knowledge can no longer clearly be distinguished' (176). By positioning the observer/reader within the narrative, Coetzee abolishes the boundaries between reader/author, external/internal, real/virtual, and ultimately fiction/nonfiction. Additionally, the understanding of the role of the reader's consciousness within the narrative through entanglement and interference carries similar implications. Since consciousness is equally implemented within the fictional and nonfictional constructions of reality, or, as Hirsch's earlier statement suggests that 'there is no magic land of meaning outside ... consciousness ('Reinterpreted' 202), then, consequently, *the fictional/nonfictional distinction is permanently disturbed*.¹⁷³ This leaves us with the most

¹⁷³ It is important here that this statement is not confused with the antirealist argument that proposes that consciousness is the ultimate creator of reality. I argue here for an entangled agnostic view where our

entangled view of *the literary event as being ontologically indistinguishable from all other phenomena of meaning*. This conclusion illuminates a new angle in reading Coetzee's different attempts to disturb the boundaries between histories/stories and fact/fiction—a theme that runs in *Foe* and Coetzee's work at large.

My proposition concerning the nature of the literary event as a phenomenon of meaning can be summarised from all the previous discussions as the following:

- The literary event *emerges* through the entanglement of the agencies of meaning (the author, the reader, and the text).
- The distinctions between the agencies of meaning are flexible, temporary, agential cuts *within* the phenomenon of meaning.
- Meaning is emergent; it has no inherent, definitive values prior to reading.
- The author, reader, and text are entangled with the meaning they claim as theirs.
- There is nothing *outside* the phenomenon, including the phenomenon of meaning.
- The ultimate subject/observer of the phenomenon of meaning is the emergent event itself.
- The *reader effect* influences the meaning making from *within*.
- The literary phenomenon is indistinguishable from all other phenomena of meaning that happen on the level of consciousness.

perception/experience of the world is a manifestation of both consciousness and reality *becoming*—or emerging through each another—not where one of these is the object/consequence of the other. This view implies neither the possibility nor the impossibility of an objective reality; however, it suggests the impossibility of an objective perception that is not consciousness-based. I extend on this argument in the concluding chapter of the thesis.

CONCLUSION

Suppressing the Blind Spot: Contemplating the Worlds of Science and Fiction

QP has a fundamental task to accomplish: to destabilise the boundaries between science and literature and to envisage human knowledge as an entangled and emergent whole. The underlying assumption of the thesis from the beginning is *the entanglement of human knowledge*. The aim of this view is to deconstruct Aristotle's division of disciplines that is deeply rooted in the Western tradition and our perception of knowledge in general.

Bohr states that the goal of quantum mechanics is not to uncover truth but discover relations: '[i]n our description of nature the purpose is not to disclose the real essence of phenomena but only to track down as far as possible relations between the multifold aspects of our experience' (*Atomic* 18). In a similar fashion, and through the merging of quantum theory with critical posthumanism to the casual (and arguably speculative) use of many quantum terms in the literary analysis of Coetzee's texts, the aim of the thesis is not to prove or validate but rather *to experiment and to contribute to establishing a sense of familiarity and connection between science and literature*.

In this section, I advance my proposition on entanglement by arguing that the modelling of human knowledge, including science and literature, shares broad principles and practices. I demonstrate the similar ways in which science and fiction construct our experiences of the world. I also propose moving beyond the traditional realist/antirealist debate, thus equally shunning both antirealist postmodernism and realist scientism. What is left for the reader is to contemplate the manifestations of these propositions in the fields of the sciences and the humanities.

In the previous chapters, I have argued for the reader-author-text entanglement. I have also proposed that the literary text has no definitive value or objective meaning outside the phenomenon of meaning. The observer is part of observation in quantum mechanics as much as the reader is part of the formation of meaning in literary interpretation and the construction of imaginary worlds. The outcome of the phenomenon of meaning is not equal to the sum of its individual constituents; it is rather governed by the unpredictable laws of entanglement and emergence. To demonstrate the inseparability

of knowing from the knower and its agencies of perception, Humberto Maturana and Francisco Varela provide a simple experiment: cover your left eye and stare at the cross in Figure 4, keeping the page about fifteen inches distance. You will soon realise that the black dot disappears. They explain this phenomenon, called *the blind spot*, by noting that in this specific arrangement, the dot ‘falls into an area of the retina where the optic nerve emerges’ making it insensitive to light (19).



Figure 4: The blind spot experiment (Maturana & Varela 20)

Indeed, the most important implication of this experiment is, unless such manipulation is conducted intentionally, the discontinuity will always go unnoticed within our continuous visual experiences. As Maturana and Varela put it, the most intriguing aspect of the blind spot is that ‘*we do not see that we do not see*’ (19).

One of many other experiments Maturana and Varela offer is Otto von Guericke’s coloured shadows in 1972. It involves using two sources of light, one of which is filtered using red cellophane. When placing a hand in the beam of light, one of the shadows has a new colour (blue-greenish) unrelated to the colours of light (red, white, or a mixture of both ‘pink’). In other words, the wavelength of the new colour does not correspond to the measurements or the composition of wavelengths in the experiment. This demonstrates that colour is not an inherent quality of objects or the light they reflect but an emergent property of the entangled phenomenon of perception (21). The results of this experiment are not limited to the colours of the objects but also extend to ‘any perceptual modality’ (22).

The implications of these results emphasise some of the QPist arguments proposed so far: a) objects have no inherent definitive qualities prior to observation—they are relational entities with emergent qualities; b) the world is constructed of phenomena, not of objects; c) phenomena are irreducible to the value of the individual components, and the outcome is not the sum of the parts; d) the knower/observer is an entangled and a composing part of the phenomenon it claims to witness/observe. These implications equally apply to the phenomenon of meaning: meaning is irreducible to any of its components, including the intention of the author, the consciousness of the reader, or the semantics of the text, or any configuration of these components. The traditional literary criticism that assumes knowledge of author, text, or history, is unwittingly a key participant of the phenomenon of meaning it claims to describe. Inspired by Maturana and Varela's aphorism, '[a]ll doing is knowing and all knowing is doing' (26), I contend that *all thinking is becoming*.

The most significant implication of Maturana and Varela's experiments is the deconstruction of the illusory space that separates the observer/observed, subject/object, knower/known, and, correspondingly, reader/meaning. This understanding becomes evident every time we come closer to examine an object, only to realise how impossible it is to separate ourselves (perception, action, consciousness) from the object and the world (23). As Maturana and Varela put it, '[w]e do not see the "space" of the world; we live our field of vision. We do not see the "colors" of the world; we live our chromatic space' (23). This analogy applies to reading: the reader does not read the texts—s/he lives it through his/her consciousness, emotions, judgments, and language. While Derrida's famous axiom, '*Il n'y a pas de hors-texte*' (*De la Grammatologie* 227) [*there is no outside-text*]¹⁷⁴, is concerned with language and *différance*, I propose another, ontological version of the axiom, concerning reality and consciousness: *Il n'y a rien en dehors* [*there is no outside*].

¹⁷⁴ I use the French edition of Derrida's book (as opposed to Derrida's other publications mentioned throughout the thesis) because this particular axiom has a different English translation than what is proposed here, which might invoke a different meaning. As Alex Callinicos mentions in his article, 'Obituary: The Infinite Search', the English translation of Derrida's axiom 'there is nothing outside the text' is rather misleading as it arguably reduces 'everything to language'. Callinicos proposes the translation 'there is no-outside text' to refer more clearly to Derrida's idea of the impossibility of understanding reality independently of language (290).

Maturana and Varela provide an interesting example of a similar yet more artistic realisation of the blind spot. In the Bronx Zoo in New York, there is a Great Ape House which contains apes, gorillas, and chimpanzees. Among them is a separate cage with a sign at its bottom ‘The Most Dangerous Primate in the World’. As one looks between the bars, one is surprised to see their own reflection in the mirror. The caption explains that the human has killed more animals and species than any other animal on earth. This key moment of reflection when the *observer is also the observed* illuminates aspects of oneself to which one is often blind. This specific arrangement allows the observer to be aware of his/her ‘blind spot’ that is difficult to be noticed otherwise (23-4). It is a moment of ‘suppressing the blindness’ in a life that is normally ‘blind to itself’ (24).¹⁷⁵

I contend that literature functions in a similar way to the mirror in the cage, the bluish-green shadow Guericke’s experiment, and the dot in Figure 4: it acts as a means to recreate moments of reflection where we become capable of momentarily suppressing our blindness, questioning our certainties, and looking at familiar things with radically new perspectives. The reader in the last chapter of *Foe* finds the same mirror that suppresses his/her blindness, revealing the nature of his/her *becoming* within the narrative. Human knowledge in general, including science and literature, functions as a means to revisit our blind spots and to realise both the limitations of our perception and the possibilities of new experiences within the world.

5.1. The Similar Worlds of Science and Fiction

The MWI¹⁷⁶ proposes that there is a(n) (in)finite number of parallel universes, and our world is only one of these possibilities. It suggests that all alternative histories and futures exist as parallel universes to ours. The difficulty, however, lies in the impossibility of verifying or measuring these universes. The multiuniverse thus remains an hypothesis in the realm of scientific theory. In the textual world, however, parallel narratives exist within the ontological parameters of imaginary possible worlds. As demonstrated in Chapter Four, there is a measurable parallelism in the way texts affect

¹⁷⁵ Interestingly, I believe that a more profound realisation of another blind spot in this example is yet to be realised: the mirror inside the cage set to condemn humans for their treatment of animals takes place in the zoo—a place where animals are captured against their will and put on display.

¹⁷⁶ The MWI is expressed in different fields of knowledge; they are sometimes called ‘alternate universes’, ‘quantum universes’, ‘parallel dimensions’, or ‘alternate realities’.

each other with no regard to the linear chronological order in which they seemingly exist. This is evident in the intertextual relations between *RC* and other historical texts. Furthermore, the QPN, exemplified in the last chapter of *Foe*, embodies this idea by allowing the narrative to multiply itself into other narratives that exist simultaneously. This mode of narrating offers the reader a chance to experience the multiuniverse or parallel worlds of the characters, where difference is not perceived as a contradiction, but rather celebrated as a possibility.

Due to its fluidity, flexibility, and the many unique abilities it exhibits in manipulating time and space, it is safe to presume that fiction plays an integral role in modelling many of these quantum notions, such as parallel, multilayered realities, through utilising the multifaceted nature of consciousness. It is, therefore, a useful tool to import and interpret the quantum advances, which are otherwise accessible only through mathematical symbols and equations, into our daily experiences. Without the powers of imagination, it is impossible for the ordinary consciousness not only to relate to these physical equations and their implications but also to discover them.

However, opponents of such comparisons argue that our relation to the material world is different than to the hermeneutic world of fiction, and dealing with subatomic particles is not equivalent to dealing with language and metaphors. There are two variables to this argument that need addressing separately. First, the nature of the medium determines our understanding of quantum mechanics. Born within mathematical equations, the linguistic reading of quantum theory is inherently interpretive—it is never a translation or an explanation of its mathematical counterpart. The relationship between the two mediums (and consequently between the science and the humanities) is fundamentally interpretive. Therefore, dealing with quantum theory in linguistic terms is always dealing with an interpretation of it.¹⁷⁷ Second, the nature of the experience,

¹⁷⁷ There is another way to tackle this argument; if we are to accept the Brukner and Zeilinger approach to information in quantum theory, namely the view of information as the foundation of reality, it is still possible to argue for comparability between quantum theory and its linguistic interpretations, based on the view of mathematics and language as both mediums *of* information and mediums *made of* information. This approach, nonetheless, produces its own inherent paradox or performative contradiction: ‘the system of information is explained by the characteristics of information’. It also generates unresolved questions on the nature of this information: ‘[w]hose information? And information about what?’ (Bilban 33). Furthermore, this approach remains antirealist at heart (Christopher Timpson describes it as informational immaterialism (70)) and is problematic to align with other arguments made here, including Vailinger’s, and the non-committed position regarding the (im)possibility an independent reality.

namely the difference between the actual and the imagined, the physical and the verbal worlds, renders the literary experience incomparable with the material one. I argue differently; the two experiences are comparable to each other. According to the latest research in neurology¹⁷⁸, for example, and through measuring the electrical activity in the brain, scientific consensus holds that the brain responds in a strikingly similar manner to real and imagined stimuli. Furthermore, studies have shown that real and imagined stimuli overlap to construct our experience of the world.¹⁷⁹ In particular, certain neurons in the brain, called mirror neurons, demonstrate this entanglement as they respond in the same manner when performing or witnessing an action.¹⁸⁰ This comparability between the actual/virtual suggests that the worlds of particles and metaphors are, in some aspects, analogous to each other. Therefore, it is safe to suggest that fiction offers an embodiment of many interpretations of quantum mechanics.

As rich as this encounter already seems to be, the relationship between science and literature is far more entangled than this. The exploration of the relationship between science and fiction should not stop at examining only one part of the interaction, that is, the implementation of scientific notions in the exploration of literary texts. This has been one of the rooted problems of many ‘consilient’ movements in the literary field. A good example of this is literary Darwinism, which started as an ambitious consilient project in English studies and wound up a narrow ultra-reductionist paradigm with extremely limited capabilities in exploring the potentials of literary texts. Instead of enriching the interaction between the two fields, literary Darwinism revoked any relations with the current literary (theoretical and practical) field, while becoming immaturely fascinated with the sciences. Needless to say, the movement failed not only in delivering its grand promises of literary rejuvenation but also in fulfilling a much simpler mission—having a

¹⁷⁸ Expanding on the research done will inevitably overwhelm the discussion. Many scientific papers specifically examine the chemical effects on the brain as a result of being exposed to fiction; see ‘Amygdala and Heart Rate Variability Responses from Listening to Emotionally Intense Parts of a story’, and ‘Neural Correlates and Network Connectivity Underlying Narrative Production and Comprehension: A Combined fMRI and PET Study’. Other anthropological works have also tackled the same issue; see Brian Boyd’s *On the Origin of stories: Evolution, cognition, and fiction*; studies on memory are particularly illuminating, see Alan Baddeley’s *Essentials of human memory*.

¹⁷⁹ For a detailed account of the scientific data, see Christopher C. Berger’s *Where Imagination Meets Sensation: Mental imagery, Perception and Multisensory Integration* (2016).

¹⁸⁰ Some scientific papers on the function of mirror neurons include: ‘Empathy Towards Strangers Triggers Oxytocin Release and Subsequent Generosity’, and ‘The Role of Mirror Neurons in Processing Vocal Emotions: Evidence from Psychophysiological Data’, among many others.

healthy relationship with the sciences, which should involve importing as well as exporting new knowledge, adaptation of (rather than adherence to) foreign terms and theories, and a critical, rather than a passive, stance throughout these intra-actions.

An integral part of the posthuman project is the deconstruction of such hierarchal disciplinary relationships and the creation of more reciprocal and entangled relations between science and literature. To approach this relationship from a different perspective, the question might be reversed. How is fiction deeply implicated within science? How do the processes of imagination constitute a crucial part in the construction of scientific theories, such as quantum mechanics? Posing such questions challenges the profound, rooted distinction that separates science as objective, logical, and factual, on the one hand, and fiction, as subjective, descriptive, and imaginative, on the other.

It is often falsely believed, particularly among humanists, that science follows a rigid process of experimenting with evidence based on which a verified theory is formed, and that theory represents a pre-existing reality. Representationalism, rooted in the 17th century's understanding of scientific observation as a method to reveal an established reality is quite problematic. In his book *The Philosophy of 'As if'* (1911), Hans Vaihinger argues that science only deals with reality 'to the extent of establishing the inevitable sequences and co-existences' (67). Science is not reflection on or of, but rather a perspective, of reality; this fact is demonstrated in the works of many quantum physicists, most notably Bohr. The theoretical physicist Rovelli explains the same idea regarding the nature of the scientific models in different words:

science is about constructing visions of the world, about rearranging our conceptual structure, about creating new concepts which were not there before, and even more, about changing, challenging, the *a priori* that we have. It has nothing to do with the assembling of data and the ways of organizing the assembly of data. It has everything to do with the way we think, and with our mental vision of the world. Science is a process in which we keep exploring ways of thinking and keep changing our image of the world, our vision of the world, to find new visions that work a little bit better ('Science').

Scientific modelling provides the sense of order and coherence that is needed to manage the world. These models are constantly being modified, altered, and replaced. Interestingly, narratives behave in the same manner; they are constructs that create a sense of coherence, order, unity, and comprehensiveness to what are otherwise scattered events. In *The Power of the Story*, Michael Hanne argues that stories are ‘the radar-like mechanism we use to constantly scan the world around us, by which we give order to, and claim to find order in, the data of experience. If we cannot narrate the world in this everyday manner, we are unable to exercise even the slightest degree of control, or power, in relation to the world’ (8). Both literary and scientific narratives represent human attempts to establish connections, relations, and meaning, and to make sense of the world and the experience of living.

Figure 5 by Maturana and Varela illustrates how knowledge is formed. The figure demonstrates that our perception of the world goes through various stages of organisation and structure to create coherence and meaning and to generate action and ethical response. The phenomenon of knowledge, as Maturana and Varela call it, is ‘all of one piece’ and shares the same groundwork (27). It is worth noting that the similarities between the scientific and the literary modelling do not neutralise the obvious differences in their methodology and applications. However, in terms of the ways in which human knowledge forms, functions, and serves, these models can, in fact, be justly compared.

In their attempt to explain how scientific knowledge is formed, Maturana and Varela define four essential conditions of any scientific proposition¹⁸¹; these are:

- a. Describing the phenomenon (or phenomena) to be explained in a way acceptable to a body of observers.
- b. Proposing a conceptual system capable of generating the phenomenon to be explained in a way acceptable to a body of observers (explanatory hypothesis).
- c. Obtaining from (b) other phenomena not explicitly considered in that proposition, as also describing its conditions for observation by a body of observers.
- d. Observing these other phenomena obtained from (b) (28).

¹⁸¹ As Maturana and Varela note, these conditions are not sequential or separated from one another.

Evidently, not only do these conditions highlight the descriptive, contextual, and relational nature of the scientific perspective, but they also highlight the ‘narrativity’ and the quest for coherence and meaning in constructing explanations, models, and structures of the observed phenomena. Consequently, the framework of the sciences is, as Waugh puts it, ‘as hermeneutic as the humanities’; the only difference, however, is that it is not ‘aware of its real hermeneutic status’ (‘Emergence’).

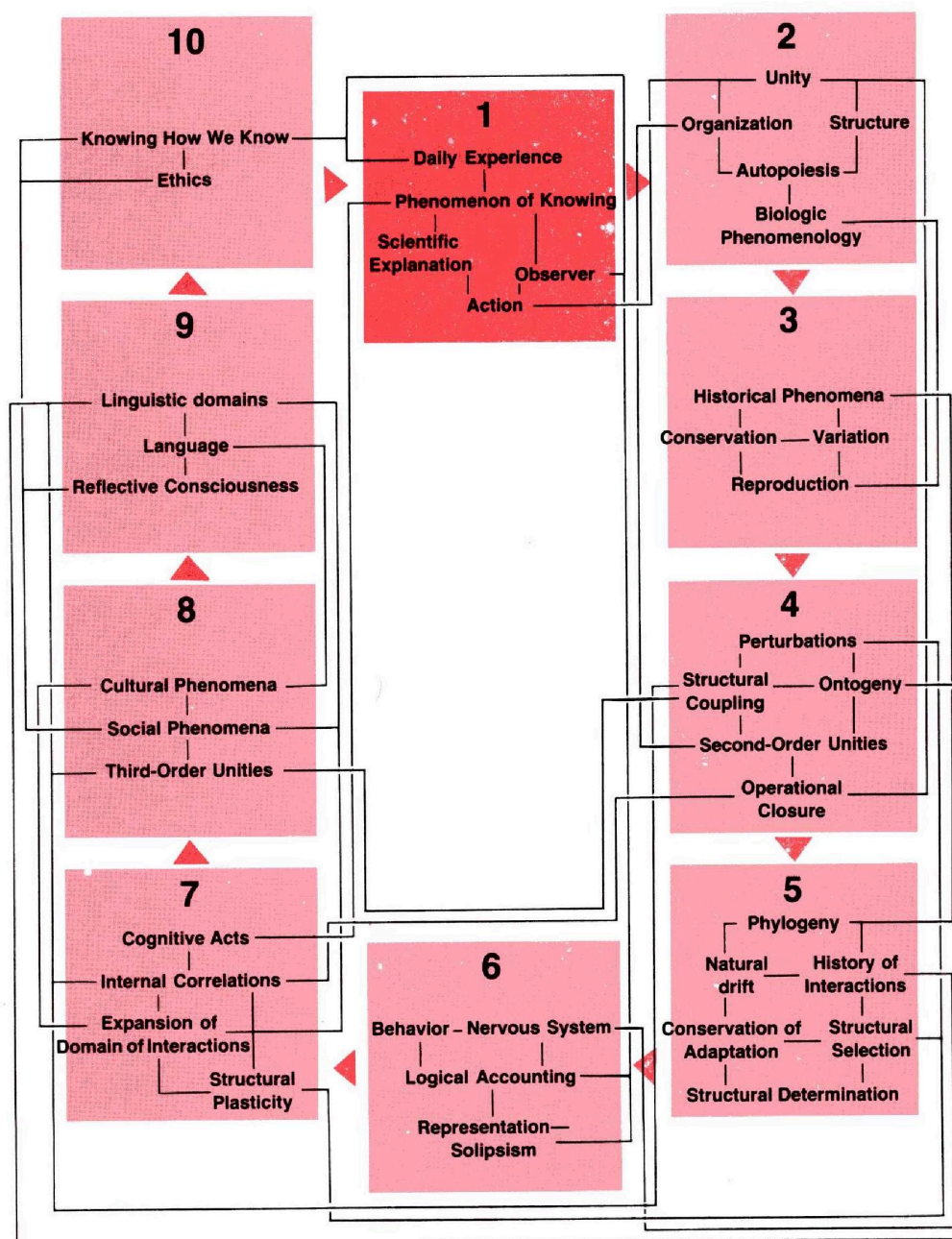


Figure 5: Knowing how we know (Maturana & Varela 14)

Science constructs models that constantly change, not due to change of observations or results but due to the emergence of new models that better explain/narrate reality. To put it differently, science always seeks *a better story to explain the world*. Byron Jennings explains how scientific models are replaced. He writes,

Observations do not kill models, models do. The ether was only abandoned after Einstein proposed the special theory of relativity; the Michelson-Morley experiment was not sufficient. Michelson and Morley may have provided the ammunition, but it was Einstein that pulled the trigger. [...] Einstein did not prove that the ether did not exist. Rather he showed that the ether hypothesis, like the Omphalos hypothesis, has no predictive power, and in the end, it was eliminated by appeals to simplicity. [...] The big bang model of the universe beat out the steady state model because it predicted the three degree microwave background, the quark model beat out rivals with the discovery of the J/Psi particle, and continental drift beat out the fixed continent model when the seabed of Atlantic was explored in detail ('Science').

I argue that the behaviour of scientific models is strikingly similar to the way that narratives replace one another. Narratives (historical, social, religious, and others) change in order to offer a better understanding of a new reality. Their modifications are a result not of progression towards a more truthful representation of reality but of the emergence of a more suitable narrative that better explains the world at a certain point of space-time. The value of a certain narrative has little to do with the narrative's abilities to reflect reality and more to do with its ability to provoke, question, and challenge our perception of it. This understanding of all human narratives puts them at an equal degree of validity and bases their selection on utility rather than representativeness. Viewing science and literature as means to explore and experience, rather than represent or reflect, the world, challenges 'the Cartesian epistemology and its representationalist triadic structure of words, knowers, and things' (Barad, *Meeting* 97).

Moreover, the falsely rigid roles assigned to science and literature, namely, science as a space of observation and literature as a space of imagination, are also misleading. As I have argued in the previous chapters, the collapse of boundaries is real

between the material/nonmaterial, history/story, truth/fiction, which inevitably leads to the collapse of borders between science/literature, and subsequently the sciences/the humanities. Moreover, science and literature employ both powers of observation and imagination to create their own distinctive models with which reality can be experienced.

In his book, Vaihinger argues that some of the major concepts and laws in science are (or at least started as) fictions. These include scientific notions such as the concept of ‘infinity’ in mathematics (61) and the atom in physics¹⁸² (70), among others. These concepts, according to Vaihinger, are not observable or measurable by/in nature; they exist within conceptual frameworks and function accordingly. However, they are ‘useful fictions’, and their validity is determined based on their capacity to explain and verify our perspectives of the world. Although they might give the illusion of comprehending the world, they, nonetheless, are valuable in their capacities to guide us ‘in the realm of actuality’ (65). This type of paradox should not bother us, Vaihinger holds, in so far as we focus our attention on the utility of these fictions rather than on their representativeness of a corresponding reality. This relieves us of the burden of believing that scientific ‘facts’ are intrinsically true, and thus of accepting or struggling with the possible controversial social and ethical implications they may carry.¹⁸³

Vaihinger believes that science has two tasks: ‘(1) to determine the actual sequences and co-existences; (2) to give the ideas with which we invest reality a more

¹⁸² According to Vaihinger, atoms cannot be seen directly; they are presumed to exist. However, they are crucial in the modern physics. Vaihinger describes this paradox, ‘without the atom science falls. And yet, with it, true knowledge and understanding are impossible. It is a group of contradictory concepts which are necessary to deal with reality. Of late it has been recognized that the atom is a fiction, a fictional counter’ (70-1). Vaihinger quotes the German philosopher Otto Liebmann in his argument on the fictional nature of the atom; ‘[t]he atom is a transitional idea whose provisional character is obvious. Its imaginary conceptual existence is due to a conceptual equilibrium of a peculiarly unstable character [...]. It is true that the atom is a mere theoretical counter, a provisional fiction, an interim-concept, but for the present it is an exceedingly useful interim-concept’ (71). However, it is important to note that Vaihinger’s book was published in 1911 *when the atom was still an idea and remained as such for a long time*. It is only recently that scientists revealed that atoms are observable using a scanning tunnelling microscope, developed in 1981. Nonetheless, Vaihinger’s argument remains relevant because the idea of the atom was used in physics long before it became observable. Its utility, not observability, is what secured its place in theoretical physics.

¹⁸³ Janet Kourany notes that accepting scientific models as true entails accepting all of its findings even if proven to be socially harmful, sexist, or racist, because truth supposedly has some ‘intrinsic value’ that ‘should not be repressed’. On the other hand, presuming that this knowledge is useful implies that it *still* has some value, but, at least, leaves the door open for perusing other equally useful possibilities without those, or with less, disadvantages (S89). However, Kourany argues against the compulsion to choose between truth and utility, or realism and antirealism stance, noting that it encourages ‘a socially uncritical outlook toward scientific knowledge’ (S90).

concise, more adequate, more useful and more harmless form' (67). The task of literature, I believe, is analogous to that of science in its quest for order, meaning, coherence, and ethical and social responsibility. Science and literature both work as tools to re-write narratives that are no longer relevant, or sometimes harmful to the ways in which we perceive the world and others. As I have demonstrated in Chapter Four, Coetzee and other authors' attempts to revisit Defoe's narrative shed a new perspective on the story of Crusoe in the light of new and more relevant political and social realities.

5.2. The Realist/Antirealist Debate

This discussion of science and literature modelling as perspectives, rather than representations of reality, inevitably invites the interminable realist/antirealist debate. Within quantum theory, it is often believed that quantum mechanics essentially favours an antirealist perspective.¹⁸⁴ Nonetheless, many quantum interpretations are associated with realist *and* antirealist views.¹⁸⁵ These opposite stances are often the result of the

¹⁸⁴ It is helpful first to draw Carl von Weizsäcker's distinction between three types of realism: metaphysical realism, radical realism, and practical realism. Metaphysical realism is not a scientific stance but an ontological worldview. Radical realism, on the other hand, maintains that 'there are no non-objectifiable statements, that every statement must have an objective meaning content and must have its truth-value independently of the availability of verificatory experiences'. According to von Weizsäcker, by its very empirical and experimental nature, quantum theory refuses this type of realism. Practical realism, however, refers to '*objectifiable* statements about the world' (qtd. in Mohanty 381). This latter type of realism is the most problematic when it comes to the current philosophical interpretations of quantum theory.

¹⁸⁵ It is very important to pause here to discuss some common stances on realism/antirealism in quantum interpretations. The problem with any form of realism from the viewpoint of quantum theory is that, as Karakostas explains, 'any a priori identification of 'physical objects' with 'physical reality' is inadmissible, since—whatever the precise meaning of 'physical objects' may be—we have to expect that such systems ... are entangled by non-separable correlations of the EPR-type, so that they lack intrinsic individuality, intertemporal existence' (3). This corresponds to the statement that is allegedly attributed to Bohr by Petersen: '[t]here is no quantum world. There is only an abstract quantum physical description. It is wrong to think that the task of physics is to find out how nature *is*. Physics concerns what we can say about nature' (12). Many authors, therefore, make the mistake of equating antirealism with quantum theory. Arthur Fine, for example, declares the death of realism in the hands of quantum theory (112). Fine's declaration, however, reduces the meaning realism to classical realism. The realist/antirealist debate within quantum theory is much more complicated than this. There are as many realist as there are antirealist interpretations of quantum mechanics. There are also other interpretations that fall in between the two extremes. As an example of an antirealist quantum interpretation is Zeilinger-Brukner's informational foundations of quantum mechanics, based on the view of an elementary informational system that builds reality where information only refers to itself; the interpretation maintains that information and reality cannot be distinguished from each other (Bilban 32). On the other hand, Bohmian mechanics, or the de Broglie-Bohm theory presumes an actualised event or reality independent of consciousness. Other interpretations, such as the Von Neumann-Wigner interpretation (also described as 'consciousness causes collapse') entail an antirealist understanding of the world, but with a separation of the process of

attempts to explain quantum laws while maintaining either the principle of locality or realism. Karakostas notes that although the nontraditional views of quantum mechanics might be tempting to interpret as antirealist, the source of such judgment is the classical and common-sensical understanding of the issue of realism (3). Some scholars, such as Michael Nielsen and Isaac Chuang, maintain that both locality and realism should be dropped to have a ‘good intuitive understanding of quantum theory’ (117), for it was thought for a long time (based on the EPR paradox¹⁸⁶) that it is theoretically impossible to maintain both.¹⁸⁷

Attempting to move beyond this controversy, Fine proposes the ‘natural ontological attitude’ (NOA) towards science. He argues for accepting both realism and antirealism as ‘pro attitudes toward science’ (‘Piecemeal’ 93-4), finding what both share in relevance to science, without burdening those attitudes with philosophical interpretations (94). Similarly, Kourany suggests that since this debate has proven to be interminable for centuries, we can either stop engaging in it altogether or possibly engage by collecting normative and empirical data on the aims of the science in order to have more helpful answers (S98).

Fortunately, one must not feel obliged to either submit to a realist or an antirealist stance in approaching QP. Irrespective of the realist/antirealist implications, QP only agrees to the fact that what is observed is directly the result of our measurement. This stance (which is the original stance of quantum theory) favours neither the traditional realist nor antirealist viewpoint. In other words, it neither claims the existence nor defends the nonexistence of an inaccessible reality; it simply states that our measurements/interpretations of the world are always contextual.

consciousness (thus acting as a new Cartesian viewpoint within the quantum tradition, which considerably weakens the proposition).

¹⁸⁶ The EPR paradox refers to a 1935 thought experiment in quantum mechanics by Einstein and his colleagues Boris Podolsky, and Nathan Rosen. It attempts to demonstrate the incompleteness of the wave function and the CI in the explanation of physical reality. The paradox is based on the impossibility of measuring two variables (position and momentum) simultaneously. The paradox is now known to be a manifestation of the phenomenon of entanglement.

¹⁸⁷ Some interpretations did in fact preserve both factors. Bohr’s interpretation, for instance—which has been justly described as ‘ontological realism and epistemological anti-realism’ (qtd. in Bilban 40)—maintains some form of realism (as some have argued, including Bilban) and reconciles it with locality by stating that the position and momentum are definitive but cannot be measured simultaneously, not without knowing the physical state of the entire universe. Also, the MWI preserves both realism and locality, but the counterfactual definiteness is consequently sacrificed.

Informed by Husserl's phenomenology and Bohr's philosophy, Bilban's stresses the fact that the quantum information is always the observer's (39); this stance benefits from both the antirealist informational foundation interpretation and its realist critiques. While it is undetermined whether objects have definitive existence prior to measurement, our measurements can *never be assumed to be the pre-existing properties of the observed*. Bilban refuses representationalism but does not fully submit to the impossibility of any form of realism. She offers an alternative, correlative, ontic and epistemic relationship between the observer, the information, and the observed (3). She states, '[f]rom the point of view of *the observer* (which is the only point of view we can have), *the observed* has the potential to give information even when not in the observation process' (38). As the statement gently implies, the possibility of a form of *predictability* and *stability* associated with the existence of an independent reality is not completely dismissed.

This understanding can be applied to the earlier analysis of the narrative of *RC* in Chapter Four. As argued earlier, the meaning of *RC* and its connotations change over the years in the collective consciousness. While this might be taken in an antirealist postmodern fashion to argue for the impossibility and undecidability of meaning, the core of *RC*, nonetheless, remains a story of survival. The relative stability of the general idea of the story, which survives in all readings and throughout time-space, opens the possibility of a form of predictability and objectivity associated with a hybrid form of realism. Nonetheless, it constitutes by no means a realist proposition of the existence of an autonomous meaning independent of the reader and other elements of the phenomenon of meaning. Also, this relative stability is impossible to translate into a single unified understanding of *RC*, because, as a phenomenon of meaning, *RC* is always *becoming*. In short, although there is a certain degree of predictability to suggest a certain level of objectivity in the general idea of the text, it is not enough to conclude the autonomy of the text or the separation of meaning.

However, the ultimate purpose of human knowledge lies not in the realist/antirealist debate, nor in the problem of truth and representation. According to Vaihinger, the purpose of thought is not self-reference but behaviour, and in particular, ethical behaviour (65). This understanding of the value of knowledge, according to Vaihinger, can liberate us from the pressure we encounter to resolve logical

contradictions that emerge naturally within our conceptual frameworks. This perspective of knowledge is precisely the ethical ground of critical posthumanist thought. The ultimate posthumanist goal of knowledge is to achieve moral responsibility and an ethical understanding of life on the planet and true co-existence with other life forms.

Posthumanism constantly revisits and *suppresses our blind spots* in our relations within the world and with others. This ethical engagement, which replaces the idealistic quest for truth, is embodied in the last chapter of *Foe*. The actual reader constantly fails in his/her attempts in finding truth in *Foe*. The lesson of the story lies in the ethical engagement of the reader with the stories of the characters knowing that there is *no truth to harvest at the end*. It is the familiar less-than-ideal situation that we encounter in our everyday life: despite our lack of truth, we are unavoidably ethically entangled within situations which require our action. The story of RC and its many alterations throughout the years becomes, therefore, one that reflects us, our moral choices and reasoning, our fears and desires—our consciousness. We, as readers, do not read texts, nor do we re-create or co-create them. We *become* what we read, in every sense of the wor(l)d.

Works Cited

- AbdulSabur, Nuria Y. et al. 'Neural Correlates and Network Connectivity Underlying Narrative Production and Comprehension: A Combined fMRI and PET Study'. *Cortex* 57 (2014): 107–127. Web. 15 Jan 2017.
- Agamben, Giorgio. *Homo Sacer: Sovereign Power and Bare Life*. Trans. Daniel Heller-Roazen. 1995. Reprint. Stanford: Stanford UP, 1998. Print.
- Ahmed, Sara. *Queer Phenomenology: Orientations, Objects, Others*. Durham: Duke UP, 2006. Print.
- Albert, David Z. *Quantum Mechanics and Experience*. Cambridge: Harvard UP, 1994. Print.
- Althusser, Louis. 'Marxism and Humanism'. *For Marx*. Trans. Ben Brewster. London: Verso, 1969. 219–247. Web. 7 Nov 2015.
- Arntzenius, Frank. *Space, Time, and Stuff*. Oxford: Oxford UP, 2014. Print.
- Attridge, Derek. *J. M. Coetzee and the Ethics of Reading: Literature In The Event*. Chicago: Chicago UP, 2005. Print.
- . 'Oppressive Silence: J. M. Coetzee's Foe and the Politics of Canonisation'. *Decolonizing Tradition: New Views of Twentieth-Century 'British' Literary Canons*. Ed. Karen R. Lawrence. Urbana: Illinois UP, 1992. 212–38. Web. 1 Mar 2016.
- Attwell, David. 'Coetzee's Estrangements'. *NOVEL: A Forum on Fiction* 41.2/3 (2008): 229–243. Web. 1 May 2015.
- . 'Coetzee's Postcolonial Diaspora'. *Twentieth Century Literature* 57.1 (2011): 9–19. Web. 11 Mar 2016.
- . *J.M. Coetzee and the Life of Writing: Face to Face with Time*. Oxford: Oxford UP, 2015. Print.
- Ayers, Edward L. 'Where the Humanities Live'. *Daedalus* 138.1 (2009): 24–34. Web. 28 Jul 2015.
- Bacciagaluppi, Guido. 'The Role of Decoherence in Quantum Mechanics'. *The Stanford Encyclopedia of Philosophy* 2016. Web. 29 Mar 2017.
- Baddeley, Alan D. *Essentials of Human Memory*. First Ed. Hove: Psychology P, 1999. Print.
- Badmington, Neil. *Alien Chic: Posthumanism and the Other Within*. London: Routledge, 2004. Print.

- . 'Pod Almighty!; Or, Humanism, Posthumanism, and the Strange Case of Invasion of the Body Snatchers'. *Textual Practice* 15.1 (2001): 5–22. Web. 3 Apr 2016.
- . 'Theorizing Posthumanism'. *Cultural Critique* 53.1 (2003): 10–27. Web. 24 Apr. 2016.
- Balibar, Etienne, and Immanuel Maurice Wallerstein. *Race, Nation, Class: Ambiguous Identities*. London: Verso, 1991. Print.
- Barad, Karen. 'Getting Real: Technoscientific Practices and the Materialization of Reality'. *Differences: A Journal of Feminist Cultural Studies* 10.2 (1998): 87–128. Web. 15 Mar 2016.
- . "'Matter Feels, Converses, Suffers, Desires, Yearns and Remembers'" Interview with Karen Barad'. *New Materialism: Interviews & Cartographies*. Ann Arbor: Open Humanities P, 2012. Web. 27 Sept 2016.
- . *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham: Duke UP, 2007. Print.
- Barnett, Ronald. 'Imagining the Humanities – Amid the Inhuman'. *Arts and Humanities in Higher Education* 13.1–2 (2014): 42–53. Web. 15 Jan 2016.
- Barraza, Jorge A., and Paul J. Zak. 'Empathy Toward Strangers Triggers Oxytocin Release and Subsequent Generosity'. *Annals of the New York Academy of Sciences* 1167 (2009): 182–189. Web. 19 Oct 2016.
- Barthes, Roland. 'The Death of the Author'. *Image Music Text*. Trans. Stephen Heath. London: Fontana P, 1977. 142–148. Print.
- Beaulieu, Alain. 'The Status of Animality in Deleuze's Thought'. *Journal for Critical Animal Studies* IX.1/2 (2011): 69–88. Web. 25 Jun 2016.
- Beauvoir, Simone de. *The Second Sex*. Trans. H. M. Parshley. 1949. Reprint. London: Vintage Classics, 1997. Print.
- Beckett, Samuel. *Watt*. 1953. Reprint. London: Faber & Faber, 2009. Print.
- Beer, Gillian. *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction*. Cambridge: Cambridge UP, 2009. Print.
- Behling, David. 'On Studying the Humanities: What Does It Mean to Be Human?' *The Huffington Post*. Huffpost, 5 June 2012. Web. 31 Dec 2015.
- Bell, John. 'Against "Measurement"'. *Physics World* 3.8 (1990): 33. Web. 19 Jan 2016.

- Bennett, Rebecca Jane. *Vibrant Matter: A Political Ecology of Things*. Durham: Duke UP, 2010. Print.
- Berezin, F. A., and M. A. Shubin. *The Schrödinger Equation*. Dordrecht: Springer, 1991. Print.
- Berger, Christopher C. 'Where Imagination Meets Sensation: Mental Imagery, Perception and Multisensory Integration'. Karolinska Institute, 2016. Web. 7 Mar 2017.
- Berger, Thomas. *Robert Crews*. New York: William Morrow & Co, 1994. Print.
- Bering, Jesse. 'Never Say Die: Why We Can't Imagine Death'. *Scientific American* 10 Jan 2008. Web. 28 Sep 2016.
- Bhabha, Homi K. *The Location of Culture*. 1994. Reprint. London: Routledge, 2004. Print.
- Bilban, Tina. 'Realism and Antirealism in Informational Foundations of Quantum Theory'. *Quanta* 3.1 (2014): 32–42. Web. 15 Jun 2016.
- Birnbacher, Dieter. 'Posthumanity, Transhumanism and Human Nature'. *Medical Enhancement and Posthumanity*. Ed. Bert Gordijn and Ruth Chadwick. Vol. 2. Netherlands: Springer, 2008. 95–106. Web. 23 Jun 2016.
- Blaim, Artur. 'Review of The Strange Surprising Sources of Robinson Crusoe'. *Utopian Studies* 7.2 (1996): 254–257. Print.
- Blanchot, Maurice. *The Space of Literature*. Trans. Ann Smock. Lincoln: Nebraska UP, 1989. Print.
- Boehmer, Elleke, Katy Iddiols, and Robert Eaglestone, eds. *J.M. Coetzee in Context and Theory*. London: Continuum, 2009. Print.
- Bohm, David. *Wholeness and the Implicate Order*. 1980. Reprint. London: Routledge, 2002. Print.
- Bohr, Niels. *Atomic Theory and the Description of Nature: Four Essays with an Introductory Survey*. Cambridge: Cambridge UP, 1934. Print.
- . 'Discussion with Einstein on Epistemological Problems in Atomic Physics'. *The Library of Living Philosophers, Volume 7. Albert Einstein: Philosopher-Scientist*. Ed. Paul Arthur Schilpp. Open Court, 1949. 199–241. Print.
- . *The Philosophical Writings of Niels Bohr: Essays 1933-1957 on Atomic Physics and Human Knowledge*. II. Woodbridge: Ox Bow P, 1987. Print.

- . *The Philosophical Writings on Niels Bohr: Essays 1958-1962 on Atomic Physics and Human Knowledge*. III. Woodbridge: Ox Bow P, 1987. Print.
- . 'The Quantum Postulate and the Recent Development of Atomic Theory'. *Nature* 121 (1928): 580–590. Web. 6 Aug 2016.
- Boje, David M., and Tonya L. Henderson, eds. *Being Quantum: Ontological Storytelling in the Age of Antenarrative*. Newcastle: Cambridge Scholars Publishing, 2014. Print.
- Bongie, Chris. "'Lost in the Maze of Doubting": J. M. Coetzee's Foe and the Politics of (Un)Likeness'. *Modern Fiction Studies* 39.2 (2009): 261–281. Web. 15 Aug 2015.
- Born, Max. *Atomic Physics*. Trans. R. J. B. Stoyle and J. M. Radcliffe. 1944. Reprint. New York: Dover Publications Inc., 1990. Print.
- . *Problems of Atomic Dynamics*. 1960. Reprint. Mineola: Dover Publications inc., 2004. Print.
- . *The Mechanics Of The Atom*. Trans. J. W. Fisher and D. R. Hartree. 1927. Reprint. London: G. Bell & Sons, Ltd., 2011. Print.
- . 'The Statistical Interpretation of Quantum Mechanics'. Amsterdam: Elsevier Publishing Company, 1954. Web. 1 Jun 2017.
- Bostrom, Nick. 'A History of Transhumanist Thought'. *Journal of Evolution and Technology* 14.1 (2005): 1–25. Web. 14 Dec. 2015.
- . 'Transhumanist Values'. *Journal of Philosophical Research* 4. Supplement (2005): 3–14. Web. 14 Dec 2015.
- Boyd, Brian. *On the Origin of Stories*. 2009. Reprint. Cambridge: Harvard UP, 2010. Print.
- Braidotti, Rosi. *Nomadic Subjects: Embodiment and Sexual Difference in Contemporary Feminist Theory*. New York: Columbia UP, 1994. Print. Gender and Culture.
- . *The Posthuman*. Cambridge: Polity, 2013. Print.
- Brown, Bill. 'Thing Theory'. *Critical Inquiry* 28.1 (2001): 1–22. Print.
- Bruns, Gerald L. 'Becoming-Animal (Some Simple Ways)'. *New Literary History* 38.4 (2007): 703–720. Web. 14 Jun 2016.
- Butler, Judith. *Bodies That Matter: On the Discursive Limits Of "Sex"*. Psychology P, 1993. Print.
- . *Gender Trouble: Feminism and the Subversion of Identity*. London: Routledge, 1999. Print.

- . *Precarious Life: The Powers of Mourning and Violence*. London: Verso, 2006. Print.
- Callard, Felicity, and Des Fitzgerald. *Rethinking Interdisciplinarity Across the Social Sciences and Neurosciences*. Houndmills: Palgrave Pivot, 2015. Print.
- Callinicos, Alex. 'Obituary: The Infinite Search'. *Socialist Review* Nov. 2004. Web. 5 Aug 2017.
- Camilleri, Kristian. 'Bohr, Heisenberg and the Divergent Views of Complementarity'. *Studies in History and Philosophy of Modern Physics* 38.3 (2007): 514–528. Web. 4 Sep 2016.
- . 'Heisenberg and the Wave-Particle Duality'. *Studies in the History and Philosophy of Modern Physics* 37 (2006): 298–315. Web. 11 Sep 2016.
- Canepari-Labib, Michela. 'Language and Identity in the Narrative of J. M. Coetzee'. *English in Africa* 27.1 (2000): 105–130. Print.
- Canguilhem, Georges. *The Normal and the Pathological*. Trans. Carolyn R. Fawcett. 1966. Reprint. New York: Zone Books, 1991. Print.
- Caracciolo, Marco. 'J. M. Coetzee's Foe and the Embodiment of Meaning'. *Journal of Modern Literature* 36.1 (2012): 90–103. Web. 15 Dec 2015.
- Carroll, Joseph. *Evolution and Literary Theory*. Columbia: Missouri UP, 1995. Print.
- . 'Poststructuralism, Cultural Conservatism and Evolutionary Biology'. *Symplokē* 4.1–2 (1996): 203–219. Web. 14 Jun 2015.
- Cavalieri, Paola. *The Animal Question: Why Nonhuman Animals Deserve Human Rights*. Trans. Catherine Woollard. Oxford: Oxford UP, 2001. Print.
- Chalmers, David. 'Foreword'. *Supersizing The Mind: Embodiment, Action, and Cognitive Extension*. Oxford: Oxford UP, 2008. x–xvi. Print.
- Chesney, Duncan McColl. 'Toward an Ethics of Silence: Michael K'. *Criticism* 49.3 (2007): 307–325. Web. 23 Aug 2016.
- Clark, Andy. *Being There: Putting Brain, Body and World Together Again*. Cambridge: MIT P, 1998. Print.
- . 'Magic Words: How Language Augments Human Computation'. Cambridge: Cambridge UP, 1998. 1–19. Web. 29 Nov. 2016.
- . *Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence*. Oxford: Oxford UP, 2003. Print.

- . *Supersizing The Mind: Embodiment, Action, and Cognitive Extension*. Oxford: Oxford UP, 2008. Print.
- Clark, Andy, and David Chalmers. 'The Extended Mind'. *Analysis* 58.1 (1998): 7–19. Web. 19 Oct 2016.
- Coetzee, J. M. *Age of Iron*. London: Penguin, 1990. Print.
- . *Boyhood: Scenes from Provincial Life: A Memoir*. 1997. Reprint. London: Vintage, 1998. Print.
- . *Diary of a Bad Year*. 2007. Reprint. London: Vintage, 2008. Print.
- . *Disgrace*. 1999. Reprint. London: Vintage, 2000. Print.
- . *Doubling the Point: Essays and Interviews*. Cambridge: Harvard UP, 1992. Print.
- . *Dusklands*. 1974. Reprint. London: Vintage, 2004. Print.
- . *Elizabeth Costello*. 1999: Vintage, 2004. Print.
- . *Foe*. 1986. Reprint. New York: Penguin, 1987. Print.
- . *In The Heart Of The Country*. 1976. Reprint. London: Vintage, 2004. Print.
- . *Life & Times of Michael K*. 1983. Reprint. London: Vintage, 2004. Print.
- . 'Nobel Lecture: He and His Man'. *Nobelprize.org* 2003. Web. 27 Apr 2017.
- . *Slow Man*. London: Secker & Warburg, 2005. Print.
- . 'The Artist at High Tide'. *The New York Review of Books*. NYRV, 2 Mar 1995. Web. 22 July 2016.
- . *The Master of Petersburg*. 1994. Reprint. London: Vintage, 2004. Print.
- . 'The Novel Today'. *Upstream* Summer 1988: 1–5. Web. 19 Oct 2016.
- . Two Interviews with J.M. Coetzee 1983 and 1987. 1987. *TriQuarterly* 69. Web. 11 Oct 2016.
- . *Waiting for the Barbarians*. 1980. Reprint. London: Vintage, 2004. Print.
- Cohen, Patricia. 'In Tough Times, the Humanities Must Justify Their Worth'. *The New York Times* 24 Feb. 2009. *NYTimes.com*. Web. 13 Jan 2016.
- Cohn, Dorrit. *Transparent Minds: Narrative Modes for Presenting Consciousness in Fiction*. Princeton: Princeton UP, 1978. Print.
- Colebrook, Claire. *Death of the Posthuman: Essays on Extinction*. Vol. 1. Ann Arbor: Open Humanities P, 2014. Print.
- Collins, Wilkie. *The Moonstone*. 1868. Reprint. Ware: Wordsworth Editions, 1992. Print.

- Coole, Diana H., and Samantha Frost, eds. *New Materialisms: Ontology, Agency, and Politics*. Durham: Duke UP, 2010. Print.
- Crews, Frederick. 'Apriorism for Empiricists'. *Style* 42.2–3 (2008): 155–160. Web. 20 Jun 2015.
- Damasio, Antonio R. *The Feeling of What Happens: Body, Emotion and the Making of Consciousness*. 1999. Reprint. London: Vintage, 2000. Print.
- Danta, Chris. "'Like a Dog... like a Lamb': Becoming Sacrificial Animal in Kafka and Coetzee". *New Literary History* 38.4 (2007): 721–737. Web. 11 Jul 2016.
- Daragmeh, Abdel Karim, and Ekremah Shehab. 'Signs Tell Their Own Stories. Rethinking the Status of Writing and Speech in J.M. Coetzee's'. *Matatu* 41.1 (2013): 183–196. Web. 15 Jan. 2016.
- Davies, Tony. *Humanism: The New Critical Idiom*. London: Routledge, 1997. Print.
- Davis, Lennard J. *Enforcing Normalcy: Disability, Deafness, and the Body*. Verso, 1995. Print.
- Dawson, Gowan. *Darwin, Literature and Victorian Respectability*. Cambridge: Cambridge UP, 2007. Print.
- Defoe, Daniel. *Accounts of the Apparition of Mrs. Veal (Ca. 1705)*. 1706: AMS P, 1965. Print.
- . *Moll Flanders*. 1722. Reprint. Ware: Wordsworth Classics, 1993. Print.
- . *Roxana The Fortunate Mistress*. Ed. John Mullan. 1724. Reprint. Oxford: Oxford UP, 2008. Print.
- . *Serious Reflections During the Life and Surprising Adventures of Robinson Crusoe: With His Vision of the Angelic World*. 1720. Reprint. J.M. Dent & Company, 1899. Print.
- . *The Further Adventures of Robinson Crusoe*. 1917. Reprint. Rockville: Serenity Publishers LLC, 2009. Print.
- . *The Life and Adventures of Robinson Crusoe*. 1719. Reprint. Waxkeep Publishing, 2013. Print.
- Deleuze, Gilles. *Francis Bacon: The Logic of Sensation*. Trans. Daniel W. Smith. London: Continuum, 2003. Print.
- . *Logic of Sense*. Ed. Constanin V. Boundas. Trans. Mark Lester and Charles Stevale. London: Continuum, 2004. Print.

- Deleuze, Gilles, and Félix Guattari. *A Thousand Plateaus*. Trans. Brian Massumi. Minneapolis: Minnesota UP, 1987. Web. 29 Sep 2016.
- . *Kafka: Toward a Minor Literature*. Trans. Dana Polan. Minneapolis: Minnesota UP, 1986. Print.
- Derrida, Jacques. *De la Grammatologie*. Paris: Les Édition De Minuit, 1967. Print.
- . 'Differance'. *Speech and Phenomena, and Other Essays on Husserl's Theory of Signs*. Trans. David B. Allison and Garver Newton. U.S.: Northwestern UP, 1973. 129–160. Print.
- . 'Structure, Sign and Play in the Discourse of the Human Sciences'. *Twentieth-Century Literary Theory: An Introductory Anthology*. Ed. Vassilis Lambropoulos and David Neal Miller. SUNY P, 1987. 35–57. Print.
- . *The Animal That Therefore I Am*. Ed. Marie Louise Mallet. Trans. David Wills. Newyork: Fordham UP, 2008. Print.
- . 'The Animal That Therefore I Am (More to Follow)'. Trans. David Wills. *Critical Inquiry* 28.2 (2002): 369–418. Web. 8 Oct. 2016.
- . 'The Ends of Man'. *Philosophy and Phenomenological Research* 30.1 (1969): 31–57. Web. 5 Jun 2016.
- Dewitt, Bryce Seligman, and Neill Graham, eds. *The Many Worlds Interpretation of Quantum Mechanics*. 1973. Reprint. Princeton: Princeton UP, 2015. Print.
- Doležel, Lubomír. *Heterocosmica: Fiction and Possible Worlds*. Johns Hopkins UP, 1998. Print.
- Dovey, Teresa. *The Novels of J.M. Coetzee: Lacanian Allegories*. Craighall: Ad. Donker, 1988. Print.
- Dupré, John. *Processes of Life: Essays In The Philosophy Of Biology*. Oxford: Oxford UP, 2012. Print.
- Dvorakova, Alena. 'Coetzee's Hidden Polemic with Nietzsche'. *J. M. Coetzee and Ethics: Philosophical Perspectives on Literature*. Ed. Anton Leist and Peter Singer. New York: Columbia UP, 2010. 357–384. Print.
- Einstein, Albert. 'Albert Einstein to Robert A. Thornton'. 7 Dec 1944: n. pag. Web. 19 Dec. 2016.
- . 'Ernst Mach'. *Physikalische Zeitschrift* 17 (1916): 101–104. Print.

- Eliot, T. S. 'Tradition and the Individual Talent'. *The Sacred Wood : Essays on Poetry and Criticism*. London: Methuen & Co. LTD, 1920. 42–53. *Internet Archive*. Web. 9 Aug 2016.
- Escher, M. C. *Drawing Hands. The M.C. Escher Company B.V.* 1948. Web. 8 Dec. 2016.
- Faber, Alyda. 'The Post-Secular Poetics and Ethics of Exposure in J. M. Coetzee's "Disgrace"'. *Literature and Theology* 23.3 (2009): 303–316. Web. 3 Jan 2016.
- Fanon, Frantz. *The Wretched of the Earth*. Trans. Constance Farrington. 1961. Reprint. New York: Grove P, 1963. Print.
- Faye, Jan, and Edward N. Zalta. 'Copenhagen Interpretation of Quantum Mechanics'. *The Stanford Encyclopedia of Philosophy* 2014. Web. 28 Feb 2017.
- Ferrando, Francesca. 'Posthumanism, Transhumanism, Antihumanism, Metahumanism, and New Materialisms Differences and Relations'. *Existenz* 8.2 (2013): 26–32. Print.
- Ferry, Luc, and Alain Renaut. *French Philosophy of the Sixties: An Essay on Antihumanism*. Trans. Mary Schnackenberg Cattani. 1985. Reprint. Amherst: Massachusetts UP, 1990. Print.
- Feynman, Richard Phillips. *The Feynman Lectures on Physics*. California Institute of Technology, 1963. Web. 11 Aug 2016.
- Fine, Arthur. 'Piecemeal Realism'. *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition* 61.1/2 (1991): 79–96. Web. 24 Oct 2016.
- . 'The Natural Ontological Attitude'. *The Philosophy of Science*. Ed. Richard Boyd, Philip Gasper, and J. D. Trout. Cambridge: MIT Press, 1991. 261–277. Print.
- Foss, Sinara. 'Coetzee's Foe: A Reading on History and Fiction'. Universidade Federal do Rio Grande, 2008. Web. 4 May 2016.
- Foucault, Michel. *Discipline & Punish: The Birth of the Prison*. Trans. Alan Sheridan. 1975th ed. New York: Vintage Books, 1995. Print.
- . *Foucault Live: Collected Interviews, 1961-84*. Ed. Sylvère Lotringer. New York: Semiotext(e), 1996. Print.
- . *Madness and Civilization*. Trans. Richard Howard. 1961. Reprint. London: Routledge, 2006. Print.
- . *The Archaeology of Knowledge*. 1969. Reprint. London: Routledge, 2002. Print.

- . *The Birth of the Clinic*. Trans. A. M. Sheridan. 1963. Reprint. London: Routledge, 2012. Print.
- . *The Order of Things: An Archaeology of the Human Sciences*. 1966. Reprint. London: Routledge, 2005. Print.
- Fransworth, Josdeph. 'To Clone or Not to Clone: The Ethical Question'. *Thefarnsworths*. N.p., 7 Apr 2007. Web. 13 Jan 2016.
- Fraser, Nancy. 'Foucault's Body-Language: A Post-Humanist Political Rhetoric?' *Salmagundi* 61 (1983): 55–70. Web. 2 Oct 2015.
- Free, Melissa. 'Un-Erasing "Crusoe": "Farther Adventures" in the Nineteenth Century'. *Book History* 9 (2006): 89–130. Web. 9 Jul 2016.
- Fuss, Diana. *Essentially Speaking: Feminism, Nature & Difference*. Routledge, 1989. Print.
- . *Identification Papers*. New York: Routledge, 1995. Print.
- Garrett, Leah. 'The Jewish Robinson Crusoe'. *Comparative Literature* 54.3 (2002): 215–228. Web. 11 Jan 2016.
- Genette, Gérard. *Palimpsests: Literature in the Second Degree*. Nebraska UP, 1997. Print.
- Genep, Arnold van. *The Rites of Passage*. Trans. Monika B. Vizedom and Gabrielle L. Caffee. 1960. Reprint. Chicago: Chicago UP, 1961. Print.
- Giuliani, Marco. 'Intellectual Capital under the Temporal Lens'. *Journal of Intellectual Capital* 10.2 (2009): 246–259. Web. 17. Feb 2017.
- Goodheart, Eugene. 'Do We Need Literary Darwinism?' *Style* 42.2–3 (2008): 181–185. Print.
- . *Does Literary Studies Have a Future?* Madison: Wisconsin UP, 1999. Web. 4 Nov. 2015.
- . *The Failure of Criticism*. Cambridge: Harvard UP, 1978. Print.
- . *The Skeptic Disposition: Deconstruction, Ideology, and Other Matters*. Princeton: Princeton UP, 1991. Print.
- Gordimer, Nadine. 'The Idea of Gardening'. *The New York Review of Books*. 2 Feb. 1984. Web. 3 Jan 2017.
- Gottschall, Jonathan. *Literature, Science, and a New Humanities*. New York: Palgrave Macmillan, 2008. Print.
- Gould, Stephen Jay. *Full House*. 1996. Reprint. Cambridge: Harvard UP, 2011. Print.
- Grobler, Annemie, A.M. De Lange, and M.J. Wenzel. 'Liminality in J.M. Coetzee's Later Experimental Texts'. *Literator* 36.1 (2015): 1-7. Web. 28 Sep 2016.

- Gross, Paul R., and Norman Levitt. *Higher Superstition: The Academic Left and Its Quarrels with Science*. 1994. Reprint. Baltimore: Johns Hopkins UP, 1997. Print.
- Grosz, Elizabeth A. *Volatile Bodies: Toward a Corporeal Feminism*. Bloomington: Indiana UP, 1994. Print.
- Hacking, Ian. 'Our Neo-Cartesian Bodies in Parts'. *Critical Inquiry* 34.1 (2007): 78–105. Web. 5 Jan 2016
- Halberstam, Judith M., and Ira Livingston, eds. 'Introduction: Posthuman Bodies'. *Posthuman Bodies*. Bloomington: Indiana UP, 1995. 1–19. Print.
- Hanne, Michael. *The Power of the Story: Fiction and Political Change*. Providence: Berghahn Books, 1996. Print.
- Haraway, Donna. 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century'. *Simians, Cyborgs and Women: The Reinvention of Nature*. London: Free Association Books, 1991. 149–181. Print.
- . *The Haraway Reader*. New York: Routledge, 2004. Print.
- . *When Species Meet*. Vol. 3. Minneapolis: Minnesota UP, 2008. Print.
- . 'The Promises of Monsters: A Regenerative Politics for Inappropriate/d Others'. *The Haraway Reader*. London: Routledge, 2004. 36–124. Print.
- Harman, G. 'Technology, Objects and Things in Heidegger'. *Cambridge Journal of Economics* 34.1 (2010): 17–25. Web. 9. Sep 2016.
- Harris, Wilson. 'Metaphor and Myth'. *Myth and Metaphor: Essays and Monograph*. Ed. Robert Sellick. Adelaide: Centre for Research in the New Literatures in English, 1982. 1–14. Print.
- Hawking, Stephen, and Leonard Mlodinow. *The Grand Design: New Answers to the Ultimate Questions of Life*. London: Bantam Books, 2010. Print.
- Hayles, N. Katherine. *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*. Chicago: Chicago UP, 1999. Print.
- Heffernan, Teresa. 'Bovine Anxieties, Virgin Births, and the Secret of Life'. *Cultural Critique* 53.1 (2003): 116–133. Web. 5 Nov 2016.
- Heidegger, Martin. *Being and Time*. Trans. John Macquarrie and Edward Robinson. 1927. Reprint. San Francisco: Harper & Row, 1962. Print.

- . *What Is a Thing?* Trans. W. B. Barton and Vera Deutsch. South Bend: Gateway Editions Ltd., 1967. Web. 29 Nov 2016.
- Heisenberg, Werner. 'A Quantum-Theoretical Reinterpretation of Kinematic and Mechanical Relations'. *Z.Phys.* 33 (1925): 879–893. Web. 10 Aug 2016.
- . *Physical Principles of the Quantum Theory*. Trans. Carl Eckhart and F. C. Hoyt. 1930. Reprint. New York: Dover Publications Inc., 1998. Print.
- Heisenberg, Werner, and Paul Davies. *Physics and Philosophy: The Revolution in Modern Science*. 1958. Reprint. London: Penguin Classics, 2000. Print.
- Herbrechter, Stefan. *Posthumanism: A Critical Analysis*. London: Bloomsbury, 2013. Print.
- Herron, Tom. 'The Dog Man: Becoming Animal in Coetzee's "Disgrace"'. *Twentieth Century Literature* 51.4 (2005): 467–490. Print.
- Hird, Myra J. 'Meeting with the Microcosmos'. *Environment and Planning D: Society and Space* 28.1 (2010): 36–39. Web. 16 Aug 2016.
- Hirsch, E. D. 'Meaning and Significance Reinterpreted'. *Critical Inquiry* 11.2 (1984): 202–225. Print.
- Hirsch, Eric Donald. *Validity in Interpretation*. New Haven: Yale UP, 1967. Print.
- Hooke, Alexander E. 'The Order of Others: Is Foucault's Antihumanism against Human Action?' *Political Theory* 15.1 (1987): 38–60. Web. 4 Dec 2015.
- Howard, Don. 'Who Invented the "Copenhagen Interpretation"? A Study in Mythology'. *Philosophy of Science* 71.5 (2004): 669–682. Web. 3 Jan. 2017.
- Howes, Raymond F. "'Robinson Crusoe": A Literary Accident'. *The English Journal* 16.1 (1927): 31–35. Web. 27 Dec 2016.
- Hume, David. *David Hume: A Treatise of Human Nature: Volume 1: Texts*. Ed. David Fate Norton and Mary J. Norton. 1874. Reprint. Oxford: Oxford UP, 2011. Print.
- Ingarden, Roman. *The Literary Work of Art: An Investigation on the Borderlines of Ontology, Logic, and Theory of Literature*. Evanston: Northwestern UP, 1974. Print.
- Irigaray, Luce. *Speculum of the Other Woman*. Ithaca: Cornell UP, 1985. Print.
- Irigaray, Luce, and Burke Porter. *The Sex Which Is Not One*. Trans. Catherine Porter and Carolyn Burke. Ithaca: Cornell UP, 1985. Print.
- Iser, Wolfgang. *The Act of Reading: A Theory of Aesthetic Response*. Baltimore: Johns Hopkins UP, 1980. Print.

- . 'The Reading Process: A Phenomenological Approach'. *New Literary History* 3.2 (1972): 279–299. Web. 15 Dec 2016.
- Janes, Regina. "'Writing Without Authority": J.M. Coetzee and His Fictions'. *Salmagundi* 114/115 (1997): 103–121. Web. 5 Oct 2016.
- Jennings, Byron. 'Is Science Merely Fiction?' *Quantum Diaries*. Interactions.org, 2013. Web. 13 Jul 2016.
- Joos, E. et al. *Decoherence and the Appearance of a Classical World in Quantum Theory*. 2nd ed. Berlin: Springer, 2003. Print.
- Jurdak, Murad. *Learning and Teaching Real World Problem Solving in School Mathematics: A Multiple-Perspective Framework for Crossing the Boundary*. Switzerland: Springer, 2016. Print.
- Kafka, Franz. *The Complete Stories*. Ed. Nahum N. Glatzer. New York: Schocken Books, 1983. Print.
- Karakostas, Vassilios. 'Realism and Objectivism in Quantum Mechanics'. *Journal for General Philosophy of Science* 43.1 (2012): 45–65. Web. 2 June 2016.
- Kochin, Michael S. 'Literature and Salvation in "Elizabeth Costello" or How to Refuse to Be an Author in Eight or Nine Lessons'. *English in Africa* 34.1 (2007): 79–95. Web. 18 June 2016.
- Kourany, Janet A. 'A Successor to the Realism/Antirealism Question'. *Philosophy of Science* 67 (2000): S87–S101. Web. 11 Aug 2016.
- Kramnick, Jonathan. 'Against Literary Darwinism'. *Critical Inquiry* 37 (2011): 315–347. Web. 3 Sep 2015.
- Krauss, Lawrence M. 'Has Physics Made Philosophy and Religion Obsolete?' *The Atlantic*. 23 Apr 2012. Web. 13 Apr 2016
- . 'The Consolation of Philosophy'. *Scientific American*. 27 Apr 2012. Web. 2 Mar 2017.
- Kristeva, Julia. *Desire in Language: A Semiotic Approach to Literature and Art*. New York: Columbia UP, 1980. Print.
- . *Powers of Horror: An Essay on Abjection*. Trans. Leon S. Roudiez. New York: Columbia UP, 1982. Print.
- . *Revolution in Poetic Language*. New York: Columbia UP, 1984. Print.

- Kuhn, Elizabeth. 'Toward an Anti-Humanism of Life: The Modernism of Nietzsche, Hulme and Yeats'. *Journal of Modern Literature* 34.4 (2011): 1–20. Web. 22 Sep 2015.
- Kusek, Robert. 'Writing Oneself, Writing the Other: J.M. Coetzee's Fictional Autobiography in Boyhood, Youth and Summertime'. *Werkwinkel* 1.7 (2012): 97–116. Web. 6 Feb 2016.
- La Shure, Charles. 'What Is Liminality?' *Liminality: The Space in Between*. C. La Shure, 18 Oct 2005. Web. 14 Mar 2016.
- Lacan, Jacques. 'The Mirror Stage as Formative of the Function of the I'. *Écrits: A Selection*. Trans. Alan Sheridan. London: Routledge, 2001. 1–9. Print.
- . 'The Subversion of the Subject and the Dialectic of Desire in the Freudian Unconscious'. *Écrits: A Selection*. Trans. Alan Sheridan. London: Routledge, 2001. 293–325. Print.
- Laland, Kevin N., F. John Odling-Smee, and Sean Myles. 'How Culture Shaped the Human Genome: Bringing Genetics and the Human Sciences Together'. *Nature Reviews Genetics* 11 (2010): 137–148. Web. 14 Jul 2015.
- Landau, L. D., and E. M. Lifshitz. *Quantum Mechanics: Non-Relativistic Theory*. Trans. J. S. Bell and J. B. Sykes. 1958. 3rd Ed. Vol. 3. Oxford: Pergamon Press, 1977. Print.
- Latour, Bruno. *Politics of Nature: How to Bring the Sciences into Democracy*. Trans. Catherine Porter. Cambridge: Harvard UP, 2004. Web. 29 Nov 2016.
- . 'The Berlin Key Or How To Do Words With Things'. *Matter, Materiality and Modern Culture*. Ed. Paul Graves-Brown. London: Routledge, 2000. 20–21. Print.
- . *We Have Never Been Modern*. Cambridge: Harvard UP, 1993. Print.
- . 'Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern'. *Critical Inquiry* 30. Special issue on the Future of Critique (2004): 225–248. Web. 11 Jun 2015.
- Leist, Anton, and Peter Singer, eds. *J. M. Coetzee and Ethics: Philosophical Perspectives on Literature*. New York: Columbia UP, 2010. Print.
- Levine, George. *Darwin and the Novelists: Patterns of Science in Victorian Fiction*. Chicago: Chicago UP, 1992. Print.
- . 'Reflections on Darwin and Darwinizing'. *Victorian Studies* 51.2 (2009): 223–245. Web. 2 Apr 2015.

- Lovett, Robert W., and Charles C. Lovett. *Robinson Crusoe: A Bibliographical Checklist of English Language Editions*. New York: Greenwood P, 1991. Print.
- Macaskill, Brian, and Jeanne Colleran. 'Reading History, Writing Heresy: The Resistance of Representation and the Representation of Resistance in J. M. Coetzee's "Foe"'. *Contemporary Literature* 33.3 (1992): 432–457. Web. 7 Jul 2016.
- MacCormack, Patricia. 'Queer Posthumanism: Cyborgs, Animals, Monsters, Perverts'. *The Ashgate Research Companion to Queer Theory*. Ed. Noreen Giffney and Michael O'Rourke. Farnham: Ashgate Publishing, 2009. 111–126. Print.
- MacLeod, Lewis. "'Do We of Necessity Become Puppets in a Story?'" or Narrating the World: On Speech, Silence, and Discourse in J. M. Coetzee's *Foe*'. *MFS Modern Fiction Studies* 52.1 (2006): 1–18. Web. 29 Sep 2016.
- Magnusson, Jesper. 'Objects vs. Things'. *Philosophies*. Wordpress, 11 Mar 2013. Web. 29 Nov 2016.
- Mairs, Nancy. *Waist-High in The World: A Life Among the Nondisabled*. Boston: Beacon Press, 2001. Print.
- Malik, Kenan. 'Universalism and Difference in Discourses of Race'. *How Might We Live? Global Ethics in the New Century*. Ed. Ken Booth, Tim Dunne, and Michael Cox. Cambridge: Cambridge UP, 2007. 155–177. Print.
- Mandelbrot, Benoit, and Richard L. Hudson. *The Misbehavior of Markets: A Fractal View of Financial Turbulence*. New York: Basic Books, 2006. Print.
- Marais, Mike. 'J.M. Coetzee's "Disgrace" and the Task of the Imagination'. *Journal of Modern Literature* 29.2 (2006): 75–93. Web. 4 Apr 2015.
- Mascia-Lees, Frances E., and Patricia Sharpe. 'Introduction to "Cruelty, Suffering, Imagination: The Lessons of J. M. Coetzee"'. *American Anthropologist* 108.1 (2006): 84–87. Web. 20 Jan 2016.
- Maturana, Humberto R., and Francisco J. Varela. *The Tree of Knowledge: The Biological Roots of Human Understanding*. 1987. Reprint. Boston: Shambhala Publications Inc., 1992. Print.
- Maudlin, Tim. 'Why Physics Needs Philosophy'. *The Nature of Reality: The Physics of Nothing, Everything, and All the Things In Between*. FQXi, 23 Apr 2015. Web 2 Feb 2017.

- Menary, Richard. 'Introduction to the Special Issue on 4E Cognition'. *Phenomenology and the Cognitive Sciences* 9.4 (2010): 459–463. Web. 27 Sep 2016.
- Merleau-Ponty, Maurice. *Phenomenology of Perception*. Trans. Colin Smith. London: Routledge, 2002. Print.
- Merleau-Ponty, Maurice, and Ted Toadvine. *The Merleau-Ponty Reader: Philosophy and Painting*. 1993. Reprint. Evanston: Northwestern UP, 2007. Print.
- Mermin, N. David. 'What's Wrong with This Pillow?' *Physics Today* 42 Apr 1989. Web. 7 Mar 2017.
- Meskell, Lynn, and Lindsay Weiss. 'Coetzee on South Africa's Past: Remembering in the Time of Forgetting'. *American Anthropologist* 108.1 (2006): 88–99. Web. 16 Sep 2015.
- Miah, Andy. 'A Critical History of Posthumanism'. *Medical Enhancement and Posthumanity*. Ed. Bert Gordijn and Ruth Chadwick. Vol. 2. Netherlands: Springer, 2008. 71–94. Print.
- Mills, Frank. 'Quantum Storytelling: The New Old Way of Thinking'. *LinkedIn Pulse*. LinkedIn, 2 Jan 2015. Web. 8 Aug 2016.
- Mohanty, J. N. 'Idealism and the Quantum Mechanics'. *History of Philosophy Quarterly* 6.4 (1989): 381–391. 3 Mar 2016.
- More, Max. 'Transhumanism: Toward a Futurist Philosophy'. *Scribd* (1996). Web. 13 Jan 2016.
- Morson, Gary Saul. *Narrative and Freedom: The Shadows of Time*. New Haven: Yale UP, 1996. Print.
- Morton, Timothy. *Realist Magic: Objects, Ontology, Causality*. Ann Arbor: Open Humanities P, 2013. Print.
- . *The Ecological Thought*. Cambridge: Harvard UP, 2010. Print.
- Mulhall, Stephen. *The Wounded Animal: J. M. Coetzee and the Difficulty of Reality in Literature and Philosophy*. Princeton: Princeton UP, 2008. Print.
- Murrell, Mary. 'Is Literary Studies Becoming Unpublishable?' *PMLA* 116.2 (2001): 394–396. Web 25 Aug 2015.
- Nagel, Thomas. 'What Is It Like to Be a Bat?' *The Philosophical Review* 83.4 (1974): 435–450. Web. 6 Oct 2016.
- Nayar, Pramod K. *Posthumanism*. Cambridge: Polity, 2013. Print.

- Neimneh, Shadi. 'Postcolonial Feminism: Silence and Storytelling in J. M. Coetzee's *Foe*'. *Journal of Language and Literature* 5.2 (2014): 49–55. 27 May 2015.
- Nielsen, Michael A., and Isaac L. Chuang. *Quantum Computation and Quantum Information*. Cambridge: Cambridge UP, 2010. Print.
- Odling-Smee, F. John, Kevin N. Laland, and Marcus W. Feldman. *Niche Construction: The Neglected Process in Evolution*. Princeton: Princeton University Press, 2003. Print.
- Onishi, Bradley B. 'Information, Bodies, and Heidegger: Tracing Visions of the Posthuman'. *Sophia* 50.1 (2010): 101–112. Web. 15 May 2016.
- Pamuk, Orhan. 'Other Countries, Other Shores'. *The New York Times* 19 Dec 2013. Web. 22 Jul 2016.
- Parker, Jo Alyson. 'Crusoe's *Foe*, *Foe*'s Crusoe, and the Origins and Future of the Novel'. *Brill Online Books and Journals*. Brill, 11.1–2 (2011): 17–40. Web. 8 Feb 2016.
- Parry, Benita. 'Speech and Silence in the Fiction of J. M. Coetzee'. *Writing South Africa: Literature, Apartheid, and Democracy, 1970-1995*. Ed. Derek Attridge and Rosemary Jolly. Cambridge: Cambridge UP, 1998. 149–165. Print.
- Peters, Michael A. 'Derrida, Nietzsche, and the Return to the Subject'. *Counterpoints* 323 (2009): 59–79. Web. 7 Aug 2015.
- Petersen, Aage. 'The Philosophy of Niels Bohr'. *Bulletin of the Atomic Scientists* 19.7 (1963): 8–14. Web. 5 Oct 2016.
- Peterson, Christopher. 'The Posthumanism to Come'. *Angelaki* 16.2 (2011): 127–141. Web. 21 Nov 2015.
- Pirnajmuddin, Hossein, and Mina Mehrabadi. '(Hi)story in Search of Author(ity): Feminine Narration in J.M. Coetzee's *Foe*'. *Studies in Literature and Language* 5.1 (2012): 27–32. Web. 3 May 2015.
- Plumb, J. H., ed. *Crisis in the Humanities*. London: Penguin, 1964. Print.
- Poovey, Mary. 'Beyond the Current Impasse in Literary Studies'. *American Literary History* 11.2 (1999): 354–377. Web. 12 Jul 2015.
- Post, Robert M. 'The Noise of Freedom: J. M. Coetzee's *Foe*'. *Critique: Studies in Contemporary Fiction* 30.3 (1989): 143–154. Web. 3 Aug 2016.
- Potter, Beatrix. *The Tale of Little Pig Robinson*. 1930. Reprint. London: Warne, 2002. Print.

- Prins, Baukje. 'The Ethics of Hybrid Subjects: Feminist Constructivism According to Donna Haraway'. *Science, Technology & Human Values* 20.3 (1995): 352–367. Web. 2 Sep 2015.
- Prodger, Phillip. *Darwin's Camera: Art and Photography in the Theory of Evolution*. Oxford: Oxford UP, 2009. Print.
- Puchner, Martin. 'Performing the Open: Actors, Animals, Philosophers'. *The Drama Review* 51.1 (2007): 21–32. *MIT P*. Web. 5 Sep 2016.
- Purser, Ronald E., and Jack Petranker. 'Unfreezing the Future Exploring the Dynamic of Time in Organizational Change'. *The Journal of Applied Behavioral Science* 41.2 (2005): 182–203. Web. 5 May 2016.
- Ramachandra, Vijayachandra, Nina Depalma, and Sara Lisiewski. 'The Role of Mirror Neurons in Processing Vocal Emotions: Evidence from Psychophysiological Data'. *The International Journal of Neuroscience* 119.5 (2009): 681–690. Web. 19 Oct 2016.
- Rich, Adrienne. 'When We Dead Awaken: Writing as Re-Vision'. *College English* 34.1 (1972): 18–30. Web. 23 Aug 2015.
- Richards, Robert J. *The Meaning of Evolution: The Morphological Construction and Ideological Reconstruction of Darwin's Theory*. 1992. Reprint. Chicago: Chicago UP, 1993. Print.
- . *The Romantic Conception of Life: Science and Philosophy in the Age of Goethe*. Chicago: Chicago UP, 2002. Print.
- Ritvo, Harriet. *Noble Cows and Hybrid Zebras: Essays on Animals and History*. Charlottesville: Virginia UP, 2010. Print.
- Roberts, Sheila. "'Post-colonialism, or the House of Friday" — J.M. Coetzee's Foe'. *World Literature Written in English* 31.1 (1991): 87–92. Web. 1 Feb 2016.
- Ronen, Ruth. 'Philosophical Realism and Postmodern Antirealism'. *Style* 29.2 (1995): 184–200. Web. 14 Jun 2016.
- Rovelli, Carlo. 'Science Is Not About Certainty'. *New Republic* 11 Jul 2014. Web. 8 Aug 2016.
- Rowlands, Mark. *The New Science of the Mind: From Extended Mind to Embodied Phenomenology*. Cambridge: MIT P, 2010. Print.

- Roy, Donald. “‘Banana Time’: Job Satisfaction and Informal Interaction’. *Human Organization* 18.4 (1959): 158–168. Web. 21 Dec 2016.
- Rutsky, R. L. ‘Mutation, History, and Fantasy in the Posthuman’. *Subject Matters* 3.2 (2007): 99–112. Print.
- Said, Edward W. ‘Beginnings’. *Salmagundi* 2.4 (8) (1968): 36–55. Web. 11 Feb 2016.
- . *Orientalism*. 1978. Reprint. London: Penguin, 2003. Print.
- Saussure, Ferdinand de, and Albert Riedlinger. *Course in General Linguistics*. 1916. Reprint. Chicago: Open Court Publishing, 1983. Print.
- Schrödinger, E. *Expanding Universes*. Cambridge: Cambridge UP, 2011. Print.
- Seaman, Myra J. ‘Becoming More (than) Human: Affective Posthumanisms, Past and Future’. *Journal of Narrative Theory* 37.2 (2007): 246–275. Web. 4 Aug 2015.
- Sedgwick, Eve Kosofsky. *Between Men: English Literature and Male Homosocial Desire*. New York: Columbia UP, 1985. Print.
- . *Epistemology of the Closet: Updated with a New Preface*. 1990. Reprint. Berkeley: California UP, 2008. Print.
- . *Tendencies*. Durham: Duke UP, 1993. Print.
- Segrè, Emilio. *From X-Rays to Quarks: Modern Physicists and Their Discoveries*. Mineola: Courier Corporation, 2007. Print.
- Simon, Bart. ‘Introduction: Toward a Critique of Posthuman Futures’. *Cultural Critique* 53 (2003): 1–9. Web. 22 May 2016.
- Smith, Jonathan. *Charles Darwin and Victorian Visual Culture*. Cambridge: Cambridge UP, 2009. Print.
- Sokal, Alan D. ‘Transgressing the Boundaries: Toward a Transformative Hermeneutics of Quantum Gravity’. *Social Text* 46–47.46/47 (1996): 217–252. Web. 13 Jun 2015.
- Soper, Kate. *Humanism and Anti-Humanism*. London: Hutchinson, 1986. Print.
- Spivak, Gayatri Chakravorty. ‘Can The Subaltern Speak?’ *Marxism and the Interpretation of Culture*. Ed. Cary Nelson and Lawrence Grossberg. Basingstoke: Macmillan Education, 1988. 271–313. Print.
- . ‘Theory in the Margin: Coetzee’s Foe Reading Defoe’s “Crusoe/Roxana”’. *English in Africa* 17.2 (1990): 1–23. Web. 2 Feb 2016.

- Staudenmayer, Nancy, Marcie Tyre, and Leslie Perlow. 'Time to Change: Temporal Shifts as Enablers of Organizational Change'. *Organization Science* 13.5 (2002): 583–597. Web. 12 Jan 2016.
- Stenger, Victor, Peter Boghossian, and James A Lindsay. 'Physicists Are Philosophers, Too'. *Scientific American*, 5 Aug. 2015. Web. 2 Mar 2017.
- Stevenson, Robert Louis. *Treasure Island*. New York: Signet, 2001. Print.
- Swift, Jonathan. *Gulliver's Travels*. Ed. Claude Rawson. 1726. Reprint. Oxford: Oxford UP, 2005. Print.
- Thomas, Carol. 'How Is Disability Understood? An Examination of Sociological Approaches'. *Disability & Society* 19.6 (2004): 569–583. Web. 7 Sep 2015.
- Thompson, Evan. *Mind in Life: Biology, Phenomenology, and the Sciences of Mind*. Cambridge: Harvard UP, 2007. Print.
- Thomson, Rosemarie Garland. *Extraordinary Bodies: Figuring Physical Disability in American Culture and Literature*. New York: Columbia UP, 1997. Web. 2 Apr. 2016.
- Timpson, Christopher G. *Quantum Information Theory and the Foundations of Quantum Mechanics*. Oxford: Oxford UP, 2013. Print.
- Tournier, Michel. *Friday*. 1967. Reprint. Baltimore: Johns Hopkins UP, 1997. Print.
- Tremain, Shelley, ed. *Foucault and the Government of Disability*. Ann Arbor: Michigan UP, 2005. Print.
- Trinh T., Minh-Ha. *Woman, Native, Other: Writing Postcoloniality and Feminism*. Indiana UP, 1989. Print.
- Turk, Tisha. 'Intertextuality and the Collaborative Construction of Narrative: J. M. Coetzee's *Foe*'. *Narrative* 19.3 (2011): 295–310. Web. 15 Aug 2016.
- Turner, Victor. 'Betwixt and Between: The Liminal Period in Rites of Passage'. *Betwixt & Between: Patterns of Masculine and Feminine Initiation*. Ed. Louise Carus Mahdi, Steven Foster, and Meredith Little. La Salle: Open Court, 1987. 3–19. Print.
- . 'Liminality and Communitas'. *The Ritual Process: Structure and Anti-Structure*. 1969. Reprint. New Brunswick: Aldine Transaction, 2008. 94–213. Print.
- . *Dramas, Fields, and Metaphors: Symbolic Action in Human Society*. 1974. Reprint. Ithaca: Cornell UP, 1975. Print.

- Tyson, Neil deGrasse. 'Nerdist Podcast: Neil deGrasse Tyson'. *Nerdist*, 7 Mar 2017. Web. 7 Mar 2017.
- Unamuno, Miguel de. *Tragic Sense of Life*. Trans. J. E. Crawford (John Ernest Crawford) Flitch. 1912. Reprint. Hamburg: Tredition Classics, 2012. Web. 19 Jul 2016.
- Vaihinger, Hans. *The Philosophy of 'as If': A System of the Theoretical, Practical and Religious Fictions of Mankind*. Trans. C. K. Ogden. 1911. Reprint. New York: Routledge & Kegan Paul Ltd., 1927. Print.
- Varela, Francisco J., Evan Thompson, and Eleanor Rosch. *The Embodied Mind: Cognitive Science and Human Experience*. Cambridge: MIT Press, 1993. Print.
- Waistell, Jeff. 'Metaphorical Mediation of Organizational Change across Space and Time'. Ed. Adrian N. Carr. *Journal of Organizational Change Management* 19.5 (2006): 640–654. Web. 9 Jan 2016.
- Wallentin, Mikkel et al. 'Amygdala and Heart Rate Variability Responses from Listening to Emotionally Intense Parts of a Story'. *NeuroImage* 58.3 (2011): 963–973. Web. 23 Nov 2016.
- Ward, Dave, and Mog Stapleton. 'Es Are Good: Cognition as Enacted, Embodied, Embedded, Affective and Extended'. *Consciousness in Interaction: The Role of the Natural and Social Context in Shaping Consciousness*. Ed. Fabio Paglieri. Amsterdam: John Benjamins Publishing, 2012. 89–104. Web. 24 Apr 2016.
- Waters, Brent. *From Human to Posthuman: Christian Theology And Technology in a Postmodern World*. Aldershot: Ashgate Pub Co., 2006. Print.
- Watt, Ian P. *The Rise of the Novel: Studies in Defoe, Richardson, and Fielding*. Berkeley: California UP, 1957. Print.
- Waugh, Patricia. 'English and the Future of the Humanities'. Durham University. 2010. Lecture. Web. 22 Jun 2016.
- . 'Paradigms Lost: Emergence and the Brave New World of Interdisciplinary Consilience'. The Experience of Emergence Lecture. Durham University. 2015. Lecture. Web. 22 Jun 2016.
- Weinberg, Steven. *Dreams Of A Final Theory: The Search for The Fundamental Laws of Nature: Search for the Ultimate Laws of Nature*. New York: Vintage, 1993. Print.

- Whimster, Sam. 'The Human Sciences'. *Theory, Culture & Society* 23.2–3 (2006): 174–176. Web. 4 Oct 2015.
- White, Hayden. 'What Is a Historical System?' *The Fiction of Narrative: Essays on History, Literature, and Theory, 1957–2007*. Ed. Robert Doran. Baltimore: JHU Press, 2010. 126–135. Print.
- Wilson, Edward Osborne. *Consilience: The Unity of Knowledge*. Cambridge: Vintage, 1998. Print.
- Woessner, Martin. 'Coetzee's Critique of Reason'. *J. M. Coetzee and Ethics: Philosophical Perspectives on Literature*. Ed. Anton Leist and Peter Singer. New York: Columbia UP, 2010. 223–248. Print.
- Wolfe, Cary. *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory*. Chicago: Chicago UP, 2003. Print.
- . 'In the Shadow of Wittgenstein's Lion: Language, Ethics, and the Question of the Animal'. *Zoontologies: The Question of the Animal*. Minneapolis: Minnesota UP, 2003. 1–57. Print.
- . 'Introduction'. *Zoontologies: The Question of the Animal*. Minneapolis: Minnesota UP, 2003. ix–xxiii. Print.
- . *What Is Posthumanism?* Minneapolis: Minnesota UP, 2010. Print.
- , ed. *Zoontologies: The Question of the Animal*. Minneapolis: Minnesota UP, 2003. Print.
- Worthington, Kim L. *Self as Narrative: Subjectivity and Community in Contemporary Fiction*. Oxford: Clarendon P, 1996. Print.
- Wright, Laura. 'Writing "Out of All the Camps": J. M. Coetzee's Narrative of Displacement'. Massachusetts: Massachusetts Amherst U, 2004. Web. 23 Jul 2016.
- Wyss, Johann. *The Swiss Family Robinson*. 1812. Reprint. Oxford: Oxford UP, 1991. Print.
- Yankovic, Weird Al. *Amish Paradise*. US: Scotti Brothers, 1996. Audio Recording. Bad Hair Day.
- Zylinska, Joanna. *The Ethics of Cultural Studies*. London: Continuum, 2005. Print.