Ineradicable Humanity: Literary Responses to Darwin in Zola, Hardy, and the Utopian Novel

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Declaration

I, Niall Sreenan, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Abstract

This dissertation is a comparative study of the evolutionary thought of Charles Darwin and a constellation of novels from the nineteenth, twentieth, and twenty-first centuries which examines how these works respond to and explore the existential death blow delivered to humanity by Darwin's theory of evolution. In doing so, this work joins a vibrant discursive field in literary criticism about the relationship between Charles Darwin's theory of evolution and literature, both in the nineteenth century and beyond. The dominant methodology in this field seeks to illuminate the historical and discursive context in which literary culture and Darwinian science co-existed and focuses on the period contemporaneous with and immediately after the emergence of Darwinian evolutionary science. Building on this methodology, I argue that, as well as recognising the intertextual and historical cross-correspondences between literary writing and Darwin's theories, it is important and critically fruitful to consider the ways that literary writing supplements Darwin's thought, submitting it to a range of interrogations, questions, complications, and transformations.

I explore how works by Émile Zola stage an inquiry into the relation between scientific objectivity and art and wonder about the possibility of transcending the biological determinism of natural selection; how two works by Thomas Hardy respond to the nihilism of an evolutionary cosmology with a radical vision of Darwinian sexual

selection; and how Utopian novels by Samuel Butler, Aldous Huxley, and Michel Houellebecq interrogate the question of individual sovereignty and perfection under rigorous Darwinian materialist law. Throughout these chapters, I work in dialogue with a number of key concepts from critical theory, with a particular focus on the work of Gilles Deleuze.

Ultimately, I argue that in the encounter between literature, Darwin's thought, and philosophy, creative modes of understanding Darwin's thought are possible – which re-affirm literature's capacity to supplement scientific thought and the life of humanity itself.

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Abbreviations

The first references to a work in each chapter gives full bibliographical details. Subsequent references are to an abbreviated title; frequently cited works will be incorporated into the text after the first full reference.

Works by Charles Darwin:

All references to works by Darwin are taken from *The Complete Work of Charles Darwin Online,* ed. by John van Whye, (http://darwin-online.org.uk/) and refer to the first edition of that text, unless otherwise specified.

Origin: Charles Darwin, *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life* (London: John Murray, 1859).

Descent, Vol. 1: Charles Darwin*, The Descent of Man, and Selection in Relation to Sex*, 2 vols (London: John Murray, 1871), I.

Descent, Vol. 2: Charles Darwin*, The Descent of Man, and Selection in Relation to Sex,* 2 vols (London: John Murray, 1871), II.

Beagle Voyage: Charles Darwin, *Narrative of the Surveying Voyages of His Majesty's Ships Adventure and Beagle between the Years 1826 and 1836, Describing Their Examination of the Southern Shores of South America, and the Beagle's Circumnavigation of the Globe. Journal and Remarks. 1832-1836.*, ed. by Robert Fitzroy, 3 vols (London: Henry Colburn, 1839), III.

Primary works:

Germinal: Émile Zola, *Germinal*, trans. by Peter Collier (Oxford: Oxford University Press, 2008).

Le Ventre: Émile Zola, *The Belly of Paris*, trans. by Brian Nelson (Oxford: Oxford University Press, 2009).

L'Œuvre: Émile Zola, *The Masterpiece*, trans. by Roger Pearson and Thomas Walton, rev. edn (Oxford: Oxford University Press, 2008).

Blue Eyes: Thomas Hardy, *A Pair of Blue Eyes*, ed. by Alan Manford (Oxford: Oxford University Press, 2005).

Return: Thomas Hardy, *The Return of the Native*, ed. by Simon Avery (Ontario: Broadview Press, 2013).

Erewhon: Samuel Butler, *Erewhon*, ed. by Peter Mudford, The Penguin English Library, New & rev. edn (Harmondsworth: Penguin, 1970).

Island: Aldous Huxley, *Island*, ed. by David Bradshaw (New York: Vintage Books, 2005).

Possibility: Michel Houellebecq, *The Possibility of an Island*, trans. by Gavin Bowd (New York: Vintage, 2007).

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Introduction

In the course of centuries the naïve self-love of men has had to submit to two major blows at the hands of science. The first was when they learnt that our earth was not the centre of the universe but only a tiny fragment of a cosmic system of scarcely imaginable vastness. This is associated in our minds with the name of Copernicus [...] The second blow fell when biological research destroyed man's supposedly privileged place in creation and proved his descent from the animal kingdom and his ineradicable animal nature. This revaluation has been accomplished in our own days by Darwin, Wallace and their predecessors, though not without the most violent contemporary opposition.

- Sigmund Freud, *Introductory Lectures to Psychoanalysis, Part III*

The physical world is the only reality. It originates wholly from impersonal natural forces; it is devoid of any intrinsic moral order or values; and it functions without the intervention of spiritual forces of any kind, benevolent or otherwise. Life and consciousness originally arose in this universe purely by accident, from complex configurations of matter and energy. Life in general, and human life in particular, has no meaning, value, or significance other than what it attributes to itself. During the course of an individual's life, all one's desires, hopes, intentions, feelings, and so forth—in short, all one's experiences and actions—are determined solely by one's body and the impersonal forces acting upon it from the physical environment. Thus, human life is inescapably subject to suffering, for all pain and misery originate from impersonal, largely uncontrollable forces of the animate and inanimate environment and from the human body.

- Alan Wallace, *The Taboo of Subjectivity*

There is grandeur in this view of life.

- Charles Darwin, *On The Origin of Species*

How can and does humanity respond to a death sentence of which it is both the author and the victim? To Sigmund Freud, the march of scientific progress appears as a succession of disruptive incursions on the human ego, each of which constitutes an attack on the very idea of humanity itself. Writing in the second decade of the twentieth century, Freud observes that the idea of humanity's central place in the cosmos, in nature, and in its own psychic territory, is preyed upon by a series of revolutionary ideas – first Copernicanism, then Darwinism, and finally, psychoanalysis. More than an attack on the megalomaniacal, naïve self love of the human ego, each of these radical scientific ideas, Freud argues, demands a comprehensive revaluation of the human as such. Copernicus, Darwin, and then Freud himself all invite humanity to redefine itself: to abandon its self-assigned cosmic significance, to surrender its self-appointed place at the head of a natural hierarchy, and to relinquish the delusional sense of supreme, self-possessed rationality which seems to make these assumptions possible. Freud's thesis that science threatens the egoistic naivety that sustains humanity's self-assigned supremacy is confirmed by the violent and desperate resistance with which each of these theories is met. Scientific progress, he argues, is not contested because it is conceptually difficult nor because the experiences it describes are sometimes observationally inaccessible. 'Its source', Freud says, 'lies deeper'.[1] What is at stake is nothing other than the existential certainty of humanity itself.

This thesis focuses on Charles Darwin's theory of evolution, the second scientific revolution in Freud's three-act history of intellectual assaults on the human ego. Darwinian evolution, Freud's analysis suggests, demands a complete reconsideration of humanity's place in nature. Humanity after Darwin is understood to be 'ineradicably' animal.[2] This can be read as an affirmation of Darwin's thesis, first implied in *The Origin of Species* (1859) and re-confirmed in *The Descent of Man* (1871), that humanity is both genealogically conjoined to and evolved from so-called 'lower animals'.[3] Although in his earlier work, Darwin avoided the question of humanity's evolutionary descent, in the later work he is explicit about the implications of his theory of evolution. Echoing Freud's argument about resistance to scientific progress,

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[1] Sigmund Freud, *The Standard Edition of the Complete Psychological Works of Sigmund Freud Volume XVI (1916-1917): Introductory Lectures on Psycho-Analysis (Part III)*, ed. & trans. by James Strachey, 24 vols (London: Hogarth and the Institute of Psycho-analysis, 1963), p. 284.
[2] Freud, p. 284.
[3] Charles Darwin, *The Descent of Man, and Selection in Relation to Sex*, 2 vols (London: John Murray, 1871), I, pp. 9–11.

Darwin in the second volume of *The Descent of Man* anticipates religious opposition to the notion that humanity and animality are borne of the same processes of 'variation and natural selection'. 'The birth both of the species and of the individual', Darwin writes, 'are equally parts of that grand sequence of events, which our minds refuse to accept as the result of blind chance.' The human ego seeks solace in religion, Darwin suggests, because religion reconfirms the idea that the human individual and the species has 'been ordained for some special purpose'.[4]

Freud's thesis on the 'ineradicable animality of man', and Darwin's observation about humanity's desire to view itself as a providential creation of God, can also be read in the context of Freud's comments on the animal in *Civilisation and its Discontents*. 'Civilisation' (*Kultur*), Freud affirms, 'describes the whole sum of the achievements and the regulations which distinguish our lives from those of our animal ancestors'. But, he submits, for all that civilisation can 'protect men against nature', this achievement is only ever a partial one.[5] The instinctual life of the human, as Nicholas Ray puts it, is 'the domain *par excellence* of man's putative animality'.[6] We are never free from our drives. Civilisation is haunted and undermined by the inescapable fact of our ancestral and instinctual savagery and animality. There is a tension between Freud's affirmation, made in his *Introductory Lectures*, that Darwin's work represents a thorough revaluation of the human as animal and his equivocation in *Civilisation and its Discontents* that the success of civilisation is built on the repression of this fact. Perhaps the former statement, made between 1916 and 1917, is a response to what Peter Bowler has designated 'the eclipse of Darwinism'.[7] In this period in scientific history, stretching from the late-nineteenth century through the first two decades of the twentieth century, the Darwinian model of evolution was challenged by a return of theistic, politically progressive, and morally purposive alternatives to Darwin's chance-ridden theory of natural selection. In this context, Freud's assertion of Darwinism's revolutionary character represents an effort to reaffirm humanity's animality and the

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[4] Charles Darwin, *The Descent of Man, and Selection in Relation to Sex*, 2 vols (London: John Murray, 1871), II, pp. 395–396.
[5] Sigmund Freud, 'Civilization and Its Discontents', trans. by James Strachey, *The Standard Edition of the Complete Psychological Works of Sigmund Freud Volume XXI (1927-1931): The Future of an Illusion, Civilization and Its Discontents, and Other Works,* 1930, p. 88.
[6] Nicholas Ray, 'Interrogating the Human/Animal Relation in Freud's Civilisation and Its Discontents', *Humanimalia*, 6.1 (2014), 10–40 (p. 13).
[7] Peter J. Bowler, *Evolution: The History of an Idea*, rev. edn (Berkeley: University of California Press, 1989), p. 246.

persistence of its ancestral savagery in the face of scientific arguments to the contrary and in favour of progress.

By contrast, when *Civilisation and its Discontents* was published in 1928, J.B.S. Haldane had already published his famous, ground-breaking, mathematical work on the 'industrial melanism' of the peppered moth.[8] This showed conclusively that these insects "adapted" to the smog of the nearby city of Manchester, the lighter coloured moths becoming extinct within a matter of generations, while the darker coloured moths flourished in the gloom of the newly-industrialised climate.[9] Haldane's work, published in 1924, signalled the beginning of the end of the 'eclipse of Darwinism' by offering irrefutable empirical evidence of the action of natural selection in a real world context. Further to that, it was an important waypoint for the development of the 'modern synthesis' of Darwinian natural selection and genetics which remains the dominant model for evolutionary biology today.[10] And with the general acceptance of the evolutionary synthesis of Darwinian evolution and genetics, Bowler argues, the teleological conception of evolution in the nineteenth century that viewed humanity as the end of evolution had begun to break down.[11] Freud's later ambivalence about the value of avowing humanity's animality, in the context of Darwinism's revivification, and later hegemony in the human sciences, represents a recapitulation of the need to repress individual, instinctual drives in the name of collective human progress. As Darwin's model of evolution becomes widely accepted by biology and the human sciences, and the fact of humanity's innate savagery threatens to become an uncritically accepted banality, it becomes newly necessary to contest the naturalisation of our savagery.

These two readings by Freud of the relation of the human and the animal outline two possible ways of conceiving humanity's place in nature after Darwin. Freud's affirmation of Darwinism in the *Introductory Lectures* seeks to diminish humanity's self-ascribed and delusional sense of transcendence. Civilisation, he argues,

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[8] J.B.S. Haldane, 'A Mathematical Theory of Natural and Artificial Selection' in *Transactions of the Cambridge Philosophical Society*, 1924, 19–51.

[9] For a historical and technical account of the phenomenon of 'industrial melanism' and its relation to Darwinian evolution see David W. Rudge, 'Ecological Genetics', in *The Cambridge Encyclopedia of Darwin and Evolutionary Thought*, ed. by Michael Ruse (Cambridge: Cambridge University Press, 2013), pp. 293–99.

[10] First published in 1942, Julian Huxley's work on genetics and the mechanism of Darwinian evolution is a classic statement of the evolutionary synthesis that persists today in the natural sciences. See Julian Huxley, *Evolution: The Modern Synthesis* (London: Allen & Unwin, 1963).

[11] Bowler, pp. 312–314.

is never free from its atavistic, animal origins. At the same time, his declaration in *Civilization and its Discontents* of the need for the repression of that instinctual savagery in the name of civilisation seems to warn against the nihilism that lies in wait for those willing to embrace humanity's inhumanity.

Jacques Derrida also elaborates upon the revolutionary nature of Darwin's theory of evolution. He argues in the fourth session of his seminars on *The Beast and the Sovereign* that, of the three Copernican moments in Freud's analysis, the Darwinian assault on human exceptionality is the one most desperately resisted by humanity.[12] Derrida suggests that it is only the singular power of human narcissism which reproduces the myth that humanity's capacity to 'efface its own trace', to repress its ancestral animality, or to judge as to the success of the effacement, is what distinguishes 'man' from its evolutionary forebears. And this 'subtle form of phallogocentrism' Derrida writes, which reinstitutes an anthropocentric conception of human as a sovereign subject, is in part a response to the 'panic' induced by Darwin's radical theory of evolution.[13] But Derrida's analysis here also points to a crucial point: while the human may not possess the power to efface its own animal trace, or the capacity to judge the success of that attempt, it does at least have the capacity for that attempt. It is this facility to name oneself, to be capable of articulating the anthropocentric, phallogocentric position, that Darwin refers to when he writes in *The Descent of Man* that '[i]f man had not been his own classifier, he would never have thought of founding a separate order for his own reception' (*Descent*, Vol. 1, 191). Crucially, as Darwin points out, humanity *is* its own classifier; so "human" is a signifier for nothing other than humanity's ability to signify. And in this very capacity – in that ability to name itself – even if that act of territorial inscription, from a naturalistic perspective, seems to be biologically inaccurate, the human marks itself out as a being which is capable of marking itself out.

From what does the human seek to distinguish itself? What contents or traits are specific to the animal which humanity, in designating itself through language as human, seeks to repudiate or repress? Darwin speculates at the conclusion to *The Descent of Man* that the emergence of the 'half-art and half-instinct' of language not only prompts humanity to name itself, alienate itself from its own nature,

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[12] Jacques Derrida, *The Beast and the Sovereign*, ed. by Michel Lisse, Marie-Louise Mallet, and Ginette Michaud, trans. by Geoffrey Bennington, Seminars of Jacques Derrida, 2 vols (Chicago: University of Chicago Press, 2009), I, pp. 130–131.
[13] Derrida, p. 131.

performatively to differentiate itself from its ancestors, but also to develop the faculty of morality (*Descent,* Vol. 2, 390). Here, Darwin seems close to the Aristotelian notion of humanity as a political animal, the capacity of which to communicate facilitates the development of moral concepts and the state. Whereas Freud sees civilisation as retaining a trace of that which it seeks to repudiate, Darwin notes that morality represents one of the most robust arguments against his thesis of the descent of man, because these traits '[constitute] the greatest of all distinctions between [humanity] and the lower animals' (*Descent*, Vol. 2, 392). He does not avow, like Freud, that humanity is haunted by its own animality, stating instead that morality emerges as part of nature not in contradistinction to it. But by arguing that morality evolves as part of humanity's struggle for survival, Darwin veers close to Freud again, implying that instinctual self-interest drives morality, thus making any transcendent conception of moral values impossible.

Alan Wallace's sketch of a naturalist and materialist cosmogony, based on Jacques Monod's conception of human life in *Chance and Necessity* (1971), further illuminates the evolutionary bind in which humanity finds itself according to evolutionary materialism. The natural world and thus humanity, he says, can be understood to have arisen by pure chance, and therefore has no special purpose in a natural world which is the source of all pain and suffering. Since we cannot remove ourselves from our bodies or from nature, life is not only miserable but also ultimately meaningless, valueless, and directionless.[14] Haldane's study of the Stygian world of the peppered moth seems to support such a view: life works according to fixed laws devoid of the light of reason or morality. Both Wallace and Monod accepts that humanity, as Derrida and Darwin suggest, can attribute value to itself through our capacity to 'express the content of a subjective experience' and through that to create religion, myth, and morality.[15] But from evolutionary science's perspective, Monod argues, this self-valuation can be understood as futile, not simply because it evolved from an amoral and impersonal force of development out of self-interest, but because that force of development cannot deliver humanity from that material, physiological prison-house of amoral animality from which all suffering derives. The crepuscular image of the evolutionary human offered by Freud and Derrida, of a figure who is

[14] Alan B. Wallace, *The Taboo of Subjectivity: Toward a New Science of Consciousness* (Oxford: Oxford University Press, 2000), p. 161.
[15] Jacques Monod, *Chance and Necessity; an Essay on the Natural Philosophy of Modern Biology*, trans. by Austryn Wainhouse (New York: Knopf, 1971), pp. 160–168.

neither authentically and wholly animal nor capable of transcending animality, is also the image of a figure who resides in an amoral world, but who is nonetheless capable of envisaging morality and imagining redemption. Freud suggests that civilisation, the effacement of our own animal trace, '[makes] the earth serviceable' to humanity and offers us protection against 'the violence of the forces of nature'.[16] But according to Monod's characterisation of naturalist materialism, civilisation allows us only to conceive of morality, as though the deliverance of humanity from amorality and suffering were situated on a distant horizon, never out of sight but always moving away.

The human after Darwin is an elusive thing: neither animal nor god, neither moral nor amoral, the human marks itself as different simply by asserting itself as such. As Darwin and Derrida together suggest, it is in that moment of utterance, and in the marking out of writing, that the pendulous sense of being human is performed and can be explored. Virginia Richter has given the term 'anthropological anxiety' to the tension that arises after Darwin in response to the blurring of the line between humanity and animality.[17] After Darwin, she writes, 'man's status in nature was no longer secure, and even the belief in the basic stability of the individual body – subject only to the changes wrought by age and illness – became undermined'.[18] Richter examines how liminal figures such as 'ape-men', evolutionary "missing links", and part-human monstrosities in 'post-Darwinian' fiction reflect and explore this anxiety, focusing specifically on themes such as degeneration, reversion, and civilisational breakdown. My dissertation undertakes a similar, but distinct, exploration. I shall, like Richter, be exploring how literary writing responds to the intellectual and existential challenge that Darwin's theory lays down to humanity. But rather than focus on the human animal in literature, understood as a response to Darwin's theory of evolution, I understand the literary to be itself a privileged site of expression which enacts the performative nature of humanity's difference from the animal, an embodiment of the unresolvable anxiety of which Richter, Derrida, and Darwin speak. Therefore, I shall be seeking to demonstrate how literature can be understood as a way for humanity to respond to its own demise. I seek to illustrate how literary art allows us to respond to the existential threat of evolution without giving in to transcendent delusions or

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[16] Freud, p.89.
[17] Virginia Richter, *Literature After Darwin: Human Beasts in Western Fiction 1859-1939* (London: Palgrave Macmillan, 2011), pp. 6-17.
[18] Richter, p. 7.

capitulating to biological nihilism, enabling humanity instead to negotiate and explore this polarity.

I shall be examining works by two canonical authors, known for their engagement with biological naturalism and Darwinism, as well as three lesser-known authors whose works also respond to Darwinian thought. First, I focus on three works from Émile Zola's monumental Naturalist series, *Histoire naturelle et sociale d'une famille sous le Second Empire*: *Le Ventre de Paris* (1873), *Germinal* (1885) and *L'Œuvre* (1886). My reading of these Second Empire works seeks to demonstrate how literary writing works in tension with the scientific discourses it draws upon and to examine how, in this way, these novels stage and seek to perform humanity's desire to transcend its own biological origins. Secondly, I shall be reading two of Thomas Hardy's novels, *A Pair of Blue Eyes* (1873) and *The Return of the Native* (1878). I illustrate how their treatment of female sexuality responds critically to Darwin's thinking on sexual desire and the origins of art; and that they anticipate an anti-essentialist conception of sexual difference. Finally, I read three novels by three novelists each of whom couch their response to biological naturalism and Darwinian evolution in terms of the Utopian imaginary. In my comparative reading of Samuel Butler's *Erewhon* (1871), Aldous Huxley's *Island* (1961), and Michel Houellebecq's *The Possibility of an Island* (2007), I shall endeavour to show how they both raise the possibility of transcending the evolutionary conditions which threaten humanity, and deflate that idealism. Taken together, these novels acknowledge the Utopian desire for autonomy in response to Darwin's theory of evolution and examine that desire, showing the Utopian imagination be intrinsic to humanity's conception of itself.

Each of these novelists is aware of Darwin's work, to varying degrees, and responds to his work explicitly through their literary writing. As a result, I shall throughout this dissertation be making reference to the work of numerous scholars who have responded to the nineteenth-century authors Thomas Hardy, Émile Zola, and Samuel Butler contextually and by examining their relation to Darwin's writings and thought. I shall also make acknowledge the genealogical and intellectual connection between Aldous Huxley and Darwin's work, through his grandfather, T.H. Huxley, one of Darwin's closest allies and colleagues. As a contemporary novelist, contextual criticism on Michel Houellebecq's work is limited to his immediate socio-historical milieu, of which Darwin is no longer a contemporaneous part. Nevertheless,

I shall still touch upon criticism that emphasises Houellebecq's debt to evolutionary biology and Darwinism.

More fundamentally, it is widely accepted today that Darwin's work, like that of Freud as well as Marx, represents a pervasive influence on the European literary and cultural imagination. As Richter puts it, today 'we are all post-Darwinians'.[19] As a consequence of recognising the importance of Darwin's work, tracing the complex interpenetrative relations of the influence of Darwin's work on literature as well as, conversely, the literary elements of Darwin's work, is a widespread and productive scholarly practice.[20] Like Richter, Gillian Beer acknowledges the pervasive influence Darwin has had on the European literary and cultural imaginary at large, and that that influence is often more powerful when his ideas become assumptions embedded in culture rather than the subject of controversy. Beer, however, is best known for her work on how Darwin's theory of evolution exerted a vital influence on Victorian literature and culture specifically, and her work in *Darwin's Plots* on Darwin's literary influence on authors such as George Eliot and Thomas Hardy in particular has become canonical in literary critical contexts. Beer's study emphasises the "literariness" of Darwin's work: evolution as an idea is, like Darwin's own conception of species, not an *ex nihilo* scientific discovery, but a historically and culturally contingent theory of nature, at least partly derived from the literary quality of Darwin's imagination.[21] And her skilful demonstration of the fecundity of nineteenth-century networks of scientific and literary discourse, the literary origins of evolutionary thought, as well as the major influence that science had on the literary imagination, has itself been as influential on subsequent critical response to Darwin as Darwin himself was on Victorian culture. As Martin Willis notes, Beer's methodology has not only instigated a literary critical surge of interest in Darwin's work and in nineteenth-century science. The very subject of

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[19] Richter, p. 1.

[20] Martin Willis offers a comprehensive review of this field including important works by Gillian Beer, George Levine, and Sally Shuttleworth, which have established the topic of Darwin and literature as an important theme in studies of Victorian culture and literature. Martin Willis, *Literature and Science: A Reader's Guide to Essential Criticism*, Readers' Guides to Essential Criticism (London: Palgrave Macmillan, 2015), pp. 52–68; Gillian Beer, *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction*, 3rd edn (Cambridge: Cambridge University Press, 2009); George Levine, *Darwin and the Novelists : Patterns of Science in Victorian Fiction* (Cambridge, MA: Harvard University Press, 1988); Sally Shuttleworth, *George Eliot and Nineteenth-Century Science: The Make-Believe of a Beginning* (Cambridge: Cambridge University Press, 1984).

[21] Beer cites the influence of Shakespeare, Wordsworth, and Milton on Darwin's imagination. See Beer, '"Pleasure like a tragedy": imagination and the material world', in *Darwin's Plots,* pp. 25-43.

literature and science, which Beer's historicist criticism has energised, has since *Darwin's Plots* become dominated by the topic of Darwin's theory of evolution, nineteenth-century scientific naturalism, as well as their representation in Victorian literature.[22]

While this thesis is similarly concerned with the relation between Darwin's thought and contemporaneous literary artefacts, its methodology and its primary purpose is distinct from the contextual and historical approach that has dominated the field. While my critical undertaking, by necessity, does build on the comparative historicist tradition in literary studies of Darwin's work, my chief aim is not to seek new texts to add to the canon of Darwin's literary and cultural legacy. Nor do I re-read already canonical novels with the aim of re-emphasising the importance or pervasiveness of Darwin's influence in the history of Western literature.[23] Instead, I seek to offer philosophically influenced readings of these works' responses to Darwin's thought and to engage critically with the question of the humanity's place in nature.

My approach in this thesis is driven by my conviction that, in addition to facilitating the study of what Gillian Beer calls the 'open fields' of discursive, historical, and conceptual relations between science and literary art, literature is also resistant to any such historically or contextually instrumental critical ethos.[24] As Derek Attridge writes in *The Singularity of Literature*, there is a crucial 'distinction between a reading that sees as its task the pragmatic utilisation of the work it reads and one that comes armed (or rather disarmed) with a readiness to respond to the work's distinctive utterance and is prepared to accept the consequences of doing so.'[25] Despite its critical productiveness, the idea of 'open fields' seems to fall short of the openness to literary singularity espoused by Attridge, which demands, paradoxically, a focus on the distinctiveness of writing and literary art. Beer derives the phrase 'open fields' from Darwin's speculative vision of the future of evolutionary thought at the closing of *The Origin of Species*. His vision of a 'new foundation' for psychology and the human

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[22] Willis, p. 52. Recent collections that study Darwin's work from a literary critical, interdisciplinary, as well as a contextual perspective include *The Evolution of Literature Legacies of Darwin in European Cultures*, ed. by Nicholas Saul and Simon J James (Amsterdam: Rodopi, 2011); *Charles Darwin's The Origin of Species: New Interdisciplinary Essays*, ed. by David Amigoni and Jeff Wallace (Manchester: Manchester University Press, 2013.

[23] A wide-ranging and detailed exploration and demonstration of Darwin's influence on less canonical works and in less common contexts can be found in Thomas F. Glick and Elinor Shaffer, eds. *The Literary and Cultural Reception of Charles Darwin in Europe*, 4 vols (London: Bloomsbury, 2009-2014).

[24] Gillian Beer, *Open Fields: Science in Cultural Encounter* (Clarendon Press, 1996).

[25] Derek Attridge, *The Singularity of Literature* (London: Routledge, 2004), p. 9.

sciences based on the 'light thrown' upon humanity's origins by evolutionary thought anticipates recent, increasingly popular positivist hermeneutic approaches which in drawing on Darwinian thought treat literature as reducible to scientifically instrumental methodologies drawn from analytic psychology and evolutionary biology (*Origin*, 488).[26] I shall be examining this development in more detail later on in this introductory chapter. For now, it suffices to state that my aims and methodologies are distinct from that field of literary critical thought: I do not attempt in this thesis to unify science and the Humanities or to find in Darwin the seeds of a natural history of literature. I am driven by the conviction that the performative truth and singularity of literary art, the conceptually complex, formally virtuosic character of certain literary works, and the act of literary reading can critique and enrich scientific thought in general and Darwin's revolutionary and challenging evolutionary thought in particular.

In order to develop critical points of hermeneutic entry into the novels with which I am concerned I shall be drawing on contemporary perspectives on Darwin's thought in critical theory and philosophy. I have already begun with a reading of the impact of Darwin's evolutionary thought through the lenses of Freud and Derrida. However, I focus especially upon the work of Gilles Deleuze and responses to it, the perspective of which is often contrary to psychoanalytic and deconstructive approaches. Deleuze's work attempts to integrate Darwinian evolutionary thought into a larger philosophical project, rather than seeking to dismantle the implicit claims to truth made by his writing and work. Indeed, as Derrida's analysis itself suggests, the demand for critical philosophy to re-engage with Darwin's work, and with the discourses of biology, comes from the recognition in deconstruction itself of the failure of philosophy to do so. Deleuze's reading of Darwin, however, does not seek only to complicate representations of the human, or to re-locate the position or redefine the human in relation to its evolutionary ancestry and immanent animality. Indeed, such an attempt at redefinition would, as Derrida's intervention suggests, merely reinstitute the phallogocentrism and anthropocentrism Darwin's thesis on the immanent animality of humanity problematises. Instead, for Deleuze, Darwin offers an account of organic life which begins with difference as the immanent, ontological precondition

[26] An introduction to the field of contemporary, positivist evolutionary approaches to literary criticism can be found in Joseph Carroll, *Literary Darwinism: Evolution, Human Nature, and Literature* (London: Routledge, 2004).

for the emergence of concrete, extensive differences between things.[27] In this way, Deleuze privileges the processes that engender the human before the human itself. Through Darwin, Deleuze reorients biological science away from a representational, taxonomical, implicitly transcendent conception of species and of humanity, and towards the processes through which species and humanity emerge as contingent, ephemeral objects on which we thrust *a posteriori* representational tags.[28]

Deleuze's understanding of Darwin's work offers us a philosophical response to the definitional problem outlined by Freud and Derrida. For Deleuze, the evolutionary human can neither be understood as a cultural being capable of effacing its biological origins, nor an evolutionary automaton that operates according to fixed evolutionary laws. Instead, Deleuze sees the human as co-extensive with the dynamic process which constitutes it, a time-bound entity which is in constant, co-creative interchange with the utterances, writings, and cultural expression it is capable of producing and the material processes from which that derives. But as I hope to show, neither the psychoanalytic nor the Deleuzean perspective on Darwin exhausts the questions that arise from his evolutionary thought. Deleuze's focus on the inhuman, for example, is perhaps unhelpfully ascetic, insensitive to the suffering which characterises humanity's inescapable station in nature; while the Freudian perspective is unable to eradicate the anthropomorphic delusion it decries. I view this tension as symptomatic of intractable problems addressed by Darwin's evolutionary thesis. What possibility is there for a non-anthropocentric philosophy or science whose perspective is itself rooted in the human? How can humanity's capacity for thought and reflection, and the anthropocentric illusion of centredness that it demands, stop itself from developing into a chauvinistic delusion of transcendence? Conversely, how can humanity live with a sense of its own animality, of its derivation from the impersonal forces of evolution, without assenting to the nihilistic amorality that that represents? Literary responses to Darwin's thought, I hope to show, are uniquely capable of formalising and interrogating this unresolved tension.

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[27] Gilles Deleuze, *Difference and Repetition*, trans. by Paul Patton (London: Continuum, 2004), pp. 248–249.

[28] For an examination of the 'Kuhnian shift' in classificatory biological Darwin's work brings about see Harriet Ritvo, 'Classification and Continuity in The Origin of Species', in *Charles Darwin's The Origin of Species: New Interdisciplinary Essays*, ed. by David Amigoni and Jeff Wallace (Manchester: Manchester University Press, 1995), pp. 47-67.

Literature: 'science with an addition'

Contributing in the pages of *The New Review* to a symposium on the subject of "The Science of Fiction" (1891), Thomas Hardy offers a meditation in the relation of art to science.[29] He affirms the primacy of imagination and pleasure in the practice of creating of literary art (which he calls both 'fiction' and 'story-telling'), and offers a critical appraisal of the supposed superiority of empirical science and its pretence to comprehensive objectivity. Story-telling, he contends, is not a scientific endeavour; fiction cannot be comprehensive in its outlook nor certain in its conclusions. Attempts at scientifically realist literature may be 'admirable' but ignore the fact that no single story is able to represent life in its totality. Moreover, Hardy argues, the notion of a scientifically realist literature – a literature of 'copyism' – over-estimates the objectivity and finality of scientific knowledge.

Although he criticises the idea that literature can incorporate without friction the methodologies and objectives of science, Hardy suggests we relinquish the notion that fiction and science are hermetically discrete practices. 'Art', he writes, 'is science with an addition', and he affirms that 'since some science underlies all Art, there is seemingly no paradox in the use of such a phrase as 'the Science of Fiction''.' For Hardy literary art is neither reducible to what he designates as the scientific pursuit of 'comprehensive and accurate knowledge of realities', nor is it opposed to scientific practice and discourse.[30] Rather, he suggests, art is an addition – something extra – which supplements the supposedly complete vision of the world offered by science.

This sense of the supplementary character of literary art and its relation to scientific thought nourishes my literary critical ethos in this dissertation and in the following paragraphs I elaborate on it further. Hardy acknowledges that science is concerned with the ideals of objectivity, exhaustive detail, and the codification of 'things as they really are'; and that science furnishes the literary author with certain materials, a knowledge of natural phenomena, which the author can productively deploy in her fiction.[31] But this ideal conception of science ends, he argues, the moment the 'constructive stage is entered upon', that is, the very instant the act of 'story-telling' begins. Story-telling for Hardy is defined by artifice, and is opposed in

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[29] Thomas Hardy, 'The Science of Fiction', *The New Review*, 4 (1891) in Thomas Hardy, *Thomas Hardy's Public Voice: The Essays, Speeches, and Miscellaneous Prose*, ed. by Michael Millgate (Oxford: Clarendon Press, 2001), pp. 106-111.
[30] Hardy, 'The Science of Fiction', p. 106.
[31] Hardy, 'The Science of Fiction', p. 106.

every sense to the ideals of science. Successful fiction functions through narrative manipulation and deliberate omission, not comprehensiveness and accuracy. It is driven not by a drive for knowledge but by 'the labour or pleasure of telling a tale'.[32] Should science ever become selective, manipulative, or imbued with affect, Hardy suggests, it would itself become a form of fictional discourse. Hardy's analysis here is symptomatic of what George Levine sees as a pervasive epistemological concern in Victorian culture: 'from what source does our knowledge derive? And how can we trust it?'[33] Hardy suggests that, as the 'art' upon which fiction is founded becomes active the moment scientific thought materialises itself, science is itself at least as untrustworthy as the story-telling through which it is articulated.

What Hardy calls art's 'addition', then, is also subtraction: it shows science's avowed objectivity to be illusory and its discursive actuality to be riven with the limitations and unreliability of affect and narration. At the same time, and for the same reason, art enhances the scientific vision of the world, supplementing science's objectivity with affect and the artifice with which it evokes, as Hardy puts it, a sense of both the 'ethereal' and the 'intrinsic'.[34] Literary art is an excess: 'a surplus, a plenitude enriching another plenitude'.[35] And literature also, in the same moment, exposes the ideal of totalising scientific truth as a material fallacy: that art can add to and enhance the work of science reveals scientific truth to be inherently incomplete. The 'constructive' act of story-telling, which by Hardy's analysis is the condition of possibility of science, is also a de-constructive act: fiction's plenitude threatens to undermine the fullness of scientific truth, revealing it as incomplete and open to addition.

Hardy's essay offers a suggestive illustration of how the creative, supplementary nature of literary writing undermines the science's pretensions to objectivity. Alluding to the quasi-scientific literary Naturalist theory of his contemporary, Émile Zola, Hardy argues that the French author 'in his work on the Roman Experimental [sic], seems to reveal an obtuseness to the disproof conveyed in

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[32] Hardy, 'The Science of Fiction', p. 107.
[33] George Levine, *Realism, Ethics and Secularism: Essays on Victorian Literature and Science*, (Cambridge: Cambridge University Press, 2011), p. 7.
[34] 'To explain why such a keen eye for the superficial does not imply a sensitiveness to the intrinsic is a psychological matter beyond the scope of these notes; but that a blindness to material particulars often accompanies a quick perception of the more ethereal characteristics of humanity, experience continually shows'; Hardy, *Thomas Hardy's Public Voice*, p. 109.
[35] Jacques Derrida, *Of Grammatology*, trans. by Gayatri Chakravorty Spivak (Baltimore: Johns Hopkins University Press, 1998), p. 144.

his own novels'.[36] In Hardy's reading, what Zola proposes in his prescriptive tract on the tenets of literary Naturalism, *Le Roman expérimental* (1880), is a paradoxical impossibility – the practice of an artless literary art. Zola espouses a form of fiction based on advances in scientific naturalism which purport to offer a comprehensive mimetic image of human nature and its socio-historical circumstances.[37] The contradiction Hardy identifies is that Zola's fiction, by definition as well as in practice, engages in the very types of omission, manipulation, and appeal to emotion that are ostensibly inimical to the practice of ideal scientific inquiry. Thus at the very moment of this scientific literature's enunciation, the moment it shifts from being an idea to a form of writing, it reveals its condition of existence to be artificial and literary.

Hardy's analysis offers us a more generous reading of the relation of Zola's scientistic literary theory to his fictional edifice than has often been granted to the French literary Naturalist.[38] Hardy recognises that Zola's melodramatic, often violent, and sometimes oneiric fiction — his 'powers in story-telling' — serve to put into question the theory of comprehensive literary mimesis he espouses. Alluding to the work of the experimental physiologist Claude Bernard, Zola proclaims that the novel should seek to construct the author as a 'photographer of phenomena [whose] observation should be an exact representation of nature'[39]. But, as Hardy suggests, the effect of his novels is to re-affirm the centrality of artifice to scientific realism and the unreliability of observation, and thus to point at the pretence of this realism. Hardy's analysis is analogous to J. Hillis Miller's conception of the auto-critical nature of the realist novel and its relation to history. Miller points out that the novel's tradition of presenting itself as history, to confirm its 'solid basis in pre-existing fact', functions by concealing the 'baseless creativity' associated with fiction[40]. But instead of confirming

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[36] Hardy, 'The Science of Fiction', p. 107.
[37] Émile Zola, *Le Roman expérimental, Chronologie et préface par Aimé Guedj* (Paris, Garnier, Flammarion, 1971); Émile Zola, *The Experimental Novel, and Other Essays*, trans. by Belle M. Sherman (New York: Cassell Publishing Co, 1893).
[38] Susan Harrow notes that the literary critical tradition has not been kind to Zola since his death and that his literary work is often condescendingly thought to be 'too *lisible*' with all the attendant negatives in a field of study that often fetishises complex, *writerly*, theoretically demanding works of modernism and postmodernism. Of particular note here for its relation to Zola's scientism is Henry James's assertion that Zola's work represented 'the most extraordinary *imitation* of observation', a point that makes Zola's writing more complex and not less. Susan Harrow, *Zola, the Body Modern : Pressures and Prospects of Representation* (London: Legenda, 2010), p. 24; *The Art of Criticism: Henry James on the Theory and Practice of Criticism*, ed. by William Veeder and Susan M. Griffin (Chicago: Chicago University Press, 1986), p. 446.
[39] Zola, p. 7.
[40] J. Hillis Miller, 'Narrative and History', *ELH*, 41.3 (1974), 455–73 (p. 457).

the objectivity of history to which it lays claim, the novel puts into question the basis of this objectivity by emphasising how the constructive act of story-telling is common to both.

Hardy's conception of literature as addition proposes, then, that both science and art are united in being artificial. In seeking to recuperate an essential, authentic nature, science and literature reveal nature not to exist in an authentic or essential form at all, but function as 'that which supplies Nature's lack, a voice that is substituted or the voice of Nature'.[41] But Hardy also suggests that the specific discourses of literary art and science are functionally distinct, and that the stories of literature have a singular, even ineffable supplementary agency. 'Nothing but the illusion of truth can permanently please', writes Hardy, affirming the essentially synthetic ontology of knowledge. But, 'when the old illusions begin to be penetrated', as science seeks to do, 'a more natural magic has to be supplied.'[42] Science, Hardy suggests, is aimed at the demystification and penetration of illusion. Scientific writing attempts to annihilate illusion by erecting an objective theoretical edifice which acts as an image of nature and obscures its own status as image at the same time. In contrast, the 'natural magic of art' does not conceal its own artificiality, but creates illusion for its own sake, which in its depiction of 'realities' points to itself *as* depiction.

Here again, Hardy on science anticipates Hillis Miller on history. Miller points out that while historians have always acknowledged and struggled with the essentially artificial nature of writing history, the lure of totalising truth persistently 'bewitches' historians and novelists who model their work on historical narrative, leading them to try and repress the inherent groundlessness of their enterprise. Hardy's reading of Zola and the aspirations of scientific literary realism casts the transcendent, final knowledge offered by science in the same role. Scientists and literary authors influenced by science, like historians, are constantly coerced by the temptation to penetrate the 'old illusions', to disabuse their readers of mythical knowledge, and convinced by their attempts. Literary art, however, works constantly to defeat this pretence, pointing to what Hillis Miller elsewhere calls literature's 'exorbitant and large scale use of the propensity words possess to go on having meaning even in the absence of any ascertainable, phenomenally verifiable, referent'.[43] But such is the lure of this referent that it survives seemingly all assaults. Hillis Miller, reversing Hardy's rhetoric, notes

[41] Derrida, *Of Grammatology*, p. 215.
[42] Hardy, 'The Science of Fiction', p. 108.
[43] Hillis Miller, *On Literature* (London: Routledge, 2002), p. 19.

how the 'system of assumptions' about referential groundedness 'tends magically to weave itself in a new form even when it has been deliberately abolished'.[44] The interplay between science and literature, then, is a constantly reproduced space between two different magics, two contrary agencies 'endless renewed, endlessly defeated': the destructive construction of literary art and the persistent rebirth of the artless construction of scientific knowledge.[45]

Hardy's critique of Zola as well as Hillis Miller's conception of the relation of history and literature foreshadow Gilles Deleuze and Felix Guattari's analysis of art in the final chapter of *What is Philosophy?*. Alluding to D.H. Lawrence's thinking on the power of poetic writing (for whom Hardy's fiction served as the basis of his most concerted reflections on literature), they posit that the effect of poetry is to disrupt regimes of common sense that have become sclerotic and oppressive. Art, they state, creates an interval in the texture of certitude, a rip in the 'umbrella that shelters [us] and on the underside of which [we] draw a firmament and write [our] conventions and opinions'. [46] This sheltering, Lawrence argues, acts as a protection against the uncertainty and danger of chaotic unknowing and of untamed perception. Recalling Freud's argument in *Civilisation and its Discontents* that the purpose of civilisation is to 'tame' the chaos of our animal instincts, Lawrence observes that to tame the formlessness of the unknown, humanity 'must wrap himself in a vision, make a house out of apparent form and stability'.[47] Science, Deleuze and Guattari suggest, is integral to this self-preservative act of intellectual edifice building. Science, they say, seeks to constitute knowledge, to create 'opinion won from chaos', even as it is drawn to the chaos it seeks to control.[48] This form of stable, referentially rooted knowledge is crucial to human life — repression and forgetting are fundamental to the project of living. But just as important is the constant interchange between this scientific production of order and the exorbitant, self-effacing, autocritical discourse of literature; between the repressions of science and the chaotic polysemy and affective power of literary art.

My readings of Zola, Hardy, Butler, Huxley, and Houellebecq are driven by this conception of literature and its relation to scientific writing and thought. It is for this

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[44] Hillis Miller, 'Narrative and History', p. 461.
[45] Hillis Miller, 'Narrative and History', p. 462.
[46] Gilles Deleuze and Félix Guattari, *What Is Philosophy?*, trans. by Hugh Tomlinson and Graham Burchill (London: Verso, 1994), pp. 203–4.
[47] D. H. Lawrence, *Introductions and Reviews*, ed. by N. H. Reeve and John Worthen (Cambridge: Cambridge University Press, 2005), p. 109.
[48] Deleuze and Guattari, p. 205.

reason that the fact that Darwin influenced these authors is only the starting point or organising principle of this work. My objective is to elaborate how these works enact the dynamic of 'science with an addition', to demonstrate how the formal, thematic, and narratological features of these works allow us to engage critically as well as positively with Darwin's thought, confirming its conceptual richness without attributing transcendent truth to its laws.

Darwinian Literary Criticism

Hardy was an avowed supporter and reader of Darwin, but his prescient, quasi-deconstructive conception of literature and science in "The Science of Fiction" is markedly distinct from other disciples of evolutionary thought in the nineteenth century.[49] For Hardy, art has the potential to deflect, critique, and enhance the knowledge of science. But following the publication of Darwin's *The Origin of Species* and the widespread popularisation of evolutionary thought, literary critics sought to develop evolutionary, scientific modes of understanding literature, rather than elaborate how literature complicates the truth claims of science. The British critic John Addington Symonds argues in "On the Application of Evolutionary Principles to Art and Literature" (1907) that Darwin's theory of evolution can offer a natural history of the rise and fall of literary and cultural types.[50] Despite referencing Darwin's work, Symonds's literary critical evolutionism is closer to that of the popular pre-Darwinian evolutionist, Herbert Spencer, who posits that evolution (social, biological, historical) consists of a universal teleological movement from simplicity to complexity. Consequently, Symonds sees the evolution of literary typologies as beginning with a simple germ of an idea, flowering into the growth of a genre, becoming complex,

[49] Hardy's call for an understanding of the dynamic discreteness of science and literature also differentiates him from alternative contributions to the "culture wars" which defend the pre-eminence of one discipline from the encroachment of the other. For example: Matthew Arnold's defence of 'literature' in "Literature and Culture" against T.H. Huxley's defence of scientific knowledge in "Culture and Science" and the attack mounted on the weakness of the so-called 'Dionysian' relativism in the postmodern humanities by EO Wilson's call for a universal scientific knowledge in *Consilience: The Unity of Knowledge.* See David A. Roos, 'Matthew Arnold and Thomas Henry Huxley: Two Speeches at the Royal Academy, 1881 and 1883', *Modern Philology*, 74.3 (1977), 316–24; Edward O. Wilson, *Consilience: The Unity of Knowledge*, (New York: Knopf, 1998); and for a useful review of historical positions in the two cultures debates, including the Leavis-Snow debate and the recent Sokal controversy, see Martin Willis, *Literature and Science: A Reader's Guide to Essential Criticism*, Readers' Guides to Essential Criticism (London: Palgrave Macmillan, 2015), pp. 1–10.

[50] John Addington Symonds, *Essays: Speculative and Suggestive*, 3rd edn (Waterloo Place, London: Smith, Elder, 1907).

decaying, and becoming extinct, and ultimately progressing towards the increasing complexity of all literary work. In France, Symonds's work was anticipated by Ferdinand Brunetière who espouses a markedly similar methodology in *L'Évolution des genres dans l'histoire de la littérature* (1890). Brunetière alludes to the advances made by Darwin in the field of biological classification, and uses this as the basis to trace the growth, decay, and extinction of a range of literary genres in European history.[51] For both Brunetière and Symonds, art does not trouble or complicate the goals of science or evolutionary natural history. On the contrary, science offers the possibility of bringing under control the complexities of artistic form and its development in history.

Examining the role of metaphor in the history of literary criticism, David Fishelov points out that both Brunetière and Symonds make a number of errors in relation to biological evolution, chief among which is their confusion of ontogenesis with phylogenesis, conflating the lifecycle of an individual organism (germination, growth, decay, and death) with that of the evolutionary development of an entire species (phylum).[52] More significantly again, these theories propose a teleological, progressive conception of literary form whereas Darwin's theory of evolution by natural selection proposes a chance-ridden, non-progressive evolution, the telos of which is simply survival. Darwin emphasises in *The Origin of Species* that certain species, 'living fossils', could successfully endure without changing or becoming extinct for very long periods. Complexity in evolution is thus a contingent development, and success in evolution is not equivalent to complexity.[53] Whatever their conceptual divergence from Darwin's theory, both these examples represent the way in which Darwinian evolution prompted literary critics to integrate its mechanisms in their modes of reading. The conceptual errors they make can be read as part of a larger discourse in literary criticism which uses "evolution" – and not Darwin's thought specifically – to trace the development, classification in history, and interaction of literary forms, genres, and tendencies. But what distinguishes Symonds and Brunetière from the general "evolutionary" tendency in literary history, derived in

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[51] Ferdinand Brunetière, *L'Évolution des genres dans l'histoire de la littérature: leçons professées à l'École normale supérieure* (Paris: Hachette, 1890).
[52] David Fishelov, *Metaphors of Genre: The Role of Analogies in Genre Theory* (Penn State Press, 2010), p. 24.
[53] Darwin writes: 'As the variability of each species is an independent property, and will be taken advantage of by natural selection, only so far as it profits the individual in its complex struggle for life, so the degree of modification in different species will be no uniform quantity' (*Origin*, 258)

part from Hegel, is simply their affirmation of their work as an extension of Darwin's work, even if in name only.[54] This is a confirmation of the cultural capital associated with Darwin's work as well as the power of his name as a signifier for a certain type of scientific materialist rigour.

Symonds, at least, recognises the risk involved in grafting a literary critical project onto a scientific one, and admits his work is speculative and not definitive. His project is part of a broader call for literary criticism to espouse a materialism consonant with Darwinian naturalism, and to relinquish the idealist practice of assessing literature in relation to the 'ambitious flight of ideal construction'.[55] But despite his intentions, Darwinian evolution in Symonds's as well as Brunetière's approach is an objective methodology to be wielded and applied to literature, not a mode of thought that is itself complicated by the culture each seeks to examine and *vice versa*. Implicitly, this constructs a strict delineation between Darwin's thought, seen as objective science, and literary art, seen as its subject, despite their explicit attempts to "unify" scientific rationality with literary study.

This delineation is maintained in more recent but still incipient works on the relation of Darwinian evolution to literature, albeit in in more explicit terms. While Brunetière and Symonds still see the methods of science as integrated with those of literature, Lionel Stevenson and William Irvine argue that literature is entirely distinct from scientific writing. In *Darwin among the Poets* (1963), Stevenson recognises the influence of Darwinian theory on literature, but argues that in Darwin's exceptional case science has managed to 'penetrate' the 'ivory tower of poetry'. [56] In the same vein, William Irvine writes in "The Influence of Darwin on Literature" (1959) that Darwin's work, while greatly influential on literature should, 'in the strict literary sense', not be considered prosodic or poetic but strictly scientific.[57] Literature and science, they suggest, are distinct separate fields of thought and discourse, any communication between which is noteworthy for its divergence from this general rule.

Robert Young in *Darwin's Metaphor* (1985), examines further this implicit conviction that literature and science should be conceived as autonomous fields of intellectual endeavour. First, Young argues that certain incorrect literary

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[54] René Wellek and Stephen G. Nichols, *Concepts of Criticism* (Yale University Press, 1963), pp. 37–53.
[55] Symonds, p. 63.
[56] Lionel Stevenson, *Darwin Among the Poets* (London: Russell & Russell, 1963), p. 140.
[57] William Irvine, 'The Influence of Darwin on Literature', *Proceedings of the American Philosophical Society*, 103.5 (1959), 616–28 (p. 619).

interpretations emerge as a result of Darwin's ambiguous, metaphorical use of language. [58] But he goes on to argue that the sheer pervasiveness of theoretical inconsistency in the afterlife of Darwin's theory – interpretive distortion, inaccurate reading, creative alteration, ideological framing – poses a troubling problem: 'it is worth considering whether or not any fundamental scientific theory can be accurately represented as a pure, positivist discovery' free from the distortions of discursive transmission. More troubling still, Young suggests, is the question this poses for the 'nature of science itself'. It appears to him as if 'societies set agendas in their broad culture, including science, as part of the pursuit of social priorities and values.'[59]. Here, Young echoes Hardy's notion of literature as the supplementary element to scientific thought – science is not engendered or materialised externally to culture and literature at all, but is constituted in its cultural expression.

Young's suggestion, echoing Hardy's critique in "The Science of Fiction", marks an important shift in the way in which critics read Darwin's work. Brunetière and Symonds sought to unify literary art and scientific epistemology, but in doing so sustain the ontological division between the two by casting the former as the submissive object of the latter. Stevenson and Irvine, by contrast, do not seek to unite evolutionary and literary discourses, policing instead the boundary between the two, even as they admit to the influence Darwin's work has on literary culture. Gillian Beer's *Darwin's Plots*, regarded as a watershed for literary critical approaches to Darwin, takes up Young's argument that science is inherently cultural. Her pivotal work demonstrates how Darwin's nominally scientific writing is itself creative and literary. Working with the techniques and artifices of 'story-telling', she shows how the influence of writers like Wordsworth and Milton is manifest in Darwin's writing and thought. Beer goes on to analyse how novelists such as George Eliot and Thomas Hardy wrestled with Darwin's theories and the invention of his language.

Subsequent to Beer, critics examine what Sally Shuttleworth in her study, *George Eliot and Nineteenth-Century Science*, calls the formation of an 'inter-related network' of natural and social sciences and literature, and show how the interaction between these fields does not always follow axiomatic or logical paths.[60] Shuttleworth's work stresses how notions of uniform, continuous selfhood in Victorian fiction are

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[58] Robert Young, *Darwin's Metaphor: Nature's Place in Victorian Culture* (Cambridge: Cambridge University Press, 1985).
[59] Robert Young, pp. 121–122.
[60] Shuttleworth, p.16.

altered by a psychological imagination derived from evolutionary studies in geology and biology. Similarly, George Levine in *Darwin and the Novelists* seeks to illuminate a 'web of connection' between evolutionary science and Victorian literature.[61] His work stresses how authors ostensibly uninterested in science absorbed the scientific influence of their cultural milieu and how, after Darwin, the Victorian imagination subsisted on the thematics, images, and intimations of evolutionary science. Like Shuttleworth and Beer, Levine argues for a renewed interest in the historical and contextual materiality of reception and reading, stating that misreading and 'the impurity' of ideas is as imaginatively productive as the frictionless transmission or total rejection of Darwin's theories. More recently, David Glendening calls this milieu of literary-scientific interconnectivity and transformation an 'entangled bank': a metaphor he derives, like Beer, from the conclusion to Darwin's *The Origin of Species* which hints at the ecological complexity as well as the unity of natural and cultural life. Glendening's work, like that of Beer, Levine, and Shuttleworth, is dedicated to unravelling the historical and discursive intertextualities of literary art and Darwin's scientific thought. Like Levine and Beer, he is convinced that Darwin's theories make up an evolutionary gestalt — a powerful scientific imaginary — to which novelists continue to respond.[62]

Such is the influence of this paradigm of scholarship that it has perpetuated what George Levine calls in his foreword to a recent edition of Gillian Beer's *Darwin's Plots* the 'Darwin Industry': a widespread veneration and economical exploitation of Darwin's work as cultural capital and as a conceptual edifice. For Levine, this is merely confirmation of 'how enormously rich and fertile Darwin's thought [remains].[63] And for Darwin scholarship this has, without doubt, entailed positive results. The profusion in studies on Darwin's cultural legacy has expanded beyond the literary to illuminate in ever greater detail the influence that Darwin has on all forms of cultural expression and artistic practice. The field is now replete with comprehensive and detailed studies of Darwin's influence, and that of evolutionary thought more generally, on the Victorian age.[64] Moreover, recent studies have begun to examine how Darwin's

[61] George Levine, p. viii.
[62] John Glendening, *The Evolutionary Imagination in Late-Victorian Novels: An Entangled Bank* (Aldershot: Ashgate, 2007), p. 14.
[63] George Levine, 'Foreword' in *Darwin's Plots*, p. ix.
[64] See, for example, Martin Fichman, *Evolutionary Theory and Victorian Culture* (Amherst, NY: Humanity Books, 2002), *Evolution and Victorian Culture*, ed. by Bernard V. Lightman and Bennett Zon (Cambridge: Cambridge University Press, 2014).

evolutionary thought influences non-literary cultural production like modernist visual culture and animal portraiture, while Rae Beth Gordon offers an original analysis of the way in which the Darwinian imaginary influences the art of physical gesture in Parisian café concerts and music halls in the early twentieth century.[65] Increasingly, attention is being focused on how Darwin's work not only influences but is influenced by aesthetic theory as well as practice – a thesis which develops that of Brunetière and Symonds.[66]

However, a less productive corollary of the growth in the Darwin Industry and the general revivification of interest in Darwin in the Humanities is the return of the positivistic literary critical methodology of the nineteenth century. In recent years, a loosely affiliated group of literary scholars that self-identify as "Literary Darwinists" or 'evocritics' have sought to bring to bear a scientific naturalist synthesis of Darwin's theory of natural selection and genetics to the study of literature.[67] The fundamental critical thesis, as expressed by Joseph Carroll, is that 'all knowledge about human behaviour, including the products of the human imagination, can and should be subsumed within the evolutionary perspective.'[68] Literature, it is argued, is an 'adaptation' to the demands of natural selection and should be understood, like other adaptations, as being produced by it. The key concept is subsumption. This methodology of adopting 'knowledge' derived from Darwinian science is aimed at subsuming all other forms of critical thought, and is equally committed to the idea that all human behaviour, including literature, is subsumed by the evolutionary demands of natural selection on humanity's 'extended phenotype'.[69] It is an approach

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[65] Hugh Ridley, *Darwin Becomes Art: Aesthetic Vision in the Wake of Darwin: 1870-1920* (Amsterdam: Rodopi, 2014); Rae Beth Gordon, *Dances with Darwin, 1875-1910: Vernacular Modernity in France* (Aldershot: Ashgate Publishing, 2009).

[66] *Darwin and Theories of Aesthetics and Cultural History*, ed. by Barbara Larson and Sabine Flach (Surrey: Routledge, 2013).

[67] "Literary Darwinism" is the title given to the discipline by its *de facto* leader, Joseph Carroll, whose works have been foundational in the emergence of the critical field. See Joseph Carroll, *Literary Darwinism: Evolution, Human Nature, and Literature* (London: Routledge, 2004); Joseph Carroll, *Reading Human Nature: Literary Darwinism in Theory and Practice* (Albany, NY: SUNY Press, 2011). Brian Boyd is an example of a critic whose outlook is less strident than that of Carroll and who describes himself more modestly as an 'evocritic', but his work is still guided by the same commitment to advancing human knowledge through "Darwinian" analyses of literary works. See Brian Boyd, *On the Origin of Stories: Evolution, Cognition, and Fiction*, (Cambridge, MA: Belknap Press of Harvard University Press, 2010).

[68] David DiSalvo and Joseph Carroll, 'What Is Literary Darwinism? An Interview with Joseph Carroll', *Neuronarrative*, 2009 <https://neuronarrative.wordpress.com/2009/02/27/what-is-literary-darwinism-an-interview-with-joseph-carroll/> [accessed 1 May 2016].

[69] Richard Dawkins coined the term 'extended phenotype' to designate a broader conception of genetic influence, which takes into account a phenotype's physical traits as well as all effects a

derived from the work of the scientist Edward O. Wilson who espouses the project of 'consilience', the fusion of all forms of human inquiry under the umbrella of a rationalist, positivist, scientific epistemology.[70]

This approach has attracted numerous critiques from a variety of sources.[71] But in light of my brief account of the work of Brunetière and Symonds, the historicist critique by Vanessa Ryan is perhaps the most suggestive. Reading these neo-Darwinian critics, Ryan says, is an uncanny experience for those who also read the scientific and quasi-scientific texts of the nineteenth century from which these these neo-Darwinian ideas originate. The desire for a universal science is a distinct echo of the Victorian anxiety about epistemological trustworthiness, and the fantasy of a 'holistic' unified conception of science which is a response to that anxiety.[72] Both contemporary and nineteenth-century exponents of Darwinian literary criticism place scientific knowledge outside the clutches of discursive and historical change, and lay claim to a superior grasp of "things as they really are:.

Ryan's diagnosis of the literary Darwinian return to nineteenth-century epistemological concerns reveals an important contradiction at the heart of this critical paradigm. In *Literary Darwinism*, Joseph Carroll seeks to differentiate himself from the error-strewn analyses of his nineteenth-century predecessors. He lays claim to an authentic Darwinism which espouses a non-teleological, non-progressive

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gene might have on its external environment through behaviour. See Richard Dawkins, *The Extended Phenotype: The Long Reach of the Gene* (Oxford: Oxford University Press, 1982).

[70] Edward O. Wilson, *Consilience: The Unity of Knowledge* (New York: Knopf, 1998).
[71] Of particular note is Jonathan Kramnick's critique in *Critical Inquiry*, which introduces this approach to the literary critical community at large and opens up a lively debate in the pages of the same journal. Kramnick instead shows how the scientific assumptions upon which neo-Darwinian ideas are based are questionable, as well as how their deployment of terms like 'humanity' and 'literature' are meaningless in the light of their own evolutionary scientific paradigm. See Jonathan Kramnick, 'Against Literary Darwinism', *Critical Inquiry*, 37.2 (2011), 315–47; and for the replies to this from the Darwinian critics, see Joseph Carroll, 'An Open Letter to Jonathan Kramnick', *Critical Inquiry*, 38.2 (2012), 405–10; Brian Boyd, 'For Evocriticism: Minds Shaped to Be Reshaped', *Critical Inquiry*, 38.2 (2012), 394–404. Frank Kelleter argues that 'neo-naturalist' methods are symptomatic of the institutional precarity of literary studies and the need for a new meta-theoretical method with which to justify humanistic inquiry in 'A Tale of Two Natures: Worried Reflections on the Study of Literature and Culture in an Age of Neuroscience and Neo-Darwinism', *Journal of Literary Theory*, 1.1 (2007), 153–89; Virginia Richter offers a critique of the epistemological naivety of calls for a return to scientific empiricism in the Humanities and, thus, its inability to perceive the relations between the things naturalism seeks to study and the language it uses to do so: Virginia Richter, '"I Cannot Endure to Read a Line of Poetry" The Text and the Empirical in Literary Studies', Journal of Literary Theory, 3.2 (2009).
[72] Vanessa L. Ryan, 'Living in Duplicate: Victorian Science and Literature Today', *Critical Inquiry*, 38.2 (2012), 411–17.

mechanism of evolution in contrast with the purposive historical development and teleological progressivism of Brunetière and Symonds'.[73] But Carroll strides into a paradox here. In Carroll's view, cultural corpuses, like organs and bodies, are adaptations: instruments of evolutionary adaptation that possess fixed – if hidden – meaning which can be "reverse engineered" to reveal aspects of the evolutionary demands on its creators. But, despite their disavowal of the "mistakes" of late-nineteenth century attempts at consilience, Carroll and his followers repeat the contradictory position of their historical predecessors. By unearthing teleology at the biological level, they reinsert transcendent purpose in a world that is otherwise, by their own Darwinian standards, a purposeless world. Like Brunetière and Symonds, then, their appropriation of Darwin is fundamentally contradictory, revealing, as Hardy described Zola's Naturalism, 'an obtuseness to the disproof conveyed' in their own critical practice. Furthermore, the fact that Carroll and others maintain this position from within the discipline of literary criticism suggests that, despite the work of critics Beer, Levine, and Shuttleworth, there is still a strong desire for Darwin's work to represent a transcendent ideal – to become, in Deleuze's terms, an umbrella under which humanity protects itself. For not only does literary Darwinism allow humanity once more decisively to distinguish itself from animality by ascribing to humanity the special capacity for literary creation; it also reifies once more the anthropocentric, epistemological supremacism that Darwin's work makes problematic.

David Amigoni's recent study on the multi-faceted network of cross-correspondences between Darwinian evolution and nineteenth-century literature offers a counterforce to this tendency in literary criticism.[74] Amigoni takes as his starting point T.H. Huxley's description of the febrile scientific and cultural context from which evolutionary biology emerged, calling this discursive and societal milieu an imaginative 'hothouse'. Through a 'vital' mode of reading, of being 'alert to the widespread contestations of the sign', he traces the way this hot-house produces a productive cultural cross-pollination and philosophical fertility.[75] Amigoni's work stands out for acknowledging that studying the relations between literature and science is an creative endeavour, rather than the work of historical verification. This approach emphasises how Darwin's writing and literary art share the same milieu and

[73] Joseph Carroll, *Literary Darwinism*, p. 222.
[74] David Amigoni, *Colonies, Cults and Evolution: Literature, Science and Culture in Nineteenth-Century Writing* (Cambridge University Press, 2007).
[75] Amigoni, p.192.

feed from some of the same sources of imagination, stressing how literary culture is suffused with scientific thought and affirming the discursive and creative nature of science. But within that hot-house, a form of hybridisation takes place between the separate entities of literary writing and scientific thought, whose fertile interactions and entanglements produce new concepts and new literature, and whose 'vital' mode of being cannot be reduced to the conditions that produced it. Amigoni asks us to consider what is created, what difference is engendered, in tracing the complex genealogical connections between science and art.

Amigoni's perspective on Darwinian literary criticism is important to my own approach. As well as implicitly rejecting the notion that science can efface the artifice, history, and ideological context from which it emerged, I seek also to affirm that literary art can supplement scientific thought to engender new ways of thinking in a Darwinian manner. That Zola, Hardy, Butler, Huxley, and Houellebecq are all readers of Darwin means that my own readings of their works builds upon the work of my critical predecessors. At the same time, I shall be seeking to articulate how the literary art of these writers enhances Darwin's thinking on evolution. I shall be unfolding how their engagement with Darwin highlights the cultural, literary, historical, and ideological situatedness of Darwin's thought. But rather than restricting myself to that context, however complex, ultimately I seek to explore a vision of Darwinism as it might be.

Darwin's theory of evolution as a critical theory

I have proposed to understand the relation of Darwin's work and literary art as one of supplementary dynamism, and that we conceive of science and art as separate epistemological entities between which there exists a dynamic, mutually transformative relation. But I have not yet outlined what I understand by the term "Darwinian evolution" as opposed to evolution in general. Defining Darwin's theory of evolution is a problematic undertaking. As one of biological evolution's most prominent historians, Michael Ruse illustrates in his study of the history and development of Darwinian thought that despite frequent attempts there is no singular or recognisably homogenous paradigm of Darwinian study, nor an agreed Darwinian vision of nature.[76] Echoing Robert Young's perception of the afterlife of Darwin's

[76] Michael Ruse, *The Darwinian Paradigm: Essays on Its History, Philosophy, and Religious Implications* (London: Routledge, 1989).

theory of evolution, the philosopher and biologist Stanley Shostak argues that evolutionary naturalism, since its rise to prominence in the nineteenth century, has been plagued by representational and philosophical ambiguity: 'Indeed, one hardly knows what anyone (past or present) is talking about as evolution in the first place.'[77] If I have reached this point without having to quote Darwin at any great length, it is precisely because there are as many Darwinisms as there are readers of Darwin, as well as a tacit Darwinism held by those who have not read his work, much in the same way, as Gillian Beer and Virginia Richter argue, that Freudianism is a tacit, if diffuse, theoretical entity which has become unmoored from Freud's writings.[78]

To make the endeavour of defining "Darwinism" and "Darwinian evolution" still more complex, these terms are themselves contested signifiers with shifting meanings depending on historical context, ideological perspective, or epistemological position. If "Darwinian" is usually considered to be an "authentic" claim to Darwin's theory of evolution, George Levine points out that the "ian" suffix both alerts readers to be less certain about its authenticity and warn us against the certainty of those that wield it.[79] Individualism, eugenics, social progress, competition, 'industrial and monopoly capitalism': each of these, Levine argues, seems to be legitimised by Darwin's name, and sometimes with justification. Further complication arises with the category of "Social Darwinism", the rise to prominence of which can itself attributed to incompatible social theories and practices, ranging from eugenic theory to the altruistic, communistic evolutionary theory of Pyotr Kropotkin.[80] Assuming the "social" modifier of this term indicates that moving Darwin's work from the purely biological to the social arena is not wholly compelling either, for, as Adrian Desmond shows, Darwin's theory of evolution cannot be extricated from socio-political hothouse of reformist politics that surrounded its genesis.[81] It is for this same reason that Robert Young insists that, Darwinism, from its inception, is already social.[82]

Conceptual, historical, and terminological ambiguity is only problematic,

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[77] Stanley Shostak, *Evolution of Sameness and Difference* (Boca Raton, FL: CRC Press, 1999), p. 211.
[78] Richter, p. 1; Beer, p.3.
[79] George Levine, p. 10.
[80] See Pyotr Kropotkin, *Mutual Aid: A Factor of Evolution*, ed. & trans. by Paul Avrich (New York: New York University Press, 1972).
[81] Adrian Desmond, *The Politics of Evolution: Morphology, Medicine, and Reform in Radical London* (Chicago, Ill: University of Chicago Press, 1992).
[82] Robert Young, 'Darwinism Is Social', in *The Darwinian Heritage*, ed. by David Kohn and Malcolm J Kottler, 1985, pp. 609–38.

however, if ambiguity is conceived as a distortion of a pure or essential version of Darwin's science. As the very notion of supplementarity suggests, there is no unmediated form of Darwinism to be found. There can only be a multiplicity of versions or iterations of Darwin which themselves reconstitute something which is itself an iteration. The auto-critical dynamics of literary story-telling, therefore, seem already to be inscribed within the discourse of "Darwinian evolution" insofar as it announces itself as a self-evidently artificial construction: a polysemous signifier with no singular referent with which to stabilise its meaning.

In the conclusion to the *The Origin of Species*, Darwin describes his text as 'one long argument', indicating the rhetoric involved in presenting the mass of evidence he adduces to convince his readership of a single idea (*Origin*, 359). But the future reception of Darwin's theory – as I show in Chapter 1 in particular – could be described in the same way. Despite the certainty expressed by some of its practitioners, "Darwinism" is not a field of consensus, but of dissent and disagreement. One of literary art's abilities is to address this terminological and conceptual insecurity. Each novel and novelist that I read in this thesis presents a distinctive reading of Darwinism and stages a dialogue between different versions of Darwin. In this way, literature gives life to the shifting meaning of Darwinian thought by staging its contested ideological valences, creative extensions, and philosophical speculations, offering complex and dialectical views of Darwin's thought, rather than homogenous images of his science.

However, it is possible to give a broad outline of the main elements of Darwin's theory of evolution, while keeping in mind the provisionality of that representation. Indeed, what is considered to be the the central concept in orthodox iterations of Darwin's theory of evolution can itself be read as a critique of mimetic realism. Darwin's major contribution to scientific naturalism in *The Origin of Species* is to introduce a materialist mechanism with which to account for the evolution of organic life. Darwin argues that life, and the abundant varieties of life and species that constitute it, is the product of the constant variation of organic individuals, their competition for survival, the extinction of certain forms, the reproduction of others, and the hereditary continuation of successful varieties that creates distinctive species:

> As many more individuals of each species are born than can possibly survive; and as, consequently, there is a frequently recurring struggle for existence, it follows that any being, if it vary however slightly in any manner profitable to itself, under the complex and sometimes varying conditions of life, will have a better chance of surviving, and thus be naturally selected. From the strong principle of inheritance, any selected variety will tend to propagate its new and

modified form. (*Origin*, 5)

This principle seeks to explain how distinct biological species emerge, become differentiated and evolve over time, and how hereditary transmission is powered by the material mechanism of what Darwin calls 'the struggle for life' or 'the struggle for existence' (*Origin*, 63). As Shostak puts it: 'Natural selection is ordinarily supposed to power evolution by sifting variations in life's forms through an environment filter. The filtrate evolves; the sediment expires.'[83] To say that this idea has been influential on the natural sciences is to is to commit a serious truism. However, far from offering science and philosophy the possibility of recuperating a more accurate picture of reality, or constructing a fixed picture of nature, Darwin's theory disrupts the certainties of representation. Natural selection posits life not as a thing, but as a shifting, inessential entity constituted by processes of variation, competition, death and hereditary transmission.

This understanding of Darwinian evolution is fundamental to the readings I perform throughout this dissertation of literary responses to Darwin's work. Natural selection, I shall demonstrate, offers us an essentially unfixed and dynamic picture of the natural world, and in that way is conceptually allied to a philosophy that is critical of representation. The shift in the natural sciences from a representational paradigm for natural science to a dynamic one is usually associated with Michel Foucault's historical analyses of shifts in the epistemological terrain of the human sciences. But I shall instead be working with the work of Gilles Deleuze to further illuminate the image of nature that Darwin offers in his theory of evolution. In *The Order of Things,* Foucault singles out the work of the French naturalist George Cuvier as playing a crucial role in the shift from representational science to a dynamic model of nature; the work of Darwin is notably absent.[84] In contrast, Deleuze in *Difference and Repetition* affirms that Darwin's theory of natural selection, not just Cuvier's work, that works to revolutionise biological science, overturning transcendent, taxonomical fixity in modes of conceiving of the natural world, and replacing it with an immanently active, materialist model of the creation of species. Deleuze argues that this points scientific naturalism towards a vital form of 'difference'.[85] According to Deleuze's conception of

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[83] Stanley Shostak, *Evolution of Sameness and Difference* (Boca Raton, FL: CRC Press, 1999), p. 231.
[84] Michel Foucault, *The Order of Things,* [translator unlisted] (Routledge, 2012).
[85] Gilles Deleuze, *Difference and Repetition*, trans. by Paul Patton (London: Continuum, 2004), pp. 248–249.

difference, the taxonomy of natural science and in all other discourses perpetrate transcendental illusions which organise organisms according to relations of identity or resemblance, and subjugate the difference of each entity to larger timeless categories. For Deleuze, Darwin's theory of natural selection releases the notion of 'difference in itself' from its transcendental constraints, by indicating that processes of differentiation precede differences themselves, and that consequently, difference is an immanent pre-condition for life as such. Darwin's work on natural selection, Deleuze writes, asks not how species come to be different, but 'under what conditions small, unconnected, or free-floating differences become appreciable, connected, and fixed differences'.[86] For Deleuze, the processes of natural selection work in concert with the multiple processes of individuation and emergence that inhabit 'difference'. On both a conceptual and discursive level, then, Darwin's thought – and Darwin's writing – asks its reader to relinquish a desire to stabilise the natural world with representation but also to look to the processes that both create representations and natural life and ensure their shared provisionality.

Deleuze's reading of natural selection's revaluation of the nature of difference informs the exploration I conduct, in following chapters, of how literature articulates a dynamic picture of Darwin's thought. In addition, I draw upon the work of Elizabeth Grosz, who elaborates Deleuze's reading of Darwin to undertake a reassessment of Darwin's theory of evolution in a feminist light. For Grosz, Darwin 'not only developed the theory of natural selection into a scientific research paradigm of unparalleled fruitfulness and success for nearly a century and a half, [but] also produced a philosophical framework whose resonances have still not been properly understood, even today'.[87] Grosz takes up Deleuze's understanding of natural life through the prism of Henri Bergson's biological vitalism and argues that Darwin brings duration into the thinking of life: transcendent categories of species are replaced with durational, time-bound entities emerging from the present and dissolving into the future. Consequently, like Deleuze, Grosz argues that nature 'in spite of its scientific reduction to closed systems operating according to predictable laws, also carries, as it were in secret, duration, flux, becoming, at its very core'.[88] For Grosz, this has implications for

[86] Deleuze, *Difference and Repetition*, p. 248.
[87] Elizabeth Grosz, *The Nick of Time: Politics, Evolution, and the Untimely* (Crows Nest, NSW: Allen & Unwin, 2004), p. 18-19.
[88] Elizabeth Grosz, *Becoming Undone: Darwinian Reflections on Life, Politics, and Art* (Duke University Press, 2011), p. 46.

theorising feminist emancipation beyond the identity politics of difference. She argues that a properly radical feminism must register materiality and the biological, but without capitulating to the view that Darwinian evolution imposes an exhaustive description of the natural world or that it pre-determines all possible action. Natural selection's dismantling of fixed, essential nature by itself, however, does not suffice, for it does not address the question of sexuality or reproduction. To complete her elaboration of a poststructural, feminist Darwin, Grosz turns towards Darwin's other major if lesser recognised contribution to evolutionary biology: sexual selection.

Sexual selection, alongside natural selection, is the other main concept from Darwin's work with which I shall be engaging in this dissertation. Sexual selection, Darwin writes, 'depends on the advantage which certain individuals have over other individuals of the same sex and species, in exclusive relation to reproduction (*Descent*, Vol. 1, 256). Traits which have no immediate bearing on an organism's capacity to survive in the 'struggle for life' are developed in sexually dimorphic species in a competition to attract mates and to gauge attractiveness: 'weapons of offence and the means of defence possessed by the males for fighting with and driving away their rivals [...] organs for producing vocal or instrumental music [...] glands for emitting odours' (*Descent*, Vol. 2, 257-258). Evolution, therefore, consists of two separate but interrelated processes: a selection process for survival based on chance, and a selection process for reproduction based an organism's capacity to attract and be attractive.

The recognition Grosz gives to sexual selection is key to my literary critical work in this thesis. Implicitly drawing further upon Deleuze's argument in *Difference and Repetition* that Darwin's work allows us to picture natural life as being defined by irreducible individual difference, Grosz continues to apply this logic to sexual reproduction. 'Individual difference, Deleuze says, 'finds a natural cause in sexed reproduction: sexed reproduction as the principle of the incessant production of varied individual differences'.[89] This concept of sexed reproduction as an engine of difference is key in Grosz's work, allowing her to construct a dynamic relation between sexual reproduction and natural selection, and a feminist concept of biological reproduction where difference designates not the only differences between individuals or sexes, but the immanent possibility of transformation. The competition of sexual selection, she argues, does not only facilitate the elaboration of irreducible difference through sexual reproduction. Purely sexual bodily features and the relations they facilitate, such as

[89] Deleuze, *Difference and Repetition*, p. 259.

those described by Darwin in *The Descent of Man*, supplement survival, derailing the instrumentality of the exigencies of pure survival with desire, attraction, and pleasure. For Grosz, this allows us to read sexual selection as the creation of forms of entirely contingent cultural life and difference in tension with the mechanics of natural selection. It is in sexual selection, Grosz argues, in the erotic and creative lives of animals and humans, that culture and biological merge in dynamic co-creation.

The dynamic picture that Grosz sketches of Darwin's thought, evolution as a relation between the mechanical dynamics of natural selection and the contingencies of desire and expression, is particularly important to my reading in Chapter 2 of the work of Thomas Hardy. Hardy's fiction, I argue, anticipates Grosz's conception of an anti-essentialist, but physiologically rooted form of sexual creativity. More generally, Grosz's methodology, as well as that of Deleuze, is key to the critical ethos I seek to bring to bear on the work of Darwin. For Grosz, Darwin's work is both a powerful explanatory instrument for the natural sciences and, for that precise reason, should be the subject of transformative and creative interpretations which both critique the essentialist, reductive uses of that tool and elaborate original, poststructural conceptions of difference in dialogue with evolutionary thought.

However, Darwin's work is rarely read in this way. Difference is, more often than not, subjugated to sameness; life as a process is ignored in preference for life as a thing. Shostak again:

> In the epistemology of life [and the life sciences], nothing ranks higher than sameness for communicating, especially communicating ideology with conviction. As a consequence, many patently absurd assertions about life go unchallenged in "ordinary" science and are only elevated in "revolutionary" science. [...][90]

"Ordinary" science, he argues, has largely become concerned with a naively realist mode of ordering the world and with a reductive conception of how human nature is determined by biology. Paradoxically, anthropocentric scientific realism returns through Darwin, Shostak argues, in order to utilise the insights of natural selection for instrumental purposes and the protection of human interests, particularly through profit-making biological commerce, and the collusion between those industries and the state in the interest of biopower. The most visible example is the recent Human Genome Project (HGP) which mobilises the modern evolutionary synthesis — natural selection combined with Mendelian genetics — to provide a more accurate picture of

[90] Shostak, p. 39-40.

"human nature" through genetic mapping. This provides companies and states with supposed solutions to genetically transmitted illnesses as well as "improving" human nature through developing the possibility of so-called "designer babies" through genetic profiling.

Shostak's characterisation of "ordinary" or orthodox science suggests that the literary Darwinian paradigm espoused by Joseph Carroll and others is not an aberration in literary critical contexts, but a symptom of the general ethos in institutionalised Darwinian science. This is a thesis supported by Hilary and Steven Rose who assert that both the human sciences and the Humanities are now characterised by a widespread deference to contemporary genetic determinism and reductionism.[91] Ever since Darwin, they argue, science has sought to explain identity with evolution, rather than examine how evolution anticipates the incoherence of human identity.[92] Moreover, these forms of essentialist, reductive, and deterministic scientific ideologies owe much of their success to the cultural capital of Darwin's name and the theory associated with it. This view is shared by Bruno Latour who sees Darwin as the 'Father of the Church' of "ordinary science", a replacement for the figure of God in secular culture, and the transcendental, representational coordinates of contemporary Darwinian discourse as a symptom of this substitution.[93] The task of reading Darwin creatively, through literary art's engagement with his thinking, in such a light appears as nothing less than a form of heresy. But this heresy can take two forms: working to dismantle the canonicity of Darwin's work; and rendering productive its conceptual contribution to human thought. In what follows I hope to illustrate how literature can enact this heretical mode of thinking, productively, critically and creatively.

Evolution as 'the war of nature'

Howard Caygill concludes his analysis of Deleuze's reading of Darwin by stating that, in focusing too closely on the notion that Darwin's theory of natural selection ratifies the ontological primacy of 'difference in itself', Deleuze ignores the brutality of the processes of selection through which difference is distributed.[94] This critique is echoed

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[91] Hilary Rose and Steven Rose, *Genes, Cells, and Brains: The Promethean Promises of the New Biology*, (London: Verso, 2014), p.277.
[92] Rose and Rose, p. 22.
[93] Bruno Latour, 'Will Non-Humans Be Saved? An Argument in Ecotheology', *Journal of the Royal Anthropological Institute*, 15 (2009), 459–75 (p. 467).
[94] Howard Caygill, 'The Topology of Selection: The Limits of Deleuze's Biophilosophy', in *Deleuze and Philosophy: The Difference Engineer* (London: Routledge, 1997), pp. 149–62.

by Peter Hallward who, in his study on immanence and creation in Deleuze's philosophy, accuses its 'constructivism' of being blind to the material effects of Darwinian and Marxist forms of biological and historical change.[95] Both readings hint at the affective, lived experience of the Darwinian world: violent, deterministic, characterised by relentless struggle. One of the most pervasive and influential readings of Darwin's theory of natural selection is not merely that natural selection determines and exhausts the behaviour of organisms, but that it prescribes only violent, brutal competitive relations between individuals in the natural and social world.

This view of Darwin's theory is widespread and permeates readings of works by Thomas Hardy as well as Émile Zola, whose novels are often thought to be symptomatic of a specifically Darwinian pessimism. For some critics, Hardy's so-called "tragic" novels were the products of a post-Darwinian world devoid of transcendent meaning, and his pessimism is directly linked to the destructiveness of Darwinian nature and its indifference to human life.[96] Similarly, Zola's work is said to emerge from a similar crisis of pessimism in the European imaginary of which Darwin's work was a central catalyst.[97] Taken together, these novelists, it is argued, offer us a vision of life and nature which is dominated by struggle and violence, where the suffering this generates is unredeemable by any transcendent agency or form of consolation. This reading of Darwin's work is not unwarranted and, while I have already outlined a critical and positive vision of how Darwin allows us to rethink difference and biology, in the following sections I elaborate the cruel vision of nature more commonly associated with Darwin's theory of evolution, discuss some of its historical origins, and begin to indicate the type of responses it engenders.

At the conclusion of *The Origin of Species*, Darwin writes: 'from the war of nature, from famine and death, the most exalted object which we are capable of conceiving, namely, the production of the higher animals, directly follows. (*Origin*, 490)' Life is borne of death; nature is at war. Although Darwin does not describe in detail the effects of this war upon humanity in this book, a suggestive section in *The*

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[95] Peter Hallward, *Out of This World: Deleuze and the Philosophy of Creation* (London: Verso, 2006), pp. 162–163.
[96] Rıza Öztürk, *The Origin of Hardy's Tragic Vision* (Cambridge: Cambridge Scholars Publishing, 2013), pp. 11–12; Ross Shideler, *Questioning the Father: From Darwin to Zola, Ibsen, Strindberg, and Hardy* (Stanford: Stanford University Press, 1999), pp. 135–167.
[97] David Baguley, 'Zola and Darwin: A Reassessment', in *The Evolution of Literature: Legacies of Darwin in European Cultures* (Amsterdam: Rodopi, 2011), pp. 216–217; José Ortega y Gasset, *Meditations on Quixote*, trans. by Evelyn Rugg and Diego Marín (Illinois: University of Illinois Press, 1961), p. 164.

Origin hints at its socio-political and imperialist valences. Imagining himself standing amidst the ruined ecosystems of North American forests, while the indigenous people of this country were in the process of being erased out by colonial interests, Darwin speculates upon the following:

> Everyone has heard that when an American forest is cut down, a very different vegetation springs up; but it has been observed that ancient Indian ruins in the Southern United States, which must formerly have been cleared of trees, now display the same beautiful diversity and proportion of kinds as in the surrounding virgin forests. What a struggle between the several kinds of trees must here have gone on during long centuries, each annually scattering its seeds by the thousand; what war between insect and insect—between insects, snails, and other animals with birds and beasts of prey—all striving to increase, and all feeding on each other or on the trees or their seeds and seedlings, or on the other plants which first clothed the ground and thus checked the growth of the trees! (*Origin*, 75)

Here, the violence of insects feeding upon insects, of vegetation colonising empty ground, is implicitly presented as being contiguous, if not continuous, with the violence of colonial warfare and civilisational decline. The ruins of a civilisation make way for new life – the abundance of life is guaranteed by constant antagonism and death.

But warfare, famine, death, and relentless strife have been represented in the Western imaginary the natural state of being at least since Thomas Hobbes in the seventeenth century described the fundamental 'state of nature' as a 'war of all against all' and life within it as 'nasty, brutish, and short'. [98] For Arthur Schopenhauer, all life – human and animal – is characterised by inescapable suffering. In *The World as Will and Representation* (1819), he alludes to a drawing by Tischbein which depicts in parallel the children of a woman and the lambs of a mother sheep being 'snatched away'.[99] Tischbein's painting, Schopenhauer says, tells us that both human and animal inhabit a common world of relentless struggle. Thomas Malthus, an important influence on Darwin, speculates that human progress would always be undermined by a lack of resources, food, and by the 'cruel customs of humanity'. Responding to William Godwin's affirmation of the 'perfectibility of man', Malthus argues at the beginning of the nineteenth century that burgeoning human populations, basic hunger, and fundamental human baseness will always return to disrupt progress and re-entrench

[98] Thomas Hobbes, *Leviathan*, ed. by Richard Tuck (Cambridge: Cambridge University Press, 1991), pp. 88–90.
[99] Arthur Schopenhauer, *The World as Will and Representation*, trans. by E.F.J. Payne (New York: Dover, 1966), p. 310.

suffering.[100]

That Darwin's theory belongs to a genealogy of philosophical, economic, and political pessimism is a commonplace. Darwin inscribed himself in this tradition by describing the process of variation, competition, and elimination as the 'doctrine of Malthus' applied to the natural world. Numerous scholars have pointed out the similarities of outlook in natural selection to that of Schopenhauer.[101] Marx noted the both the Malthusian and Hobbesian overtones to natural selection.[102] Darwin's vision is undeniably bleak. But what differentiates Darwin's theory from his pessimistic antecedents is that, in the wake of *The Origin of Species*, the sense that suffering was immanent to life could be read as a scientific law of nature, a representation of the real. 'Darwin's speculations, based on the inductive method, have now corroborated the deductive theory of Schopenhauer's', wrote the anthropologist, David Asher, in 1871.[103] That life is driven by self-interest and riven by suffering, Asher claimed, had now been shown by Darwin to be empirically true at the level of the natural world.

Darwin's was not the first evolutionary biological hypothesis of the long nineteenth century. It arrived in a field of thought already populated by Robert Chambers' theory of cosmological evolution in *Vestiges of the Natural History of Creation* (1844), Jean-Baptiste Lamarck's theory of acquired characteristics in *Philosophie zoologique* (1809), and his grandfather, Erasmus Darwin's proto-evolutionary poems of the late-eighteenth century.[104] But Darwin was the first evolutionary naturalist to suggest that struggle without end was the cradle of life and not its unfortunate accident. Darwin was also the first to argue that evolutionary development was a wholly material mechanism. No higher creative agency participated

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[100] T. R. Malthus, *An Essay on the Principle of Population, Or, A View of Its Past and Present Effects on Human Happiness with an Inquiry into Our Prospects Respecting the Future Removal or Mitigation of the Evils Which It Occasions*, 1st American edn, from the 3rd London edn (Washington: RC Weightman, 1809).

[101] Gustav Weng, *Schopenhauer-Darwin. Pessimismus Oder Optimismus? Ein Beitrag Zur Fortschrittsbewegung* (Berlin: Ernst Hofmann & Co. Verlag, 1911); an English review and summary of this can be found in J. A. H, 'Schopenhauer-Darwin: Pessimismus Oder Optimismus', *Nature*, 85.2152 (1911), 403; David Asher, 'Schopenhauer and Darwinism', *Journal of Anthropology*, 1.3 (1871), 312–32; Arthur O. Lovejoy, 'Schopenhauer as an Evolutionist', *The Monist*, 21.2 (1911), 195–222.

[102] *Marx Engels Selected Correspondence*, ed. by S. W. Ryazanskaya (Moscow: Progress Publishers, 1965), p. 128.

[103] Asher, p. 331.

[104] Robert Chambers, *Vestiges of the Natural History of Creation* (London: John Churchill, 1844); Jean Baptiste Lamarck, *Zoological Philosophy: An Exposition with Regard to the Natural History of Animals*, trans. by Hugh Elliot Macmillan (London: 1984; repr. Chicago: University Chicago Press, 1984).

in or directed natural selection; only nature itself and the vicissitudes of material struggle engendered purposeless organic life.[105] The idea of nature as endless struggle without higher purpose found a receptive audience with significant sections of the British public for whom, Raymond Williams argues, Darwin's brutal theory of nature corresponded to their own 'daily experience of life'.[106] Schopenhauer's vision of life as struggle, the bleak struggle for survival that Malthus's theory of population growth described, as well as, Williams argues, the incessant warring of imperialist nations, could now be read as expressions of the deepest aspect of nature itself.[107] War, conflict, struggle: these were not the incidental phenomena of historical circumstance, nor the result of venal elites, unchecked capitalist competition, and European imperialist ambition. Nature was at war – and from this all other struggles flowed.

Throughout the literary critical chapters of this dissertation, I shall be referring back to this vision of Darwin's theory of 'the war of nature', particularly in my first chapter on Zola's engagement with Darwinian natural selection, but also in the second and third chapters on Hardy and Utopianism. Literary responses to Darwin, I hope to show, can stage a compelling dialogue between the Deleuzean conception of evolution as a theory of difference and evolution as a brutal process of biological warfare. But first I want to offer further historical background to these later discussions and explore how, in response to Darwin's apparent diagnosis of nature's cruelty, various theorists, philosophers, and Darwin himself speculated as to how humanity can respond to their own evolutionary fate. For prominent British theorists such as Francis Galton and Herbert Spencer, the war of nature provided paradoxical support contra Malthus for a belief in the possibility of progress and human amelioration. Galton was a proponent of eugenics: the theory that judiciously selective breeding practices could perfect the 'stock' of the human species. In *Hereditary Genius* (1869), he writes: The processes of evolution are in constant and spontaneous activity, some pushing towards the bad, some towards the good. Our part is to watch for opportunities to intervene by checking the former and giving free play to the latter."[108] For Galton, the administration of Darwin's principle of selection could ensure the perfection of the natural character of

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[105] Janet Radcliffe Richards, *Human Nature after Darwin: A Philosophical Introduction* (London: Routledge, 2005), p. 17; Daniel Dennett, *Darwin's Dangerous Idea: Evolution and the Meanings of Life* (New York: Touchstone, 1996), p. 73.
[106] Raymond Williams, *Culture and Materialism: Selected Essays*, Radical Thinkers, no.11 (London: Verso, 2005), p. 92.
[107] Williams, p. 93.
[108] Francis Galton, *Hereditary Genius: An Inquiry into Its Laws and Consequences*, 2nd edn (London: Macmillan, 1892), p. p.xxvii.

humanity. Spencer was strictly speaking a disciple of Lamarckian evolution, and thus believed that evolution was not driven by random extinction and variation but by the willed progress of individual organisms that passed on acquired improvements to their progeny. But he also argued that competition was the precondition for progress, an idea that was underwritten by Darwin's naturalisation of struggle, and nourished by nineteenth-century ideologies of the competitive individualism and free-market capitalism of which he was a proponent.[109]

Although it predated Darwin's theory by centuries and is generally pessimistic about nature's character, Hobbes's state of nature theory anticipates the more sanguine outlook of Spencer and Galton. The war of natural selection was not seen by Galton and Spencer as the naturalisation of eternal struggle, but, paradoxically, as the mechanism through which humanity could be improved by transcending its own natural conditions. Hobbes's vision of a human society deprived of the 'commodious' structures of civilisation was figured by him as a justification for further violence – the violence of the state – and its judicious use through the enforcement of law.[110] In contrast with Jean Jacques Rousseau's argument that civilisation represents a corruption of an otherwise essentially innocuous state of nature, Hobbes argues that only civilisation could manage the fundamentally malevolent character of natural being. To avoid 'continual fear, and danger of violent death', Hobbes's theory prescribed the necessity of separating humanity from the cruelty of the state of nature through the invention of a sovereign power: an autonomous enforcer of supra-natural civil law to which humanity ceded some of its more animal freedoms.[111] Spencer and Galton posit analogous, but newly bio-political modes of enforcement and control. Galton's theories of eugenics sought to shape evolutionary development with reference to a normative, ideal vision of the human.[112] For Spencer, the enforcement of free-market economics and competitive social relations ensured only the best individuals would survive the melee to create an

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[109] Mike Hawkins, *Social Darwinism in European and American Thought, 1860-1945: Nature as Model and Nature as Threat* (Cambridge: Cambridge University Press, 1997), pp. 85–86.
[110] Hobbes, pp. 88–89.
[111] Helen Thornton, *State of Nature or Eden?: Thomas Hobbes and His Contemporaries on the Natural Condition of Human Beings* (Rochester, NY: University of Rochester Press, 2005), pp. 141–144.
[112] In *Hereditary Genius* (1869), Galton wrote: 'There is nothing either in the history of domestic animals or in that of evolution to make us doubt that a race of sane men may be formed who shall be as much superior mentally and morally to the modern European, as the modern European is to the lowest of the Negro races.' Thus, Galton argued, eugenic efforts should be directed at emulating this superior 'breed' of human. See Francis Galton, *Hereditary Genius: An Inquiry into Its Laws and Consequences*, 2nd edn (London: Macmillan, 1892).

ideal society.[113] Each theorist proposed a type of self-separation, an incision in the very fabric of human evolution, through the creation of a law outside nature with which to construct a correspondingly sovereign human. To escape the war of nature, the human must separate itself from its own nature and impose a definitive break between the civilised and the savage.

This contradictory and attempt by humanity to definitively separate itself from its own animality is an important theme in my third chapter on Utopian responses to Darwin's theory of evolution. And humanity's desire to constitute itself in opposition to an animality from which they cannot escape reoccurs in different guises throughout this dissertation. But this type of response to violent anarchism in Darwin's vision is not limited to the historically contemporaneous political and social theories of British liberalism and capitalism, of which Hobbes was a founding father and of which Spencer and Galton were proponents. As I have discussed, Freud too affirmed the importance of repressing the innate savagery of humanity, but unlike Spencer and Galton was not convinced of our capacity to do so definitively.

Brett Buchanan finds an unexpected engagement with the problem of self-legislation in response to the laws of constant, all-encompassing biological struggle in the work of Emmanuel Levinas. While exploring the bio-philosophical facets of Heideggerian ontology, Buchanan alludes to a surprising aside by the French ethicist on Darwin's theory of evolution, in which Levinas argues that the idea of a being as 'attached [...] to its own being' is Darwin's critical contribution to philosophy. [114] 'The being of animals', Levinas states, 'is a struggle for life. A struggle for life without ethics. It is a question of might.' [115] Echoing Darwin's conception of human morality and Freud's notion of *Kultur,* Levinas suggests that what separates humanity from our own animality and from warfare without ethics is the fundamental concern we have for the question of being, rather than for merely unreflectively protecting or carrying out being. Without proposing a speculative account of human history, Levinas posits that

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[113] Richard Hofstadter dedicates an entire chapter to Spencer in his work *Social Darwinism in American Thought* (1944) and argues that his free-market vision of nature was well-suited to an already extant aggressively individualist ideological atmosphere in the American imaginary. See Richard Hofstadter, *Social Darwinism in American Thought*, rev. edn (Boston, MA: Beacon Press, 1955), pp. 31–50.

[114] Brett Buchanan, *Onto-Ethologies: The Animal Environments of Uexküll, Heidegger, Merleau-Ponty, and Deleuze* (Minnesota: SUNY Press, 2008), p. 48.

[115] Emmanuel Levinas and others, 'The Paradox of Morality: An Interview with Emmanuel Levinas', in *The Provocation of Levinas: Rethinking the Other*, ed. by Robert Bernasconi and David Wood (Routledge, 1988), p. 172.

the human appears at the very moment when, in ontological terms, 'the human breaks with pure being'. The human has already transcended its own nature, according to Levinas, because human ontology is constituted by an internal dividedness. The capacity to exceed our own biological imperative is engendered at the very moment we reflect upon this imperative and create an implicit ethics.[116]

Levinas's brief reading of Darwin offers us a more complex, ambivalent picture of the human under natural selection than the social theories of Spencer and Galton, and Hobbes's espousal of sovereignty. Echoing Freud, Levinas proposes that if the human is separate from the animal it is also internally divided by the twin poles of an ethics of reflection and nature without ethics. Unlike Galton and Spencer, Levinas does not affirm that this separation can be enforced, or that the invention of an autonomous law can make this cleavage. These British theorists share a belief in the supreme agency of humanity, and the possibility of separating the human from the materialism of natural selection that creates it. In contrast, Levinas states that reflection upon being-without-ethics engenders a separation between nature and the human at the moment of its unbidden occurrence. But this does not represent transcendence. For Levinas, the human animal under the regime of natural selection is a divided being, constituted not by its control over its own savage, self-interested lack of ethics but by the struggle for control that the recognition of this lack engenders: the struggle between reflection on being and the egocentric, biologically act of merely being. Echoing Derrida, Levinas suggests that the human is defined only by the performative act of reflection, and by no other transcendent marker. It is an ambivalent account of human agency: it is not that humanity under natural selection lacks agency, but that human agency – and humanity – lies in supplementing the undeniable fact of its own cruelty and animality with acts of reflection.

Although in later works, Darwin dedicated significant space to the implications of evolutionary biology for the human species, in *The Origin* he was scrupulously unspecific on this topic. As I have already alluded to, in the conclusion to the book he offers only a single a gnomic indication of the importance of his theory to the human

[116] Buchanan is suspicious of Levinas's reading of Darwin here, as it is based on a questionable interpretation of Heidegger's concept of *Dasein*. Levinas conflates *Dasein* with the living organism and '*Dasein's* concern for being' with the animal's struggle to survive. In doing so, he commits the very thing that, Buchanan argues, Heidegger wishes to avoid in his own philosophy: the conflation of a mechanical, reductive physiological understanding of the organism and its essential existence. However, Levinas's supposed misreading of Heidegger here is compelling for the way that it takes natural selection as a fact of natural life and through this develops – and enacts – a form of reflective agency. See: Buchanan, p. 48.

species: 'Light will be thrown on the origin of man and his history' (*Origin*, 488) He declines to offer any further guidance.[117] I read in the combination in that remark of discretion and affirmation – 'light *will* be thrown' – a tacit recognition of the double-edged, contradictory nature of his theory's consequences for humanity's conception of itself. Light will be thrown, but on what? Darwin's ambivalence foreshadows the wider cultural tension to which I seek in this thesis to respond. On one hand, natural selection makes a continuing contribution to natural science, biology, genetics, anthropology, psychology, geology, palaeontology, and geology and countless other disciplines. On the other hand, natural selection asks fundamental questions that the sciences seem unable to answer: how can the human construct itself as a moral subject, as an ethical being, in the image of God, as well as avow the scientific, amoral materialism of Darwin's theory? What agency or freedom is available to the human being constrained by the war of nature? And what does the act of reflection offer humanity other than a vision of its own mortality and cruelty?

The critical dialogue between Spencer, Galton and Levinas represents two distinct types of responses to these questions. The first two theorists take the supreme agency of humanity as an *a priori* assumption, thus casting our knowledge of natural selection in the role of mobilising the war of nature for human gain. Levinas suggests that a break with a 'struggle for life without ethics' comes only in the form of reflection, through the distance of thought, and consigns us to a different type of internal warfare: the struggle between our own natural savagery and our capacity to examine it. Both responses describe forms of human agency – one more commanding than the other.

But Darwin's own writing on morality seems to indicate a nihilism that exceeds the pessimism of even the relatively meagre form agency that Levinas's brief

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[117] This reticence to touch on the subject of human evolution could be the result of a combination of any number of historical and personal factors: Darwin's sensitivity to his wife's religiosity; his own conflicted faith; a desire to avoid courting undue controversy and to maintain his health, which often depended on the reception of his work; the fact that, in Darwin's eyes, this book was merely an 'abstract' of a much larger and delving project. For a biographical account of the conflicting feelings Darwin and his wife, Emma, had on religion and the strain evolution put on their relations, see Adrian J. Desmond and James R. Moore, *Darwin* (London: Penguin, 1991), pp. 487, 587; and for an account of Darwin's own conflicted faith, see Desmond and Moore, pp. 359–360. Darwin suffered immensely from stomach pain, vomiting, and physical weakness prior to the publication of *The Origin of Species*, feeling 'foolishly anxious' about the reception of his book: Charles Darwin, 'Letter 2492, Darwin C.R., to Lyell, Charles', 20 September 1859, Darwin Correspondence Project, <http://www.darwinproject.ac.uk/entry-2492> [accessed: May 12, 2016]. Darwin refers to *The Origin of Species* as an 'Abstract' in its Introduction, citing the haste with which he wrote it due to Alfred Russell Wallace's simultaneous discovery of natural selection (*Origin*, p. 5).

engagement with Darwin expresses. As I have already alluded to in this Introduction, in the second volume of the *The Descent of Man* dedicated to the evolution of "Moral Sense", Darwin argues that the morality and sympathy – the very idea of humanity – which he had observed himself in civilised and, to a degree, in "un-civilised" humans, was an incidental development of evolutionary change. Morality, like the multitude of organic species, is not a gift from a higher power. Rather, it arises as an adaptation contingent on the apparently random variation of human character and the changing social and biological conditions of the species (*Descent*, Vol. 1, 85-86). Evolutionary competition, Darwin implies, does not allow the human to exceed its fundamentally self-interested biological desire for survival. Nor does the evolution of morality authorise any sense that humanity can exert control over its own nature. Rather, the subordination of self-interest is a paradoxical expression of a species' desire to continue to survive and, thus, re-emphasis the vice grip that natural selection has on the human species.

In *The Origin*, then, Darwin in contrast with Galton and Spencer as well as Levinas and Freud is unable – or unwilling – to break with the biological materialism of his own theory. He offers humanity relief from natural selection only in the intervals between the material experience of struggle and, the final interval, the release of death. While the actual 'war of nature is not incessant', for those that fail in surviving to reproduce, 'no fear is felt, [and] death is generally prompt' (*Origin,* 79). Hobbes too distinguished the threat of constant war with the act of 'battle' itself. But he believed that, in a dominion ruled by a sovereign, the constant threat of conflict could at least be minimised through lawful violence, if unlawful acts of violence could not always be avoided. In contrast, as well as suggesting that all attempts to minimise violence are themselves a function of evolutionary self-interest, Darwin implies that consolation from this struggle only comes in death. The apparently deterministic and amoral materialism of Darwin's evolutionary thought, therefore, invites a third response to the war of nature. Spencer and Galton are sanguine and blindly anthropocentric in their co-option of natural selection to the cause of human progress. Levinas offers us a vision of an internally conflicted human being that seeks to negotiate its own alienation from nature via the very ethics that engenders this split. In contrast to Galton and Spencer's positive determinism and Levinas's indeterminate concept of the human, Darwin appears to propose an amoral determinism that allows only for nihilism.

In the following chapters, this triad of biological nihilism, supreme sovereignty,

and a human being which is caught between these two, will reoccur. Above all, I am interested in how what Levinas calls 'reflection' can be enacted by literature. At the very moment of its enactment, the emergence of an ethics through contemplation – regardless of its success or ephemerality – implies a momentary critical break from the savagery upon which it reflects. Reflection in Darwinian terms could be said to be facilitated by language, the emergence of which in humans, Darwin argues, engenders the possibility of morality. As Hardy's notion of 'science with an addition' reminds us, and as Gillian Beer's work has argued for many years, Darwin's work is itself linguistic and artistic. Darwin's writing is itself an embodiment of a form of reflection, even as it conceals that fact behind the façade of scientific objectivity *and* seeks to undermine the possibility of a morally contemplative life at all. I shall be seeking to illustrate how literary art, through its engagement with Darwin's thought, can work as critical reflection, interrogating and enhancing Darwin's theories of evolution and, in the process, confirming the sense that Darwin's work is itself an affirmation of humanity's capacity to meditate upon its own nature.

Chapter Synopsis

Chapter 1 explores Zola's *Rougon-Macquart* novels, *Le Ventre de Paris* (1871), *Germinal* (1885), and *L'Œuvre* (1886). Each appears to respond to Darwin's theory of natural selection by depicting life as a biologically deterministic war of nature. But by drawing on Deleuze's reading in the *Logic of Sense* of Zola's literary deployment of hereditary theory, I explore how Zola's preoccupation with biological determinism and violence can be read affirmatively as a picture of the epic, non-deterministic nature of evolution. As counterpoint, I offer a reading of Kristeva's psychoanalytic notion of the abject. This argues against Deleuze's positive reading of Zola on the grounds that to take perverse pleasure in human suffering is to confirm the chauvinistic, self-interested nature of humanity. Ultimately, I seek to illustrate that while Zola's reflection upon Darwinian evolution is undeniably pessimistic in relation to human life, in the very act staging and investigating the function of literary art, Zola's work can be read as a reflection upon the conflicted agency available to the evolutionary human.

Chapter 2 focuses on Hardy's novels *A Pair of Blue Eyes* (1873) and *The Return of the Native* (1878), and aims to show how they can be read in dialogue with Elizabeth Grosz's construction of Darwinian sexual selection as emancipating. First, I draw on J. Hillis Miller's and George Levine's work to discuss Hardy's "Darwinian pessimism", and

show that it feeds into a tragic conception of human sexuality, the fatal consequences of which, Hardy shows, affect women disportionately. Through Grosz's Deleuzean reading of sexual selection, I endeavour to demonstrate that Hardy's engagement with Darwin does more than challenge naturalistic and essentialist conceptions of sexuality. I argue that in Hardy's fiction female sexuality and sexual courtship can be read as contingent and creative, involving biological materiality but exceeding determinism. I seek to show how without surrendering his pessimistic vision of the natural world, Hardy affirms excess, desire, and beauty, the operations of which do emerge from biological drives but which equally confirm the unpredictability of biological life and its interaction with culture.

Chapter 3, my final chapter, explores three novels spanning the nineteenth, twentieth, and twenty-first centuries. Each novelist imagines Utopian forms of human life made possible by social, political, and technological applications of Darwinian evolutionary thought. Reading Samuel Butler's *Erewhon*, Aldous Huxley's *Island*, and Michel Houellebecq's *The Possibility of an Island,* I illustrate how each work's response to Darwin belongs to the long tradition of Utopian literature inaugurated by Thomas More's *Utopia* (1516), as well as a satirical tradition to which Utopianism is historically and aesthetically linked. Drawing on Deleuze's early essay on "Desert Islands" as a sublimation of humanity's desire for sovereignty, I link this to the work of Fredric Jameson and Louis Marin on Utopian desire. By doing so, I seek to elucidate the various ways in which each of these novels simultaneously enact and challenge the human longing to transcend evolutionary change. These novels, I argue, warn against ingenuous as well as doctrinal scientific Utopianism, while also acknowledging the creativity involved in imagining Utopian futures. I seek to show how these novels give narrative form to an image of the internally divided human that Darwin's theory of evolution involves, and to which humanity offers so much resistance.

Chapter 1 –Émile Zola and the 'War of Nature'

All that we can do, is to keep steadily in mind that each organic being is striving to increase at a geometrical ratio; that each at some period of its life, during some season of the year, during each generation or at intervals, has to struggle for life, and to suffer great destruction.

- Charles Darwin, *On The Origin of Species*

Science, of course, is what poets and novelists are going to have to turn to; science is their only possible source these days. But there you are again! What are they to get out of it? How are they to keep up with it?

- Émile Zola, *L'Œuvre*

Introduction: Zola, Darwin, and Genealogical Connection

In a recent re-assessment of the genetic relationship between the work of Charles Darwin and Émile Zola, David Baguley alludes to an anecdote recounted by Armand Lanoux, which Baguley argues is emblematic of the persistent but often questionable practice of connecting the work of the British evolutionary naturalist and the French literary Naturalist.[1] Describing an encounter between Zola and the Goncourt Brothers, Lanoux relates how Zola is said to have admonished the brothers and re-affirmed the importance of evolutionary naturalism to their shared literary enterprise: '"The constitution of our characters is determined by the genitals. That's from Darwin! That is literature!"'[2] The anecdote, however suggestive it may be, is unlikely to have taken place. Baguley's point is that while seeing a connection between the nineteenth century's most famous scientist and the same century's most famous scientific author might be tempting, it is usually a misguided undertaking. Zola was not a reader of Darwin, he says, and Darwin's theories did not occupy the extensive preparatory notes Zola made for his literary writing. Darwin appears only a handful of times in Zola's entire *œuvre* and, Baguley notes, nowhere in Zola's detailed preparatory *ébauches*.

A more historically and genetically accurate account of Zola's scientific influences on his *Histoire naturelle et sociale d'une famille sous le Second Empire* (1871-1893) might include instead the French physiologist Claude Bernard, whose *Introduction à l'étude de la médecine expérimentale* (1865) was integral to Zola's theory of literary scientific verisimilitude as he expresses it in in *Le Roman expérimental*. Throughout this text, Zola cites Bernard's theory and practice of experimental medicine as authorisation for the notion that the novelist's 'observation should be an exact representation of nature' and that, in turn, the literary body could act as a space on which to conduct sociological experiments and develop scientific theses about nature and humanity.[3] Moreover, a study of Zola's theory of heredity might examine the work of the French medic and theorist Prosper Lucas whose work in *Traité philosophique et physiologique de l'hérédité* (1847-1850) was instrumental in Zola's conception of the genealogical tree structure upon which his *Rougon-Macquart* cycle

[1] David Baguley, 'Zola and Darwin: A Reassessment', in *The Evolution of Literature: Legacies of Darwin in European Cultures* (Amsterdam: Rodopi, 2011), p. 203.
[2] 'Les caractères de nos personnages sont déterminés par les organes génitaux. C'est de Darwin! La littérature c'est ça!' Armand Lanoux, *Bonjour Monsieur Zola* (Paris: Hachette, 1962), p. 88.
[3] Émile Zola, *The Experimental Novel, and Other Essays*, trans. by Belle M. Sherman (New York: Cassell Publishing Co, 1893), p. 7.

of works is based.[4] Further analysis might include French translations of Cesare Lombroso's *L'Uomo deliquente* (1876) and its thesis on the deep atavistic origins of human criminality which is reflected in Zola's literary study of psychopathology in *La Bête humaine*'s Jacques Lantier or the murderous simian-like child Jeanlin Maheu in *Germinal*.[5]

It is Gillian Beer's point, however, that literary critical readings of Darwin's work and its relation to literature should not be limited to demonstrable evidence of reading or reception by one author or the other. Darwinism, she argues, is as widespread and influential an intellectual force as Freudianism, with all the attendant theoretical inaccuracies, transformations, and appropriations that this diffuse intellectual climate begets.[6] So the (European) novel after Darwin is as Darwinian, in the broadest sense, as any literary text is Freudian after Freud. In this chapter, therefore, I shall be exploring the implicit assumption of Lanoux's imaginative thesis on Darwin and Zola: that in Zola's fiction the human subject and the human organism are overtaken by their own nature, of which Darwin's work seems to provide a powerful, if pessimistic, image. I shall be reading two novels primarily, *Le Ventre de Paris* (1873) and *L'Œuvre* (1885), grounding these analyses in a consideration of arguably Zola's most canonical novel, *Germinal* (1888), and asking how these texts figure the deterministic, Darwinian "war of nature".

This analysis will show how, outside the speculations and reconstructions of reception-based analyses of Zola and Darwin, the literary materiality of Zola's writing does set up a genealogical connection with Darwin's work. But rather than emphasising the direct influence that Darwin's work had on literary culture, Zola's fiction equivocates the notion of influence itself. Zola's fiction depicts Darwin's work as discursive but also emphasises the vital productivity of error and misreading in the transmission Darwin's ideas. I shall be seeking to demonstrate that these works do not just connect historically or discursively to Darwin's work, genealogically speaking, but represent what in Levinas's words are critical "reflections" upon scientific objectivity

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[4] David Baguley, 'Darwin, Zola and Dr Prosper Lucas's "Treatise on Natural Heredity"', in *The Literary and Cultural Reception of Charles Darwin in Europe* (London: Continuum, 2014), vol. 3, 416–31. For an account of the importance of Lucas to early hereditary science see Carlos López-Beltrán, 'In the Cradle of Heredity; French Physicians and L'Hérédité Naturelle in the Early 19th Century', *Journal of the History of Biology*, 37.1 (2004), 39–72.

[5] Marie-Christine Leps, *Apprehending the Criminal : The Production of Deviance in Nineteenth Century Discourse* (Durham, NC: Duke University Press), pp. 166–176.

[6] Gillian Beer, *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction*, 3rd edn (Cambridge: Cambridge University Press, 2009), p. 3.

and the Darwinian war of nature, as well as the manner in which the former works to ratify the image of human life offered by the latter. The novels I read in this chapter by Zola ask questions about the possibility of escaping biological pre-determination; about whether literature itself and its testimony on the lived experience of the war of nature offers distance from this; or whether Zola's literary dramatisation of the struggle to survive merely deepens the sense in which life – and human life – is imprisoned by heredity, physiology, and the violence of natural selection.

Biological Determinism in *Le Ventre de Paris* and *L'Œuvre*

The thesis articulated by Lanoux's anecdote is elaborated upon by José Ortega y Gasset, who in his *Meditations on Quixote* examines the effects of the existential assault Darwin's theory of evolution makes on conceptions of human agency, and its further implications for literary form:

> The natural sciences based on determinism conquered the field of biology during the first decades of the nineteenth century. Darwin believed he had succeeded in imprisoning life – our last hope – within physical necessity. Life is reduced to mere matter, physiology to mechanics. The human organism, which seemed an independent unity, capable of acting by itself, is placed in its physical environment like a figure in a tapestry. It is no longer the organism which moves but the environment which is moving through it. Our actions are no more than reactions. There is no freedom, no originality. To live is to adapt oneself; to drive us out of ourselves. Adaptation is submission and renunciation. Darwin sweeps heroes of the face of the earth.[7]

Ortega bemoans the loss of human agency emblematised and instigated by Darwin's work which, he argues, submits life to mechanistic scientific laws to which all possible action can be reduced. Although it is articulated as a lament, this affirms Derrida and Freud's insistences that Darwin's thought demands a profound revaluation of the ontological status of the human subject and organism. No longer at the epicentre of the natural world, and stripped of the superior rationality ascribed to itself in opposition to animality, the human comes to represent a newly and wholly attenuated figure. Prior to Darwin, in literature and myth, sovereign, active, self-possessed heroes bestrode the world exercising supreme agency over their surroundings. But the human after Darwin, Ortega says, can exist only as a figure in a tapestry – indecipherable from the strands that both surround it and from which it is made.

[7] José Ortega y Gasset, *Meditations on Quixote*, trans. by Evelyn Rugg and Diego Marín (Illinois: University of Illinois Press, 1961), p. 164.

For Ortega, Darwin's revaluation of the human is not an emancipatory event but instead engenders a culture of determinism and renunciation in the nineteenth-century which is reflected in its literary culture. And in his reading, few genres symbolise this culture better than literary Naturalism, generally, and Émile Zola's 'experimental novel', specifically. Zola, he argues, in response to the culture of biological determinism inaugurated by Darwin, gives literary form to this conception of humanity's relation to nature in two distinct but related ways. The first, a historical or narrative determinism, consists in Zola subjecting his characters to an inescapable tragic fatalism where destiny is predicted by the characters' biologically predetermined relations and enforced adaptations to their external environment. The second form of determinism is a representational one: Zola's insistence on the scientific verisimilitude of his works is premised on the notion that, as the human becomes indistinguishable from its environment, any scientific theory that can claim to represent relations which constitute the environment in its totality can by the same token lay claim to an exhaustive representation of the human.[8] Thus, with the advent of Darwin's work and its success in placing the natural sciences on a scientific materialist footing, Zola can invoke scientific naturalism in order to underwrite the authenticity and scientific rigour of his fictional literary writing.

The first aspect of Ortega's reading on the scientific determinism enacted by Zola's fiction is a widely held one. As Fredric Jameson points out in his analysis of narrative development in Zola's work, the reader is assaulted by an 'extravagant sense of impending doom' and a suffocating 'temporality of destiny'. Jameson recognises that as well as being derived from what he calls the Flaubertian 'narrative apparatus', the fatalism of Zola's work is scientific, hereditary version of the 'mark of destiny'.[9] Michel Serres argues that the hereditary narratives of Zola's *Rougon-Macquart* novel cycle trigger a thermodynamic plot of entropic decline and tragic dissolution, a reading to which Susan Harrow assents, stating that the tragic inevitability of Zola's works functions as a newly biologised iteration of the basic plot of Greek tragedy.[10] David Baguley's analysis in *Naturalist Fiction: The Entropic Vision*, written prior to his later critique of the Zola-Darwin comparison, provides the most complete version of these

[8] Ortega, pp. 164–165.
[9] Fredric Jameson, *The Antinomies of Realism* (London: Verso, 2013), p. 46.
[10] Michel Serres, *Feux et Signaux de Brume: Zola*, *Figures* (Paris: Grasset, 1975); Susan Harrow, *Zola, the Body Modern: Pressures and Prospects of Representation* (London: Legenda, 2010), p. 94.

combined accounts of Zola's determinism and its relation to Darwin's thought. While in Naturalist fiction nature might possess aesthetic value, Baguley argues, it is in Zola's work 'ontologically evil'.[11] For once nature breaks its boundaries as other and the animal becomes indistinguishable from the human, it 'draws man into an essential compliance with [nature's] laws [and] abolishes distinct humanity'. Thus, Baguley writes: 'Naturalist literature unhesitatingly sees man as essentially formed by, and explained in terms of, the biological model: birth, life, decline, death, developing within the broader framework of evolution, destined to struggle and eventual waste'.[12] Baguley is content here, like Beer, to work on the basis that Darwinism was a dominant scientific cultural frame in response to which Naturalist literature develops a pessimistic, deterministic conception of life.

These critical views seem at first glance to be borne out by the plot and thematic focus of Zola's *Rougon-Macquart* novels, *Le Ventre de Paris* and *L'Œuvre*.[13] The first of these tells the story of Florent Quenu, an accidental political revolutionary returned to Paris from exile on 'Devil's Island' (the French penal colony of Cayenne), and his struggle to survive in the viciously competitive political and biological milieu of Second Empire Paris. Florent's trajectory traces a fatalistic, tragic plot involving his re-birth on his return to Paris, his eventual decline and ultimate dissolution in exile. Despite securing employment as a market inspector in Les Halles and maintaining the pretence of bourgeois respectability by lodging with his brother and his wife, owners of a charcuterie, Florent's involvement with radical, emancipatory politics sees him betrayed by his sister-in-law, arrested, and exiled once more. The biological subtext to Florent's struggle for political liberation is the theme, developed throughout the novel, of the immanent war between the fat and the thin; of the perpetual, biological struggle to evade hunger and to survive; and the constant but vital struggle between the bourgeoisie and the comparatively powerless proletariat.

Like Darwinian natural selection's "war of nature" and its all-encompassing, instrumental, animal struggle for survival, this conflict and its filtration of the weak is figured in the novel as the pre-determining engine of life itself. Florent's companion,

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[11] David Baguley, *Naturalist Fiction: The Entropic Vision*, Cambridge Studies in French (Cambridge: Cambridge University Press, 1990), pp. 216–217.
[12] Baguley, *Naturalist Fiction*, p. 216.
[13] Émile Zola, *Le ventre de Paris*, ed. by Henri Mitterand, (Paris: Gallimard, 2006); Émile Zola, *The Belly of Paris*, trans. by Brian Nelson (Oxford: Oxford University Press, 2009); Émile Zola, *L'œuvre*, ed. by Henri Mitterand (Paris: Gallimard, 2006); Émile Zola, *The Masterpiece*, trans. by Roger Pearson and Thomas Walton, Revised Edition (Oxford: Oxford University Press, 2008).

an artist named Claude Lantier, sees this struggle for survival as originary and perpetually reproduced in life and human society: '"Cain", he said, "was a Fat man and Abel a Thin one. Ever since that first murder, the big eaters have sucked the lifeblood out of the small eaters. The strong constantly prey on the weak; each one swallows his neighbour and then gets swallowed up in turn"' (*Le Ventre*, 191). Naomi Schor reads in this depiction of biological competition made social, the 'the story of Cain and Abel as retold by Darwin'.[14] But this is a deeply pessimistic Darwin, inflected with the Malthusian economic pessimism and Schopenhauerian sense of resignation, offering the violent dynamism of evolution without the possibility of change.[15] Through the novel's drawing together of social or class antagonism with biological warfare as originary myth, it presents as natural and thus inescapable the hunger and oppression of the proletariat and the comparative strength of the bourgeoisie. Florent's desire to instigate a revolutionary political movement, therefore, is as much a rebellion against the war, famine, and death that Darwin suggests is immanent to biological life as it is an effort to transcend the competitive social dynamics which constrain human action in the social field (*Origin*, 490). But that Florent does not succeed, that he is consigned once more to suffer perpetual hunger in exile, is entirely predictable; it is determined by his hereditary inheritance, 'thin, sickly – suspect', which consigns him to fail in the struggle for life against the biologically well-adapted, well-fed and contented bourgeoisie (*Le Ventre,* 89).

In Zola's later novel, *L'Œuvre*, although it is not as explicitly concerned with biological struggle as *Le Ventre de Paris*, this foundational combat between the weak and the strong is an important dynamic and, once more, its plot appears to confirm Ortega's thesis on the role of biological determinism in Zola's fiction. The novel relates the story of Claude Lantier, the very same artist whose pessimistic diagnosis of nature and society in the previous novel connects its plot with Darwinian struggle, as well as his own struggle to survive as an artist in Paris in the mid-nineteenth century. Claude's war is ostensibly the struggle of the artist to create, but his enterprise, like Florent's, is an attempt at a revolutionary resistance to, and transcendence of, the imprisonment of socio-biological pre-destination. Claude's artistic practice and aesthetic theories (he is a proponent of the 'Open Air school') are proxies for the Impressionist movement, but his drive to create revolutionary artwork is nourished as much by his contempt for

[14] Naomi Schor, *Zola's Crowds* (Baltimore: Johns Hopkins University Press, 1978), p. 27.
[15] Baguley, *Naturalist Fiction*, p. 217.

academic aesthetics and bourgeois conservatism as it is by a desire for a fundamentally transformative form of art.[16] At a moment of creative fervour, Claude speculates as to the monumental capacity of his work to instigate revolutionary change: 'The day was not far off when one solitary carrot might be pregnant with revolution!' (*L'Œuvre,* 35). But Claude is like Florent: formed, constrained, and ultimately deprived of revolutionary agency by his biological constitution as well as the constraining socio-biological environment in the tapestry of which he is merely a pattern of threads. Not only do his artworks fail to excite commercial interest, and in addition to being a member of the socio-biological class of thin, he is the progeny of Gervaise Macquart. Gervaise, a crippled alcoholic, possesses and transmits the hereditary taint which drives both Claude's obsessive drive to create, as well as his fundamental inability, we are told, to produce truly original work:

> What drove him to distraction was the infuriating thought of the hereditary something, he did not know what, that sometimes made creation a sheer pleasure and other times reduced him to such complete sterility that he forgot the very basics of drawing. It was like being swept up in a sickening vortex. (*L'Œuvre*, 45)

Claude passes this taint on to his only son, a sickly, intellectually underdeveloped child, whose death from an unnamed illness occurs towards the final stages of the novel. This event seems not to trouble Claude's self-destructive, monomaniacal drive for artistic perfection and revolutionary change, and the novel concludes with Claude's suicide: the culmination of his misery in response to the intractable conflict between his inherent desire to create original work and his seeming biological incapacity to do so.

In the Introduction to this thesis, I stated that literary art has the capacity to supplement and thus complicate the claims to truth made by science. This chapter, specifically, is dedicated to asking how Zola's writing questions and complicates the "laws" of biological determinism and its association with Darwin's theory of evolution. On this reading, *Le Ventre de Paris* and *L'Œuvre* do not appear either to question or supplement scientific law and the culture of resigned determinism which, Ortega and Baguley argue, is nourished by Darwin's work. Rather, each novel seems only reflect upon the 'sickening vortex' of hereditary pre-determination, biological struggle, and

[16] M. Douglas Kimball, 'Emile Zola and French Impressionism', *The Bulletin of the Rocky Mountain Modern Language Association*, 23.2 (1969), 51; William J. Berg, *The Visual Novel: Emile Zola and the Art of His Times*, (University Park, PA: Pennsylvania State University Press, 1992).

the Darwinian war of nature, only in a way that repeats its image without offering the potential to escape or transform it. Both novels raise the possibility of revolutionary change – of transforming the biological coordinates of life by transcending them through politics or art – but appear to end by crushing this possibility with narrative re-affirmations of biological law.

In this respect, Zola's fictional Darwinism can be read in relation to the the milieu of the *struggleforlifeurs*, a term coined in the late-nineteenth century to describe a group of elite, bourgeois followers of scientific naturalism who advocated the idea of the importance of the natural selection's struggle for life for the progress of society.[17] These *struggleforlifeurs*, Louise Lyle demonstrates, were the subject of a series of late-nineteenth century *romans à thèses* which criticised the *struggleforlifeurs'* social application of Darwinism as 'a mechanism which serves to uphold the privileges of the economically and politically dominant few at the expense of the impoverished and disenfranchised many'.[18] Lyle argues that Zola's work can be read like those novels, as an implicit critique of the cruelty of Darwinian law and the human condition. However, she also points out that authors such as Maurice Barrès and Paul Bourget saw this supposed critical manoeuvre as fundamentally disingenuous. The anti-*struggleforlifeurs* themselves were members of a literary elite, they argued, in whose interest it was to naturalise social inequality in the name of alleviating this very problem. Barrès and Bourget, however, engage in the very same 'scientism' they decry in Republican thought, arguing that the natural competitive stage of nature demands a conservative, even monarchical, state that would repress these most savage freedoms.

Whether we accept that Zola's depiction of competitiveness of natural selection was implicitly critical; or whether we side with Bourget and Barrès and accuse Zola of a fundamental contradiction in seeking to critique something he also accepts as natural; neither view takes into account how the specificity of Zola's literary figuration of biological struggle can dynamically interpose both of these nominally opposed readings. Susan Harrow argues that, in addition to representing a transposition of the deterministic narrative of biological determinism, the formal rhetoric of Zola's biologically deterministic forward-driven narratives also provide the means with which to complicate its own unfolding of natural law. Biological development and hereditary continuity, Harrow notes, is constituted and propelled

[17] Louise Lyle, '"Le Struggleforlife": Contesting Balzac through Darwin in Zola, Bourget, and Barrès', *Nineteenth-Century French Studies*, 36.3/4 (2008), 305–19.
[18] Lyle, p. 314.

forward by a series of discrete and singular events, which in Zola's narratives take the form of independent literary tableaux or scenes: 'births, deaths, accidents, fights, play, competitions, performances, rituals, violations, working practices, eating habits, forms of adulteration, acts of adultery'. And, Harrow argues, 'while the outcome of such events is to advance the linear plot, they also function briefly to arrest development [and] inscribe the potential for disruption'.[19] This point is echoed by Andrew Counter who applies a similar logic to the entire structural logic to the genealogical schema of the *Rougon-Macquart* project. Heredity, Counter argues, is constituted and enacted by a succession of ruptures, both creative and destructive, which sustain patrilineal continuity through a violent breaking away from previous generations. Counter cites the case of the originary parricide of the 'patriarchal horde', an idea Freud attributes to Darwin, in *Totem and Taboo*. He notes how in Zola's works patrilineal and hereditary transfers of power are marked by severances, murders, deaths, suicides, as we all as continuity.[20] So through Counter and Harrow, the originary Darwinian murder of Cain and Abel, is both what propels the oppressive and violent determinism of Zola's work and functions to puncture its own sense of continuity.

In effect, what Harrow and Counter ask of the reader is not to ignore the biological determinism inscribed in the tragic trajectories of Zola's plots, nor to indict Zola for his apparent deference to scientific determinism, but to look carefully at how his individual novels and the individual events within these are inscribed with the capacity to complicate their own scientific fatalism. For Harrow, the effect of narrative rupture in Zola's works is to pull the reader out of the fatally driven plot to draw her attention to the 'very texture of the writing' – something which, she argues, is a frequent failing of Zola's critics. Harrow cites the categorisation of Zola's fiction by Gabriel Josipovici as existing at the pole of 'extreme objectivity', an assertion which Harrow says is contradicted by the 'mythopoeic evidence' in Zola's writing.[21] Josipovici's argument, made with reference to Northrop Frye, is that the nineteenth century of Zola (and Rimbaud) is anomalous in literary history because, in contrast to earlier forms of myth-making and twentieth-century modernism, nineteenth-century Naturalism seeks to conceal its own existence as a 'made object'.[22] Literary Naturalism,

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[19] Susan Harrow, p. 98.
[20] Andrew Counter, 'The Legacy of the Beast: Patrilinearity and Rupture in Zola's La Bête Humaine and Freud's Totem and Taboo', *French Studies*, 62.1 (2008), 26–38.
[21] Susan Harrow, p. 24.
[22] Gabriel Josipovici, *The World and the Book: A Study of Modern Fiction* (Stanford University Press, 1971), pp. 288–289.

according to this view, attempts to deny the 'fact' that 'art is not primarily imitation but the making of things'.[23] This criticism is an echo of Henry James's remark that Zola's work did not represent true scientific observation, as Zola appeared to claim, but 'the most extraordinary *imitation* of observation'.[24] Rather than seek to elaborate how Zola's work is productively unsuccessful at concealing its own imitative character, these critics, Harrow suggests, seem content to rest at merely accusing Zola of being naïve.

In opposition to the literalism of James's reading of Zola, Henry Mitterand affirms 'Zola is above all a storyteller'. Zola, Mitterand states, 'did not merely write a "natural and social history" of the Second Empire'. Instead, the mythic, literary, and fabulist nature of his writing – its 'music of internal echoes and rhythms' – 'transcend purely realistic *mimesis*'.[25] In that light, the notion that Zola did not achieve objectivity but an imitation of objectivity, which is intended by James as an indictment, is also a starting point with which to recognise how Zola's mythopoeic fiction addresses its own existence as a literary object. Rather than take Zola at his word and use as the primary mode of assessing his work what another critic calls Zola's desire to 'categorise' and to 'master' his subject, Harrow asks us to attend to those moments in his texts – scenes, tableaus, descriptive deviations, events of momentous significance – where the continuity of the imitation of objectivity breaks down to reveal itself as imitation.[26] This injunction is also implicitly present in J. Hillis Miller's understanding of the auto-critical nature of literary realism, which I have outlined in my Introduction. Realism's attempt to repress its own 'baseless creativity' by appealing to scientific or historical objectivity achieves the opposite effect.[27] Rather than confirming literature's grounding in scientific "fact", Hillis Miller suggests that careful attention to the specific formal rhetoric and thematic focus of avowedly scientific and objective literary realism emphasises how both literary writing and science are forms of creative narrative – thus, putting into question the objectivity of science itself.

These responses to Zola's scientific fiction show the second half of Ortega's critique, on the verisimilar determinism of Naturalism, to complicate the first, on

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[23] Josipovici, p. 289.
[24] *The Art of Criticism: Henry James on the Theory and Practice of Criticism*, ed. by William Veeder and Susan M. Griffin (Chicago: Chicago University Press, 1986), p. 446.
[25] Henri Mitterand, *Émile Zola: Fiction and Modernity*, ed. & trans. by Monica Lebron & David Baguley (London: Émile Zola Society, 2000), pp. 3-6.
[26] Ann Jefferson, *Nathalie Sarraute, Fiction and Theory: Questions of Difference* (Cambridge University Press, 2000), p. 2.
[27] J. Hillis Miller, 'Narrative and History', *ELH*, 41.3 (1974), 455–73 (p. 457).

Zola's appropriation of scientific determinism. In Ortega's view, Zola's insistence on the rigorous scientific verisimilitude of his writing is further evidence of his deference to the biological and evolutionary nihilism of the nineteenth century. But to indict Zola's fiction on these grounds merely assents to Zola's assertion of the scientific objectivity of his writing, while at the same time finding it inadequate. Hillis Miller, as I have discussed, acknowledges the appeal of the promise of objectivity offered by historical and scientific discourses; he notes the power of this promise and how both historians (and by extension, scientists) and literary writers are repeatedly captivated by the possibility of their writing embodying and communicating totalising and transcendent truth.[28] Ortega's critique of Zola is symptomatic of the same desire. His dismissal of Zola for being, as Harrow puts it, 'too prescriptive, too naïve […] and perhaps […] just too obvious' infers that an appropriate, less explicit, level of mimetic prescription is available. In this sense, Ortega's lamentation of Zola's deterministic literary practice is a mirror of his critique of Darwin. Just as he bemoans Darwinism's exposure of the groundlessness of the idea of the human, his indictment of Zola for being *too* objective seems borne of a fear that it reveals the ultimate groundlessness of *all* claims to objectivity – not just those which are self-evidently incorrect.

This tension between a desire for scientific objectivity and its impossibility in art is one of the themes of Zola's *L'Œuvre*. The novel's depiction of Claude Lantier's struggle to survive in a competitive socio-biological milieu is also a depiction of his war on the intractable tensions of realist representation. In his preparatory notes for this novel, Zola describes wanting to represent the struggle of the artist against nature ('la lutte de l'artiste contre la nature') and Claude's battle against his own biological inheritance and naturalised social law, as I have stated, is also a struggle to inaugurate a new paradigm of art.[29] However, what Zola in the novel calls Claude's 'endless struggle with nature' does not merely designate the toil of creating art, but his obsession with inaugurating a new form of objective art, to paint and draw what stands in front of him 'as it really is'.[30]

In an example of what Harrow would deem a rupture of the hereditary narrative flow, Claude breaks off from his painting to soliloquise his vision for a revolutionary, realist aesthetic. He declaims: 'What is Art, after all if not simply giving

[28] J. Hillis Miller, 'Narrative and History', p. 461.
[29] Quoted in William J. Berg and Laurey Kramer Martin, *Émile Zola Revisited* (Woodbridge, CT: Twayne Publishers, 1992), p. 196.
[30] Zola casts Claude's struggle to create art in these same terms in the novel (*L'Œuvre,* 35).

out what you have inside you? Didn't it all boil down sticking a female in front of you and painting her as you *feel* she is?' (*L'Œuvre*, 35). Claude's theory of art, here, appears markedly different to Zola's conception of the objectivity of literary art in *Le Roman expérimental*. Claude is not concerned with shallow mimesis, which in his view blights the academic pre-Impressionist painters of the Beaux Arts, but with capturing a deeper reality – the intrinsic qualities of life as opposed to its extrinsic surface. But he also speculates, as Zola does, that science 'is the only possible source' for this new realism which will grant the artist panoptic vision, the capacity to 'see everything and paint everything' (*L'Œuvre*, 37). So Claude's downfall – his failure to achieve his artistic aims and his suicide – derives from his incapacity to see that neither Naturalist representational mimicry nor Impressionistic art which eschews formal, mimetic realism can objectively exhaust its subject. Here, Zola, through Claude, is addressing the theoretical foundations of his own art, questioning the drive to represent reality in concert with science, while dramatising the struggle and failure of one artist to do so. Claude's suicide is a consequence of the notion that biological struggle and heredity imprisons life. But it also represents the futility of the attempt to capture life in its totality through art, science, or scientific art. Claude's decline into obsessive and suicidal mania, then, is a response to the inevitable failure of his powerful drive for artistic objectivity – an extreme symptom of what Hillis Miller calls the 'bewitching' of artists, writers, and scientists by the lure of final, total, and stable truth.[31]

L'Œuvre, then, addresses the ultimate baselessness of representation, artistic or otherwise, the overcoming of which through scientific naturalism is the paradoxical catalyst for Zola's self-questioning fiction. Moreover, he places within the frame of his investigation the biological determinism which underwrites the deterministic trajectory of his narrative form and which, in turn, authorises his pursuit of scientific verisimilitude. As David Baguley suggests, faith in literary-scientific objectivity is made possible by the notion that if the creation of a human being is explained by a deterministic set of biological laws, processes, and axioms, an exhaustive description of humanity is enabled by the sciences that codifies these dynamics. Thus, Claude outlines his vision for a series of paintings that seem uncannily similar in its aims, subjects, and narrative trajectory to Zola's literary-scientific project of the *Rougon-Macquart* novels and the 'experimental novel' outlined in his (Zola's) eponymous manifesto:

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[31] Hillis Miller, 'Narrative and History', p. 461.

> He had started by toying with the idea of a gigantic undertaking and had projected an 'Origins of the Universe' in three phases: the creation, established according to scientific research; the story of how the human race came to play its part in the sequence of living beings; the future, in which beings succeed beings, completing the creation of the world through the ceaseless activity of living matter. (*L'Œuvre*, 38)

Claude seeks to create a scientific artwork capable of a depiction of the birth of the world, human society, and their futures – intimating, in the process, that through a grasp of scientific law, futurity can be made a calculable entity. However, in the same moment, Claude expresses doubts about the viability of this project. 'He had cooled off, however, when he began to realise the hazardous nature of the hypotheses of the third phase, and was now trying to find a more limited, a more human setting for his ambitious plan' (*L'Œuvre*, 38). The third phase of Claude's project concerns the constant flux of evolutionary change, 'the ceaseless activity of living matter', which, he appears to recognise, is not amenable to the abstraction of representation, whether avowedly mimetic or otherwise. Thus, as well as putting into question the groundedness of representation, the driving force of his own art, Claude (and Zola) specifically addresses the problem of a deterministic science that seeks to represent with total accuracy a world which is never solid.

Zola's engagement with the tensions inherent in science's desire to construct a totalising image of nature – and the inherent futility of a literary art founded on the same ambition – complement Harrow and Miller's theses that reading the mythopoeic content of Zola's scientific realism complicates the notion of scientific realism itself. Ortega's critique is not merely misguided but does not go far enough: that Zola adopts in his literature a biologically rooted narrative determinism is not inaccurate, but Ortega fails to notice how the instability of realism and its literary enactment can only result in an ambivalent process of transposition. Zola, in *L'Œuvre* questions the idea that the relation between his literary art and biological science is one of straightforward, axiomatic, and deferential reproduction of its central methodologies and theses. But through the figure of Claude and his struggle to create objective art, Zola thematises the contradictions and tensions in his own quasi-scientific literary approach. Here, he addresses the impossibility of the scientific task he sets himself in *Le Roman expérimental* in addition to affirming the desire that drives both Claude's and his ambition for a monumental, literary scientific undertaking. Zola's literary art is not only driven by a desire for mastery and control, but examines the effects and

implications of this drive for scientific mastery in art and on the artist himself. In this sense, this ambivalence towards scientific naturalism in his literary work corroborates Hillis Miller's assertion that there exists a constant interplay between the desire to re-weave the fabric of assumptions about the possibility of final truth in response to the perpetual un-weaving work carried out by the deconstructive work of art. Claude finds himself stuck at the intersection of these two agencies, obsessed by his desire for objective art and incapable of recognising how his artwork perpetually resists this desire.

By the same token, Zola's engagement with scientific naturalism in this novel puts into question the very objectivity of its scientific influences: perhaps, after all, the sciences that he adopts with such ambivalence are themselves inscribed with the possibility of their own undoing? Certainly, Claude perceives the contradictory nature of science's need to represent a natural world which is, by scientific definition, resistant to representation by virtue of its ceaseless flux. Zola's questioning of the objectivity of evolutionary theory specifically is the subject of the following section, in which I shall be examining how Zola addresses the problem of biological determinism with explicit reference to Darwin's theory of natural selection. Until now, Darwin's work has been present as an insistent shadow. As Ortega and Baguley suggest, Darwin's thought is instrumental in nurturing an intellectual climate of determinism and nihilistic rejection of the possibility of change on which, it is assumed, Zola's Naturalism subsists. But Darwin's work is notably absent from both novels I have examined as well as the preparatory notes Zola made for them. In what follows, I shall be reading a scene from Zola's *Germinal* (1885) in which Darwin's name and work is mentioned (one of the few instances in Zola's entire *œuvre*) to continue to demonstrate how his literary realism puts into question the climate of pseudo-scientific determinism which his fiction is said to reflect.

A literary dialogue on the war of nature

Questions of biological determinism, the brutal conditions of material life under Darwinian natural selection, human agency, and the struggle to transcend the biological conditions of life: these concerns form the subject of a debate that takes place between two political antagonists in Zola's *Germinal*.[32] Amidst the ongoing collapse of a

[32] Émile Zola, *Germinal*, trans. by Peter Collier (Oxford: Oxford University Press, 2008).

general miners' strike, a discursive intellectual scene unfolds. Two revolutionary Marxists debate the merits and demerits of Darwin's theory of natural selection with regard to the practical and theoretical project of proletarian emancipation. Étienne Lantier, the novel's protagonist (Claude Lantier's brother), reads the struggle of natural selection as the scientific basis for progress: 'a revolutionary idea of the fight for existence, the lean swallowing the fat, the strong people devouring the sickly bourgeoisie.' (*Germinal*, 450) For Claude, natural selection does not negate the possibility of progress, on the contrary it confirms its inevitability – a mirror-image of the view of Spencer and Galton which I outlined in the Introduction. In opposition to Étienne stands Souvarine, who takes a nihilistic view of Darwin's idea and rages against Étienne's conflation of biological and Marxist historical determinism, offering a stern *ideologiekritik* of the capitalist economic undertow of the idea of natural selection. Darwin, Souvarine argues, is nothing other than an 'apostle of scientific inequality', the purveyor of a theory that naturalises competition, inequality, and suffering and is fit only for 'aristocratic philosophers' (*Germinal*, 450).

Étienne is apparently undaunted by this rhetorical strike and continues to espouse his Marxist-Darwinian synthesis, so the anarchist seeks instead to engage directly with his more optimistic opponent's arguments. If Étienne is correct, he concedes, and the biological struggle for life does govern the antagonistic relations between classes, would not that very organic mechanism of conflict continue to threaten the proletariat when it assumes power? Would not, Souvarine asks, 'the world [...] grow up gradually spoiled by the same injustices, some people sick and other people healthy [...] some more skilful and intelligent, succeeding in every venture, others stupid and lazy, becoming slaves again?' (*Germinal*, 450). His question goes unanswered and the argument remains unresolved.

Here then, in Zola's story, are two opposing, but equally deterministic interpretations of Darwinian struggle as a natural state and its implications for human agency. Either Darwin's theory states that natural selection determines human action, denying the human any form of meaningful agency and the possibility of freedom from struggle. Or conversely, the knowledge of natural law that Darwin's theory offers us opens the way to a different, historical determinism: the means by which to ensure progress and perfection. The contours of the argument that takes Darwin as its symbolic centre-point are shaped by the combined demands of personal circumstance and ideological allegiance. For Étienne, as the instigator of the failing general strike in

the mining town of Montsou, Darwin's theory of struggle and the social and biological determinism he (Étienne) ascribes to it offers a sort of utopian consolation for the failed revolutionary. Not only does the scientific certitude offered by Darwin's theory galvanise him for the continued fight against capital, but it casts his own personal and political failure in a positive light. The revolution, Darwin seems to tell him, is merely postponed. In contrast, Souvarine's nihilism is rooted in the trauma of his wife's tragic death and as a result he seeks not human emancipation but to cast humanity into oblivion. And his critique of Étienne's interpretation of Darwin is beholden to a correspondingly desperate conception of failure: if, as Darwin seemed to predict, biological, social, and political relations are constituted by perpetual warfare, and, if in this 'vision of eternal misery [...] justice was impossible in a world of men, then mankind would have to disappear' (*Germinal*, 450). The two men's subjective interpretive frames of hopeful optimism and its nihilistic opposite open out on to larger interpretive polarities of interpretation. For Étienne, Darwin offers a deterministic, utopian vision of progress and a superior form of humanity; for Souvarine, it merely re-confirms the nihilistic standpoint that in Darwin's conception of nature revolution and injustice is impossible and thus humanity itself should be destroyed.

In what way, then, does Zola's text supplement or question Darwin's theory of the war of nature? Both men seem to merely reconfirm the idea that Darwinian natural selection reduces life to matter and consigns humanity to perpetual struggle, war, and famine: Étienne, by fetishising biological struggle for the purposes of his own ideological conviction and, Souvarine, by renouncing the possibility of revolutionary action in the face of biologically immanent war. But while both men are convinced of the scientifically rigorous nature of their own deterministic iteration of Darwin, Zola announces Darwinian science in this scene not as an objective truth but as an object of interpretation which is open to being shaped by personal circumstance and ideological conviction. Étienne interprets Darwin's work as underwriting social and historical progressive teleology, a notion to which Darwin's co-option of the anti-progressive Malthus would seem inimical. Souvarine appears to have a clearer conception of the Malthusian implications of natural selection, and prescribes resignation and human extinction as the only possible answer to the immanence of injustice. But in doing so he espouses a type of domination of nature through its destruction that he argues is impossible in his critique of Étienne's argument. The dialogue between these two men, then, re-emphasises how numerous versions of a supposedly singular, objective theory

can exist in tension with one another. And like *L'Œuvre*, it also dramatises the desire of each man to repudiate ambiguity and lay claim to an authentic naturalist paradigm for revolutionary emancipation –emphasising once again how, for Souvarine no less than Étienne, the certitude offered by science exerts magnetic appeal.

As well as stressing the impossibility of an authentic interpretation of Darwin's work and each man's desire for one nonetheless, this exchange stresses the productivity of interpretive error. Zola, as I have already alluded to, appears not to have read Darwin in detail. But if he did, it could have been through the work of Clémence Royer, the first French translator of *The Origin of Species*. She was a prominent, politically active, left-wing lecturer who who prefaced her translation of Darwin's book with a strident, anti-clerical essay which claimed Darwin as an ally of progressive politics who anticipated eugenic theory.[33] Echoing Étienne's deterministic Marxism and anticipating Galton and Spencer's capitalist and imperialist appropriations of Darwin, Royer argued that in contrast with Christian charity, natural selection offered the justification to eliminate 'the weak, the infirm, the incurables, the wicked' that weighed down 'the arms of the strong'.[34] This was partly a consequence of Royer's fealty to the evolutionary theory espoused by the pre-Darwinian naturalist Lamarck, who thought individual organisms exercised agency over their own evolutionary trajectory. But Darwin, in contrast to Lamarck, proposed a theory essentially devoid of teleological purpose, as evolutionary change was driven only by the success or otherwise of an organism's variation. Regardless of its accuracy, Royer's tendentiously framed translation of Darwin was an important mediator in the reception of Darwin in France and perhaps even by Zola.[35] Her translation offers us a salutary reminder that concepts and ideas travel through channels of interpretation – which Zola depicts in this scene – and not faultless transmission.

Zola's depiction of interpretive error and tendentious ideological appropriation mirrors a broader context too. I quote here from D.A. Stack's excellent history on the intersections of Darwinism, Marxism, and socialism in the nineteenth and twentieth centuries, which details an interpretive duality that mirrors the one constructed by Zola's two interlocutors in *Germinal*:

On the one hand, by ensuring the acceptance of evolution it opened up [for the

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[33] Joy Dorothy Harvey, *Almost a Man of Genius: Clémence Royer, Feminism, and Nineteenth-Century Science* (New Brunswick: Rutgers University Press, 1997), pp. 210–211,
[34] Translation in Harvey, p. 212.
[35] Michel Prum, 'Charles Darwin's First French Translations', in *The Literary and Cultural Reception of Charles Darwin in Europe* (London: Bloomsbury, 2014).

> left] the possibility for change. On the other, by explaining evolution in terms of natural selection it seemed to simultaneously undercut radical and socialist politics, as [...] smooth teleological progress [...] gave way to Malthusian brutality and wastefulness.[36]

Souvarine's view is that Darwin's work authorises Malthusian brutality and Étienne's the notion that Darwin naturalises political change. Taken together, this dialogue embodies the ambivalence that characterised the socialist and Marxist view of Darwin in their time, one which is echoed by Marx's own conception of Darwinian evolution. Marx affirmed the materialism of Darwin's approach to naturalism, writing in a letter to Friedrich Engels that, while it was written in a 'crude English style', *The Origin of Species* represented 'the basis in natural history' for their shared view of the progress of history. In another letter to Engels, Marx outlines further concerns, relating not the style of Darwin's argument, but echoing Souvarine, to the ideological substrates of his theory:

> It is remarkable how Darwin recognizes among beasts and plants his English society with its division of labour, competition, opening-up of new markets, 'inventions', and the Malthusian 'struggle for existence'. It is Hobbes' *bellum omnium contra omnes* [...][37]

Engels, while similarly critical of the bourgeois capitalist origins of Darwin's theory of natural selection and perpetual struggle seemed to defend, was nevertheless influenced in his own work by its implications. He partly founded his unfinished theory of the evolution of labour in the fragment, *The Part Played by Labour in the Transition from Ape to Man*, on the British naturalist's apparently ideologically suspect theories. But unlike Étienne, his adoption of Darwin's thought was intended as much as a corrective to its ideological trappings as it was a development of its theoretical potential: 'even the most materialistic natural scientists of the Darwinian school' Engels wrote, 'are still unable to form any clear idea of the origin of man, because under this ideological influence they do not recognise the part that has been played therein by labour.'[38] Even for Engels, then, who it is claimed cited Darwin's name alongside that of Marx at the latter's graveside, Darwinism represented a double-edged body of thought. On the one hand, it offered to put Marxism on a more biological footing, but on the other, it

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[36] D.A. Stack, 'The First Darwinian Left: Radical and Socialist Responses to Darwin, 1859-1914', *History of Political Thought*, XXI.4 (2000), 682–710 (p. 689).
[37] Marx to Engels, 18 June 1862, *Marx Engels Selected Correspondence*, ed. by S. W. Ryazanskaya (Moscow: Progress Publishers, 1965), p.128.
[38] Friedrich Engels, *The Part Played by Labour in the Transition from Ape to Man*, 3rd rev. edn, 7th print. (Moscow: Progress Publishers, 1978).

appeared to provide a natural basis for the capitalist fetish for competition he was attempting to oppose. Souvarine and Claude's dialogue, then, does not only mirror the ambivalent relationship that Marxist thought has had with Darwinism historically, but embodies the very contradictory place Darwin's theory of evolution holds in relation to conceptual commitment of Marxism the human and to its progress.

For literary historians and critics, this dialogue on Darwinism and determinism in *Germinal* might invite continued reflection upon its author's relationship with science, upon Zola's renowned attempt at synthesising literary and scientific naturalism, as well as upon his understanding of Darwin (whether he read him or not). Zola, like Étienne, saw great political potential in scientific naturalism. The Naturalist experimental novel, as Tullio Pagano points out, was not conceived only for the sake of pursuing higher truth, but to improve the social conditions of the societies upon which Zola's literary works focused its experimental gaze.[39] And although he sought to ground his literary naturalism in discourses other than those drawn from natural selection, Zola, like Étienne, implies that Darwin has a role to play in this political project. He noted with false modesty in *Le Roman expérimental* that 'to touch on Darwin's theory' meant losing himself, 'were [he] to enter into details'.[40] Given what Baguley's analysis of his reading habits has revealed about Zola's reading of Darwin, this aside can be read as an attempt by Zola to conceal his ignorance of Darwin's work. But the dialogue in *Germinal* amplifies the sense that physically reading a work, especially one as ubiquitous as Darwin's *The Origin of Species*, is not a precondition for constructing an explicit or implicit a reading of it – in the sense of an interpretation. Zola's dramatisation of the politically contradictory ways of reading Darwin's work affirms this point. But Zola goes further and offers an analysis of the conditions of his own reading of Darwin with a brief but telling meta-narrative commentary on the reception of Darwin in France and the manner in which Étienne – and probably Zola himself – laid his hands on Darwin's ideas. Étienne, he writes, 'had read some fragments summarized and popularised in a five-sou volume; and from this half-digested reading' had developed his revolutionary conception of evolution (*Germinal*, 450). Here, as if anticipating the Souvarine-like rigour of literary historians and reception critics, Zola anticipates the problem of his own scientific erudition, or the lack it. The 'question of whether the reader had read Darwin turns out […] to have softer edges than might at

[39] Tullio Pagano, *Experimental Fictions: From Emile Zola's Naturalism to Giovanni Verga's Verism* (New Jersey: Fairleigh Dickinson Uåniversity Press, 1999), p. 48.
[40] Zola, p. 19.

first appear'; for Zola, a 'half-digested' reading remains a reading nonetheless.[41] Zola's text offers a glimpse into the historical conditions of the transmission of Darwin's theory, as well as addressing the conditions of error that produce and sustain its discursive fluidity. More significantly, Zola's novel addresses its own condition as misreading and, therefore, the conditions of its own existence.

The irony of Zola's literary dialogue on Darwin is that through literary Naturalism which ostensibly seeks to affect or enable social progress it produces a meditation on the question of human possibility under Darwinian natural selection that is at once more dynamic and less concerned with action than many other readers of Darwin committed to social meliorism. The dialogue on Darwinism asks questions in dialectical form, offering a vision of Darwin's work that is internally divided by interpretative contraries. This stands in in contrast with theorists like Spencer, Galton, or Royer, or indeed Étienne and Souvarine individually, who demand and propose definitive versions of Darwin's work. Étienne and Souvarine ask, in this brief section of *Germinal*, what type of agency is available to the human being under the regime of Darwinian natural selection? If nature is truly constituted by war, and life by constant struggle, they wonder, is human action bound by a prison-house of determinism? And if so, if nihilistic resignation the only possible response? Or, as Étienne sincerely hopes, can this determinism be re-oriented towards the benefit of human liberation from struggle? Zola casts these questions in oscillatory irresolution, suggesting that no solution or synthesis is readily available. He also addresses the conditions that make these ideological positions possible, as well as implicitly foregrounding the conditions of error and misreading under which his own text comes to dramatise this argument. In Ortega's eyes, Zola re-confirms the dreary scientific determinism inaugurated by the Darwinian paradigm of naturalism in the nineteenth century. Ultimately, the impasse at which Étienne and Souvarine arrive affirms the opposite, by demanding we seek a chorus of historical, critical, theoretical, and fictional voices with which to approach the challenge that Darwin's natural selection represents for the idea of human agency.

This moment of productive discursive aporia is echoed by the novel's conclusion which offers little prospect of a synthesis between Étienne's progressivist historical determinism and Souvarine's resigned nihilism. The novel closes with the image of Étienne moving to Paris, filled with a sense of utopian, revolutionary energy. But the landscape he traverses is littered with the corpses of his failed revolution; days before

[41] Beer, *Darwin's Plots*, p. 3.

this event, Souvarine sabotages a mine-shaft in response to capitulation of the strike under pressure from the state and management, killing himself and numerous others. Étienne is struck by the suggestion that Souvarine's success in enacting his own nihilistic critique of Darwin invalidates a progressive, Marxist reading of natural selection: 'Was Darwin right then, was the world nothing but a battlefield where the strong ate the weak, for the beauty and survival of the species?' His conclusion is as certain as before: 'New blood would create a new society. And in his expectation of a barbarian invasion which would regenerate the decadent old nations there appeared his absolute faith in a forthcoming revolution' (*Germinal*, 521).

The narrative conjunction of Étienne's blind Darwinian optimism and the consequences of Souvarine's murderous nihilism enacts a formally distinct but structurally analogous type of irresolution to that offered by the earlier discursive stalemate. What agency does he offer his two Darwinian revolutionaries, other than the choice of self-delusion or death? The novel does little to offer succour to either side of the debate. And yet, this literary work enacts in this irresolution a specific type of agency, which if we can not call it autonomous from the war of nature, offers humanity the possibility of a type of distance from it through critical contemplation. Zola's conjunction of readings and misreadings re-situates the Darwinian "law" of constant struggle in discourse, as the product of multiple interpretations, and dramatises how seemingly transcendent scientific truth is open to multiple transformations. Zola has natural selection authorising Marxist historical determinism (Étienne) as well as confirming the impossibility of progress (Souvarine). And he addresses the conditions of misreading that made possible this dialogic investigation of Darwinism, which is constituted by opposing interpretations of Darwin's theory. This dialogue also stresses the ambivalent consequences of scientific certainty: in *L'Œuvre,* a desire for objectivity drives Claude (and Zola) to create art and also leads Claude to his death. The same desire for certainty, this time in relation to Darwinian science, nourishes Étienne's faith in the possibility of the emancipation of the oppressed people across the world and drives Souvarine to kill himself and countless others. Zola's depiction of society and nature as a site of relentless biologically driven conflict, then, can be read as a critique of scientific certitude. Zola's Marxist interlocutors bring Darwin's theory of natural selection to a point of discursive aporia, which is both a form of ending and the precondition for a productive re-beginning. The termination of two lines of argumentation in a seemingly interminable point of undecidability simply means that

the unwinding of this discursive knotting belongs to a futurity that is currently beyond our capacity to conceive. Thus, we may read Zola's casting of Darwin's 'war of nature' in dialogic irresolution as an affirmation of its theoretical incompleteness; a dramatisation of Darwinian science's openness to the supplement of a thought which is not simply pre-given by Darwin's writing or but demands its creation through critical reading.

The narrative aporia with which the novel concludes can be read in a similar fashion, as affirming the essentially unpredictability of biological futurity even through the predictive lens of Darwin's natural selection. The novel ends by juxtaposing two forms of Darwinian determinism: Souvarine's theory that natural selection's relentless destruction abnegates the possibility of all forms of human agency and Étienne's historically deterministic vision of a supreme human agency via the march of the proletariat. But the final sentences of the novel, a reverie of politically revolutionary and biologically evolutionary futurity as seen through the eyes of Étienne, synthesises these two images of nature, images of morbid nihilism and restorative hope. As Étienne traverses the landscape of Monstou, underneath the surface of which many of his comrades were drowned while many others continue to be brutally exploited by capital, he intuits that this very failure of revolutionary politics represents the precondition for vital biological and political regeneration. He imagines the sound of coal picks beneath him forming a chorus of vital revolutionary possibility, the tapping of his comrades providing the rhythm for a germinal renewal of life after the horrors of political failure and death: 'in that morning of new growth, the countryside rang with its song, as its belly swelled with a black and avenging army of men'. But for Étienne, this germinal restoration travels on no fixed route towards proletarian emancipation, but is a renewal of a more vital, unpredictable sort. The swarms of workers beneath his feet grow in readiness, not for a pre-given ascension to victory, but merely, as Zola has it in the novel's final line, for 'the harvests to come' (*les récoltes du siècle futur*) (*Germinal*, 523). And the novel ends with the image of this seething, subterranean growth coming to fruition, 'until one day soon their ripening would burst open the earth itself.' This is not an image of a well-defined revolutionary body which emerges from the ground fully-formed. Instead, it is a growth whose purpose is its newness, its bursting forth, the sheer fact of its emergence, which tears the surface of the earth asunder and paves the way for continued transformation. So Zola affirms neither the cynical reading of Darwin offered by Souvarine nor accepts the easy optimism of Étienne's historically determinist Darwin. Instead, he offers instead an image of evolution that is explicit

about the carnage inflicted upon humanity by natural selection as well as the inherently recuperative power of a nature that is never fixed and always undergoing a germinal process of renewal.

Deleuzean Heredity and Zola

The productivity of endings, the vitality of biology's morbidity, is the theme of the fifth appendix to *The Logic of Sense,* in which Deleuze undertakes an analysis of the role of scientific naturalism in Zola's fiction. This reading further challenges the notion that Zola's work merely uncritically appropriates and reproduces the claims of hereditary and biological discourses, and contests the idea that hereditary and evolutionary thought can only be understood as deterministic. Deleuze argues that the poetic force of Zola's "familial romance" submits the idea of hereditary transmission – the development, reproduction, and evolution of organic forms – to a 'transformation'.[42] Moreover, he seeks through an analysis of this literary transformation to elaborate a theory of heredity and biological evolution which is not deterministic but instead represents the absolute and indeterminate creativity of biological life.

Deleuze reads in Zola's *Rougon-Macquart* a tension between two layers of narrative movement. There is the dramatic or historical tier of events in the plot: Claude's suicide, Florent's betrayal and exile, murders, instances of adultery, and alcoholic breakdowns. These happen at the level of the human body and, as Harrow and Counter suggest, act as propellants of, but also ruptures in, the hereditary narrative of any individual novel. Deleuze goes further, however, and affirms that there exists beneath this level of somatic happenings an epic, *germinal* register of narrative which is both immanent to the somatic and exceeds it. This 'double register' has two distinct narrative characteristics. The 'adventure of men and their instincts' is played out in the 'small manoeuvre' of the tragic, somatic plot. In contrast, Deleuze stresses the 'pagan character' of the epic plot which, in unlike the 'closed space' of tragic destiny, represents an 'open space' of grand, impersonal narrative, the future of which is indeterminate and beyond the control of the human.[43] This dual-tier narrative can be read in *Germinal*. The coal mines where the workers work and against the oppression of which the workers struggle represent an epic, subterranean space on a geological scale,

[42] Gilles Deleuze, *The Logic of Sense*, ed. by Mark Lester, trans. by Constantin V Boundas and Charles Stivale (New York: Columbia University Press, 1990), pp. 321–333.
[43] Deleuze, *The Logic of Sense*, p. 331.

above which and in which the human struggle to survive plays out its tragic, but comparatively insignificant plot. That the human drama of the novel concludes in irresolution with Étienne Lantier striding towards the future leaving behind a failed revolution and a trail of human destruction conjoins these two levels of narrative. The collapse of the general strike is undoubtedly tragic, but the inconclusive ending of the novel points to the epic, indeterminate historical and political trajectory within which this smaller plot takes place.

Deleuze states that these two registers of narrative, the grand, epic narrative and the smaller, historical one, correlate with a similarly divided form of biological inheritance or hereditary transmission. Following on from his analysis of the theme of the 'crack-up' taken from F. Scott Fitzgerald's collection of autobiographical essays, Deleuze re-works the concept of the Freudian death-drive to argue that heredity in the *Rougon-Macquart* novels consists of two distinct but interactive forms of biological communication. One is small, *somatic*, historical, dramatic and the means by which 'instincts' and such well-defined characteristics as alcoholism, perversion, and obsession are transmitted from body to body. This type of heredity would apply to Claude in *L'Œuvre* and Florent in *Le Ventre de Paris*, both of whom inherit hereditary defects (monomania and pathological "thinness" respectively) from their familial antecedents and these determine their destinies. The other form of heredity which Deleuze calls 'the crack' (*la fêlure*) is *germinal*, silent and rests beneath the noise of these surface drives in Zola's novels.[44] It is the 'great internal Void' that traverses his works and its characters and which transmits only itself, the possibility of transmission – the transmission of possibility. Deleuze suggests that readings of Zola which grasp only the tragic and deterministic function of biological heredity in his fiction confuse historical, somatic heredity with its vehicle, which is to confuse what is transmitted by heredity with the transmission of transmission itself. Deleuze calls this latter idea the 'red thread' of communication that connects all the elements in the genealogical network of the *Rougon-Macquart* novels. And although, Deleuze writes, '[t]he crack designates, and this emptiness, is, Death – the death Instinct', it does not confirm the determinism of heredity in Zola's fiction, but acts as a topos of pure possibility, an 'imperceptible rift or hole' through which determinism's repetition of the same can be

[44] 'La fêlure' could also be translated as 'flaw', as in hereditary flaw or crack. I prefer to keep it as 'crack' (as Boundas does in his translation) to better communicate the difference between the surface effects a flaw or taint in somatic heredity, and the subterranean issue of a crack or crack-up.

transformed into the creation of the new.[45]

This articulation of the work of the death instinct and its presence in Zola's fiction can be understood as part of a wider project by Deleuze, most notably undertaken in *Anti-Oedipus* with Felix Guattari, to critique and extend the psychoanalytic tradition inaugurated by Freud.[46] In his reading of Zola in *the Logic of Sense*, Deleuze inverts the Freudian schema of Eros and Thanatos, casting the death drive as the drive of vital transformative potential, and the instinct towards life as a form of repetition of the same. The instincts, temperaments, appetites, and obsessions that drive Zola's characters towards self-destruction, Deleuze says, are not symptoms of the drive towards death or of failure in nature's war, but are closer to being enactments of the will to live, and the evolutionary notion of adaptation. Although they are ostensibly self-destructive or, in the terminology of Darwinian competition, mal-adaptive, these tendencies are expressions of a type of life that seeks to preserve itself 'in a historically determined existence in an unfavourable environment'.[47] In the case of Claude for example, this means that his drive for an impossible form of objective art can be read not an unconsciously self-lacerating one or a means of ensuring his failure in the struggle for life, but is a means of asserting life in response to a biological or historically pre-determined situation. Equally for Florent, an engagement with radical, leftist politics in Second Empire Paris need not be seen as the unknowing enactment of a deeper bio-political nihilism, even though, for the reader, it seems inevitable that his actions will change nothing and cause his downfall. Rather, this engagement represents the means by which Florent lives a life that is acceptable to him, in response to his pre-determined socio-biological position. Nevertheless, this small heredity remains a heredity of repetition of the same: somatic or historical heredity always transmits something 'well determined', reproducing whatever it transmits.[48] So Claude's suicidal expression of agency is doomed to reproduce itself, never achieving transformation, but perpetuating the destructive mode of life he has found for himself. And Florent's

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[45] Deleuze, *The Logic of Sense*, pp. 321–324.
[46] Termed 'schizoanalysis' rather than psychoanalysis, Deleuze and Guattari's engagement with Freud is premised on a rejection of 'all reductive psychoanalytic and political analyses that remain caught within the sphere of totality and unity, in order to free the multiplicity of desire from the deadly neurotic and Oedipal yoke'. Part of this rejection consists in a re-reading the death-drive as an affirmative constituent of the multiplicity of desire, which Deleuze prefigures in his reading of Zola in *The Logic of Sense.* See Mark Seem, 'Introduction', in Gilles Deleuze and Félix Guattari, *Anti-Oedipus: Capitalism and Schizophrenia*, trans. by Robert Hurley, Mark Seem, & Helen R. Lane (Minneapolis: University of Minnesota Press, 1983), pp. xv-xxiv.
[47] Deleuze, *The Logic of Sense*, p. 322.
[48] Deleuze, *The Logic of Sense*, p. 324.

desperate attempt at political revolution, while it is affirmative insofar as it provides him with a means of living acceptably, only begets further misguided attempts at revolutionary action that are doomed to fail. Nonetheless, says Deleuze, the heredity of the crack – the vital death instinct – lies beneath all the results of these smaller drives, silently and imperceptibly connecting each novel of Zola's *Rougon-Macquart* series into a single unity. For Deleuze, everything that occurs in Zola's novels, the drama of familial conflict, murder, war, alcoholic dissolution, both covers over and points towards this underlying *epos* of the crack. This silent but ever present realm of the crack spreads itself throughout all the narratives and points towards a vast, supra-human narrative of life on a scale that exceeds and is immanent to the lives and drives of the human being. The heredity of the crack transmits only transmission, communicates only the possibility of communication, and represents incalculable possibility as such: '[t]here remains […] a future for heredity simply because what is inherited in any passing on is the future.'[49]

This reading of Zola's heredity, Deleuze argues, also allows us to re-assess the so-called 'putridity' of Zola's tragic novels, which depict violence, failure, and cataclysm, and the ostensible optimism of later novels like *Le Docteur Pascal*, which concludes by looking forward to a redemptive future driven by hereditary improvement. Deleuze states that Zola's pessimistic or tragic novels are precisely his optimistic works because in their depiction of the abject desperation and animal violence of biological and social struggle, they open out on to the vast imperceptible topos of the death instinct. 'It is one and the same movement – the movement of the epic – that the basest instincts are reflected in the terrible death instinct, but also that the death instinct is reflected inside an open space [the crack], perhaps even against itself'.[50] Thus, what Deleuze calls the 'socialist optimism' of Étienne in *Germinal* is misguided in its reading of Darwin in terms of progress, because it is rooted to a somatic conception of heredity which can only repeat itself. A more realistic and yet radically optimistic biological socialism, Deleuze suggests, consists in recognising that the 'proletariat already makes its way through the crack', that life is always 'endowed with a future', and in exposing the transcendental illusion of a redemptive bio-politics

[49] Keith Ansell-Pearson, 'Spectropoiesis and Rhizomatics: Learning to Live with Death and Demons', in *Evil Spirits: Nihilism and the Fate of Modernity*, ed. by Gary Banham and Charlie Blake (Manchester: Manchester University Press, 2000), pp. 124–46 (p. 132).
[50] Deleuze, *The Logic of Sense*, p. 332.

founded on the avoidance of endings and death.[51]

Ian Buchanan's reading of the crack in Deleuze's work links it to the notion of the third synthesis of time in *Difference and Repetition*.[52] The first synthesis is the level of habit, the repetition of the same, while the second synthesis is memory, which acts as the ground to habit and grants it historical coherence. The third synthesis, Buchanan says, is the crack up, death, crisis, violence – 'the bolt of lightning' – which connects these two levels and brings into being the possibility of a future. Habit ensures that an individual (Hamlet, say, or Oedipus) is initially unable to carry out a task of going beyond their unwillingness or incapacity to change their 'situation'. Memory, or 'action', represents an acknowledgement of what it would be required to effect a monumental change (murder, say, or confronting one's own complicity with evil). The third synthesis occurs at the moment when it becomes clear that in order to carry out this act the individual will have to become inhuman – where the 'event and the act possess a secret coherence' – which both connects the individual with the revolutionary, impersonal forces already at work and consigns that individual to a tragic fate.[53] Thus, what Deleuze calls 'the basest instincts' become reflected in the epic death instinct; this represents the moment at which a mode of historically and somatically destructive life resonates with epic, vital life where, as a result, we as readers sense the impersonal, incalculable forces of life at work.

Keith Ansell-Pearson in his work on *Germinal Life* sketches out the virtual topography of the crack, and affirms the transformative potential of its recognition. Alluding to Zola's use in the *Rougon-Macquart* novels of the symbol of the steam train as an emblem of industrial progress and hereditary transmission, Ansell-Pearson writes:

> On the tracks of this germinal train of life there is neither beginning nor end, neither a given genealogy nor a given teleology, but only the broken middles that allow for novel intersections, cross-connections, and unpredictable growths, constituting a cornucopia of good and bad. The crack enjoys a capacity for self-overcoming, a making possible creative 'evolutions', in which the creation involved offers not a simple redemption but allows for the germinality of the most destructive inclinations and tendencies.[54]

The crack is undifferentiated life, difference in itself: what Deleuze in *Difference and*

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[51] Deleuze, *The Logic of Sense*, p. 332.
[52] Ian Buchanan, 'Deleuze's "Immanent Historicism"', *Parallax*, 7.4 (2001), 29–39.
[53] Buchanan, pp. 34–37; Deleuze, *Difference and Repetition*, p. 89.
[54] Keith Ansell-Pearson, *Germinal Life the Difference and Repetition of Deleuze* (London; New York: Routledge, 1999), p. 114.

Repetition calls 'the state in which one can speak of determination *as such.*'[55] Without difference or the crack – without incalculability being immanent to life – life would merely repeat itself without changing. Deleuze's reading is, therefore, a corrective to the deterministic conception of Zolian Naturalist narrative, such as is offered in the work of Michael Serres. As Ansell-Pearson points out, entropy, death, decline: these are only half the story. Beneath biological and social waste there exists a potential for transformation, where the somatic interacts with the germinal. The key to understanding how this operates, Ansell-Pearson insists, lies in Deleuze's reversal of the Freudian death drive. In Freud, he argues, the notion of the death drive represents a desire to return to 'the single truth of death'. But in Deleuze the topos of the death drive represents difference in itself, and the return to death is thus a return to originary heterogeneity and possibility, the opposite of a fixed condition of identity. Futurity – the possibility of the repetition of difference – is not secured by the agency or actions of individual humans, whom Zola shows repeatedly failing in their attempts to instigate revolutionary change. Rather, Zola's narratives in their depiction of failure show that futurity is sustained and secured by failure; is kept vital by the incapacity of humanity to control it; and that futurity itself exists is an immanent, supra-organic, immaterial realm from which Zola's characters 'burst forth and to which they return'.[56]

Deleuze's theory of the heredity of the crack in Zola's fiction, therefore, is not only an attempt at a corrective to the critical consensus that Zola's fiction is irretrievably resigned to its own biologically tragic plots. It also goes beyond the suggestion that Zola's literary engagement with hereditary and biological science is transformative rather than merely deferential. Deleuze, via Zola, goes on to also contest the Darwinian model of evolutionary heredity in natural selection. As I have discussed in the Introduction, Deleuze affirms in *Difference and Repetition* that Darwin's theory of natural selection points the biological sciences towards a reassessment of difference – showing difference to be ontologically primary to ('differenciated') individual beings and species. However, he also recognises that Darwin's theory fails to perceive or fully appreciate its own revolutionary nature. For Darwin, writes Deleuze, 'individual difference does not yet have a clear status, to the extent that it is considered for itself and as primary matter of selection or differenciation: understood as free-floating or unconnected difference, it is not distinguished from an indeterminate variability.'[57]

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[55] Deleuze, *Difference and Repetition*, p. 28.
[56] Ansell-Pearson, *Germinal Life the Difference and Repetition of Deleuze*, p. 120.
[57] Deleuze, *Difference and Repetition*, p. 248.

Difference under the Darwinian model is still a matter of transcendence, still bound to the level of the somatic. Moreover differences are understood to be borne by individuals, differenciated beings, and can then be gathered together under categories of resemblance.[58] In this model, differentiation through natural selection can only work in relation to individuals – in relations of conflict, war, or competition. This stands in contrast with the Deleuzean model, which focuses on difference in itself, which is a realm of germinal potentiality where natural selection is but one of many principles of differentiation. This is why Deleuze seeks to split the process of selection and hereditary transmission into those two distinct but interactive parts, the somatic and the germinal. The somatic encompasses the Darwinian model and addresses physical differences, adaptations, and the repetition of the same. In adding the germinal, Deleuze introduces the non-actualised, or 'free-floating' difference, which supplements the hereditary and evolutionary determination of the somatic and the historical with immanent pure possibility.

This two-pronged formulation mirrors the hereditary theory of the French hereditary theorist Prosper Lucas, whose work, as I have mentioned, was instrumental in Zola's conception of inheritance and to whom Deleuze appears to allude in his reading of Zola's work.[59] Lucas divided up heredity into two distinct forms. First of the law of imitation, which gives way to inheritance and, second, the law of *innéité* (translated variously as 'variation' or 'mutation').[60] Structurally speaking, this echoes Deleuze's formulation: the first form of heredity ensures the transmission of characteristics (instincts in Deleuze's terms), such as mental diseases, and the latter represents a more diffuse heredity that brings forth the possibility of variation and change. Echoing Deleuze, Lucas writes of this latter heredity, *innéité* is the 'veritable Proteus of generation […] the very incarnation of the diverse in life' which 'progresses by transforming all the elements, all the attributes, all the modes of life on which its action has a bearing'.[61] The homology between Lucas and Deleuze's theories of

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[58] Nathan Eckstrand, 'Deleuze, Darwin and the Categorisation of Life', *Deleuze Studies*, 8.4 (2014), 415–44.

[59] Deleuze notes in his reading of Zola in *The Logic of Sense* that the influence of contemporary medical science had on the Naturalist should not be ignored, especially the idea of 'a homologous and well determined heredity and a "dissimilar or transformational heredity", with a diffuse character'. See: Deleuze, *The Logic of Sense*, p. 325.

[60] Ricardo Noguera Solano, 'Darwin and Inheritance: The Influence of Prosper Lucas', *Journal of the History of Biology*, 42.4 (2009), 685–714 (pp. 692–693).

[61] Translation by David Baguley taken from *The Literary and Cultural Reception of Charles Darwin in Europe*, eds. Shaffer and Glick, p. 428, originally in Prosper Lucas, *Traité philosophique et physiologique de l'hérédité naturelle* (Paris: J.B. Baillière, 1847), p. 649.

heredity casts Deleuze, via Lucas, as an unexpected genealogical mediator between Zola and Darwin. Darwin acknowledged Lucas's influence on his work in the *The Origin of Species* and, recently, work has been undertaken to further emphasise the import of this relation.[62] For my purposes, this genealogical connection also emphasises how Deleuze's reading of Zola can work to examine the dynamics of sameness and difference in Darwin's theory of evolution. Darwin folded together under the rubric of natural selection the processes of hereditary transmission through selection as well as the transmission of differences. Variation through the production of difference, Darwin speculates, is a response to an organism's conditions of life – the physical. He recognises in *The Origin of Species* the physical plasticity of the organism, but attributed its variations to the effects of selection and adaptation:

> But the much greater variability, as well as the greater frequency of monstrosities, under domestication or cultivation, than under nature, leads me to believe that deviations of structure are in some way due to the nature of the conditions of life, to which the parents and their more remote ancestors have been exposed during several generations. (*Origin*, 131)

In contrast, for Lucas and Deleuze, the corporeal world produces only sameness; variation is not located in the world of physical differences or adaptations, but in the Protean ontological condition of difference that precedes the physical materialisation of differences. So through Deleuze, Zola's fiction is shown to have a genealogical connection with Darwin. But this genealogical connection does not reveal a historical chain of influence, nor does it trace a history of biological determinism from Darwin via Zola. Instead, it works to crack open Darwin's theory of heredity to reveal its blindness to the problem of difference as Deleuze understands it, and to raise the issue of that which exceeds the operations and tragedies of natural selection. For Deleuze, Zola's tragedies remind his readers that the epic pre-exists and exceeds the vicissitudes of the Darwinian struggle for life, and that the obsessive return to the topos of possibility in death is the condition by which futurity is reproduced.

It is, perhaps, for this reason that Deleuze suggests, contrary to common sense, that it is in the most violent and 'putrid' aspects of Zola's fiction where we can grasp or intuit a sense of the revolutionary and infinite *epos* of the death drive. In *Germinal*, the drowning of countless innocent miners deep beneath the surface of the earth through

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[62] 'Any variation which is not inherited is unimportant for us. But the number and diversity of inheritable deviations of structure, both those of slight and those of considerable physiological importance, is endless. Dr Prosper Lucas's treatise, in two large volumes, is the fullest and the best on this subject.' See: Darwin, p. 13.

the actions of Souvarine represents a cruel, nihilistic affirmation of the futility of revolutionary political action. But it might also work as a reminder, for that same reason, that revolutionary change is immanent to biological life and that the return of difference in death is the pre-condition of that change. Similarly, in *L'Œuvre* the scene of Claude's funeral ostensibly represents the final punctuation mark in the novel's biologically deterministic narrative and in the inevitably tragic life of an artist, doomed by his heredity to fail in the struggle for survival. As Claude is lowered into the ground, the voice of the priest presiding over the funeral service is drowned out by a 'huge, puffing locomotive', that emblem of industrial progress which Zola uses throughout the *Rougon-Macquart* as a symbol of the interconnectivity and inexorable movement inherent in heredity (*L'Œuvre,* 361). Echoing the plot of Cocteau's *La Machine Infernale*, the train represents the unstoppable, tragic onrush of events that concludes in the destruction of the individual. For Deleuze, however, because the train represents germinal and not somatic heredity – 'that which rushes by, a mobile spectacle linking the whole earth and men of every origin' – it does not represent biological predetermination but precisely its opposite. The train represents the very 'image of death', that is, in Deleuze's inverted sense, 'the pure Death instinct': a symbol of the epic heredity of the crack which joins together all of Zola's novels and which also represents that which precedes and exceeds narratives of death, crime, and adultery.[63] Claude's death represents both the end of a life and points towards that which creates individual life: pure, immanent possibility. The priest intones the following words, words which are barely audible over the din of the passing train: '*Revertitur in terram suam unde erat …*' ("Return to the earth, as it once was") (*L'Œuvre,* 361). But in Deleuze's conception of heredity, Claude's return is not a return to identity or to origins, but the dissolution of his identity into pure difference: a reminder that even in its eschatological conception, heredity and evolutionary competition is always inhabited by futurity.

"The man who was eaten alive" – Putrid Art and the Crack

Deleuze's reading of heredity in Zola in *The Logic of Sense*, as Zola does himself in *Le Roman expérimental*, ascribes singular agency to literary art. For Zola, at least in that essay, the capacity of art to represent reality makes it possible to recruit literary

[63] Deleuze, *The Logic of Sense*, pp. 329–330.

Naturalism into the service of a positivist scientific project – accruing knowledge about the world in order to ameliorate it. But Zola's own theoretical foundations create an art that deconstructs its own scientific basis, putting into question the very objectivity of the sciences upon which it is founded. Not only does Zola's fiction negate the objectivity of its own scientific foundations, and complicate the fatalist determinism of biological naturalism and the struggle for life. Deleuze's interpretation of heredity in Zola's fiction raises the further possibility that Zola's art confides in us as humans the absolute anti-determinism of biological life and struggle through its literary transformation of theories of heredity and evolution. In such a light, Zola's fiction is not just implicitly critical of its own representational basis and its scientific foundations, but indicates a positive project whereby the fiction of abjection and putridity offers a revelatory truth about biological and social life. In usual readings of Naturalism, putridity and the abject are thought to offer a representation of codifiable laws about the world. But in Deleuze's reading, Zola's depiction of the violent clamour of instincts, drives, and obsessions does not exhaust reality, but offers a sense of the Real's refusal of signification by opening out on to the silent, imperceptible topos of difference in itself which the drives both cover and reveal. Zola's putrid art does not represent reality, but affirms for the reader that beneath the destructive material, bodily, and social implications of heredity, evolutionary struggle, and the attempts to transcend them, there exists a topos of possibility that exceeds representation and is beyond the reach of human action.

Deleuze's claim that Zola's literary art enables its reader to intuit a sense of epic, over-human infinity, within which resides a form of heredity that transmits only itself and the possibility of futurity, invites further discussion; not only because this is a radical proposition, but because it dovetails with the discussion I undertook earlier on this chapter on the significance of narrative rupture in Zola's fiction. Deleuze stipulates that it is the exaggerated, descriptive hyperbole of Zola's depiction of the 'history of the instincts against the background of death', that affirms the future-oriented, epic character of the grand heredity of the crack. To merely narrate death or to allude to it, Deleuze suggests, would keep us reading at the level of the 'history of the instincts'. But exaggerated and explicit representations of human waste, Deleuze says, connect the somatic with the germinal: 'one can never go too far in the description of decomposition, since it is necessary to go as far as the crack leads'.[64] A

[64] Deleuze, *The Logic of Sense*, p. 332.

productive literary relation to the crack, therefore, should seek to take the descriptive literary rendering of decomposition and death to its gruesome limit, even to the point of exaggeration, breaking open the surface realism of that novel's narrative. A writer of epic literature, Deleuze says, 'has no *logos*, but only an *epos*', in which there is no appropriate level of realism and whose point, despite what Zola seems to avow, is not to prescribe a signifying, scientific, or predictive frame for reality.[65] The function of Zola's morbid epics is to describe how the seething violence of reality is also the pre-condition for its relentless change and thus to imply reality's fundamental incompatibility with representational exhaustion. In contrast, to falter in describing the abject cruelty and horror of biological life, to allude to it without exposing oneself and one's reader to its most nauseating effects, is not merely an attempt to protect ourselves from the prospect of the bodily and affective consequences of our own mortality. It also permits us the fantasy of control, via representational capture, over the existential threat of death. The function of Zola's putrid literature, then, is to wound its readers and lacerate its own textual body: to expose readers to the full force of their own mortality, and to mutilate the very claims to the predictive and totalising capacity of signification which sustains humanity's illusory control over its own future.

To this conception of the aggressive nature of Zola's putrid literary art, Harrow's and Counter's analyses of the simultaneous continuities and ruptures which are constitutive of hereditary transmission add an illustration of the specific structural characteristics of Zola's fictions of bodily breakdown and human waste. Harrow argues that Zola's hereditary tragedies are constituted by a series of corporeal incidents – births, deaths, murders, and so forth – which often take the form in his writing of singular events, scenes, or independent literary tableaus. These structural building blocks, crucial to the progress of the heredity and narrative, also work as breaches in the otherwise smooth literary progression of hereditary tragedy. Each murder, mutilation, death, or suicide is a narrative block with which Zola constructs an ostensibly tragic linear plot and is, at the same time, a self-sufficient event which draws attention to the discontinuousness and contingency of such a narrative shape. This structural tension is reproduced throughout Zola's work: at the level of the novel's individual narrative, where divergent narrative meandering or moments of tangential description are at odds with the relentless narrative of fatal heredity in which they are embedded; and at the level of Zola's entire *Rougon-Macquart* undertaking, in which

[65] Deleuze, *The Logic of Sense*, p. 332.

each single novel is both a singular, self-sufficient work, which breaks up continuous 'red thread' of biological and genealogical history they constitute. So the violence described in each novel or narrative tableau formalises the inherent cruelty of hereditary progression, which, as Andrew Counter points out, is premised on various iterations of symbolic parricide. Moreover, the emphatic, descriptive exaggeration with which Zola treats scenes of violence or death is brought to our attention by these structural ruptures – once again exposing readers to the nauseating and horrifying prospect of death and its necessity for the continuation of life.

In what follows, I shall be reading a scene in Zola's *Le Ventre de Paris* that embodies this structural dynamic of evolutionary furtherance and violent rupture and which also engages in a hyperbolic dramatisation of this violence. My intention is to continue to examine Deleuze's notion that we can find a form of literary consolation in the putridity of Zola's literary art and to inquire as to the plausibility of this thesis as a mode of reading Darwin's war of nature.

One evening in the kitchen of the Quenu family's *charcuterie*, Florent is beseeched by his brother's daughter to tell a story and recounts the semi-autobiographical story of how he escaped from exile on Devil's Island. '"Tell me the story of the man who was eaten alive!", enjoins his niece, as in the background, a *boudin noir* is prepared and described by Zola in nauseating and precise Naturalistic detail. 'No doubt', interjects the narrator, 'the mention of blood flowing from pigs' had re-instigated her interest in this tale and so, with the scene set, and the kitchen's atmosphere becoming thick with the pall of animal fat, Florent begins to narrate this story within a story (*Le Ventre,* 161). He begins his tale by describing the harsh, adversarial world of imprisonment on French Guiana. The prisoners live in a Hobbesian state of nature and Darwinian abjection, fighting for survival against mosquitoes who 'covered them at night with sores and swellings' and whose bites, despite their efforts, kill numerous men. They battle with maggots that infest their food and they struggle with the violence of the guards, not merely to survive, but to continue to survive as humans and not 'like animals, constantly on the point of being whipped' (*Le Ventre*, 81-82). Eventually Florent details how, having left a companion on an island while searching for a boat in which to escape, he returns to find him dead:

> When they got back to the rock they saw their companion lying on his back, his hands and feet eaten away, his face gnawed, and his stomach full of crabs, crawling about, making his sides shake, as if the half-eaten corpse, still fresh, was in the throes of a terrible death agony. (*Le Ventre*, 83)

This is the image of the man eaten alive to which his niece alludes in her plea to Florent. It is emblematic of Florent's life in exile: here, humanity is locked in a constant Darwinian battle with a nature that is beyond domination, constantly threatening to devour humanity. The prisoners fight insects, disease, bacteria and other humans merely to survive. Just as the over-arching narrative of the novel details Florent's biological failure, Florent's own tale foreshadows that failure by offering a detailed description of the conclusion of all biological struggle in a determinist logic by magnifying its corporeal effects in excruciating detail.

The theme of biological struggle for survival in Florent's story, is further doubled by its relation to the domestic contest in which it unfolds. As Florent narrates his morbid tale of biological warfare, his brother, Quenu, Quenu's wife, Lisa, and a kitchen servant congregate over vats of bubbling pig's blood, taking a powerful epicurean pleasure in the bloody and sensual processes with which the *boudin* is prepared. So while Florent details how the wretched political exiles of the French state become the victims of nature's war, the bourgeoisie delight in the evisceration they have ordered of another creature, that of the equally wretched swine. This reiterates Claude Lantier's assertion that society is constituted by and continually reproduces an originary act of violence, which mirrors biological life: the juxtaposition of Florent's story of death and the slaughter of a pig represent the originary, transcendent status of the battle between the poor, the starving, the biologically unfortunate and the comparatively fat, healthy, and well-adapted bourgeoisie.

This scene – and its central image of a corpse being devoured by crustaceans – stands as a gruesome diorama of biological life, Darwin's war, famine, and death, and prefigures Florent's presumed fate at the conclusion of the novel as he is, once more, exiled to Devil's Island. His escape from exile, therefore, represents nothing other than a brief reprieve from the war of nature, a postponement of his inevitable dissolution and exile as a result of the overwhelming force of biological combined with societal self-interest, and of his own hereditary thinness. Similarly, the telling of the story itself is a brief reprieve: it represents a moment of safety, outside the bounds of the competitive bio-social world to which he has returned, and which will eventually go on to devour him. However, in that foreshadowing, Zola points to the artifice that is involved in his work and disrupts the supposed continuous determinism which philosophically underpins the biological pretention of his narrative. Indeed, this scene represents a double interruption: the story of "the man who was eaten alive" is an

interruption in the daily slaughter and commercial competition of the charcuterie, just as the story within a story is an interruption for us in the headlong narrative rush of the novel. But that interruption does not negate biological determinism but merely stalls it. To that extent, the work of rupture reminds us as readers of our own implication in a biologically and historically pre-determined world of constant violence and competition. And so, we would be once more consigned to renounce ourselves to the Darwinian struggle to survive, as the inevitability of death and the inescapability of struggle become further entrenched. Florent's story seems to have the same effect, pointing to its own ephemerality in contrast with the abject state of suffering to which we are all consigned.

But for Deleuze, as I have already pointed out, in his own reading of Zola death, decline, and dissolution are only one side of the story, for death is the condition by which life as such becomes possible. In a non-dialectical and non-oppositional sense, death understood in terms of the crack represents the diffuse, immaterial topos of potentiality from which bodies and their drives emerge and into which they dissolve. And death in these scenes is a constant, immanent presence. Its inevitability colours everything that occurs both within Florent's framed narrative and outside it, in its further frame. Although Florent's tale, ultimately, details his escape from exile and therefore traces a plot of redemption, the scene of butchery that frames his story is a reminder of the cruel world into which he has escaped and in which he is nothing but another animal to the slaughter. Florent will be sacrificed in the interest of bourgeois respectability and capital: Lisa, his sister-in-law, takes the decision to betray him to the police in order to protect her reputation and business. Similarly, while Quenu's family exult in their epicurean domination of the animal world, Florent's tale operates as a striking *memento mori* for the mood of comfortable bourgeois invincibility that characterises his extended family. Zola's re-assertion of the immanence of death and the abject picture of life in a state of nature does entrench a certain type of somatic determinism: we all must die in a state of unending conflict. But in the light of Deleuze's conception of the heredity and the death drive in terms of his notion of the crack, this can be read to represent the immanence of future possibility. Neither fat nor thin, Cain nor Abel, shall live in perpetuity; revolutionary change is inherent to biological life as it is in society and civilisation. The contours of futurity are beyond the reach of the individual human and the destiny of conflict, whose return to the crack along with all life is the condition by which futurity as such is ensured.

The germinal heredity of the crack as theorised by Deleuze, then, allows us to read Zola's putrid literature in affirmative terms – albeit in terms that demand a conception of tragedy that steps outside a purely humanistic frame. For Deleuze, in his reading of Zola, tragedy is not a despairing or nihilistic vision of the world, but a comprehensive one in which the apparently contradictory totality of nature is dramatised. Zola's writing intimates that nature is constituted by both death and growth, by both negation and abundance. But Zola's putrid fiction, Deleuze says, ensures that the suffering and pain of negation is never resolved, is in fact aggressively exaggerated, and thus forces us to relinquish the false hope of redemption in favour of reconciling suffering and negation with the pleasure of living. Moreover, reading Zola in this way permits us to respond affirmatively to critiques of Deleuze's conception of difference and its anti-humanist stance, such as those of Hallward and Caygill, which accuse Deleuze of a blindness to the material effects of biological and social change. By contrast, Deleuze's preoccupation with Zola's putrid literature, while it is viewed as a means through which the infinite can be felt, shows the infinite to be linked irretrievably to the physical pain of humanity. Indeed, Deleuze demands specifically that we pay close attention to Zola's 'filth' for it is precisely in this aspect of his literature that the price of the infinite is absolutely clear.

Ian Buchanan's reading of Deleuze's conception of the crack echoes this point, arguing that at the core of Deleuze's method of literary criticism here is an attempt to remind the reader, with equal force, of the cruelty of inhuman forces of change (the ethological), and their effects on the human level of being (the anthropological). Specifically, '[t]he art of writing' in a Deleuzean sense, Buchanan argues,

> consists in utilizing anthropological material to stage ethological material in a way that causes the reader to oscillate between the two worlds. This very oscillation, [... which] can be found as much in the reader as the work itself, is the crack.[66]

Deleuze's reading of Zola, therefore, might allow us also to read Darwin's theory of natural selection in a different light, permitting us to oscillate between the power of the inhuman forces it describes as well as their effects on human life. As I have already demonstrated, in *The Origin of Species* Darwin affirmed that a constant 'war of nature' constituted the evolution of life and, in doing so, he recognised that what consolation was available to us was minimal. Death, Darwin says, is mercifully 'generally prompt'

[66] Buchanan, p. 38.

and in the meantime 'the healthy, and the happy survive and multiply' (*Origin,* 79). For Deleuze, however, this cruel materialism produces its own type of consolation, and he suggests in his reading of Zola that our pain derives from an attempt to resolve or repress the inherent tragedy of living in an evolutionary cosmology. Deleuze's own reading of Darwin in *Difference and Repetition* is similarly affirmative: the point is not to despair at the ephemerality of organic life, but to marvel at the vital, seething organic productivity that is made possible by ephemerality and the irreducible individuality of all living beings. 'The leitmotif of *The Origin of Species*', Deleuze says, is not that now know what life is capable of but precisely the opposite: 'we do not know what individual difference is capable of. We do not know how far it can go, assuming we add to it natural selection'.[67]

But the love of a futurity immanent to difference which Deleuze counsels in his reading of Zola and his reading of Darwin demands a certain type of self-abnegation which, despite appearing desirable, confronts the human ego with a challenge it has never previously overcome. Although Freud was sanguine about the capacity for his work as well as that of Darwin and Copernicus to effect a revaluation of the human, it is clear, today, that this revaluation has only been partly successful. As Sylvia Winter points out in her assessment of the anthropological revolution in science in the nineteenth century, Darwin's work did not penetrate the serene, phallic, racial supremacism of Western conceptions of humanity, but strengthened its claims by offering it a nominally scientific footing. '[B]io-evolutionary Natural Selection', Winter writes, functioned in the nineteenth century 'at the level of the new bourgeois social order as a *de facto* new Argument-from-Design-one in which while one's selected or dysselected status could not be known in advance, it would come to be verified by one's (or one's group's) success or failure in life.'[68] And today, as Rose and Rose have emphasised, the synthesis of genetics and natural selection has only provided humanity with further pretext to protect itself against all perceived existential threats – often with insidious consequences. In the following section, therefore, I shall be looking in greater depth at the thesis made in Deleuze's reading of Zola and asking whether the dogged persistence of human egotism negates the possibility of humanity

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[67] Deleuze, *Difference and Repetition*, p. 248.
[68] Sylvia Winter, 'Unsettling the Coloniality of Being/Power/Truth/Freedom: Towards the Human, After Man, Its Overrepresentation--An Argument', *CR: The New Centennial Review*, 3.3 (2003), 257–337 (p. 310).

cherishing its own mortality.

Abjection and Putridity

Echoing Deleuze's reading of Zola, which claims his representation of the morbidity of biological life confronts and consoles us with the sublime domain of germinal heredity, Julia Kristeva reads in Zola's 'talent for the unbearable, for the grotesque, for the execrable human condition' a literature of visionary clinical power.[69] Reading Zola, Kristeva suggests, we find a mirror of the conditions of the Darwinian war of nature and the pre-determination of hereditary taints: 'the raw and ugly violence of brutal sexuality, of nervous pathology, of the banal, and cruel, distress of the poor'.[70] But she argues that Zola's work is less a transposition in the novel of the methods of natural history than an anticipation of the aesthetics and affective powers of expressionism in painting, and artists like Oskar Kokosckha, Edvard Munch, and Egon Schiele. The oneiric, hyperbole of expressionism, Kristeva argues, is the inheritor of Zola's aesthetic, which is concerned with what she calls in *The Powers of Horror* the 'dreary crisis' of modern civilisation, an acknowledgement of the 'horror of being', the arrival of which, it is possible to argue, has been hastened by the Darwinian assault on human exceptionality.[71] As Deleuze argues in the *Logic of Sense*, however, Zola's fixation on civilisational malaise, biological nihilism, and violent death should not be confused with biological pessimism, but recognised as a means to embracing a greater – un-representable – optimism. Zola's work has a conciliatory function for Kristeva as well. She argues that 'great modern literature unfolds over [the] terrain' of that which is unassimilable through normal modes of representational capture and that this abyssal indeterminacy appears to us as repulsive and horrifying.[72] Death and 'the horror of being', Kristeva says, exists outside the binaries of subject and object, of human and animal. And to confront this in literary writing, as Zola does, is to raise the possibility of recognition and catharsis rather than insist upon repression and the prolongation of nihilism's misery.

Kristeva's reading of Zola and of the power of literature is rooted in her elaboration of a psychoanalytical theory of abjection. The abject, Kristeva argues, is not

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[69] Julia Kristeva, 'Aimer La Vérité Cruelle et Disgracieuse', *Cahiers Naturalistes*, 1994, 7–9 (p. 8). (My translation)
[70] Kristeva, 'Aimer La Vérité Cruelle et Disgracieuse', p. 8.
[71] Julia Kristeva, *Powers of Horror: An Essay on Abjection*, trans. by Leon S. Roudiez (New York: Columbia University Press, 1982), p. 208.
[72] Kristeva, *Powers of Horror*, p. 18.

an object or symbol, but an intolerable and exorbitant topos whose only quality is that of being 'opposed to I'. The abject, Kristeva writes, is

> [n]ot me. Not that. But not nothing, either. A "something" that I do not recognize as a thing. A weight of meaninglessness, about which there is nothing insignificant, and which crushes me. On the edge of non-existence and hallucination, of a reality that, if I acknowledge it, annihilates me.[73]

This abyssal space of threatening non-signifying significance is embodied, most forcefully, in the corpse and by the wounds and emissions that accompany it. Unlike the medical or scientific *representations* of death, a cadaver, a laceration, blood, pus, or the acrid smell of decay confronts us directly with what we as subjects 'permanently thrust aside in order to live'. This experience of the abject – of that which lies beyond the "I" and its location in a binary relation to an object – is itself resistant to being objectified such that we might cast ourselves as a stable subject. Instead, in its presence we are threatened and harried by the company of non-existence and brought to 'the border of [our] condition as a living being'.[74] Our affective response to this presence of non-presence, critically, is what allows us once more through the process of abjection to reconstitute ourselves as subjects. Disgust, horror, nausea, the symptoms of bodily and emotional repudiation: these powerful affects of aversion permit us to consolidate ourselves in opposition to the boundlessness of death, and reconstruct ourselves as safe and bounded beings. In addition to death, the loathing of food, turning away from and repudiating what is supposed to nourish us is also a fundamental embodiment of the process of abjection, which in Kristeva's theory is linked closely to infantile subject formation. The child, confronted with exorbitant parental desire in the form of food refuses to assimilate this dependency, and in gagging, vomiting, or refusing nourishment, they become other. But abjection is not represented by the act of refusal itself, since the horror of food or a corpse is not a response to an object *per se*. Rather, in abjection, Kristeva writes, 'I expel *myself*, I spit *myself* out, I abject *myself* within the same motion through which "I" claim to establish *myself*'.[75]

In his wide-ranging history of the philosophy of disgust, Winfried Menninghaus points out that, while Kristeva's theory of corporeal and psychic repudiation seems to add another term to the already lengthy catalogue of

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[73] Kristeva, *Powers of Horror*, p. 2.
[74] Kristeva, *Powers of Horror*, p. 3.
[75] Kristeva, *Powers of Horror*, p. 3.

psychoanalytic (and specifically Freudian) defence mechanisms, Freud's concept of disgust (*Ekel*) is conspicuous by its absence in *The Powers of Horror*.[76] As Menninghaus recognises, this absence is as telling as would be its presence; Kristeva's theory of the abject represents an encounter with Freud through which she both relies on Freudian notions of repudiation and re-casts them in new terms. For Menninghaus, Freud argues that the ego is driven primarily by desire, incorporating what it judges to be pleasurable as much as it repudiates what it perceives to be "displeasurable" or harmful. 'The original pleasure-driven ego' of Freud, Menninghaus says, 'wants to introject into itself everything that is good and to eject everything that is bad.' But disgust and horror are more intense affective responses than that of dis-pleasure or the intellectual judgement of 'badness' (although the most extreme degrees of dis-pleasure might reach levels of disgust) and when they do appear in Freud's work, Menninghaus argues, they are always limited to specifically neurotic or psychotic cases of repression. He cites the case in Freud of a woman who, at her sister's deathbed, expresses her wish to marry her now widowed brother-in-law. 'The neurotic reaction to the forbidden desire would be its immediate repression', resulting later in intense psychic pain; 'the *psychotic* reaction would have been a disavowal of the fact of the sister's death'. Both forms of repudiation or repression are, in Menninghaus's words 'cultural' forms of denial: temporary repressions of longings judged to be unappealing or unwanted in order to stabilise a subjectivity premised on the policing of desire.[77]

In contrast, disgust in Kristeva is neither limited to the extremities of neurosis or psychosis nor is it based on a secondary from of intellectual judgement. Instead, in Kristeva, disgust is universal to the formation of normal subjectivity and is a pre-intellectual, originary response to the fundamental trauma of parturition. The child emerges from a space that precedes the subject and the object, being and non-being, and responds with horror to the prospect of this abyssal topos whose only attribute is being opposed to "I". The subject, Kristeva argues therefore, is fundamentally a product not of desire but of negation, terror, and disgust at the abject; given form by violent aversion as much as it is shaped by the policing of positive drives and their unattainable and sometimes disgraceful objects. Again, the abject is not an object; it does not distinguish itself by escaping from desire or shaming it, but actively turns desire away by confronting the subject with the intolerable threat of non-being which

[76] Winfried Menninghaus, *Disgust: The Theory and History of a Strong Sensation*, trans. by Howard Eiland and Joel Golb (Albany: State University of New York Press, 2003), p. 367.
[77] Menninghaus, p. 368.

it must repudiate to constitute itself. Kristeva's analysis, therefore, does not seek to separate desire and horror, or to suggest that horror is always a response to shameful desire, but to reveal how fascination and yearning are drawn by horror at the same time as this horror evokes our disgust. We are attracted by the abject in the same movement as we are disgusted by it because it offers us the *jouissance* of abjecting ourselves even while we experience the affective onslaught of nausea. Thus, human subjectivity is uniquely and perversely ambiguous: always constituted both by desire for wholeness and in response to horror, subsisting on the perverse braiding of these two supposedly contrary affects. The power of the abject in art is to confront us with this ambiguity, to place before our eyes the internal uncertainty that logical systems of representation seek to conceal.[78] And, in doing so, art (and literary art especially, Kristeva argues) works in a similar fashion to the corpse or the nauseating odour of decaying. We are drawn to the abject in art for the same reason we are drawn to the abject itself: as a means to both confront with fear and dismay that which is intolerable to our being while taking pleasure in the momentary sense of being whole that this experience offers us.

In light of this idea of the abject, Claude's death in Zola's *L'Œuvre* takes on a new complexion. Claude's suicide is caused, we assume, by his hereditary taint and, relatedly, his incapacity to recognise the fundamental indeterminacy of representation. He is driven by a 'hereditary something' beyond signification which both inspires his creativity and makes him incapable of accepting its limits, impelling him towards self-destructive monomania and suicide. Deleuze, as I have shown, might cast this death-driven narrative of biological determinism in affirmative terms. Claude, faced with the pre-determined social and biological fate of *somatic* heredity, expresses the only type of life that is available to him, a life which constantly desires transformation, or the *germinal* heredity of the crack, through the creation of art, but which falters at the edge of its possibility until his death. Death, however, is the confirmation of the existence of germinal heredity, since it represents the pre-condition for the repetition of difference in the somatic world. Kristeva's theory of disgust in this light also re-works the Freudian notion of the death drive, suggesting that Claude's misery and suicide represents a logical horror at the groundlessness of his own art and his own biological constitution. Or rather, it is the impossibility of representational objectivity

[78] Nicholas Mansfield, *Subjectivity: Modern and Postmodern Theories of the Self* (St Leonards, N.S.W.: Allen & Unwin, 2000), pp. 85–87.

and the impossibility as it appears to him of transcending his own biological conditions that both repulses and attracts Claude. Appalled by his own inability to produce work that is adequate to his own Naturalist theorisation, Claude returns repeatedly to this impasse, neurotically re-confronting himself with his own biological fate and the impossibility of his artistic project. He becomes obsessed with a panoramic landscape painting of the Île de la Cité, the perfection of which consumes his life, and which, despite all his efforts, remains unfinished. He refers to his art as a battle with 'the Real', the narrator alerting us to the 'impossible task of putting all nature on one canvas' which defeats Claude at every attempt. And it is in front of this failed painting that the artist is found hanged by his wife Christine, Claude having made the decision to commit suicide on the basis that all life – real or otherwise – was a groundless fiction. So Claude, in his final act, recognises the abject nature of life and achieves a final form of self-determination in himself becoming abject.

Claude's perverse attraction to death is crystallised in the work he creates in the moments after discovering his child's corpse. Finding his child deceased, struck down by an unidentified hereditary weakness, Claude is immediately struck by a nameless fascination with this corpse and a desire to paint:

> Every time he passed the child's dead body he felt obliged to look at it, as if the glassy, staring eyes were exercising some kind of power over him. He tried to resist it at first, but the attraction grew stronger and stronger to the point of obsession, until at last he gave way, fetched out a small canvas and set to work on a study of the dead child. (*L'Œuvre,* 262-263)

Claude is bewitched by this embodiment of morbidity, which draws him towards it, even as his son, frozen in death, horrifies him with his grotesque, hereditarily deformed features: '[t]he exaggerated shape of the head, the waxlike texture of the skin' (*L'Œuvre,* 263). What Claude ultimately perceives in the corpse of his child, in addition to the figuration of hereditary fatality and evolutionary failure, is the abyssal emptiness of the abject, his child's 'eyes like holes wide open on the void', which is both aesthetically attractive to him and repulsive at the same time. And Claude sublimates this close braiding of contrary affects into this work, entitled *Dead Child* (*Enfant mort*), which represents one of the few instances in which he completes an artwork that satisfies his ambitions. The work, after much difficulty and political manoeuvring, is accepted to be exhibited at the Salon where its grotesque subject matter stands in stark contrast to the works that surround it. Zola describes the picture with as little restraint as Claude exercises in his own rendering of his dead son

on to canvas:

> Hanging where it did it was just a confused mass, like the carcass of some shapeless creature cast up by the tide, while the abnormally large head might have been any white, swollen object, a skull or even a bloated belly, and the wizened hands on the shroud looked like the curled-up claws of a bird that has died of cold. […] It was, however, possible to distinguish the light, glassy eyes and to recognize a child's head, a pitiful case of some disease of the brain. (*L'Œuvre*, 290)

This dark, surreal work is predictably unpopular with bourgeois crowds that visit the Salon and *Dead Child* attracts moralising derision and revulsion amongst those that see it. However, in this failure, the painting is, in Kristeva's terms, a type of success. For the work functions for these exhibition-goers in the same manner as it does for Claude: as a means by which one can confront the abject, stand at the threshold of one's own being, and reconstitute oneself in pleasurable opposition to that which inspires in us the most powerful affects of revulsion.

For the reader, a similar feeling of delightful repulsion might overcome us as we gaze imaginatively upon Claude's morbid work, and the implications of this perverse affect depend on the way in which we choose to read Zola's 'putrid' writing. To follow Deleuze, we might insist that Zola is here pointing once more to a type of germinal heredity, to the immanence of the germinal void even, in the most gruesome symbols of human failure and mortality. Pleasure in death would here be a result of humanity's recognition of its own minority – a satisfaction in relinquishing the oppressive egomania of our desire to be the central agent of all change. Claude's failure and his death are a precondition of revolutionary change, because that possibility must lie outside human control to be genuinely revolutionary. In following Kristeva, we would seek to identify what forms of cathartic power are put into action by Zola's depiction of the biologically abject. Does the abjective charge of Zola's writing open up a wound in the idea of humanity's biological supremacy and in that way challenge the notion of the tragic? Does it alert us to our own condition as ephemeral, time-bound, biological entities, whose subjectivity is contingent on the terrifying and visceral experience of our own mortality? Or does repulsion merely act as Kristeva suggests it does in the presence of the corpse: do we merely abject ourselves in order to shore up a sense of supreme identity where tragedy becomes the perverse but privileged means through which we mourn an entirely illusory sense of immortality?

Any answer to these questions would surely be subjective, would depend as it does for Étienne and Souvarine in *Germinal* on ideological allegiances or personal

histories and traumas. But we might also recognise that Zola's allows us to view those two possibilities as existing simultaneously in tension with one another. Zola's figuration of biological determinism in *L'Œuvre* is neither absolutely a transposition of biological nihilism into literature, nor an unambiguous resistance to the implications of biological conceptions of humanity and its place in nature. Instead, through a fictional examination of the life of the artist under the influence of biological determinism, the novel seeks to examine its own function as art in relation to that which is presented as given under bio-social law.

This critical dialogue on the role of art under the aegis of biological struggle takes on more explicitly Darwinian valences in *Le Ventre de Paris*, whose subject matter, unlike *L'Œuvre*, addresses more directly the struggle to survive than the struggle to transcend biological limitation. Both novels offer an abject victim of biological warfare as a privileged subject of art. Claude's *Dead Child*, in its depiction of hereditary fatality, both confronts its viewers with the unassimilable and horrifying reality of universal mortality, and allow those who are disgusted by it to be galvanised in their own sense of immortality. Florent's tale of 'the man who was eaten alive', though not a formal work of art, functions in a similar fashion. The corpse in that story – its flesh seething with crabs – repulses its listeners by confronting them the logical conclusion of the Darwinian struggle. And as readers we are also nauseated, both by Florent's experience as an abject victim of biological warfare and political exile, his vision of the corpse of his comrade, as well as by the naturalised murder of a pig that takes place in parallel to this story. The narrative of 'the man who was eaten alive' is itself lacerated by glimpses of this bloody gastronomic process. On the subject of slaughtering pigs, the family's shop assistant opines, '"I always stick the knife in four inches deep; that's just right"', as his own hands are covered in the crimson of the pig's viscera, just as Florent is about to begin his tale (*Le Ventre*, 79). Thick steam rises from the stove as the atmosphere is suffused with the fumes of animal fat and Florent continues his story, describing the prisoners' maggoty rice and the stench of rotten meat. At the conclusion of his story, with the *boudin* prepared, '[t]he mixture, black and steaming, flowed through the funnel, gradually swelling the skin, which fell back in a soft, fat curve', and Florent himself, exhausted by the story of his own suffering, renounces his revolutionary politics (*Le Ventre*, 82). The oscillation between the cruelty of Florent's tale and the normalised brutality of butchery shows how corpses, viscera, and the emissions of death are already a part of a symbolic order and as such

do not threaten human superiority. But it also acts as a critique of this assimilation. We see the human as a crab crawling through the flesh of the animal and what becomes abject in our eyes is not death itself or the logic of the struggle to survive, but the easy co-option of this struggle into human relations.

As in *Dead Child* in *L'Œuvre*, however, this scene in *Le Ventre* does not only work on the visceral, somatic responses of its reader, but offers a reflection on the further consequences of these responses. Florent's family, faced with the abject, are horrified by Florent's story, much as we are nauseated by it ourselves as readers. But the contrastive conjunction of the bloody gastronomic processes in which they are engaged with Florent's equally violent tale of struggle, fails to register with his family in any meaningful way. They are disgusted not merely by the hideousness of the images Florent describes but by the very notion that one could succumb to hunger or imprisonment, or that one could find oneself locked in a struggle to survive. Lisa's 'straight unflinching gaze clearly implied that in her opinion only a scoundrel could ever go without food in this ill-regulated fashion. A man capable of living without food for three days struck her as a highly dangerous character' (*Le Ventre*, 85). So a confrontation with the Darwinian *struggleforlife*, for Lisa and her family, merely strengthens their belief in the transcendental health and vigour of the bourgeois identity and distrust of the biologically and socially vulnerable. Correspondingly, for Florent, recounting this tale signals his readiness to return to bourgeois respectability; to return to being a member of the biologically superior race of the strong – an attempt we know will be unsuccessful. Florent accepts the offer to work for the Préfecture as an inspector in the food markets of Les Halles, a job that jars with Florent's status as a constituent of the race of 'the thin' but also his hatred of the French political and administrative establishment.

Zola's putrid Naturalism seems to offer us something other than a critical reflection upon biological determinism and the inescapability of Darwinian struggle. It does provoke, as Kristeva says, a complex 'braid of affections', but it is a violent repulsion that is pregnant with attraction. These grotesque intertwined images of the human corpse and the blood pudding do not exclusively proffer the immanence of a sublime kind of bio-evolutionary uncertainty, as Deleuze might insist. Rather, they underline the human desire to confront the drama of the struggle for life only in so far as it sustains scientific assurance and the imagined domination of it. Moreover, Zola's work here underlines how this process of abjection, how a revulsion at humanity's

mortality and animality merely re-entrenches the very ideas of human sovereignty that Darwin's work challenges. Kristeva writes that 'by way of abjection, primitive societies have marked out a precise area of their culture in order to separate it from the threatening world of animals or animalism'. Disgust, she says, is a 'safe-guard' against the incursion of the animality, of chaos, and of irrationality; the ambivalence of the abject, 'the primers of my culture'.[79]

Zola's fiction, then, does not merely offer us a sense of the productive void of difference that is immanent in, exists prior to, and will exist after, the somatic world of Darwinian natural selection, as Deleuze would have it. It also stages the difficulty of reading Naturalism in this manner. The affects of Zola's work may wound us through their co-option of biological discourses, and in so doing may destabilise the sense of primordial human significance which these discourses themselves complicate. But Zola also shows, in *L'Œuvre*, in *Le Ventre de Paris*, how art can have the opposite effect, by turning us away from our own morbidity and our own animality, and re-entrenching the separation between human and animal which Deleuze insists is dissolved in the germinal region of the crack. Ultimately, Zola stages the difficulty both of overcoming biological nihilism without indulging in utopian fantasy and avoiding utopian philosophical reflection on biology without capitulating to nihilism.

Conclusion: 'one long argument'

At the outset of the conclusion to *Origin of Species,* Darwin defines the book's rhetorical structure and his elaboration of the theory of natural selection as 'one long argument' (*Origin*, 459). He goes on to synthesise and recapitulate each major point, answering in brief his theory's possible weaknesses, reminding his reader not only of the content of his argument but of the rhetorical shape of his thesis, which puts forward a multiplicity of facts and deductions in the service of a single idea, natural selection. This rhetorical gesture could be read as a concession to the reader, a self-effacing recognition by Darwin of his own supposedly modest rhetorical skill, even in recapitulating the authority of his multiple and forceful evidence. But despite the scientific authority Darwin's work arrogates to itself with such a gesture, the contested and febrile afterlife of his work – itself 'one long argument' – not only describes the central competitive dynamic of natural selection, but also undermines the very

[79] Kristeva, *Powers of Horror*, p. 2.

objectivity to which each contested interpretation of his work lays claim.

Zola's fiction allows us to bear witness to these various but related forms of contestation in response to Darwin's theory of natural selection. Zola's primary concern in the novels is with struggle, with the brutal competitiveness of biological and social life. Alongside the depiction of that violence, Zola's fiction dramatises opposing political and social iterations of Darwin's theory in response to that struggle, and in that way begins to work as a contestation of the Darwin's own authority. I have tried to show that Zola's fiction is not merely literary propaganda for Darwin's 'war of nature', nor does it offer to naturalise the idea of hereditary predetermination. Instead, I hope my reading of Zola's work as response to Darwinian natural selection confirms its capacity to critique the Hobbesian and deterministic iteration of the natural world it seems to present. Crucial to that critique is the resistance Zola's fiction offers to the objectivity of Darwin's theory of evolution, as well as the implicit critique his unflinching depiction of the violence of natural selection, especially when reproduced in social and political contexts. Read in this light, the authorial persona of Zola can be understood like his characters, Florent Quenu, Claude Lantier, and Jacques Lantier, as accepting the truth of evolutionary biology and acknowledging the power it exercises over humanity while also seeking to resist that power with actions that exceed biological exigencies. Quenu and Jacques are political revolutionaries whose struggle for emancipation represents a struggle to transcend the biological conditions which enable and sustain the political orthodoxy. Claude's artistic revolution, although it is ostensibly cultural and political in nature, also represents an attempt at breaking the constraints of biological enchainment. But unlike each of these self-described revolutionaries, Zola's resistance to evolutionary law does not promise resolution in the form of a utopian revolutionary future. Instead, Zola's work can be read as pitting each of these character's implicit revolutionary responses to Darwin against the biological determination they seek to negate, repeatedly depicting the victory of biology over human agency. I have tried to show that this need not be read as a repudiation by Zola of all possible resistance to biological determination. Instead, we can read Zola's works as performing a refutation of specifically messianic and deterministic forms of revolutionary thought, as well as dismantling scientific claims to truth which negate all forms of human agency.

Whereas Claude conceives of art as being pregnant with the possibility of revolution, Zola's literary art presents a more contingent form of resistance to

evolutionary pre-determination. His novels depict the human as living in an unescapable bind: all efforts at asserting autonomy from the influence natural selection in the Darwinian sense are either unrealistically optimistic or fall into biological nihilism. But in staging a dialogue between these two responses to Darwin in his fiction, Zola at least affirms that humanity is capable of perceiving its own position, of performing philosophically sophisticated, dialectical inquiries into its own biologically constrained position. This tension is further expressed in the opposing readings of Zola by Kristeva and Deleuze. For Deleuze, Zola's literature does not offer revolutionary change, but rather confirms the immanently revolutionary nature of biological life itself. Kristeva, by contrast, asserts that any claim that humanity can consent to its own death, that any assertion that true evolutionary self-abnegation is attainable through literature, is a form of perverse utopian self-deception.

Above all, this chapter testifies to the manner in which Zola's fiction can stage these complex, critical debates, thematically and formally. Contrary to general critical opinion, Zola's work addresses the problems of its own purported objectivity and the tensions that arise in an attempt to have literary art engage with the biological destiny of humanity, and even seek to transform it. That these disputations only produce further aporia is testimony to literary art's capacity accommodate complexity, and to mobilise irresolution against the stifling epistemological certainty of evolutionary determinism, even as Zola confirms the biological destiny which is the consequence of that discovery.

Chapter 2 – 'Relations of the Sexes': Thomas Hardy's Evolutionary Meliorism

Man was no longer a cherished creature of the gods, first because there were no gods, and second, because cherishing was foreign to the nature of things.

- Jacques Barzun*, Marx, Darwin, Wagner*

With respect to female birds feeling a preference for particular males, we must bear in mind that we can judge of choice being exerted, only by placing ourselves in imagination in the same position. If an inhabitant of another planet were to behold a number of young rustics at a fair, courting and quarrelling over a pretty girl, like birds at one of their places of assemblage, he would be able to infer that she had the power of choice only by observing the eagerness of the wooers to please her, and to display their finery.

- Charles Darwin*, The Descent of Man, Vol. 2*

Introduction: Hardy and Darwin, Negation and Plenitude

In his *Distance and Desire*, a study of the underlying narrative and thematic patterns in the fiction of Thomas Hardy, J. Hillis Miller affirms that Hardy's fiction, like that of Zola, was shaped by the nineteenth century's intellectual climate of materialist naturalism, of which the work of Charles Darwin was a crucial element. But Hillis Miller goes on to equivocate the supposed self-evident significance of this observation for the literary critical study of Hardy, and his equivocation suggests a positive project for re-thinking the relation of Hardy's fiction to the scientific and biological thought of the time. Hardy's fictional 'vision of things', Hillis Miller writes, 'is one vision of a world view widely present in the late nineteenth century. Its sources in his reading of Tyndall, Huxley, Darwin, Spencer, Schopenhauer, Comte, and others have often been discussed'. But, he argues, the importance of this vision is not entirely apparent: 'It is impossible to demonstrate [...] that any one of these sources is uniquely important in determining Hardy's view of things.'[1] Hardy, Hillis Miller notes, was a voracious reader of popular writing and periodicals as well as scientific tracts, philosophy, and poetry, so the task of accurately pinpointing the influence of a single author on any of Hardy's writing is, by definition, a complex and potentially endless exercise. More productive, he says, is to explore through close reading the singularity with which Hardy's fiction explores the contours, complexities, and contradictions of the intellectual climate which this assemblage of authors constructs.

Implicitly then, Hillis Miller would be cautious about the objective of this chapter, which is to emphasise the importance of the evolutionary thought of Darwin in particular in a reading of Hardy's fiction. Privileging Darwin in this way over, for example, the French positivist Auguste Comte, whom Hardy quotes extensively in his *Literary Notebooks*, risks positing a critically objective literary influence which cannot be confirmed. Moreover, it risks doing so to the detriment of an appreciation of Hardy's catholic, autodidactic reading habits; we are at risk of losing a complex picture of the singular multiplicity of shifting and contradictory influences which make up what Derek

[1] J. Hillis Miller, *Thomas Hardy, Distance and Desire* (Cambridge, MA: Belknap Press of Harvard University Press, 1970), pp. 16–17. For a demonstration of this point, see Thomas Hardy's *Literary Notebooks*, which include notes, quotations, and commentary on topics as diverse as Ancient Greek tragedy, Fourier's theory of the passions, the natural history of sea-life, and the concept of historical progress. Thomas Hardy, *The Literary Notebooks of Thomas Hardy*, ed. by Lennart A. Björk, 2 vols (London and Basingstoke: Macmillan, 1985).

Attridge calls an author's 'idioculture'.[2] Such caution is also urged by George Levine, albeit in different terms, who reflects with circumspection on the manner in which Hardy's writing and Darwin's ideas are connected by literary and cultural critics.[3] He notes what in his view is the glib regularity with which commentators on Hardy's novels and poetry routinely cite the influence of Darwin's thought and the intellectual milieu with which it is associated. Specifically, Levine alludes to the customariness with which critics reference Florence Hardy's claim that her husband was 'one of the earliest acclaimers of Darwin' and the suggestively symmetrical biographical detail that Hardy, having read Darwin at the beginning of his life, attended the evolutionary scientist's funeral in Westminster Abbey in 1888.[4] Lastly, Levine references a letter routinely cited by critics, sent by Hardy to Helen Garwood, in which he enumerates his primary scientific and philosophical influences. Offering a constellation of influential authors that partially overlaps with Hillis Miller's list, Hardy writes that his 'pages show harmony of view with Darwin, Huxley, Spencer, Comte, Hume, Mill, and others'.[5] But for Levine, like Hillis Miller, the ways in which these readings deepen or transform our understanding of Hardy's fiction is not always clear and instead often engender a simplistic, un-critical picture.

For both Hillis Miller and Levine, the most productive question about the relationship between Hardy's fiction and the scientific thought influential on his work is not simply whether or to what extent there is harmony between them; the question for both is what sort of harmony? And further exploration of Levine's reading of Hardy and Darwin indicates how a comparative study of these two authors might avoid the pitfalls of relying on the self-evident value of intertextual or historical connection. In his criticism of the Darwin-Hardy comparison, Levine is alluding to the tendency for literary studies to

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[2] Attridge defines an author's 'idioculture' in the following way: 'a changing array of interlocking, overlapping, and often contradictory cultural systems absorbed in the course of his or her previous experience, a complex matrix of habits, cognitive models, representations, beliefs, expectations, prejudices, and preferences that operate intellectually, emotionally, and physically to produce a sense of at least relative continuity, coherence, and significance out of the manifold events of human living.' See Derek Attridge, *The Singularity of Literature*, p. 21.

[3] George Levine, 'Hardy and Darwin: An Enchanting Hardy?', in *A Companion to Thomas Hardy*, ed. by Keith Wilson (Oxford: Wiley-Blackwell, 2009), pp. 36–54 (pp. 36–37).

[4] Florence Emily Hardy, *The Early Life of Thomas Hardy, 1840-1891* (Cambridge University Press, 2011), p. 198.

[5] Originally cited in Helen Garwood, *Thomas Hardy: An Illustration of the Philosophy of Schopenhauer* (PA: John C. Winston, 1911); first brought to widespread attention in Carl Weber, *Hardy of Wessex: His Life and Literary Career* (New York: Columbia University Press, 1940), p. 163.

emphasise too easily the shared materialist determinism and pessimism of Hardy and Darwin, both of whom, it is assumed, respond and contribute to the violent, spiritually empty, mechanistic, and pessimistic vision of nature and society prescribed by Darwinian evolutionary science. The general principles of this shared outlook is described by Alan Wallace whose gloss of Jacques Monod's conception of the philosophical consequences of applying the abstract tenets of a biologically oriented scientific materialism to human life I quoted in the epigraphs to the Introduction of this dissertation. Wallace argues that evolutionary materialism insists that nothing exists outside physical materiality, that life is controlled by impersonal and amoral forces, and that the prospect of spiritual redemption is entirely delusional: human life is accidental, meaningless, and constantly subject to the cruelty of evolutoinary change. Just as in Zola's fiction where relentless tragic causality and its cruelties is frequently associated by critics with deterministic conceptions of heredity and Darwin's conception of the struggle to survive, Levine notes the 'inevitable catching of Darwinian strains in Hardy just where there is stress, competition, chance, struggle, and suffering'.[6] This, he argues, is not an unwarranted theme, but it is also, in his view, an exhausted critical trope which neither appreciates the complexity of Darwin's evolutionary naturalism nor the nuance with which Hardy treats the broadly Darwinian materialist conception of nature.

This way of thinking echoes the critical dynamic which my previous chapter on Zola and Darwinian natural selection sought to address. I have argued that the widespread critical stance on Zola's fiction of biological determinism and Darwinian struggle is rewarded by further critical scrutiny, but not because this critical commonplace is inaccurate. Zola's fatalistic, violent fiction is certainly influenced by biological and hereditary determinism and Darwinian ideas of struggle. But within and through that influence the specific mythopoeic content of Zola's fiction also complicates the very notion of influence, implicitly questions the transcendent truth of biological science and wonders about the possibility of finding genuine and lasting consolation in art even as humanity is seemingly biologically oriented towards doom. Similarly, for Levine, the shared pessimism of Hardy's work and Darwin's theories demands further consideration. He argues that a close reading of Hardy's fiction will certainly uncover a concern with the

[6] Levine, 'Hardy and Darwin: An Enchanting Hardy?', p. 37.

Darwinian tropes of chance, tragedy, and waste, and the sense of existential emptiness these ideas engender. But it will also find the less commonly noted of materialist 'life-affirming' 'enchantment'.[7] Levine is influenced in this respect by Gillian Beer's study of Hardy and Darwin in which she argues that, alongside existential pessimism, Hardy's writing interrogates a different sensation that pervades Darwin's work: 'happiness'.[8] But happiness, says Levine, is an inapt word for what Hardy's ambivalent image of a Darwinian world communicates which is an almost sacred 'mood of fullness, plenitude, or liveliness' and its co-existence with negation, suffering, and struggle.

This interpretation of Darwin's vision of nature is part of a larger project of cultural criticism by Levine which seeks, as each of Zola's protagonists do, to contest the reductive pessimism and nihilism of biological life and thought, here associated with Darwinian evolution. In his work *Darwin Loves You,* Levine seeks, in his own words, 'to demonstrate, through the example of Darwin and of his writing, the compatibility between an enchantment that has the power to stimulate ethical engagement and a naturalistic vision of the world'.[9] In order to achieve this, Levine revisits Darwin's writings to discern whether in the midst of the all-encompassing 'war of nature' of Darwinian natural selection there lies some manner of redeeming ethical or aesthetic counterbalance to the relentless, competitive, and meaningless onrush of biological change. '[I]t would be absurd', however, Levine says, 'to insist that Darwin's chance-ridden, mindless and heartless universe can be felt to be as inspiriting as a divinely meaningful world, whose worst elements might be reabsorbed into a theodicy based on the idea of the fall.'[10] Natural selection, Levine continues, invoking the analytical Darwinian philosopher Daniel Dennett, works as a 'universal solvent', depriving biological thought of the mystery of unanswered questions, robbing life of intention, as well as dissolving over time everything living in its wake. This view is especially popular in Neo-Darwinian and evolutionary psychological discourses of the twenty-first century, some of which I have already referenced, which seek to reduce all natural life's action to set of fixed, biological axioms.

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[7] Levine, 'Hardy and Darwin: An Enchanting Hardy?', p. 37.
[8] Gillian Beer, *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction*, 3rd edn (Cambridge: Cambridge University Press, 2009), p. 224.
[9] George Levine, *Darwin Loves You: Natural Selection and the Re-Enchantment of the World* (Princeton, NJ: Princeton University Press, 2008), p. 169.
[10] Levine, p. 202.

More historically appropriate is Jacques Barzun's analysis of the revaluation of life that occurs in the nineteenth century with Darwin, Marx, and Wagner. Darwin's 'mechanical materialism', Barzun argues, describes a world without spirit or unknown possibility, a deterministic and 'cold world in which man's feelings are illusory and his will powerless."[11] Levine's method, however, is not to refute that evolution – and natural selection in particular – possesses substantial explanatory power or to deny that it exercises considerable influence on natural life and human action. But neither does Levine insist that the mechanical materialism of natural selection exhausts all the possible ways of both human and natural life and their dynamism. If natural selection dissolves will, spirit, individuality, and the mystique of unanswered questions, Levine searches for, 'what is left behind'. Not much, he concedes; but not nothing either.[12]

In Levine's reading, two significant and related aspects of life evade and complicate the so-called universally demystifying Darwinian logic of natural selection: the affective power of Darwin's vision of nature, and his concept and dramatisation of sexuality. Firstly, he argues, the phenomenologically undeniable reality of 'feeling and valuing', through the close entwinement of Darwin's scientific thought and Darwin's lived experience, becomes an indissociable aspect of Darwin's scientific thought.[13] In this respect, Levine's reading of Darwin accords with Beer's sense of the sublimity of nature in Darwin – the plenitude in his writing and theory of both beauty and horror. Beer calls this Darwin's 'romantic materialism', arguing that it derives in part from his reading of Milton's *Paradise Lost*.[14] Perhaps the most famous example of Darwin's sensual and divinely inspirited materialism is the famous 'entangled bank' with which Darwin concludes *The Origin of Species*.

> It is interesting to contemplate an entangled bank, clothed with many plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other, and dependent on each other in so complex a manner, have all been produced by laws acting around us.
> […]
> There is grandeur in this view of life, with its several powers, having been

[11] Jacques Barzun, *Darwin, Marx, Wagner: Critique of a Heritage*, Phoenix (Chicago: University of Chicago Press, 1981), p. 7.
[12] George Levine, p. 202; Daniel C. Dennett, *Darwin's Dangerous Idea: Evolution and the Meanings of Life*, (London: Penguin Books, 1996), p. 63.
[13] Levine, *Darwin Loves You*, p. 169.
[14] Beer, *Darwin's Plots*, pp. 25–37.

> originally breathed by the Creator into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved. (*Origin*, 490)

Such enchantment and grandeur, such investment of feeling in the infinite power of nature to both destroy and create, Levine suggests, is incompatible with a natural world that works only as a mechanism or with a science that seeks objective truth. Darwin's nature, Levine argues, is a phenomenon in which 'affect and intellect, value and fact' are aspects of the science of which Darwin's is an exemplar: beauty and affect are indissociable from scientific logic and the material world it describes.[15] John Glendening has also argued that the affective climate and formal image of entanglement represents a powerful imaginary blueprint which he sees reproduced throughout Victorian letters.[16]

That elements of the imagination and of personal feeling and value find expression in a wider non-scientific imaginary is not completely unique to the work of Darwin. However, Levine argues, Darwin stands out amongst nineteenth-century evolutionary biologists for proposing to integrate feeling, value, and affective sense into scientific naturalism, specifically in his theory of sexual selection, which describes a form of relation between organisms that complicates the apparently deterministic mechanism of natural selection. Darwin's theory of sexual selection seeks to explain the evolutionary rationale behind the seemingly illogical morphological development and behaviour of sexually divergent species, which often appear opposed to the biological *realpolitik* of natural selection's ruthless competition. Of particular interest to Levine in his attempt to 're-enchant' Darwin's work is the value latter attributes to 'prettiness', which, Levine argues, inflects the Darwinian conception of sexuality in evolutionary life.[17] This is a distinctly Victorian trope, Levine admits, but when stripped of retrospective ideological judgement, it points towards the fact that the phenomenology of attraction, desire, and aesthetic value are not secondary to life's evolution, but integral parts of the Darwinian conception of nature.

Affect, value, prettiness, romance even: these seemingly unscientific notions are

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[15] Levine, *Darwin Loves You*, p. 44.
[16] John Glendening, *The Evolutionary Imagination in Late-Victorian Novels: An Entangled Bank* (Aldershot: Ashgate, 2007).
[17] Levine, *Darwin Loves You*, p. 194.

not just latent in Darwin's work, awaiting detection through sensitive critical analysis. They are, in Darwin's theory of sexual selection, integral and explicit elements of biological evolution. This theory proposes that, unlike most species traits, the curious feature of seemingly useless secondary sexual differences is not the result of a conclusive process of selection for fitness or survival. Instead, it is the consequence of a separate logic of attraction and desire, whereby prospective mates compete with sexual rivals through a variety of conflictual encounters, the resolution of which is not dependent on the death of an individual or the extinction of a species. Darwin first touches upon this theory in *The Origin of Species*: sexual difference, Darwin says, depends 'not on a struggle for existence' but on a comparatively 'less rigorous' competition to attract potential mates and for those mates, in turn, to be attracted by the most suitable suitors (*Origin*, 88). He expands on this theory in *The Descent of Man*, in which he demonstrates in patient and expansive detail the myriad ways sexually dimorphic species make themselves attractive to each other through 'courage and pugnacity – their ornaments of many kinds – their organs for producing vocal or instrumental music – and their glands for emitting odours; *most of these latter structures serving only to allure or excite*.' (*Descent*, Vol. 1, 257-258 [italics mine]) Even in a world seemingly drained of spirit, biological species, both animal and human, constantly seek to allure and be allured, to call forth desire and to enact it, for which there is no apparent subterranean motive. Darwin even suggests that in these impulses resides the beginning of aesthetic expression: music, self-decoration, performance all emerge out of the dialectic of the desire to be desired. And although it has been argued by neo-Darwinists such as Geoffrey Miller that sexual desire and art are subordinate to evolutionary utility, to what Darwin calls 'the improvement of the species', even the sensual experience of art and sexuality may be a source of some comfort, perhaps joy, for those dismayed by iterations of Darwinian thought in which human life is subject to constant suffering, and in which there is no escape from the overpowering and impersonal forces of evolution.[18]

According to Levine, Hardy is singular among nineteenth-century novelists in perceiving this ambivalent sense of creative plenitude alongside scientific disenchantment in the Darwinian vision of nature. Hardy, argues Levine, depicts a world without meaning

[18] Geoffrey Miller, *The Mating Mind: How Sexual Choice Shaped the Evolution of Human Nature*, (New York: Anchor, 2001).

in which, nevertheless, humanity creates and responds to meaning. In this respect, Levine's understanding of Hardy's 'view of things' appears strikingly different to that of Hillis Miller, whose study initially emphasises Hardy's depiction of a world emptied of human significance where 'man and all his concerns [are] reduced by the terrible impersonality of space to infinitesimal specks in a measureless hollow'.[19] But Hillis Miller, like Levine, intuits reparative possibility in Hardy's materialist vision, if not outright redemptive prospects. He cites Hardy's concept of 'evolutionary meliorism', something which Hillis Miller claims Hardy thought he had himself inaugurated. This particular form of evolutionary progressivism consists, in Schopenhauerian terms, of a coming to consciousness of the 'immanent will', the conclusion of which, in evolutionary terms, would result in humanity evolving the capacity to step outside its own biological misery through a process of becoming a transcendent, 'pure will-less subject of knowledge'.[20] Schopenhauer posits that aesthetic perception, 'our whole consciousness [becoming] filled by the calm contemplation' of nature, is a form of liberation (*Befreiung*) which releases humanity from the suffering that is constitutive of individuality and embodiment and their reliance on the will to life.[21] This liberation in the form of releasing oneself from embodiment through the cessation of the will to life, Schopenhauer argues, allows us to apprehend an object as a timeless ideal, as the de-individuated subject becomes a clear mirror, devoid of earthly subjectivity, for the object it perceives. Schopenhauer reserves this capacity for figural arts, painting, sculpture, poetry, and architecture, but ascribes a different power to music. Music, he argues, embodies the quintessence of the will *in itself*; not as a copy of the will, but as a non-imitative embodiment of it through which we can apprehend, not timeless ideas, but a detached sense of the will without experiencing the pain and suffering of embodiment or active desire for life. Each of these forms, however, is incompatible with the fundamental materialism of Darwin's theory of evolution, since Schopenhauer's liberation from suffering is posited on an escape from embodiment and willing which, in turn, allows us to view the world from a point of non-embodied, peaceful detachment. Taking up this idea of 'evolutionary meliorism' Hillis Miller suggests instead that Hardy's doomed protagonists resist the onslaught of the will to life, and by extension,

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[19] Hillis Miller, *Distance and Desire*, p. 19.
[20] Arthur Schopenhauer, *The World as Will and Representation*, trans. by E.F.J. Payne (New York: Dover, 1966), pp. 178–181.
[21] Schopenhauer, p. 179.

its expression in natural selection, in two modes of coming to consciousness, neither of which require the notional destruction of one's material individuality nor the transcendent escape from life that Schopenhauer's theory demands.

This recuperative potential in Hardy's works, Hillis Miller says, renewing Schopenhauer's conception of music, lies in his characters' refusal of the meaningless, violent determinism of natural selection in both the 'yielding to the magical power of music and falling in love'.[22] Hardy's characters respond to the emotional power of music through dance, a response which transmutes helplessness into an active participation in the world as well as mediating, organising, and mirroring those sexual relations which themselves through pleasure and desire seem to dispute the violent nature of natural life. Hillis Miller calls the relations between the affects, intrigues, and complications of love and the experience of and response to Schopenhauer's highest form of art the 'Dance of Desire'. Many of Hardy's novels, he says, describe the 'tangle of conflicting desires', 'the circulation of mutually fascinated characters around one another, in a graceful dance of crossings and exchanges' and these are represented and organised by the literal dances in Hardy's stories. In this way art, Hillis Miller says, represents 'a way of being involved in the world and of responding to it without being swallowed up by it.'[23] So like Levine, Hillis Miller's reading of Hardy is fundamentally concerned with the intimacy with which desire, attraction, and the aesthetic are mutually interpenetrated and persist in a world seemingly devoid of spirit. Hillis Miller might not wish to privilege Darwin over any other member of Hardy's pantheon of influences. However, his reading of Hardy's fiction raises one of the central complications of Darwin's theory of evolution: the power of art and feeling to both emerge from and, potentially, complicate the rigorous and demystifying logic of biological evolution.

In this chapter, I shall be seeking not merely to trace the influence of Darwin's work on Hardy, but, as I have done in response to Zola, to explore how the literary material of Hardy's fiction provides us with a critical reflection on, and perhaps transformation of Darwin's evolutionary thought and the place of humanity within it. As Hillis Miller suggests, what is crucial is not to isolate Darwinism in Hardy, but 'to identify the idiosyncratic emphases in his version' of Darwin's thought. I shall also be taking up

[22] Hillis Miller, *Distance and Desire*, p. 23.
[23] Hillis Miller, *Distance and Desire,* pp. 26–27.

the thematic focus offered by a simultaneous reading Hillis Miller's and Levine's interpretations of Hardy.[24] In my analysis of Hardy's fiction I shall be addressing not only the violence or emptiness of a world governed by the laws of natural selection. I shall be focusing, as other critics are now also attempting to do, to refocus on the literary and philosophical consequences of Darwin's theory of sexual selection.[25] However, as with Zola, I shall be seeking to articulate how Hardy's engagement with Darwin, with sexual selection in particular, offers a singular development of evolutionary thought. Sexuality, I shall show, is both the natural mechanism which that sustains and reproduces this evolutionary world, and is a source of genuine reparative possibility in Hardy's fiction.

To that end I shall be reading two of Hardy's novels, his early work *A Pair of Blue Eyes* (1872) and his later, canonical work *The Return of the Native* (1878), and exploring how Hardy's treatment of sexual courtship in these works might offer us a creative and affirmative vision of life under Darwinian materialism. Choosing an early work and a later work by Hardy not only has the benefit of offering this study a wider view of Hardy's literary development and his fiction's treatment of Darwinian thought. Central to my reading is a continued engagement with Deleuzean philosophy, in this instance through the work of Elizabeth Grosz who, in her work on the intersection of philosophy, feminist thought, and biology, expands upon Deleuze's reading of Darwin as a theorist of difference in *Difference and Repetition*. Grosz, like Levine, identifies a tension in Darwinian evolutionary theory between the deterministic and violent mechanism of natural selection and the creative, desire-driven relations of sexual selection. Sexual relations, she argues, do not only act contrary to the reductive logic of survival. They also introduce transformative possibility into the nominally calculable, competitive relations of natural selection, opening a space for excess and pleasure which may be read as the evolutionary origins of art and cultural life. Ultimately, through my readings of Hardy's two novels and in conversation with Grosz's conception of Darwinian evolution, I shall be attempting to show how Hardy's depiction of evolutionary sexuality seeks to reconcile

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[24] Hillis Miller, *Distance and Desire,* pp. 16–17.
[25] Bert Bender, *The Descent of Love: Darwin and the Theory of Sexual Selection in American Fiction, 1871-1926* (Philadelphia, PA: University of Pennsylvania Press, 1996); Travis Landry, *Subversive Seduction: Darwin, Sexual Selection, and the Spanish Novel* (Seattle: University of Washington Press, 2013).

hope with biological limitation, without concluding like Zola's two revolutionary Marxists in nihilistic retreat or utopian transcendence.

Darwinian Pessimism in *A Pair of Blue Eyes* and *The Return of the Native*

There is, as Levine and Miller suggest, a significant weight of critical material on the relation between Hardy's fiction and Darwin's evolutionary thought. As early as 1894, Lionel Johnson noted that Hardy, like 'a naturalist with a bone', dwelt upon such distinctively Darwinian themes as the 'earth's antiquity' and the genealogies of ancient families.[26] Johnson was circumspect about the value of Hardy's scientific interests in interpreting his fiction, noting however that while certain scientific terms would alienate readers without specialist education, the evocation of such powerful and 'plausible views' as 'natural selection [and] the survival of the fittest' would retain their significance for future readers.[27] And in 1938, William Rutland, it seems, inaugurated the practice of citing Hardy's interest in Darwin via the fact of his attendance at Darwin's funeral, and dedicated significant space in his study of the context of Hardy's philosophy to Darwinian evolution.[28] In more recent times, prominent critics like Levine and Beer have continued to affirm that Hardy's fiction represents a significant and creative response to the emergence of Darwinian thought. However, although both argue that Hardy's literary vision of nature concerned the enchantment of the natural world *as well as* the cruelty of Darwinian life, general critical opinion tends to emphasise the existential anxiety that derives from that.

Beer herself accepts the primacy of a specifically Darwinian fatalism in Hardy, acknowledging in *Darwin's Plots* that, much like the characteristic view of Zolian narrative, '[p]lot in Hardy is almost always tragic or malign: it involves the overthrow of the individual either by the inevitability of death or by the machinations (or disregard) of "crass casualty".' 'Crass casualty' refers here to Hardy's poem, "Hap", in which the narrator laments that human suffering comes not from a malign deity, but from the indifference of

[26] Lionel Johnson, *The Art of Thomas Hardy* (London: Mathews & Lane, 1894), p. 65.
[27] Among the terms that Johnson thought alienating were 'binomial, agnation, atavism' and 'quaternion, polarization, kinetic' – an excellent demonstration of the manner in which some scientific thought slides into common parlance, while some remains obscure. Johnson, pp. 81–82.
[28] William R. Rutland, *Thomas Hardy: A Study of His Writings and Their Background* (New York: Russell & Russell, 1938), pp. 48–54.

the banal materialist cruelties inherent in the passage of time.[29] Moreover, in another parallel with Zola's Naturalism, Beer argues that while Hardy's complex, multi-stranded plots place a strain on the linearity of Darwinian biological determinism, its ultimate function is to make the tragic endings of his works all the more deflating in their re-assertion of the laws of natural selection. As a result, reading Hardy, one is constantly 'pained by the sense of multiple possibilities, only one of which can occur and be thus verified in time, space, and actuality.'[30] This doubly tragic view is shared by Ross Shideler who calls Hardy 'an almost classic product of a post-Darwinian culture'.[31] Hardy's fiction, he proposes, investigates the destruction by Darwinian evolution of patriarchal authority, the dissolution of its serene hierarchical ordering of the world, through the depiction of a series of family crises. It is the ill-suited nature of Victorian family ideals to a new world devoid of a creator, Shideler says, that makes these plots tragic. For the 'seemingly inevitable ruination and destruction' of Hardy's major characters is made all the more painful for the reader through our knowledge of the absence of any transcendent power or afterlife and any prospect of redemption.[32]

Numerous other critics have implicated Darwin's theories in Hardy's fiction and its supposed negativity. David Lodge references Hardy's 'evolutionary pessimism' and calls *The Woodlanders* a 'Darwinian Pastoral Elegy'; Angelique Richardson sees in Hardy's fiction a vision of the meaninglessness of a world governed entirely by chance; while Roger Ebbatson identifies 'Chance' as well as 'Struggle and Competition' as two defining aspects of inhabiting Hardy's post-Darwinian universe.[33] Similarly, John Glendening argues that Hardy's fiction deals with 'the random, contingent character of the post-

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[29] Thomas Hardy, 'Hap' *The Complete Poems of Thomas Hardy*, ed. by James Gibson (London: Macmillan, 1976), p. 9.
[30] Beer, *Darwin's Plots*, p. 223.
[31] Ross Shideler, *Questioning the Father: From Darwin to Zola, Ibsen, Strindberg, and Hardy* (Stanford, CA: Stanford University Press, 1999), p. 135.
[32] Shideler, pp. 135–137.
[33] Roger Ebbatson, *The Evolutionary Self: Hardy, Forster, Lawrence* (Rowman & Littlefield, 1982), pp. 6–18; David Lodge, '"The Woodlanders": A Darwinian Pastoral Elegy', in *Working with Structuralism: Essays and Reviews on Nineteenth- and Twentieth-Century Literature* (Boston: Routledge, 1981), pp. 79–94; Angelique Richardson, 'Hardy and Biology', in *Thomas Hardy: Texts and Contexts*, ed. by Phillip Mallet (New York: Palgrave Macmillan, 2002), pp. 156-179.

Darwinian world and the loss, death, and limitation of freedom that occur there.'[34] Glendening elaborates upon his notion of the Darwinian 'entangled bank' as an aesthetic model to argue that the individual in Hardy's fiction is a victim of a correlative evolutionary ontology. Recalling Ortega's metaphor of the evolutionary tapestry, entanglement for Glendening represents organic connectivity, commonality, and universality; but such conditions also herald a loss of distinctive identity and agency, highlighting once more the powerlessness with which the human meets the morbid and meaningless determinism of its own biological existence.

That Hardy's fiction codifies in literary form the indifference, determinism, and cruelty of Darwinian nature seems confirmed by the plots of both *A Pair of Blue Eyes* and *The Return of the Native*.[35] Hardy's earlier work, *A Pair of Blue Eyes*, is often criticised for its structural imbalance and inconsistent tone, and categorised as a result as an insignificant piece of Hardyean juvenilia.[36] But in its simplicity lies its value, for its plot offers us a straightforward unfolding of a series of chance events leading to a conclusive tragedy and in this way works as a proleptic account of many of the characteristic themes and plot dynamics of his later, more complex canonical works. The novel tells the story of Elfride Swancourt, the semi-aristocratic daughter of a rector of a country parish in the fictional Lower Wessex, and of her courtship by a series of admirers: an apprentice architect named Stephen Smith; Smith's mentor, an urbane writer and amateur geologist named Henry Knight; and a local, widowed aristocratic peer of the realm, Lord Luxellian. The plot hinges on Elfride's father's rejection of Smith's interest in his daughter due to Smith's inferior social status, and Henry Knight's rejection of Elfride upon discovering the previous courtship, though he remains ignorant of the suitor's identity. Finally, after a period of illness precipitated by the social shame of two failed relationships, Elfride marries Luxellian out of convenience, becoming a surrogate mother to Luxellian's children; she dies tragically, in Hardy's words, 'with a miscarriage' soon after (*Blue Eyes*,

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[34] John Glendening, *The Evolutionary Imagination in Late-Victorian Novels: An Entangled Bank* (Farnham: Ashgate, 2007), p. 67.
[35] Thomas Hardy, *A Pair of Blue Eyes*, ed. by Alan Manford (Oxford: Oxford University Press, 2005); Thomas Hardy, *The Return of the Native*, ed. by Simon Avery (Ontario: Broadview Press, 2013).
[36] Richard Hyde Taylor, *The Neglected Hardy: Thomas Hardy's Lesser Novels* (Macmillan, 1982), pp. 29–56.

353).[37] The novel concludes in a suggestively similar fashion to Zola's *L'Œuvre*. Claude Lantier's funeral is punctuated by the brutal noise of a steam train's passing, a forceful symbol of the inexorable logic of that biological fatality which has killed him. The conclusive scenes of Hardy's novel show Elfride's coffin being transported home on board a train, once again symbolising ineluctable biological change and death, while unaware of Elfride's fate, on the very same train, Smith and Knight quarrel over their competing claims to Elfride's hand.

The specifically Darwinian subtext may not be immediately apparent, but the homology with Zola's symbol of the locomotive is significant. This image of Elfride's coffin being carried by a train to Wessex suggests her tragic fate is predetermined by the relentless but indifferent dynamics of a world propelled towards tragedy according to fixed laws. The pathos of this conclusion, however, lies in the sense that for all their attempts to win Elfride's hand in marriage, a deeper, fatal logic over which neither Knight nor Smith has control operates beneath their intentional actions. That that logic is reflected in Darwin's thought specifically is affirmed by Mark Asquith who points out that Hardy's fiction is concerned fundamentally with what Darwin called natural selection's 'ever watchful nature'. This nature, he writes, 'picks out, and favours each successful competitor, but rejects failures'.[38] And here, Elfride is a failure, not only because she fails to uphold and negotiate repressive Victorian sexual values and find a partner whom she genuinely loves, but because, by dying of complications in childbirth, she is additionally marked out as weak biologically. The irony of the term 'miscarriage' is significant: Elfride's death is, in one sense, an inevitable result of her being a passenger carried along by the laws of biological determination; but her death is, in another sense, the outcome of her deviation from a culturally accepted path which has led to a socially unacceptable series of failed courtships, a loveless marriage, ill-health, and, ultimately, failure in the biological and social struggle to survive. Just as in Zola's *L'Œuvre* and *Le Ventre de Paris*, the true pessimism of this narrative lies not only in biological determinism, but the manner in

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[37] In the original serialised version of the novel, Hardy offered no explanation for her death; the almost equally ambivalent explanation of 'miscarriage' was a later addition to the Wessex Edition of the text which serves as the basis for the standard edition of this novel (*Blue Eyes*, 374, note, 353). For a comprehensive review of the editorial evolution of this novel see Alan Manford's notes on the text (*Blue Eyes*, xxxix-xliv).

[38] Mark Asquith, *Thomas Hardy, Metaphysics and Music* (New York: Springer, 2005), p. 35.

which culture reproduces its logic by systematically destroying the weakest in society.

Further Darwinian inferences can be drawn from the notion of competition and its enactment in the novel through the metaphor of the game. Numerous commentators have pointed out how the competitive logic of a zero-sum game permeates the novel and its symbolic power appears most forcefully in the two sexually freighted games of chess played between Elfride, Smith, and later, Henry Knight. Chess, Elfride states, 'is [her] favourite scientific game' and she easily beats Smith, a novice, but unexpectedly loses to Knight – a reflection of the comparative power differentials constructed by each potential pairing (*Blue Eyes*, 156). Knight is sexually and socially dominant, a predator, and is an accomplished chess player; Smith is sexually and socially inexperienced, and the manner in which he handles the chess pieces reveal him to be lower in status than Elfride. These encounters can be read as metaphors for the complex choreographies and power dynamics involved in the act of courtship itself: a series of approaches, withdrawals, and sometimes confrontational encounters, all enacted within a framework of imbalances of authority and explicit and implicit rules about the terms of engagement. But the conclusive logic of chess – the production of a winner and a loser – reflects the finality of natural selection, the winners of which survive to reproduce and the losers of which are extinguished. Similarly, while each actor in this novel's repeated games loses in one manner or another, it is only Elfride that loses conclusively, her death a combined result of the determining logic of Victorian social mores and the ruthless Darwinian logic of failure.

Like *A Pair of Blue Eyes*, *The Return of the Native* unfolds a plot in which a complex series of courtships plots surround a central female figure, whose reward for being an object of desire is death. In 'the vast tract of unenclosed wild known as Egdon Heath' in Hardy's fictional Wessex, Eustacia Vye is an exotic-seeming, strikingly beautiful, and rebellious woman who, after conducting a brief affair with a local man named Damon Wildeve, finds herself infatuated with Clym Yeobright, a successful businessman who returns to Egdon from Paris in order to found a school in which the inhabitants of the heath could be educated (*Return*, 47). After marrying, the two become disillusioned with one another; Eustacia's love for Clym and her ambitions to leave Egdon for Paris are thwarted, first, by Clym's desire to remain in Wessex and, second, by a deterioration in his eyesight apparently as a result of the intensity of his studies. Eustacia's interest in Wildeve is re-ignited but, as he waits to liaise with Eustacia with the intension of eloping to Paris,

Eustacia, terrified of the prospect of her plan becoming exposed, throws herself – or falls – into a nearby weir and drowns.[39]

Like the conclusion of *A Pair of Blue Eyes,* the tragic fate of the novel's protagonist is framed as an individual overwhelmed by a relentless and violent fatal logic which is unyielding to human agency. Clym, hearing the noise of Eustacia's body hitting the water, runs to the weir to see only an opaque 'vortex' of water in which 'a dark body was slowly borne by one of the backward currents' (*Return*, 378). Wildeve too is carried away by the currents of the weir as he leaps in to save Eustacia, as is Clym who follows him. Clym, 'uppermost' in the pool, survives; but Wildeve, 'completely submerged', dies and Eustacia, swallowed entirely by the current of the weir, perishes too (*Return*, 380). The unalterable tragic logic that infuses these fatal currents is not explicitly Darwinian, but is consistent with Gillian Beer's diagnosis of Hardy's tragic vision which, like the plot of natural selection, is characterised by its indifference towards the fate of humanity. The individual is overcome, as Hillis Miller puts it, by the 'measureless hollow' of unconcerned nature – one without creator or plan, in which the only certainty is death.

Both novels, then, seem like Zola's works to reproduce the fatalism of the war of nature where Darwinian entanglement symbolises enchainment rather than enchantment: the death of identity and individuality in a network of biological fatalism rather than the human intimacy that such a network might make possible. Against the backdrop of evolutionary change and the biological causality of chance, humanity loses all agential significance and can only be certain of its own demise. *A Pair of Blue Eyes* and *The Return of the Native* seem on the face of it to reflect this pessimistic outlook through what Fredric Jameson, in reference to Zola, called the biological 'temporality of destiny' in tragedy. Moreover, it is not only that Hardy's endings are fatal or tragic but, as D.H. Lawrence points out in his 'Study of Thomas Hardy', that those characters who embody or seek to attain a kind of distinctive individuality – contrary to a determinist account of Darwinian law – are punished most severely. Lawrence identifies and laments the narrow Darwinian

[39] The ambiguity surrounding Eustacia's death and the divergent readings it has prompted is discussed in Frank R. Giordano, 'Eustacia Vye's Suicide', *Texas Studies in Literature and Language*, 22.4 (1980), 504–21. Regardless of *how* Eustacia dies, the sense of the inevitability of her death and her becoming "swallowed up" remains consonant with the notion of Darwinian and materialist tragic fatalism.

logic of 'self-preservation' which he sees as being reproduced in social contexts.[40] Hardy's 'aristocratic' characters, Lawrence suggests, like Eustacia, Wildeve, and presumably also Elfride, are consigned to their tragic fates through their desire to repudiate the pre-determined social or biological laws of a 'struggle for existence', seeking instead to attain a 'fullness of being' outside the utility of mere survival.[41] In Lawrence's reading of Hardy, ever watchful nature does destroy indiscriminately; it seeks out not only the unfit, the unsuitable, but especially those who wish for nothing other than to struggle for something other than survival.

The Failure of Evolutionary Meliorism: The Darwinian Abyss

Pamela Gossin, in her comprehensive study of Darwin's 'Post-Darwinian' aesthetic, echoes these pessimistic readings of Hardy's Darwinism. Hardy, she says, was like many of his Victorian contemporaries in seeking to examine Darwinian themes of human history, cultural evolution, and the place of humanity in nature. But Hardy, Gossin argues, goes further than merely affirming the bleak determinism of nature in the wake of the Darwinian revolution. This is because Hardy perceives neither 'positivist optimism', nor 'signs of inevitable and infinite progress' as seen by a theorist like Herbert Spencer, for whom Darwinian competition could improve society, or as envisaged by Zola's sanguine revolutionary, Étienne Lantier, for whom natural selection underwrites Marxist historical determinism.[42] Nor does Hardy see authorisation for biological and social nihilism which deems the oppression of women, the poor, or the weak as correlatives of the evolutionary worldview. Consider here the implicit critique in *A Pair of Blue Eyes* and *The Return of the Native* of the conclusive Darwinian logic of weakness being applied to the perceived social failures of women under a regime of impossibly narrow social restrictions. By the same token, consider Hardy's apparent unwillingness in these novels to console his readers with any sense of progressive change or redemptive possibility. Hardy's work, according to Gossin, eschews both Darwinian progressivism while also refusing to affirm Darwinian biological nihilism. But this refusal of both progressive delusion and cynicism might still

[40] D. H. Lawrence, 'Study of Thomas Hardy', in *Study of Thomas Hardy and Other Essays*, ed. by Bruce Steele (Cambridge: Cambridge University Press, 1985), pp. 3–132 (pp. 20–22).
[41] Lawrence, pp. 48–50.
[42] Pamela Gossin, *Thomas Hardy's Novel Universe: Astronomy, Cosmology, and Gender in the Post-Darwinian World* (Farnham: Ashgate Publishing, Ltd., 2007), p. 232.

produce its own type of pessimism: the pessimism derived of a world that is absolutely blind to any type of human significance, transcendent or otherwise.[43]

Mark Asquith echoes this point, stating that it is not merely natural selection's abnegation of human agency or, as a result, its draining the world of meaning that causes human misery in Hardy. It is also the agonising irony of evolution having given rise to the emergence of a self-consciousness that knows its own fate; humanity can 'view' its own evolutionary destiny, but is powerless to affect it.[44] This is Hillis Miller's point too in *Distance and Desire*. On the failure of Hardy's 'evolutionary meliorism', Hillis Miller writes that

> […] man must endure things as they are. This endurance is made more painful by knowledge that if the Immanent Will does not come to consciousness the best man can hope for is that he will be lucky enough to "darkle to extinction swift and sure". The development of man is a mistake on the part of the vital energy of the earth. Man is not more fit for survival than the dinosaur or the sabre-toothed tiger.[45]

Again, it is not merely the basic plot of Darwinian natural selection – the violence of competition, its determinism, and the meaninglessness of life – which communicates the dark pessimism in Hardy's fiction. This pessimism lies also in the futility of humanity's capacity to confront natural selection's violent determinism and the irony that this reflective confrontation seemingly produces no distance from it. That humanity inhabits along with the animal a world of relentless suffering is not made easier by being consciously intelligent or possessing a limited form of purposive agency. Rather, consciousness compounds suffering by allowing us to view it, offering a hint of what it might be like to be truly sovereign, while relentlessly confronting individuals with its impossibility.

George Levine elaborates upon the implications of attempting to view our own nature in his chapter on Hardy in *Darwin and the Novelists*, focusing on what he calls 'The Perils of Observation'.[46] In this, he argues that in Hardy's fiction, even as the vision of

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[43] Mark Asquith, 'Philosophy, Metaphysics and Music in Hardy's Cosmic Vision', in *The Ashgate Research Companion to Thomas Hardy*, ed. by Rosemarie Morgan (Farnham: Ashgate, 2009), pp. 181–99 (p. 183).
[44] Asquith, p. 186.
[45] Hillis Miller, *Distance and Desire,* p. 16.
[46] George Levine, 'The Perils of Observation', in *Darwin and the Novelists: Patterns of Science in Victorian Fiction* (Cambridge, MA: Harvard University Press, 1988), pp. 210–38.

nature it constructs denies the independence of human will, that the act of viewing is itself a form of agency that complicates the concept of observational distance as well as the pessimism it seems to beget. Darwin's evolutionary empiricism unearths a paradox, argues Levine, by relying initially on the observational transcendence of the individual while at the same time, through the resultant science of evolutionary interdependence, revealing that individual's very aloofness to be illusory. Hardy's fiction, says Levine, is characteristic of Victorian literature in sharing in the spirit of surveillance and reporting – a narrative practice wholly consistent with the premise of empiricist observational methodology. But Hardy, Levine argues, like Darwin, troubles the notional mastery provided by empiricism. On the one hand, his fiction is constructed on the relaying of uncannily detailed descriptions – faces, landscapes, personalities. On the other, characters in his works constantly engage in covert forms of observation, hiding themselves from the subject they seek to observe, and are equally as concerned with the danger of exposure as they are with collecting and articulating information, attesting to the frailty of the empiricism's construction of a sovereign observer. So in Hardy's fiction, the act of viewing is a delicately balanced form of agency which offers neither complete transcendence nor the ability to be wholly consumed by materiality. Instead, the act of observing in Hardy's fiction puts both distance and proximity into play, the construction of the former acting as a constant reminder of its contingency.

Consider the complications of concealment and disclosure in *The Return of the Native* at the moment when Eustacia attempts to observe her sexual quarry, Clym, without his knowledge. Determined to view her subject from a position of anonymous power, Eustacia infiltrates a band of mummers which plans on performing in Clym's home, hides her identity and gender behind a costume, and performs the folk play with Clym watching. Once the performance concludes, Eustacia finds an isolated spot from which to observe her subject. But her observational supremacy is constantly threatened by the possibility of recognition, a possibility which is as alluring as it is disastrous. 'At moments during this performance', the narrator observes, 'Eustacia was half in doubt about the security of her position; yet it had a fearful joy.' (*Return*, 176) The fragility of scientific distance is exposed; the Cartesian logic of empiricism is revealed to subsist on a form of performance, on concealment of position, not the absolute transcendental removal of the viewer. And the fragile barrier between subject and object is shown to be constantly under

threat, in this case by the voyeuristic observer's desire for this exposure to take place, for there to be a contraction of distance, even at the expense of losing observational mastery.

Here, the idea that a vision of nature's indifference to humanity necessarily entails pessimism comes into question. Eustacia desires exposure in the same moment that she constructs a contingent form of concealment, showing how scientific distance and its pessimistic conception of nature's cruel indifference to human morality is simultaneously driven by a desire to relinquish transcendence for being exposed to this very cruelty. For the scientific observer too, the potential danger of exposure is tinged with the subversive possibility of moving in such proximity to their subject that they become indistinguishable from it. Darwin's theory of evolution, Levine notes, emerged out of British empiricism's privileging of the data of individual observation. He suggests that natural selection was constructed from a position of authority made possible by the assumption of humanity's exceptionalism, but that it resulted in the destruction of this authority through the discovery of what Freud called 'the ineradicable animality' of the human itself. Darwin himself exulted in being *amidst* nature rather than above it, and in casting off the self-imposed isolation required of empiricist surveillance. He describes in a letter, written soon before the publication of *The Origin of Species,* how, after falling asleep in the grounds of the hydrotherapeutic clinic in Moor Park, he awakens surrounded by a 'chorus of birds singing […] & squirrels running up trees & some Woodpeckers laughing'. Here, the desire for scientific mastery through empirical distance remains in slumber, the imagined interval between observer and his subject is closed, and Darwin luxuriates in the freedom this grants him: 'I did not care one penny how any of the beasts or birds had been formed.'[47]

Perhaps, then, this constant oscillation between a desire for objective distance and a desire for intimate proximity, is the source of a perverse, materialist "evolutionary meliorism". The recuperative pleasure we gain from viewing nature's cruelty lies not in transcending it. Rather, in attempting to view nature, we discover the contingency of our own position in it and accept our own mortality in an evolutionary cosmology: a joyous liberation from the pressures of possessing transcendental agency and purpose. But the pleasures of exposure and of becoming indiscernible from one's subject must always be

[47] Charles Darwin, 'Letter 2261, Darwin, C,R, to Darwin, Emma', 28 April 1858, Darwin Correspondence Project <http://www.darwinproject.ac.uk/entry-2261> [accessed 3 November 2014].

accompanied by the pain that this loss of identity causes. Freud's diagnosis of the resistance with which Darwin's theory of natural selection was met in his own time suggests that the existential agony of being indiscernible from nature or the animal takes precedence over the blissful hedonism of giving up supreme human agency. And this reading complements Derrida's suggestion in *The Beast and the Sovereign* that in order to sustain the human sciences' phallic sense of centredness, they must both affirm Darwin's thought and repress its most threatening imputation: man's animality and abjection under natural selection.

My engagement with Kristeva's reading of Zola's literature of the biological abject has anticipated this point. The pleasure we feel at the prospect of becoming indistinguishable from our observational subject – the animal, nature, and ultimately death – is merely the vital *jouissance* of egoic reconstitution. To view the abjection of humanity's evolutionary existence (our mistakenness, our contingency), is both repugnant and attractive to us as human subjects, because it allows us to re-affirm our notional status as pure, rational, but biological beings while muting the meaninglessness of human life amidst perpetual struggle. Deleuze theorises in *The Logic of Sense* that Zola's work can affirmatively enact this confrontation; that through a poetics of putridity and disgust it confides to humanity a positive sense of its own finitude and the immanent possibility of revolutionary change. But Kristeva shows that even this reading of the germinal potential in Zola's fiction ignores the perpetual defensiveness of humanity in relation to the prospect of being indistinct. Thus, the recognition of human contingency, the love of mortality, represent nothing other than a disavowal of the existential threat of evolutionary reality which works only to reproduce the illusion of human mastery in relation to animal inferiority. Kristeva makes the point that a confrontation with the abject in primitive societies 'mark[s] out a precise area of their culture in order to separate it from the threatening world of animals or animalism'.[48] Here, the rather more "advanced" practice of scientific observation – the confrontation of the abjection of evolutionary life – is revealed to work in the same manner: as a primer of human culture contrary to what is perceived as the animal.

In the *Return of the Native,* the fortunes of Clym Yeobright represent one instance

[48] Kristeva, *Powers of Horror*, pp. 12–13.

in which Hardy shows an attempt at materialist meliorism to be an exercise in covert, existential self-defence. Amidst the turbulent violence of Hardy's Darwinian world of Egdon Heath, there is Clym, an ardent educationalist – 'the Rousseau of Egdon' – who 'had a conviction that the want of most men was knowledge of a sort that brings wisdom rather than affluence' (*Return*, 243). This conviction was nourished by Clym's knowledge of 'the central […] thinkers of his date [which] may have owed to his studious life in Paris, where he had become acquainted with ethical systems popular at the time.' (*Return*, 204) Hardy is referring here, most likely, to Auguste Comte's theory of social progress, on which Hardy took a series of notes around the time he was composing the novel.[49] Comte's theory of social evolution argues that humanity moves through successive periods of development leading ultimately to the 'positive stage'. The positive stage represents, for Comte, the point at which 'the most exact and the most complete possible knowledge of the laws of nature' is attained.[50] The biological sciences are central to this; for Comte, their extension into sociology would provide the conditions for a totally rigorous science of humanity. Thus Clym's desire to found a school in Egdon is a part of a larger evolutionary and epistemological endeavour which has the completion of human knowledge at its core. In this respect Clym, like Claude in *L'Œuvre*, is dedicated to a totalising knowledge of humanity; to observing, confronting, and mastering the laws of nature. But, like Claude, the impossibility of his project makes his efforts redundant and precipitates his own downfall.

Dismayed at his mother's distaste for Eustacia, whom he has married, Clym dedicates himself to more intense study and to 'read[ing] far into the small hours during many nights.' But the intensification of his effort is rewarded not with increased illumination of the laws that govern humanity and nature, but with its literal opposite. Clym wakes one morning to find himself partially blinded and looking at the world as if through 'smoked glass': '[a]t every new attempt to look about him the same morbid sensibility to light was manifested, and excoriating tears ran down his cheeks' (*Return*, 270). Blindness – a symbolic and literal inability or unwillingness to observe nature from a

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[49] In 'Appendix C' of the Broadview Edition of *The Return of the Native,* Simon Avery writes that Hardy was 'a keen reader of [Comte's] work', an argument borne out by Hardy's *Literary Notebooks* which contain numerous references to the French Positivist theorist (*Return*, 429).
[50] Auguste Comte, *Comte: Early Political Writings*, ed. by H. S. Jones (Cambridge: Cambridge University Press, 1998), p. 154.

distance – for Clym, as it was for Darwin, is a release from the pain and isolation of illusory scientific detachment and a chance to move into close proximity to the natural world. In lieu of being able to study the natural world, Clym sinks himself into it bodily, taking up furze-cutting, the local practice of harvesting the gorse bushes which cover the heath for fuel, and in doing so dissolves into the natural territory in which he moves. Released from the agony of vision, Clym becomes 'a brown spot in the midst of an expanse of olive-green gorse, and nothing more', writes Hardy, and takes pleasure in the forced limitation of his own predicament. He becomes the companion to 'creeped and winged things'; bees, grasshoppers, and 'huge flies' circle him 'without knowing he was a man'; snakes and rabbits run about his feet, and '[n]one of them feared him.' (*Return,* 273) But Clym's descent into the 'entangled bank' of nature and his wilful loss of biological identity is no less quixotic than his previous endeavour of maintaining an absolute distance from nature through scientific observation. In becoming indecipherable from the subject which he once studied at a distance, he does not become more connected to nature but less; he does not become less isolated but more. His 'daily life was of a curious microscopic sort', writes Hardy, 'his whole world being limited to a circuit of a few feet from his person' (*Return*, 273). And as a result of this, his wife, dismayed at his 'social failure' and indifference to her, becomes depressed and estranged from him (*Return*, 275). This loss of both vision and identity, instigated by the pain of being unable to dominate nature, does not allow Clym to relinquish his humanity and the desire for mastery through a connection with the infinite or the abject. Instead, it offers him a different sort of humanity which reproduces the split between humanity and nature he seeks to close: an imagined sense of connection with non-human nature, at the cost of disconnecting from the human world, and still without understanding non-human nature's fundamental indifference to his own human life.

A similarly problematic encounter with nature's indifference is depicted by Hardy in *A Pair of Blue Eyes* in what is, perhaps, the most explicit reference in Hardy's entire novelistic *œuvre* to geological and evolutionary science. It occurs in the novel's famous cliff-hanger scene, in which Henry Knight slips while on a coastal walk with Elfride and finds himself hanging from one of the steep promontories that line the Wessex coast. Knight is faced with almost certain death, but is at first galvanised by an unyielding will to survive: 'He could only look sternly at Nature's treacherous attempt to put an end to him,

and strive to thwart her' (*Blue Eyes*, 199). But his initial resolve is troubled as he notices, embedded in the cliff-face, a fossilised trilobite. The trilobite, a crab-like and extinct creature, represents both evolutionary abjectness as well as an embodiment of the opposite of humanity's self-ascribed superiority, 'a low type of animal existence, for never in their vernal years had the plains indicated by those numberless slaty layers been traversed by an intelligence worthy of the name' (*Blue Eyes*, 200). Faced with the ineluctable fact of his own imminent death and the fact of his own low animal existence, Knight's mind is borne imaginatively through the ancient past:

> Time closed up like a fan before him. He saw himself at one extremity of the years, face to face with the beginning and all the intermediate centuries simultaneously. Fierce men, clothed in the hides of beasts, and carrying, for defence and attack, huge clubs and pointed spears, rose from the rock […]. Behind them stood an earlier band. No man was there. Huge elephantine forms, the mastodon, the hippopotamus, the tapir, antelopes of monstrous size, the megatherium, and the mylodon –– all, for the moment, in juxtaposition. Further back, and overlapped by these, were perched huge-billed birds and swinish creatures as large as horses. Still more shadowy were the sinister crocodilian outlines – alligators and other uncouth shapes, culminating in the colossal lizard, the iguanodon. Folded behind were dragon forms and clouds of flying reptiles: still underneath were fishy beings of lower development; and so on, till the lifetime scenes of the fossil confronting him were a present and modern condition of things. (*Blue Eyes*, 200-201)

This remarkable scene has drawn extensive critical commentary, much of which focuses on its genetic origins. In opposition to the view that the scene is derived from a similar incident in Hardy's life, John Halperin sides with Robert Gittings's conviction that the scene was derived from a passage in Leslie Stephen's essay, "A Bad Five Minutes in the Alps", in which Stephens imagines himself in a comparably precarious situation.[51] Others have commented on the scientific origins of the scene, but have come to divergent conclusions on its aesthetic success.[52] William Dawson, echoing the tentativeness with which Lionel Johnson at the end of the nineteenth century viewed Hardy's use of scientific language and ideas, thinks this 'lecture in geology' to be a mere exercise in pedantry.[53] However, Carl Weber and Arthur McDowall concur that the effect of Hardy's inclusion of

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[51] John Halperin, 'Leslie Stephen, Thomas Hardy, and "A Pair of Blue Eyes"', *The Modern Language Review*, 75.4 (1980), 738–45.
[52] J. O. Bailey, 'Hardy's "Imbedded Fossil"', *Studies in Philology*, 42.3 (1945), 663–74.
[53] William J. Dawson, 'Thomas Hardy', in *The Makers of English Fiction* (New York: Fleming H. Revell, 1905), pp. 238–239.

geological detail is powerful, the former affirming the scene's evocation of the 'torture' of humanity's temporal insignificance, the latter commenting on the 'personalised loneliness of nature'.[54] Even more suggestively, David Cecil writes that in Hardy's evocation of geological and evolutionary science, a new type of literature is born, that confronts its reader with 'awe-inspiring vision[s] of infinite spaces and mysterious, irresistible forces'.[55]

Whereas Clym's encounter with evolution's 'infinite space' is made possible by the relinquishment of sight and becoming invisible, Knight's confrontation with evolutionary temporality is premised on vision and on the realisation that humanity is itself a subject of observation. Hardy writes: 'Knight and this underling seemed to have met in their place of death', and as Knight begins to ruminate on 'the Dark Valley and the unknown future beyond', he begins to conceive of the inconsequentiality of his own life in the context of deep evolutionary time and the vast history of life (*Blue Eyes*, 203). The trilobite, Hardy writes, was 'a creature with eyes' and while Knight regards this symbol of low animality and gazes into the very image of obliteration, the trilobite's 'eyes, dead and turned to stone, were even now regarding him' back (*Blue Eyes*, 200). In another contrast with Clym, Knight does not appear to welcome the obliteration of ontological definition, and is instead repulsed by those sinister, ancestral, animal forms from which he is now, in this moment of danger, indistinguishable. The past is inhabited, in Knight's imagination, by 'monstrous', 'fishy', 'uncouth', and 'shadowy' forms. Nevertheless, he appears to gain an insight into humanity's contingency in the context of evolutionary change. Common to both, however, is a perceived collapse of the difference between observer and observed, animal and human, subject and object; and in this lies oblivion. Knight confronts and is confronted by human insignificance and the abyssal space of evolutionary temporality. No longer resolute in his will to survive, the sea below no longer seems blue to him but black, and the 'boisterous tossing' of foam-tipped waves appears to him as a 'white border to a black sea––his funeral pall and its edging' (*Blue Eyes*, 202). Knight is overwhelmed by evolutionary historical vertigo, overcome by the triviality of human life, and seems, like Clym to be resigned to sharing the fate of those horrifying creatures that preceded him in evolutionary history. But the fallacy of his acquiescence to being swallowed up by

[54] Arthur Sydney McDowall, *Thomas Hardy, A Critical Study* (London: Faber & Faber, 1931), p. 97; Weber, p. 59.
[55] David Cecil, *Hardy The Novelist* (London: Constable, 1943), p. 73.

evolution's abyss is revealed by his visible relief when Elfride arrives at the cliff-face and devises a means with which to rescue him. She disrobes down to her bodice and undergarments and pulls him up from the cliff-face by fashioning her dress as a rope and, in doing so, pulls him out of his reverie of morbid submission.

Knight's 'view of things' is different to that of Clym, who performs a kind of submission to nature but in doing so attests to a concealed anthropocentric egotism. Knight's confrontation with the trilobite, his imagined encounter with the evolutionary past, and his experience of self-abnegation in the face of nature's abyss, is a temporary one achieved under only the the duress of imminent death. Knight it seems is fully aware of the existential threat that evolutionary materiality and temporality poses. For him, confronting his own mortality is not a liberating experience but a horrifying one, a process of abjection as described by Kristeva. He does not disavow the terrifying nature of the evolutionary real, but affirms its horror; only when he is convinced he is about to die does he resign himself to his own death. But both encounters – Clym's becoming indiscernible from the heath and Knight's imaginative descent into evolutionary temporality – dramatise how both attempting to view nature from a distance as well as becoming entangled in it are equally unsuccessful forms of evolutionary meliorism. For Knight, his visions of his entanglement with an evolutionary past function merely disgust him and thus, as Kristeva would put it, call on him to abject himself as a subject wholly separate from the nature which horrifies him. For Clym, the descent into entanglement is performed with the understanding that leaving the human world is a form of materialist transcendence – of being liberated from life by becoming indistinct from the natural world. But in doing so, Clym merely reproduces the split between nature and the human which scientific distance erects.

Thus, not only does Hardy's fiction appear to communicate an abiding and desperate sense of pessimism by reproducing the tragic plot of Darwin's war of nature in literary form, his novels, *A Pair of Blue Eyes* and *The Return of the Native,* anticipate literary critical efforts to find redemptive possibility in his evolutionary, materialist cosmology and reveal even those efforts to be driven by covert desires for and impossible transcendence of evolutionary misery. In Hardy's works evolutionary meliorism as a response to the inescapable violence of natural selection is a failure by its own terms, for it is always an attempt to stand outside evolutionary change, and thus mortality; or else it

signals a disingenuous avowal of one's readiness for death.

Sexual Selection: Hardy's 'Relations of the Sexes'

At the conclusion of his work on Hardy, having outlined in detail how Hardy's fiction raises the prospect of redemption through desire and affection only to crush this possibility with morbid repetition, Hillis Miller echoes Deleuze's reading of Zola by asserting that it is the very tragic repetitiousness of Hardy's fiction that offers the prospect of genuine consolation. The 'pattern [Hardy] habitually picks out of the web [of life] is one which [...] reveals precisely that futility of existence which justifies the narrator and the characters in withdrawing altogether from active engagement in life.'[56] The very object of Hardy's art, Hillis Miller says, is to communicate of the dismal senselessness of materialist life. However, just as Deleuze does in his reading of Zola's so-called 'putrid literature', Hillis Miller insists that in Hardy's work it is exactly this reflection on and documentation of the abject position of the human in the evolutionary universe that rescues things from their 'eternal recurrence in the void'. The art of human abjection and of documenting the futility of human existence has value and meaning precisely because it emerges out of a world that can operate without them. And as long as literature continues to memorialise the victims of nature's constant violence, the stories it tells represent a victory of 'consciousness over suffering', the triumph of human creative power over nature's capacity to destroy.[57]

Deleuze's interpretation of Zola's putrid literature in *The Logic of Sense* and Claude's conception of the revolutionary capacity of painting in Zola's *L'Œuvre* (which is a proxy for Zola's theoretical understanding of literature in *Le Roman expérimental*) understand art as possessing the capacity to redeem and transform hereditary fate. Similarly, Hillis Miller is committed to the capacity of art not merely to mimic and thus momentarily arrest the onslaught of material and biological struggle. He also suggests that in the case of Hardy it is mimetic repetition which ensures that the reality literary art depicts does not repeat itself without change. In this respect, Hillis Miller's emphasis is

[56] Hillis Miller, *Distance and Desire*, p. 262.
[57] Hillis Miller, *Distance and Desire*, p. 262.

not on how art might confide in humanity a sense of its own minority in relation to a larger awareness of epic, immanent inhuman possibility, as Deleuze's reading of Zola proposes. Nor does he argue, as Zola does in *Le Roman expérimental*, that scientific mimetic exactitude allows us to apprehend, possess, and thus transform reality. Instead, he focuses on literary art's inherent inhumanity, its capacity to live beyond the confines of human temporality and, in that way, to 'safeguard the dead' for the life of the future.[58] Hardy's vision, he argues, indefinitely preserves in fiction the cruel reality of human life lived under the regime of deterministic law and thus ensures that such a life can never be lived in the same manner again, because we must always live in relation to that which has been preserved by fiction. In this respect, both Deleuze and Hillis Miller emphasise the idea that art is singular in its capacity, at its inception, to be oriented towards a future people or reader, and in that way to engender that future's unknowability. Literary art, therefore, can be understood, in Hillis Miller's reading of Hardy's vision of humanity's abject position in nature, as a rebuke to that abjectness, to the destructive nature of natural selection and indeed to death, by preserving human life beyond the supposedly all-engulfing acid of Darwin's mechanism of elimination.

This understanding of literature as a reproof of, and guarantee against, the destructive repetitiousness of biological evolution could imply that literary creation is somehow opposed to Darwin's theory of evolution. Certainly, it seems to understand evolutionary nature progresses only through the selective paring back of the otherwise regularly, predictably reproductive organic life. This is a recapitulation of the Malthusian argument on population: life reproduces at a regular rate which is checked by the competition and destruction which is its logical consequence. However, Darwin's theory of sexual selection shows this characterisation of evolution to be inaccurate. Sexuality and the choice of a mate involves unpredictable and contingent desire, making the direction of evolutionary reproduction contingent and thus essentially incalculable. Moreover, *The Descent of Man* implicitly contests precisely the idea that literary creation and evolutionary development are in tension. In the second volume of this work, having set out the principles of sexual selection and demonstrated multiple examples of the ceaselessly inventive ways in which animals and humans engage in reproductive relations,

[58] Hillis Miller, *Distance and Desire*, p. 269.

Darwin offers a speculative, naturalist account of the emergence of art. Artistic expression, Darwin suggests, is to an extent the accidental consequence of the various ways animals act upon desire and themselves seek to evoke desire in a prospective mate. Dance, music, self-adornment: Darwin argues that these forms of expression are deployed to attract a potential lover, to impress upon them one's sexual prowess, ingenuity, and strength. He goes so far as to suggest that the 'articulate language' that is particular to humanity develops first as a means with which to express desire and love, and that the affective 'charms' of rhythm and melody precede and give rise to a more semantically complex language later on (*Descent*, Vol. 2, 337). For Darwin, artistic expression and creativity are not contrary to the dynamics of evolution, but are contingent emergences as a result of the process of sexual selection which is itself integral to evolutionary change. This exceeds Hillis Miller's claim that meaning-making and valuation is vital in a world devoid of intrinsic meaning or value. Darwin suggests that the capacity to create meaning and respond to that with desire is itself an integral part of the material dynamics of evolution's process.

Up to this point, I have emphasised how Zola's and Hardy's stories offer an abject and deterministic vision of Darwinian evolution as consisting of an unremitting war in nature, an attempted escape from which entails a nihilistic embrace of its violence or a utopian withdrawal. I have also focused on the manner in which Hardy's fiction goes further in its pessimism than even Zola, anticipating and puncturing any efforts to find redemptive possibility in its vision of a Darwinian world – for those efforts are at the very root of that suffering. In what follows, however, I shall be arguing that Hardy's focus on courtship and sexuality in *A Pair of Blue Eyes* and *The Return of the Native* offers an alternative and affirmative vision of nature and of Darwin's theory of evolution. I want to show how, in these two novels, Hardy's depiction of the ordinary but sometimes beautiful creative rituals of the denizens of his fictional Wessex organise, facilitate, and complicate sexual desire. And I want to demonstrate that through his representations of these rituals, dances, plays, and games, Hardy's work in these two novels represents a distinctive literary engagement with Darwin's theory of sexual selection. Whereas Zola's engagement with Darwin is limited only to natural selection, I seek to show how Hardy's focus on courtship and ritual offers a renewed vision of Darwin's work; a vision which does not only focus on the meaninglessness and cruelty of a determinist principle of constant

destruction, but which considers the plenitude offered through sexual reproduction and the desires that prefigure it. Read in this way, Hardy's work offers a radical interpretation of Darwinian evolution, where sexual desire and its intimate relation with artistic expression can be understood as a principle of organic supplementarity. This not only counteracts the determinism of evolutionary natural selection but ensures the reproduction of biological life itself.

In later editions of *The Descent of Man*, Darwin argues that what is at stake in the study of sexuality in evolutionary terms is nothing other than biological futurity itself, the 'composition of the next generation [and] not the weal or woe of any one individual'.[59] As I suggested earlier, whereas *natural selection* regulates those aspects of a species which relate specifically to survival, *sexual selection* deals in those characteristics which seem to offer little advantage to an organism in the 'war of nature'. In the second part of the first volume of *The Descent of Man*, Darwin outlines the basic principles of sexual selection. He argues that in sexually dimorphic species, where the male and female follow 'exactly the same habits of life' and whose morphology does not differ as a function of survival, sexual selection works to differentiate the sexes through the development of apparently exorbitant and impractical morphological traits (*Descent, Vol. 1*, 256-257). Males in particular, Darwin observes, seem to develop apparently useless features such as antlers in stags, horns in rams, brightly coloured plumage in birds, or facial hair in humans. This contrasts with females of these species (and many others) who, according to Darwin's observations, generally remain 'more like the young of her own species, and more like the other members of the same group' (*Descent, Vol. 1*, 272). The reason for this relates to the *realpolitik* of sexual choice which ensures the continued evolution and vigour of the species. Males compete between males for access to female mates and have developed bodily traits which allow them to engage in combat or to compete in other ways for female attention. Females, in turn, select the fittest – strongest, most attractive – male and in that way ensure the strength of their progeny as well as continuing the development of those powers of attractiveness and judgement which they themselves exercise.

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[59] Charles Darwin, *The Descent of Man, and Selection in Relation to Sex*, 2nd edn, revised and augmented. (London: John Murray, 1874), p. 587; for a full publication history of *The Descent of Man* see R.B. Freeman, *The Works of Charles Darwin: An Annotated Bibliographical Handlist*, 2nd edn (Folkstone: Dawson, 1977), pp. 128–141.

In the second volume of *The Descent of Man*, Darwin complicates this argument by suggesting that these dynamics of competitive courtship engender the biological conditions of possibility for the emergence creative expression. Describing the mating habits of certain birds, Darwin writes that 'the season of love is that of battle'; but as he also argues in *The Origin of Species*, this battle is not fatal and rewards creativity not destruction (*Descent, Vol. 2,* 48; *Origin*, 88). To take a specific example, Darwin describes in *The Descent of Man* how birds compete with 'love-notes, songs, and antics', seeking to exert a type of 'charm' over their sexual quarries (*Descent*, *Vol. 2,* 50). Moreover, where certain species of bird do engage in physical combat, Darwin notes that one naturalist at least is convinced of its dramatic and performative nature, having in his observations of certain male sexual contests never found a 'maimed hero' and 'seldom more than a broken feather' (*Descent*, *Vol. 2*, 50). It is in this book too that Darwin makes his most forceful and explicit argument for the continuity of descent between man and these 'lower forms', arguing in the conclusion that, contrary to established notions of religiosity, it is more 'irreligious' to reject the idea of man as a distinct species due to variation and selection because such a rejection cannot explain why humanity would have any distinct traits from other animals (*Descent, Vol.2*, 396). In this way Darwin makes the implicit case for the continuity between the evolutionary emergence of a primitive form of sexually-charged expression and humanity's highest forms of cultural expression. This implicit link between animal and human forms of creative expression is made explicit, albeit in terms that are today racially problematic, when Darwin expatiates upon the artistic faculties of 'savage' races such as those that live in South America, Africa, and in other areas subject to Western colonial rule. While simultaneously dismissing the analogy with "civilised", European cultures, Darwin remarks upon the customs of decoration, bodily modification, and the fashions of dress which individuals in 'savage' societies use to render themselves more attractive to the opposite sex; upon certain societies' preference for culturally specific forms of beauty; and upon the possibility that primitive forms of song, music, and even poetry emerge from pre-human forms of expression. Thus, not only does art – artifice, performativity, the unending creativity of cultural expression – have an integral place in Darwin's evolutionary dynamic, its importance to the reproduction of the natural world emphasises how a vision of Darwinian evolution as dominated by natural selection and the war of nature attenuates life rather than offering an image of its complex whole.

Writing in the *New Review* in 1890 in an essay entitled "Candour in English Fiction", almost two decades after the initial publication of Darwin's *The Descent of Man*, Hardy gestures at the fallacy of a naturalistic literature unconcerned with sexuality and desire. He argues for the importance of sexuality to a candid, realistic, and scientifically informed portrayal of human life: '[l]ife being a physiological fact', Hardy says, 'its honest portrayal must be largely concerned with, for one thing, the relations of the sexes'.[60] Hillis Miller's reading of Hardy, recalling the poetics of entanglement with which Glendening's study of post-Darwinian fiction is concerned, suggestively notes that these relations in Hardy's fiction take the narrative form of a thicket of sexual connections and severances, 'describ[ing] the relations not of a single pair of lovers, but of a group in their tangle of conflicting desires.'[61] Glendening's study, moreover, points to those tangles in Hardy's narratives and argues for greater acknowledgement that sexual selection is as integral to Hardy's engagement with Darwinian thought as natural selection.[62] These complex thickets of relations between the sexes are precisely the narrative focus of *A Pair of Blue Eyes* and *The Return of the Native*, both of which describe the courtship plots of a series of characters, the intrigues of sexual politics, their pleasures and their disasters. Angelique Richardson explicitly points out how Hardy's fiction – particularly his early work in *A Pair of Blue Eyes* – is pervaded by the complex competitions, manoeuvres, and complications of attraction and choice that also characterise Darwin's theory of sexual selection.[63] She shows how, in this early novel published very soon after the publication of Darwin's *The Descent of Man*, the structure of the courtship plot involving Elfride and a competition between three male suitors is structurally homologous to the expected courtship plots outlined by Darwin. Similarly, although its plot is not as straightforward as that of *A Pair of Blue Eyes, The Return of the Native* focuses primarily on Eustacia as a sexual and sexualised object, the possession of whom is the subject of an implicit competitive struggle between Clym and Wildeve. This plot is doubled by the story of Tamsin

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[60] Thomas Hardy, 'Candour in English Fiction', *The New Review*, 2 (1890) in Thomas Hardy, *Thomas Hardy's Public Voice: The Essays, Speeches, and Miscellaneous Prose*, ed. by Millgate, Michael (Oxford: Clarendon, Oxford University Press, 2001), pp. 95–102 (p. 95).
[61] Hillis Miller, *Distance and Desire*, p. 165.
[62] Glendening, pp. 94–102.
[63] Angelique Richardson, '"Some Science Underlies All Art": The Dramatization of Sexual Selection and Racial Biology in Thomas Hardy's A Pair of Blue Eyes and The Well-Beloved', *Journal of Victorian Culture*, 3.2 (1998), 302–38.

Yeobright, Clym's sister, and the competition that takes place between Wildeve (who later defects to Eustacia) and another character, the enigmatic Reddleman, for her hand in marriage. Hardy's fiction therefore seems to adopt the structural, narrative features of Darwin's theory of sexual selection, in order to produce a candid, naturalistic literary portrayal of real life.

Although Darwin's theory of sexual selection gestures at the creative freedom of sexual relations and the performative nature of its competitions, critics point out that Hardy's relations of the sexes offer a more unforgiving picture of human sexuality. Gillian Beer argues that Hardy's depiction of sexuality, like his engagement with natural selection, is particularly sensitive to its tragic potential, arguing that the connection it makes between the individual and the future of its entire species burdens 'love-intrigues and the marriage market' with heavy and insidious significance.[64] In *The Return of the Native*, for example, Wildeve's failure in two different sexual competitions seems to exceed his capacities for love-intrigue, resulting in his desperate, fatal pursuit of Eustacia into the weir. More significantly, in this reading, both Elfride's and Eustacia's failure successfully to secure a stable marriage also represents a failure to serve the progenerative requirements of the species, placing yet further pressure on women in addition to the Victorian expectation that they serve as merely as vessels for reproduction. In this light Hardy would appear attuned to the importance of sexuality in an evolutionary and materialist world, but sees its outcomes – like the competition of natural selection – as ultimately tragic.

Richard Kaye's reading of sexual selection in Hardy echoes this critically gendered interpretation and suggests that in this vision of biological despair Hardy's fiction is implicitly critical of the Victorian context that nourishes it. Kaye affirms that Hardy's 'entire fictional œuvre comprises an extensive exploration of the concerns that would find their culmination as a scientific in *The Descent of Man'* and that, as a result, Hardy's plots of sexual courtship are 'permeated by a nearly obsessive preoccupation with the effects of female choice'. [65] One effect of this must be that this form of agency has the capacity to subvert the apparent biological predetermination of seemingly patriarchal evolutionary law. But Kaye is more convinced that Hardy's focus is on the ultimately doomed nature of

[64] Beer, *Darwin's Plots*, p. 199.
[65] Richard A. Kaye, *The Flirt's Tragedy: Desire without End in Victorian and Edwardian Fiction* (Charlottesville, VA: University of Virginia Press, 2002), p. 85.

female choice. Citing the critiques of Darwin's theory of sexual selection in Nancy Armstrong's study of domesticity in Victorian fiction and Ruth Bernard Yeazell's study of courtship plots in Darwin and Havelock Ellis, Kaye further examines the sense that, as Armstrong puts it, 'the sexual contract' implicit to sexual selection 'is used to grant women power with the one hand while taking it away with the other.'[66] Hardy's female protagonists, Kaye argues, discover that the exercise of even a nominal or limited form of agency in the field of sexual power relations leads women into culturally constrained, self-destructive *culs de sacs* of indecision from which there is no escape.

Consider Eustacia's vacillation in *The Return of the Native* over whether to remain with Clym or elope with Wildeve. Although the precise circumstances which surround Eustacia's death are unclear (it happens "offstage" in Hardy's text), it is clear that were she not seeking to escape with Wildeve, and aware of the possibility of being discovered, she would not have fallen or thrown herself into the weir. Either way, it is clear for Kaye that her death is a sort of punishment for the temerity of being unsure about her feelings, for the deferral of the act of definitively choosing is an enactment of choice. This, Kaye argues, 'implies that the flirtatious female may, if she chooses, interrupt evolutionary "progress," as the novelist explores the forms of disaster that proceeds from the overdetermined logic of sexual selection.'[67] Here, Kaye brings to mind D.H. Lawrence's reading of the 'aristocratic figures' in Hardy's fiction who seek to enact forms of individuality and agency that are anathema to the established laws of self-preservation established in society through biology. These characters, Lawrence suggests, *must* be destroyed by Hardy and are deliberately destroyed in order to reveal the cruelty and dismal nature of a biological and social world which is ruled, on the one hand, by the tawdry capitalist attenuation of creative excess, and, on the other, evolution's mechanistic, instrumental logic of struggle. Similarly, Kaye argues that Hardy's fiction constantly punishes those "flirtatious" women who wish to exercise sexual choice and that in this way Hardy's work is pessimistically critical in its outlook, whether it is read as engaging with Darwinian sexual selection or natural selection.

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[66] Ruth Bernard Yeazell, 'Nature's Courtship Plot in Darwin and Ellis', *The Yale Journal of Criticism*, 2.2 (1989), 33–53; Nancy Armstrong, *Desire and Domestic Fiction: A Political History of the Novel* (Oxford: Oxford University Press, 1987), p. 36.
[67] Kaye, pp. 141–142.

An exemplary instance of the manner in which Hardy shows Victorian social mores reproducing the violence of over-determined evolutionary fatalism is the meta-poetic figure of the game of chess in *A Pair of Blue Eyes*. The games of chess Elfride plays, first, with Smith and, subsequently, with Knight can be read as a form of courtship by proxy: a formal means of facilitating the libidinal dynamics of approach and retreat between man and woman, encoding the antagonistic nature of sexual selection in an innocent, performative, and playful encounter. Of the first game played by Smith and and Elfride, the narrator notes that the game's value lay 'in helping on the developments of their future', and as they play Smith's ardour for Elfride intensifies, and her easy victory confirms his love for her and submission to her (*Blue Eyes*, 47). Smith's chess teacher is Knight, whose victory over Elfride in a parallel game later in the novel signals both his assertion of sexual power over Elfride as well as his victory by proxy in sexual competition with Smith. In the plot of this particular novel, however, these games are not innocent or merely performative encounters. Knight's victory over Smith reflects the former man's superior social status, while his domination of Elfride reconfirms the normative Victorian sexual power relations which Smith's loss to Elfride seemed to complicate. Mary Rimmer's reading of these games of chess points out that the meta-narrative of the chess game in particular is a gendered, rule-bound ritual that establishes and reproduces historically determined, patriarchal power relations.[68] While the games of chess in *A Pair of Blue Eyes* would seem in initially to establish playful sexual relations between Elfride and her suitors, their function is to reproduce, through the imposition of rules, the normative class and gender antagonisms they reflect. In this way, the rule-bound nature of the game of chess – its zero sum logic – mirrors natural selection and not the less rigorous competition of sexual selection, and prefigures the manner in which Elfride will herself suffer numerous losses and finally a fatal illness. That Smith's loss is comparatively less serious (he merely suffers disappointment and shame) shows that while the competition of sexual selection is intended by Darwin not to be fatal, it is always contingent on the context in which it takes place. In *A Pair of Blue Eyes,* Hardy shows how, for a woman, Victorian society's rule-bound rituals of courtship attenuate the playful, open nature of

[68] Mary Rimmer, 'Club Laws: Chess and the Construction of Gender in "A Pair of Blue Eyes"', in *The Sense of Sex: Feminist Perspectives on Thomas Hardy*, ed. by Margaret Higonnet (Chicago: University of Illinois Press, 1993), pp. 203–19.

sexual encounter. Moreover, it is Victorian society and not any essential natural law which enforces a patriarchal iteration of Darwinian sexual selection in which female choice is punished and male dominance rewarded.

Hardy's cruel and critical representation of the manner in which Victorian culture reproduces an unforgiving conception of evolutionary sexuality anticipates a prominent strain in the tradition of feminist critique which targets Darwinian sexual selection. I have already cited critiques of literature's engagement with sexual selection by the contemporary authors Armstrong and Yeazell. However, the earliest criticism of Darwin's theory of sexual difference came from the Victorian naturalist Antoinette Blackwell Brown, who in *The Sexes Throughout Nature* (1875), noted that sexual selection mirrored the 'time-honoured' reification of the male understood as normal and powerful in relation to the aberrant and passive nature of woman.[69] From the perspective of critical theory, a particularly unforgiving critique of the naturalisation of sexual difference by evolutionary thought takes place in Simone de Beauvoir's treatment on "Biology" in *The Second Sex* (1949). Beauvoir, like Blackwell Brown, indicts the scientific hierarchy of sexual difference and its consequent emphasis on maleness as dominant and active:

> We [...] repudiate any frame of reference that presupposes the existence of a natural hierarchy of values—for example, that of an evolutionary hierarchy; it is pointless to wonder if the female body is more infantile than the male, if it is closer to or further from that of the higher primates, and so forth. All these studies that confuse a vague naturalism with an even vaguer ethic or aesthetic are pure verbiage. Only within a human perspective can the female and the male be compared in the human species. But the definition of man is that he is a being who is not given, who makes himself what he is.[70]

Despite their different methodological approaches to interpreting the claims to truth made by biology, what Beauvoir's phenomenological approach and Blackwell Brown's historicist one is an attempt to distinguish biology's "truths" from a more immediate, material, or social reality, by contesting the transcendence of biology's claims. Today, this feminist ethos towards Darwinian sexual selection persists, both within and outside the discipline of evolutionary biology. Feminist critic Ruth Hubbard's critique of Darwin

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[69] Antoinette Blackwell Brown, *The Sexes throughout Nature*, *Pioneers of the Woman's Movement* (Westport, CT: Hyperion Press, 1976), p. 122.
[70] Simone de Beauvoir, *The Second Sex*, ed. by Sheila Malovany-Chevallier, trans. by Constance Borde (New York: Vintage Books, 2011), p. 131.

argues, like Blackwell Brown, that Darwinian sexual selection represents a scientific reification of the distinctively Victorian trope of passive femininity.[71] While the biologist Sue Rosser argues that Darwin's theory of sexual selection does appear to naturalise Victorian social mores and ascribe hierarchical pre-eminence to the male of the species, contrary to the fundamentally non-hierarchical and relational image of nature offered by evolutionary descent.[72] Hardy's fiction anticipates this critical tradition and methodology in his fiction, by depicting how society sharpens the competitive nature of sexual selection and attenuates the agency it claims to offer women. The dialectic between nature and culture which Hardy constructs implies that nature does not determine culture, but that culture can reproduce and naturalise certain scientific ideas.

That Darwin's work is in some sense deeply inimical to a feminist perspective is easily afforded credence by his own speculations upon the "natural" condition of the female across many species. In addition to males enjoying greater 'pugnacity', energy, and determination as a result of a constant competition for the *possession* of females, human males are ascribed a greater faculty in the following fields: 'deep thought, reason, or imagination, or merely the use of the senses and hands', as well as, 'poetry, painting, sculpture, music, —comprising composition and performance, history, science, and philosophy' (*Descent*, *Vol. 2,* 245). It is for this reason, perhaps, that Patricia Adair Gowaty affirms a type of methodological pluralism by which Darwin's science and feminist theory can be kept conveniently separate.[73] Whereas Hubbard and Rosser distinguish scientific fact from social and discursive materiality, calling for the former to engage with the latter, Gowaty seems to acknowledge that the creation of such a feminist science would problematise Darwin's work to a large extent, and thus argues for 'multiple foci of analysis'. Hardy's fiction, in contrast, places these two perspectives alongside one another – the social and the biological – and shows how sexual determinism is not merely a function of biological law, but of society's nurturing and perpetuation of this fatalism. However, as Kaye's analysis of Hardy suggests, for all that the male of the species is

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[71] Ruth Hubbard, *The Politics of Women's Biology* (Rutgers University Press, 1990), pp. 92–98.
[72] Sue Rosser, *Biology and Feminism: A Dynamic Interaction* (New York: Twayne Publishers, 1992), p. 57.
[73] Patricia Gowaty, 'Darwinian Feminists and Feminist Evolutionists', in *Feminism and Evolutionary Biology: Boundaries, Intersections, and Frontiers*, ed. by Patricia Gowaty (New York: Chapman and Hall, 1997), p. 5.

represented as a dominant, active agent in a sexual marketplace, the final act of determination and agency – sexual choice – lies with the female. After all, in both *A Pair of Blue Eyes* and *The Return of the Native*, both Elfride and Eustacia are approached by numerous suitors: Smith, Knight, and Luxellian in the former, Wildeve and Clym in the latter. In both cases, vacillation is a form of agency – an exercise of the refusal to partake in patriarchal rituals around sexual choice, even despite their tragic outcomes. And in that sense too, the agency of feminine choice or agency, not male supremacy, lies at the central axis of the novel's narrative, thereby providing a different perspective on the biological politics of sexual choice. Elfride seeks to exercise the choice afforded to her by evolutionary biology, but is denied that choice by her father and by the societal demand that she marries a man of suitable social status. Hardy's depiction of feminine agency being severely compromised in *A Pair of Blue Eyes* by the oppressive and stultifying requirements of Victorian patriarchy suggests a distinct, but still critical view of society, which does not seek to separate feminism and biology, and entails a potentially affirmative, feminist conception of biological sexual agency.

The Return of the Native depicts an even more subversive and affirmative image of female evolutionary sexual agency, offering not only a critique of the erasure of female agency by socio-historical sexism, but affirming the creative, anti-essentialist nature of evolutionary sexual selection. Eustacia's role in the mummer's play affords her a form of social and sexual agency usually reserved for the male scientific empiricist: the capacity to be both part of a social or natural milieu and to assume a voyeuristic position through observational distance, by concealing her position in that milieu. But Eustacia does not only take on the gendered role of the voyeuristic scientist – and all the attendant phallic, epistemological power that this gives her – but her performance in the play is also explicitly a performance of gender and an assertion of her sexual desire. In the mummers' play, the traditional folk-play of St George and the Saracen Knight, she takes on the role of the Turkish Knight, her costume concealing her everyday sexual identity: 'revealing herself to be changed in sex, brilliant in colours, and armed from top to toe' (*Return*, 163). This role affords her the anonymity she requires to observe the object of her sexual desire and casts her in the role of a pugnacious, aggressive, and exorbitantly decorated male competitor. Like Darwin's birds, who engage in mock battles in order to attract female attention, Eustacia's dramatic performance of a battle with the Valiant Knight of

Christianity is intended as a proxy competition through which the actors compete for the attention of the female members of their audience. Describing the way in which the actors take part in a decorative arms race for female attention, Hardy writes:

> It might be that Joe, who fought on the side of Christendom, had a sweetheart, and that Jim, who fought on the side of the Moslem, had one likewise. During the making of the costumes it would come to the knowledge of Joe's sweetheart that Jim's was putting brilliant silk scallops at the bottom of her lover's surcoat, in addition to the ribbons of the visor, the bars of which, being invariably formed of coloured strips about half an inch wide hanging before the face, were mostly of that material. Joe's sweetheart straight-way placed brilliant silk on the scallops of the hem in question, and, going a little further, added ribbon tufts to the shoulder pieces. Jim's, not to be outdone, would affix bows and rosettes everywhere. (*Return*, 158)

Eustacia undermines the gender dynamics of this self-enhancing decorative arms-race by performing the role of the male combatant in the play's depiction of war but equally, and more suggestively, she takes on an androgynous role by performing the sexual role of both the male and the female: exercising female agency through her choice of lover while also enacting the part of the male sexual competitor. I began this chapter with an epigraph taken from Darwin's *The Descent of Man* in which he conjectures that 'if an inhabitant of another planet were to behold a number of young rustics at a fair, courting and quarrelling over a pretty girl' he would not only be unable to deny its homology with the behaviours of other animals – again, birds in particular – but would also observe the importance of female choice in sexual relations. Hardy's 'rustics', the inhabitants of Egdon Heath, do not simply enact the normative dynamics of sexual selection, but have the ingenuity to undermine them.

Subversive Evolutionary Creativity

If sexual competition is, therefore, naturally performative and in that way subverts culturally normative biological constructions of gender, this supplements readings of sexual selection in Hardy, which otherwise tend to focus on the teleological, instrumental way biological sexuality seems to formalise and naturalise patriarchal dominance. Hardy's vision of a sexual performance derives from an evolutionary imperative, but later complicates normative ideas of biological sexuality. This anticipates Elizabeth Grosz's reading of Darwin in her work *Becoming Undone*, which seeks to re-assess Darwinian

evolution and sexual selection in particular and through that articulate a radical conception of becoming as biological and sexual indeterminacy. Grosz's interpretation of Darwin is not limited to putting into question its claims to truth by revealing its historically contingent ideological undertow, as well as its historical sexism, racism, and supposed biological essentialism. Indeed, she criticises the epistemologically pluralistic approach to sexual selection, such as that of Adair Gowaty, which by seeking to keep feminist thought free from biology implicitly denies biological thought the insights of feminist philosophy. As Grosz points out in a survey of feminist approaches to Darwin, in feminist literature and politics, 'nature has been regarded primarily as a kind of obstacle against which we need to struggle, as that which remains inert, given, unchangeable, resistant to historical, social and cultural transformations'.[74] What Grosz seeks to do is to reintroduce "nature" to feminist thought, and in doing so to develop an image of nature which is not fixed but always in flux; a nature in dynamic interrelation with the contingencies of culture, history, and desire.

Darwin's theory of evolution, Grosz argues, anticipates later philosophical work on 'becoming' by Henri Bergson and Deleuze in particular, by stressing the inherently processual, durational nature of life. Like Deleuze, Grosz understands Darwin to be a theorist of life's becoming as well as a biologist whose work repudiates the ontological primacy of representation. Evolution, she argues, is one way of understanding how the processes of differentiation give rise to 'the differences which constitute whatever identity things – including subjects, living beings – might have.'[75] And like Deleuze, she is interested in the epic quality of evolutionary narrative, in how it describes a form of inhuman development that both includes humanity and implicates it in 'forms of development beyond, outside, and after the human'.[76] Reading Darwinian evolution in this way, as a theory of open-ended and creative 'becoming', is the starting point for her critical re-engagement with Darwin's works which, in her view, have been too easily dismissed by feminist thought. More importantly, she argues that Darwin's thought offers a support to a biologically and ontologically dynamic form of feminism which seeks to go beyond identity understood as representation, and to focus on biology and the real.

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[74] Elizabeth Grosz, 'Darwin and Feminism: Preliminary Investigations for a Possible Alliance', *Australian Feminist Studies*, 14.29 (1999), 31–45 (p. 31).
[75] Grosz, *Becoming Undone*, p. 1.
[76] Grosz, *Becoming Undone*, pp. 2–3.

Grosz's reading of Darwin asserts, firstly, that Darwinian evolution should be understood as a testament to the fact that nature is not essential, that because of evolution life is always on the verge of becoming something other than it is. Secondly, Grosz argues that to understand how Darwin's theory of evolution authorises neither biological essentialism nor historical determinism, critical readers must shift their focus away from natural selection towards sexual selection. Sexuality, she contends, is the principle of excess in the natural world. Sexual relation and reproduction, she says, is a supplementary dynamic which 'unhinges' the logic of natural selection, by adding to and complicating its ruthless logic of elimination. Evolution should not be understood as a calculable and regular dialectic of death and growth; but as an indeterminate process of the unfolding of life, in which reproduction gives rise to a host of unpredictable, emergent cultural as well as natural forms, whose interaction deflects any purely instrumental, deterministic conception of evolution.[77]

Grosz mentions George Bataille's theory of 'general economy' to illuminate her thesis on the economic logic of sexual selection in relation to natural selection. She makes an analogy between the dynamics of natural selection and calculable reasoning of Bataille's 'restricted economy', which works according 'determinable rules and procedures'. In contrast, she argues, sexual selection functions 'according to a general economy, without order, without striations or organisation.'[78] For Bataille, in *The Accursed Share*, the general economy is exemplified by excessive forms of waste or gift-giving, in art or in non-procreative sexuality, and reveals the restrictive and nominally rational economics of exchange and growth to be inadequate to 'cosmic' or complex systems of human relation. According to Bataille, the restrictive economic method of arbitrating expenditure based on a perceived, immediate benefit in return, in a general economic sense, is illogical and over-determined because it fails to take into account the ineffable and unpredictable benefits of surrendering wealth with no expectation of profit in return.[79] Grosz argues that to understand biological evolution, we also need to conceive of

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[77] Grosz, *Becoming Undone*, p. 171.
[78] Grosz, *Becoming Undone*, p. 131.
[79] 'Changing from the perspectives of *restrictive* economy to those of *general* economy actually accomplishes a Copernican transformation: a reversal of thinking- and of ethics. If a part of wealth (subject to a rough estimate) is doomed to destruction or at least to unproductive use without any possible profit, it is logical, even *inescapable,* to surrender commodities without return. Henceforth, leaving aside pure and simple dissipation, analogous to the construction of the

certain biological acts as forms of general economic sacrifice – acts which are not reducible to the cost-benefit logic of natural selection. She therefore conceives of sexual selection as a form of sacrificial eroticism, which is to say, like Bataille in his work on the sacrificial nature of sexual desire, she differentiates the 'psychological quest' of exuberant sexual relation and pleasure from its assumed telos of reproduction. '[E]roticism', Bataille writes, 'is the sexual activity of man to the extent that it differs from the sexual activity of animals'. By animal sexuality, Bataille here means the sexuality of the general economy, conducted, un-reflexively, with the intended outcome of reproduction and, thus, although '[h]uman sexual activity is not necessarily erotic […] erotic it is whenever it is not rudimentary and purely animal'.[80] Grosz, however, rejects the idea that erotic pleasure and energy is limited to humanity and the perversions of civilisation, which she does by emphasising, as I have sought to do also, the exorbitant vitality of animal sexuality as well as that of humanity.

For Grosz, therefore, it is vital that philosophy accepts that sexual excess is not the purview of "culture", which we take as a metonym for "humanity" and in opposition to animality, but as an integral aspect of the natural. Her focus is on how erotic desire and sexual play can be understood as arising from and integral to the necessity of evolutionary reproduction (the animal drive) *as well* as engendering various forms of desire, relation, and which are also enjoyed for their own sake and which exceed that necessity. 'The laws of sexual selection', Grosz argues', are the principles of aesthetics, not the strategies of game theory; the functioning of appeal rather than the operations of rational agents who act according to their self-interests; the order of taste rather than […] calculation.'[81] In this light, we can read Eustacia's and Elfride's sexual failures affirmatively. Both women die because they seek to follow their irrational, contingent, and inexplicable desires. They are driven by appeal, by attraction, and do not seek to attenuate or limit their desires to the restrictive logic of natural selection or the equally restrictive and punitive sexual norms of Victorian society, even to the detriment of their own survival. They are sacrificial figures,

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Pyramids, the possibility of pursuing growth is itself subordinated to giving.' Georges Bataille, *The Accursed Share: An Essay on General Economy. Volume 1: Consumption*, trans. by Robert Hurley (New York: Zone Books, 1988), p. 25.

[80] Georges Bataille, *Eroticism*, trans. by Mary Dalwood (London: Penguin Classics, 2012), p. 29.

[81] Grosz, *Becoming Undone*, p. 135.

women who affirm the possibility and reconfirm the risk of exceeding the limited logic of biological instrumentality.

This analysis allows us to supplement a critical analysis of the patriarchal and fatal restrictions that are placed on female bodies by Victorian society and evolutionary discourse with a conception of evolutionary thought which challenges the notion of patriarchal hierarchy. Rather than only focus how endings in Hardy's fiction re-confirms the fatalistic and deterministic nature of sexual selection, which limits our understanding of sexuality to a restrictive economy, Grosz's affirmation of biological eroticism invites us to focus instead on what excesses and differences are generated by sexual relation. Grosz emphasises the creativity of sexual performance, alluding to the singular bodily modifications, intensifications of colour which sexual selection engenders with exorbitant morphologies, through song, through dance, but also through territorial practices like nest-making and self-adornment. In this light, the human body becomes a site of instrumentality: the supposedly superficial adornments of hairstyle or jewellery, are, in the arena of sexual selection, integral elements of human morphology whose very existence complicates the idea of bodily purity and evolutionary necessity. Moreover, Grosz argues, the supplementary nature of the the behaviours and bodily changes that arise from sexual selection and erotic desire are themselves the origins of art. Grosz writes, 'the creation of music and art, visual display, and the joy of immersion in sonorous or visual qualities, are a primordial resource of sexual selection'; and art is merely 'the formal structuring or framing of [...] intensified bodily organs and processes which stimulate the receptive organs of observers and coparticipants'.[82] Sexual desire engenders the need to attract and, Grosz argues, that this exigency can only be satisfied with creative performances, elaborate self-adornments, and the development of exorbitant and strictly unnecessary morphologies. Performance, cultural expression, and creativity, therefore, are not deviations from an essential nature, but arise from nature to complicate the idea of its essential character.

In this reading of Darwin, Hardy's critical depiction of Elfride's tragic death in *A Pair of Blue Eyes* is a less radical and less affirmative representation of Darwinian sexuality than Hardy's depiction of Eustacia's performative mode of courtship with Clym. In Hardy's

[82] Grosz, *Becoming Undone*, p. 135.

critical depiction of sexual competition in the earlier text, sexual relation is still understood to be subordinate to the instrumental, mechanistic competition of natural selection – and its reinforcement through Victorian societal and sexual norms. However, in his later work, *The Return of the Native,* the relation between sexuality and survival is more complex. Like Elfride's chess games in his earlier text, Eustacia's performance in his later work frames and structures the courtship dynamics between her and Clym. This aesthetically formal structuration of desire does not essentialise or reproduce societally or organically normative relations but complicates them. Eustacia transmutes from female to male, giving a virtuosic, sexually ambivalent performance as a both a male and a female agent; as a male capable of enhancing his appearance to provoke sexual desire as well as a female capable of exercising desire through her agency of sexual choice. In this way, she dramatises the manner in which sexual selection nurtures creative and anti-essentialist modes of being, but are also driven by evolutionary imperative. Her performance, understood as rooted in a nominally biological drive for the reproduction of her species, generates forms of sexual and cultural complexity which both derive from this imperative and exceed it. According to Grosz, these forms – in art, in performance – are not forms of external prosthesis through which we could definitively name or delineate the male and the female. Rather, they show the performance of gender roles and sexuality to be both biological and unpredictable, and the human body to be constituted by an assemblage of corporeal and non-corporeal organs and agencies, the latter of which produce singular and unpredictable responses according to the particular taste, cultural, historical position, and singular desires of an other gender or being.

Grosz sees significant theoretical potential in the hybridity of culture and nature which is engendered by sexual desire and enacted by humans and animals in their creative responses to that desire. Echoing Derrida's critique of the phallago-anthropocentrism of the human sciences, which persists not despite but as a form of resistance to Darwin's assault on human supremacy, Grosz argues that the discourses of biology, philosophy, and sociology still implicitly and explicitly attribute powers to 'man' which animals do not possess. The animal, Grosz writes, is understood to be incapable of rationality, of reflection, and, therefore, of ethics – and this distinction is extended metonymically to women, children, slaves, and others, as 'the alignment of the most abjected others with

animals is almost ubiquitous'.[83] Feminist philosophy in particular, she says, is guilty of ignoring Darwin's work by seeking to address numerous forms of oppression, while ignoring the most sustained assault on humanity's primary narcissism – its difference from the animal. It is for this very reason, as well as Darwinism's contribution to scientific racism and sexism, Grosz argues that Darwin is either maligned or largely neglected in the critical tradition. But to address the fundamental problem of humanity's capacity to name itself as different from the animal – and humanity's inability to "un-name" itself – philosophy must work past naming and representation and address the problem of difference itself.

To that end, Grosz positions her reading of Darwin and sexual difference in contradistinction to feminist philosophies of difference understood as representation.[84] These feminisms contest hierarchical, oppressive, and normative representations of identity by complicating and critiquing ideas of an essential nature, and the reduction of sexuality and gender to biology. But for Grosz, this conception of sexual difference is derived from too strong an emphasis on language as well as on what Deleuze would call 'actual' differences or 'differenciated' categories – identities, sexualities, genders, races – rather than on materiality and the processes of differentiation, including evolution, that precede these. She argues that a feminism which seeks primarily to address oppression with representational and intersectional identity politics neglects to address the existential, ontological, and material question of humanity's animality. This leaves intact, therefore, the primordial distinction between the human and the animal through which the human constitutes itself as rational, reflexive, and ethical, and from which all further oppressive distinctions of identity flow. Grosz is interested, she says, not in deconstructing representations, only to reconstruct a proliferation of alternative identities. Instead, she seeks to explore 'difference as the generative force of the world, the force that enacts materiality (and not just its representation), the movement of difference that marks the

[83] Grosz, *Becoming Undone*, p. 12.
[84] Grosz in particular singles out work by feminist scholars like Judith Butler and Drucilla Cornell in addition to the critiques of Darwin that come from feminist philosophy and biology I have already cited. For Grosz, Butler and Cornell are prominent representatives of a tradition in philosophy that implicitly reject a feminism based on ontological difference, owing to the sense that such a shift in perspective away from a representation ignores the intersectional issues of class, homosexual or queer indentities, and race. See Pheng Cheah and others, 'The Future of Sexual Difference: An Interview with Judith Butler and Drucilla Cornell', *Diacritics*, 28.1 (1998), 19–42.

very energies of existence before and beyond any lived or imputed identity'.[85] To that end, Grosz follows Deleuze in turning to Darwin as both a compelling and canonical theorist of humanity's biological continuity with and derivation from the animal, but also as a theorist of ontological difference who places differentiation prior to differences and the process of individuation prior to individuals. Ultimately, Grosz is interested in Darwinian sexual selection, not merely to defend it against critiques of biological sexism and essentialism, but because it offers an account of how a multiplicity of sexualities arise, relate, reproduce, and self-create, in close dialogue with the material dynamics of evolution that are common to both humans and animals.

To redirect this conception of the co-creativity of natural and cultural sexual relation towards feminist thought, Grosz turns to Luce Irigaray's theorisation of sexual difference. This can be understood as an extension of her interest in Deleuze; for as Rosi Braidotti suggests, the idea of "becoming" is central to both Irigaray's and Deleuze's theoretical projects, allowing them to envisage a form of philosophy in which sexualities, womanhood, and the body are not denied an independent reality, but not defined in terms of essential identities. Braidotti argues that their shared postructuralist project on difference as ontologically primary is uniquely placed to posit the subject 'not [as] a substance but as a process of negotiation between material and semiotic conditions that affect one's embodied, situated self'.[86] Irigaray's break with Deleuze, however, rests on their distinctive conceptions of "becoming" and difference, which for Irigaray must be sexuated. This is partly because the 'dispossession' of identity and agency inherent to the fluidity of becoming, Irigaray argues, is already the historical condition of the feminine. But Irigaray also insists on sexuating difference because she holds a distinctive conception of a nature "which is not one", in which sexual difference is the fundamental engine through which difference elaborates itself.

> The natural is at least two: male and female. All the speculation about overcoming the natural in the universal forgets that nature is not *one*. In order to go beyond – assuming this is necessary – we should make reality the point of departure; it is *two* [...] The Universal has been thought as one, thought on the basis of *one*. But this *one* does not exist.

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[85] Grosz, *Becoming Undone*, p. 91.
[86] Rosi Braidotti, *Nomadic Subjects: Embodiment and Sexual Difference in Contemporary Feminist Theory* (New York: Columbia University Press, 2011), p. 274.

> If this *one* does not exist, limit is therefore inscribed in nature itself. Before the question of the need to surpass nature arises, it has to be made apparent that it is *two*. This *two* inscribes finitude in the natural itself. No one nature can claim to correspond to the whole of the natural. There is no "Nature" as a singular entity.[87]

Whereas Deleuze insists that ontological difference is primary to its becoming actual in physical, representational, and, therefore sexual difference, Irigaray argues that this condition is itself sexually bifurcated, composed of two sexuate 'polarities', through which difference reproduces itself.[88] Understanding this concept of sexual difference, Irigaray argues, also allows feminist thought to relinquish a desire for exceeding the biological or the natural, and to theorise sexual difference in dialogue with it.

For Grosz, Irigaray's theory of a non-representational form of pre-physical sexual difference lends further philosophical dynamism to Darwin's notion of sexual selection. Difference as a sexually bifurcated ontological condition is echoed and expressed in the fundamentally sexuate manner in which the biological world reproduces itself, the dynamics of which are described by Darwin. And Grosz sees further cause for an alliance between Irigaray and Darwin, in their respective treatments of the tension between survival and excess. Sexual selection, according to Grosz, is a supplementary principle of excess to the limited and instrumental logic of natural selection Similarly, Irigaray identifies the exigencies for survival in societies, a 'neuter' demand for basic necessities such as food, and housing which, in capitalist societies, accords money (and thus calculability) supreme power. This stands in tension, Irigaray argues, with the lived reality of sexual desire, erotic energy, and sexual difference, the simultaneous excess and necessity of which, Irigaray says, problematises the idea of money as the essential basis for human survival.[89]

Irigaray distinguishes clearly between 'sexual difference' (*la différence sexuelle*) as a universal, ontological pre-condition for the elaboration of difference and 'sex difference' (*la différence des sexes*), as the actual or biological difference between biologically dimorphic organisms.[90] However, she also insists that each that one is implicated in the

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[87] Luce Irigaray, *I Love to You: Sketch of A Possible Felicity in History*, trans. by Alison Martin (New York: Routledge, 1996), p. 35.
[88] Alison Stone, *Luce Irigaray and the Philosophy of Sexual Difference* (Cambridge: Cambridge University Press, 2006), pp. 90–91.
[89] Irigaray, p. 50; Grosz, *Becoming Undone*, p. 155.
[90] Stone, p. 94.

other. If sexual difference can be understood as what Grosz calls the 'ineliminable' condition through which social and natural relations arise and proliferate, sexual selection, by contrast, only denotes those erotic relations and encounters between sexes which are separated by difference. But where these two nominally separate realms come into contact, Grosz argues, is precisely through the excess that sexual selection generates, in which the very barrier between nature and culture becomes overturned. 'Darwin's work [on sexual selection] can be understood as an analysis of the proliferation of nothing but differences: differences without any hierarchical order, without fixed identities or biological archetypes; differences generated for their own sake and evaluated only through social and natural contingency differences without norm, without inherent value.'[91] Sexual selection understood as a form of sexual difference explodes the difference between nature and culture, showing their entwinement to be a condition of evolutionary reproduction, as bodies become cultural and thus culture becomes natural in the rituals, dances, and creative encounters between sexes.

According to Hillis Miller, dancing in response to music is a way for Hardy's characters to respond to the material world, a reaction to nature's indifference, which neither takes the form of a retreat nor a wholehearted, nihilistic embrace of nothingness. Dance halts momentarily the cruel onrush of evolutionary temporality, but also formalises desire, marking out and enacting desire's patterns of approach and retreat, facilitating looking and desiring and pleasure as much as it mimics its patterns. According to Grosz, through her reading of Darwin's theory of sexual selection in *The Descent of Man*, dance not only facilitates sexual desire and reproduction, but produces a cultural excess that is irreducible to the mechanics of natural selection, and which itself facilitates a co-creative dynamic between culture and nature such that the two categories become indistinct. A suggestive example of such a dynamic between nature, culture, sexual desire is embodied in another example the ritual, folk-art of Hardy's fictional Wessex, this time the 'gipsying' folk-dance in *The Return of the Native*. Eustacia, having become increasingly dissatisfied with her marriage to Clym, falls into a depression, anticipating her later apparent suicide and proleptically reconfirming the novel's narrative determinism. But at this point of the novel, rather than capitulate entirely to her melancholia, and to her biological fate,

[91] Grosz, *Becoming Undone*, p. 167.

Eustacia decides first to attempt to resist this fate by attending a village fete: '"I'll be bitterly merry,"', she asserts, '"and ironically gay, and I'll laugh in derision. And I'll begin by going to this dance on the green."' (*Return*, 279). Eustacia, here, seeks to resist her own biological determination not by withdrawing from an engagement with the natural world, but participating in a cultural act which, according to Grosz, is itself intrinsically natural.

This co-creative, synthesis between the natural and the cultural is further developed in Hardy's narration of Eustacia's experience of the spatial and aesthetic qualities of this dance. What Eustacia encounters when she finds the site of the fete is an enclosed site of cultural energy, a territory marked off from the wilderness of the heath, in which musicians play to a group of ecstatic dancers. Nature encircles this area; the boundaries of the fete area are delineated by 'brakes of furze and ferns', and its approach is marked by the tracks made by cattle hooves. Eustacia's escape from her fate, then, can be read as an attempt to withdraw from nature or, in Schopenhauerian terms, embodiment, into the liberation (*Befreiung*) of ritual and music. Indeed, Eustacia is first drawn to the scene by '[t]he lusty notes of the East Egdon band [who] had directed her unerringly'. However, what Eustacia witnesses in this territory is not a space devoid of or removed from nature, but a suggestive entanglement of the natural and the cultural in a group of musicians wreathed in flora: 'sitting in a blue wagon with red wheels scrubbed as bright as new, and arched with sticks, to which boughs and flowers were tied' (*Return*, 278-279). In addition to the musicians covering themselves in the flora that cover the heath, the dancers to whom they play are likewise garlanded in in flowers and ferns. What is thus first presented to us and to Eustacia is a break in nature, a boundaried zone of human, ritual activity from which to escape biological materiality and temporality, is revealed to Eustacia and to the reader as indissociable from the natural world. Here, culture has co-opted the natural for aesthetic purposes, while the natural encircles the cultural, seeming to transgress its own boundaries.

What is more, Eustacia's participation in this dance can be read, in the light of Grosz's theory of the supplementary creativity of sexual selection, as an act of joining in, affirmatively, with nature's interminable flux. For what is intended by Eustacia to be an innocent foray into the pleasures of a 'gipsying dance', becomes freighted with sexual significance and erotic energy as she encounters her former lover, Wildeve. First, however, she sees in the dancers before her the complex patterns of movement and desire, of

approach and retreat, enacted by couples responding to to the music: 'In front of this was the grand central dance of fifteen or twenty couples, flanked by minor dances of inferior individuals whose gyrations were not always in strict keeping with the tune' (*Return*, 279). This central dance of desire can be read as an echo of the acts of performative sexual self-enhancement undertaken by the performers in the folk-play, described earlier in the novel. Indeed, the scene can also be read as echoing once more Darwin's 'rustics', as Hardy describes the manner the manner in which these sexual agents adorn themselves and engage in a creative arms race between men and women. The young men, writes Hardy, 'wore blue and white rosettes, and with a flush on their faces footed it to the girls'; the women, in response, 'blushed deeper than the pink of their numerous ribbons' and wore curls, 'lovelocks', and braids with which to attract their suitors (*Return*, 279). In Grosz's terms, the competitive dynamics of sexual selection in this scene are at play and simultaneously complicated, as both male and female exercise the erotic, supplementary agency of self-amelioration. Seeking both to be desired and to enact some form of agency in relation to whom they desire, these human agents are acting in concert with natural impulses while at the same time, in the enactment of that purely erotic desire, subverting the instrumental dynamics of competition in which they engage.

Similarly, although Eustacia is not drawn to the dance with the intention of seeking a sexual partner, 'she had come out to seek pleasure, she was only doing a natural thing to obtain it', meeting her former lover, Wildeve, introduces a distinctively sexualised, erotic energy to her enjoyment (*Return*, 282). She and Wildeve begin to dance and 'through the length of five-and-twenty couples they threaded their giddy way, and a new vitality entered her form' (*Return*, 283). Again, Eustacia finds an escape from evolutionary fatality through engaging in the active performance of evolutionary sexual relation, a relation which is tinged with but not reducible to the potential for sexual reproduction. In the dance, her desire for Wildeve is rekindled; she becomes rapt with emotional intensity, and enchanted by movement. And whereas Hardy shows in Eustacia's performance of the mummer's play how the intentionality of sexual desire can produce a creative and cultural excess which exceeds the origins of this desire, here the very act of dancing itself is shown to mimic and provoke desire, offering a brief respite from the dreary crisis of Eustacia's life.

> The enchantment of the dance surprised her. A clear line of difference divided like a tangible fence her experience within this maze of motion from her experience without it. Her beginning to dance had been like a change of atmosphere; outside, she had been steeped in arctic frigidity by comparison with the tropical sensations here. She had entered the dance from the troubled hours of her late life as one might enter a brilliant chamber after a night walk in the wood. (*Return*, 282)

Readers are aware that this renewed infatuation with Wildeve will have tragic consequences. And it could be argued that far from offering us an affirmative vision of sexuality, of sexual selection as a creative process through which the cultural, the natural, and pleasure converge in what Hillis Miller calls 'a magically charged milieu', this scene makes the tragedy of Eustacia's death all the more cutting. But as Grosz's understanding of sexual selection enjoins us to do, the affective intensity of this scene – as well as the spatial and temporal break it creates in the novel's narrative – invites us to focus on the excess evolutionary eroticism does create and not the death it fails to prevent. Eustacia in this moment is caught up in the affective, emotional, and creative excess which for Grosz is that which evolutionary sexuality produces and which is irreducible to and complicates the instrumentality of natural selection's laws. To focus on Eustacia's death is to ignore what is being created in dialogue with the biological impulses of the human animal: music, the patterns of dance, and the artistic decorations that accompany and intensify sexual relation and whose afterlife and affect on its viewers and participants is incalculable. Hardy offers us a glimpse of the incalculable afterlife of this ritual, evolutionary, and erotic art. Eustacia, he shows, is only one of the many participants in the dance: her dance with Wildeve is 'but one of the many those impassioned but temporary embraces were destined to become perpetual', and, Eustacia 'began to envy those pirouetters, to hunger for the hope and happiness which the fascination of the dance seemed to engender within them.' (*Return*, 280) This ritualised dance of sexual selection, in this co-creative 'whirlwind' of the nature and culture, is not solely in the possession of Eustacia and her lover, Wildeve. It is a collective form of creative participation, in which an entire community gives expression to and partakes in the sensuous reality of their own desire within an intensifying ritual space. 'A whole village-full sensuous emotion, scattered abroad all the year long, surged here in focus for an hour.' (*Return*, 281) And in that momentary, intense, but ordinary expression of the lattice-like patterns and crossings of desire, the complex and unknowable future of nature is confirmed.

Conclusion: Tragedy, Sexuality, and Futurity

In "Candour in English Fiction", Hardy argues for the necessity of a literary art that can address, with physiological frankness, the erotic lives of the people to whom it is addressed.[92] Alongside this, Hardy mounts a defence of literary tragedy against the incursion of the 'puerile inventions' and the 'thirst for accuracy' which characterises the quasi-biological and encyclopaedic methodology of literary Naturalism. Here, as in "The Science of Fiction", Hardy seeks to reserve for literary art independence from the illusions and methods of naturalism and science, and to construct a dynamic relation between art and natural life. Harking back to the age of Attic drama, Hardy finds an exemplar of combined autonomy and dynamism in Greek tragedy which, in his reading, does not attempt exhaustively to enumerate the world, but rather to uncover something latent in life that previously was invisible. 'They reflected life' Hardy says of the Greek tragedians, and in doing so 'revealed life, criticised life'.[93] In Hardy's evolutionary materialism, nothing exists beyond the physical and natural world, but it is precisely for this reason that literature is uniquely placed to supplement the material world from which it derives and upon which it reflects: to create an interval between life and art and in that way to add to life's plenitude.

It is in the context of Hardy's argument on the supplementary capacity of literary art that his argument on the need for literature to reflect on the 'physiological' nature of life takes on new significance. In *A Pair of Blue Eyes* and *The Return of the Native* Hardy bears witness to the repetitive fate of women in Victorian society, and criticises the manner in which a scientifically oriented understanding of sexual difference is complicit with the socio-historical context in which women are traded like commodities in an evolutionary marketplace. Moreover, the logic of supplementarity that Hardy sees in Attic tragedy, and that he seeks to advocate for realism, is active in the biologically driven dramas and rituals of sexual courtship and desire that he depicts. Eustacia's ambivalent sexual performance is a virtuoso display of the creative and unstable nature of human sexuality, a counter-argument to the biological determinism which also drives the fiction.

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[92] Hardy, 'Candour in English Fiction', p. 95.
[93] Hardy, 'Candour in English Fiction', p. 97.

Hardy's fiction combines a grim view of the cosmology of materialist naturalism as well as an affirmation of the creative nature of sexuality which exceeds it. In this way, Hardy suggests that an eschewal of 'English prudery' in favour of a literature attuned to sexual politics and materiality might offer a deeper conception of biology in which reflection, revelation, and criticism are immanent.[94] Similarly, Grosz understands difference as immanent to evolution, which she argues can be understood as the origin of artistic expression, but to which artistic expression is not reducible. This allows us to read Hardy as a story-teller whose engagement with Darwin's work is used both to imitate life and to reveal how life evolves creatively. Not only does Hardy's deliberate focus on narratives of courtship and sexual desire in *A Pair of Blue Eyes* and *The Return of the Native* suggest that he is fundamentally interested in reproduction and love as much as he is with waste and meaninglessness. Hardy's focus on the creativity, ingenuity, and beauty of the rituals that mediate sexual selection anticipates Grosz's assertion that Darwin's theory of sexual selection is only partly about the continuation of a species. The creative excesses and multiple tangles of unpredictable relations which emerge from evolutionary eroticism, which in turn become unhinged from the desires from which they emerged, are precisely what ensures that evolution is generated in difference and not repetition.

To criticise productively is neither to reject nor to submit to the object of one's criticism, but to engage actively with that object, refusing submission while acceding to its demands. This is no easy task, especially when the object of criticism is Darwin's work - life itself – and that life seems to bend all to its will. But Hardy's fiction accomplishes this difficult task even while understanding life in Darwinian terms as devoid of intrinsic meaning, release from which requires utopian transcendence or nihilistic self-abnegation. Hardy accepts the fundamental thesis of Darwin's work, that humanity is derived from the animal and is therefore, like the animal, an insignificant speck in an otherwise uncaring, inexorably progressing cosmos. Precisely for this reason, his attempts to engender meaning in world intrinsically devoid of it represents a critical attitude towards that world. Moreover, Hardy's work offers this affirmative attitude as available to all of us, suggesting in fact that it always has been available and been performed by humans. In Zola's works, a messianic and sublime form of evolutionary redemption is rejected in

[94] Hardy, 'The Science of Fiction', p. 102.

favour of the more modest, realistic, but vital task of bearing witness to the violence and struggle from which humanity cannot remove itself. In Hardy, that act of bearing witness, of reflecting life, is considered to have an agency by itself – not a sublime of messianic one, but a creative mode of engaging with life.

Hardy's fiction affirms that the most 'rustic' forms of meaning-making, the most rudimentary responses to nature, the simplest expressions of desire are themselves active and creative co-participants in the immanently transforming onrush of the evolutionary cosmos. This is an affirmative form of creative materialism, a literary naturalism which seeks to account for the complexity of relations between nature and culture, and the bodies, identities, and art which emerge contingently from these interactions. And it is in art, and the yearnings in response to which art arises, that Hardy offers us a glimpse of incalculable evolutionary futurity

Chapter 3 – 'Dreaming of Islands': Three Darwinian Utopias

Dreaming of islands – whether with joy or in fear, it doesn't matter – is dreaming of pulling away, of being already separate, far from any continent, of being lost and alone – or it is dreaming of starting from scratch, recreating, beginning anew.

- Gilles Deleuze, "Desert Islands"

… the very close relation of the distinct species which inhabit the islets of the same archipelago,—and especially the striking relation of the inhabitants of each whole archipelago or island to those of the nearest main- land,—are, I think, utterly inexplicable on the ordinary view of the independent creation of each species, but are explicable on the view of colonisation from the nearest or readiest source, together with the subsequent modification and better adaptation of the colonists to their new homes.

- Charles Darwin, *The Origin of Species*

'As luck would have it, Providence was on my side'.

- Samuel Butler, *Erewhon*

Introduction: Desert Islands

In his early, enigmatic essay, "Causes et raisons des îles desertes", Gilles Deleuze unfolds a critique of what he perceives as a persistent and pervasive yearning in Western thought for transcendence, and the manner in which that impossible desire is sublimated into the meta-poetic figure of the desert island.[1] The desert island in Daniel Defoe's *Robinson Crusoe,* Deleuze says, represents an exemplary geo-philosophical fantasy of a bourgeois capitalist, individualist capacity to create something from nothing, but it also reveals the fallacy behind that anti-materialist delusion. 'The mythical recreation of the world from the deserted island gives way [in *Robinson Crusoe*] to the reconstitution of everyday bourgeois life from a reserve of capital. Everything is taken from the ship. Nothing is invented.' Similarly, in Jean Giraudoux's work, *Suzanne et le Pacifique,* the novel offers a vision of the desert island as a transcendent, monadic territory, while also uncovering the material impossibility of that vision. The desert island in this novel, Deleuze explains, is a twin of Suzanne's Paris, 'a depository of ready-made, luxurious objects'. Giraudoux's island, for Deleuze, does not represent transcendent autonomy, but derivation through repetition: a 'disarticulated' island derived from a larger body of land, 'a double without consistency, separated from the real'.[2] This doubling, therefore, shows the island to have a pre-existing historical origin, to which it remains related by virtue of recapitulation. The desert island, Deleuze asserts, is a fantasy whose literary representation undermines its own ideational content.

Although Deleuze argues that transcendent islands are illusory, he affirms the existence of actual, physical geographical islands. For Deleuze, this otherwise obvious point is a philosophically significant one, for the island, he argues, represents a type of life whose geologically dynamic but ephemeral existence is indissociable from the causes of its creation. Thus, the actual life of material islands, Deleuze reasons, is a negation of the idea that islands should represent transcendent spaces of completion and closure. He argues even a rudimentary understanding of geology and geography shows that islands, like Crusoe's and Suzanne's islands, are constituted by material processes of differentiation,

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[1] Gilles Deleuze, *L'île Déserte et Autres Textes: Textes et Entretiens, 1953-1974*, ed. by David Lapoujade, Paradoxe (Paris: Editions de Minuit, 2002).
[2] Gilles Deleuze, 'Desert Islands', in *Desert Islands and Other Texts: 1953-1974*, ed. by David Lapoujade, trans. by Michael Taormina, Semiotext(e) Foreign Agents (Cambridge, MA: Semiotext(e); MIT Press, 2004), pp. 9–14 (p. 9).

emergence, and derivation. A continental island becomes separated from a larger body of land, splitting off to take up a seemingly independent existence; an oceanic island rises from geological depths to break the water's surface. And what these geo-oceanic dynamics reveal to us, Deleuze educes, is that the very conditions that make islands possible also make their transcendent finality impossible. Both kinds of islands, Deleuze says, continental and oceanic, 'reveal a profound opposition between ocean and land. Continental islands serve as a reminder that the sea is on top of the earth, taking advantage of the slightest sagging in the highest structure; oceanic islands, that the earth is still there, under the sea, gathering its strength to punch through to the surface'. '[T]hese elements' Deleuze continues, 'are in constant strife', their 'revulsion for one another' resulting in a constant differential exchange.[3] The existence of an island is premised on the perpetual play between material forces, which ensures that it can never be said that an island exists, but only that it is relentlessly in the process of coming into and fading out of existence.

This analysis of the geographical materiality of the figure of the desert island anticipates Deleuze's approach to reading Darwin's theory of evolution. In *Difference and Repetition*, Deleuze argues that Darwin's theory of evolution strikes a blow against the idea of the transcendence of 'taxonomic units - genera, families, orders and classes', which, he says, foist illusory timeless coherence on the natural world by subordinating difference in relation to conditions of resemblance and opposition. However, Deleuze also argues, Darwin's critique does not deny the reality of these taxonomic units, but insists that their biological materiality is a repudiation of the idea that any of them could exist indefinitely, or as a sovereign totality. The island is not evidence of the possibility of transcendence, but a physical reminder of the differential and dynamic nature of materiality. Analogously, what we perceive as separate units of biological life – individual organisms, species, variations – does not authorise a transcendent conception of their existence, but '*on the contrary*, […] are understood on the basis of such fundamental mechanisms of natural selection as difference and the [physical actualisation] of difference.'[4] Life, as with islands, is neither an illusion nor a transcendent entity; it is both real and constantly in motion.

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[3] Deleuze, 'Desert Islands', p. 9.
[4] Deleuze, *Difference and Repetition*, p. 248.

In an essay on the concept of difference according to Henri Bergson, Deleuze elaborates on this reading of Darwin. Arguing that Darwin 'helped associate the problem of difference with life', Deleuze suggests that Darwin's theory of evolution reconfirms the biological and ontological primacy of difference, as he asserts in *Difference and Repetition*.[5] He continues, suggesting that by releasing difference from its representational and transcendent constraints in biology, Darwin also related a specifically immanent conception of difference with biological materiality. Rooting his reading of Darwin in Bergson still, Deleuze states that after Darwin life must be understood as durational and, for that reason, as always differing from itself.[6] Deleuze argues, therefore, that 'biology shows us the process of differentiation at work' and that '[l]ife is a process of difference.'[7] In this light, Darwin offers a counterpoint to the idea that difference in biological life is activated by 'alterity or contradiction', whereby the definitive difference between things and the mechanical relations between them drives forward calculable evolutionary movement. Rather, life is saturated with its own immanent creativity: difference in itself divides, but only from itself, a movement which is not extrinsic to life but intrinsic to its being. Peter Hallward contrasts this 'anti-Cartesian naturalism' with a naturalism which invests biological creativity in a being that stands outside nature. An anti-Cartesian, theoretical stance, Hallward notes, demands that creativity and being are understood to be internally constitutive of one another. 'Difference itself doesn't apply to something other than itself, and a differing does not apply to something that would otherwise be the same. Being is itself differing, so Deleuzean reality is a process of immanent and infinite self-differentiation.'[8] Reflecting back on the biological implications of this conception of difference, Elizabeth Grosz suggests as a consequence we see life, species, and biological organisms as 'a kind of contained dynamism, a dynamism within a porous boundary, that feeds from and returns to the chaos which surrounds it'.[9] For Deleuze, the island represents an analogous dynamism: the geo-oceanic embodiment of dynamic, immanent

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[5] Gilles Deleuze, 'Bergson's Conception of Difference', in *Desert Islands and Other Texts: 1953-1974*, ed. by David Lapoujade, trans. by Michael Taormina, Semiotext(e) Foreign Agents (Cambridge, MA: Semiotext(e); MIT Press, 2004), pp. 32–51 (p. 39).
[6] Grosz, *Becoming Undone*, pp. 40–47.
[7] Deleuze, 'Bergson's Conception of Difference', p. 39.
[8] Peter Hallward, *Out of This World: Deleuze and the Philosophy of Creation* (London: Verso, 2006), pp. 13–15.
[9] Grosz, *Becoming Undone*, p. 27.

difference.

In the discourse surrounding Darwin's theory of evolution, particularly in biographical and historical accounts of the discovery of the principle of natural selection, the meta-poetic figure of the island is an iconic and theoretically vital presence. As is well known, Darwin's visit to the Galapagos Islands was instrumental to his formation of a nascent theory of evolution. On these islands, twenty years prior to *The Origin*, Darwin was struck by the singularity of the new species he observed as much as he was intrigued by their unmistakeable resemblance to separate species on the continent of America. He speculates in his account of the *Beagle* voyage that this phenomenon of difference and resemblance was the result of a 'creative power [that] had acted according to the same law over a wide area.'[10] Two decades later, in *The Origin*, Darwin alludes to the significance of his time on the Galapagos. He recalls that it was there that he began note the inadequacy of a representational model of biological life, 'how entirely vague and arbitrary is the distinction between species and varieties', and to notice how the geographical distribution of similar species implied a 'deep organic bond, prevailing throughout space and time, over the same areas of land and water, and independent of their physical conditions.'[11] This problem of sameness and difference was solved by Darwin, Peter Bowler argues, by recognising – as Deleuze does later – that islands are themselves a kind of dynamic entity, a porous zone of 'geographical isolation' within which new species could become separate and, through processes of selection and evolution, diverge from their ancestors on nearby continents.[12]

There is a suggestive dissonance, then, in Edward Larson's account of Darwin's development, which while presenting it as the elaboration of a biological, materialist, non-transcendent theory of creation, also attributes to Darwin and to his experience of the Galapagos Islands an almost providential creative force. Larson calls the islands 'Darwin's Eden' and 'The Galapagos Wonderland', and argues that they represent a liminal space between the irrational time of pre-Darwinian thought, and a superior, rational time after

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[10] Charles Darwin, *Narrative of the Surveying Voyages of His Majesty's Ships Adventure and Beagle between the Years 1826 and 1836, Describing Their Examination of the Southern Shores of South America, and the Beagle's Circumnavigation of the Globe. Journal and Remarks. 1832-1836.*, ed. by Robert Fitzroy, 3 vols (London: Henry Colburn, 1839), p. 474.
[11] Darwin, *Origin*, pp. 48, 350.
[12] Peter J. Bowler, *Evolution: The History of an Idea*, rev. edn (Berkeley: University of California Press, 1989), pp. 162–163.

its discovery.[13] In a similar vein, Julian Huxley writes that it was on the Galapagos 'that Darwin took the first step out of the fairyland of creationism into the coherent and comprehensible world of modern biology for it was here that he became fully convinced that species are not immutable – in other words, that evolution is a fact.'[14] Devoid of materiality, the Galapagos Islands in these accounts are assigned what amounts to a story of transcendent origin, constructed as a timeless mediating agency between chaos and disorder, between the animal and the human, on which Darwin lands like Crusoe to re-create the world in his image. Moreover, as Elizabeth Hennessy and Amy McCleary argue, the rhetoric of the Galapagos as a pristine Eden of scientific creation both reproduces and is symptomatic of a 'deeply ingrained' Western conception of scientific knowledge as itself pristine, timeless, and removed from human interference.[15]

Analogously, Ian Watt shows the way in which the fantasy transcendence expressed in Robinson Crusoe's island, and the creative agency of the *homo economicus* in Defoe's novel, both nourish and are nourished by the historical emergence of a Puritan, individualist capitalist impulse in the late-seventeenth and early eighteenth centuries. Crusoe, Watt argues, can be read as an 'archetypal capitalist', whose vigorous individualism reflects that of the British empiricists of the seventeenth century, and whose reconstitution of a civilised world from a savage one dignifies Adam Smith's focus on the division of labour in *The Wealth of Nations* later in the century.[16] This idea of the individual as a timeless, sovereign island is paradoxically reproduced by readings of Darwin's theory of evolution which dictate that natural selection further authorises – and naturalises – individual, economic self-interest and competition. As Mike Hawkins suggests, Herbert Spencer's tendentious, progressivist interpretation of Darwin's theory of biological evolution, or rather the co-option of its authority, underwrote a popular strain of individualist economic liberalism in late-nineteenth century Britain which continues to

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[13] Edward J Larson, *Evolution's Workshop: God and Science on the Galápagos Islands* (New York: Basic Books, 2001), p. 3.
[14] Julian Huxley, 'Charles Darwin: Galapagos and After', in *The Galápagos: Proceedings of the Symposia of the Galápagos International Scientific Project*, ed by Robert I. Bowman (University of California Press, 1966), pp. 3–9 (p. 3).
[15] Elizabeth Hennessy and Amy L. McCleary, 'Nature's Eden? The Production and Effects of "Pristine" Nature in the Galápagos Islands', *Island Studies Journal*, vol. 6, no. 2 (2011), 131–56 (p. 139).
[16] Ian Watt, *The Rise of the Novel; Studies in Defoe, Richardson, and Fielding* (Berkeley, CA: University of California Press, 1957), pp. 60–93.

be widespread today.[17] According to Hawkins', Spencer's evolutionism affirms that unlike biological organisms, the social organism is constituted by multiple centres of consciousness, the relations between which govern the progress of society as a whole. In other words, whereas Darwinian evolution suggests for Deleuze that the individual is a durational, ephemeral entity, Spencer's capitalist re-interpretation uses evolution to re-assign transcendent sovereignty to the individual, reproducing a paradoxical fantasy of an evolutionary but still autonomous island.

In other, more nuanced accounts of Darwin's time on the Galapagos, scholars such as Peter Bowler and Niles Eldredge affirm that the Galapagos Islands do symbolise a turning point in Darwin's thinking, not because the island is a transcendent space, or a source of providential paradigm-shifting inspiration, but precisely because the island is an unstable, dynamic and porous entity.[18] The emergence and derivation of islands engenders what biologists call "geographical speciation", facilitating the reproductive isolation of a group of organisms and allowing those organisms to diverge and to evolve into distinct but related species. In addition to the Galapagos Islands, Darwin also notices at this early stage of his career the manner in which the Irish and the English hare had diverged, owing to their island isolation and subsequent evolutionary bifurcation.[19] So for Darwin, in such accounts, the dynamism of islands – both the British and Galapagos archipelagos – and their differential relation to the dynamism of biological change, sharpens and makes visible those processes of selection, reproduction, and evolution, which over a less physically differentiated territory would be more difficult to perceive.

For Manuel de Landa, in *Intensive Science*, the process of evolutionary divergence that Darwin saw through the isolation of islands is an exemplary illustration of Deleuze's anti-essentialist conception of individuation.[20] The individuation of species, de Landa argues, consists of two processes: the sorting operation of natural selection and the creation of reproductive islands which are effectively sealed off from the possibility of reproductive hybridity. This, he proposes, elucidates the fundamental reversal that

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[17] Mike Hawkins, *Social Darwinism in European and American Thought, 1860-1945: Nature as Model and Nature as Threat* (Cambridge: Cambridge University Press, 1997), pp. 89–90.
[18] Bowler, pp. 156–164; Niles Eldredge, *Darwin: Discovering the Tree of Life* (London: Norton, 2005), p.39.
[19] Darwin, *Beagle Voyage*, p. 245.
[20] Manuel DeLanda, *Intensive Science and Virtual Philosophy* (London: Bloomsbury, 2013), pp. 42–43.

Deleuze, through Darwin, applies to biological thought. The degree to which a species (which de Landa understands as an 'individual') possesses an identity depends on the degree to which that species has become reproductively isolated from the differential network in which it is embedded. For less-differentiated species, hybridisation remains possible and, thus, their identity is unclear; for others, they have in effect become islands, and their identity is almost but not entirely definitive. But as Darwin points out, the difference between a defined species and a hybrid variation is an arbitrary distinction; unless of course, as de Landa suggests, that distinction is understood to be inseparable from the historically contingent process of individuation that gives rise to it.

The figure of the island, then, symbolises and embodies contradictory tendencies in the interpretation of Darwin's theory of evolution and its application to wider social, economic and philosophical fields. The island represents a figure through which to comprehend the differential, anti-essentialist naturalism that Deleuze and de Landa through Deleuze read in Darwin's theory of natural selection. It is also a historical, philosophical and economic figure that enables a fantasy of individual liberty, autonomy, and agency in the service of which Darwin's work is pressed. Deleuze's essay on desert islands suggests, however, that the latter interpretation of Darwinian evolution, the contradictory authorisation of transcendent biological autonomy, is fundamental not only to anti-materialist theories of economic individualism, but to a sense of the existential security of humanity. 'Humans cannot live, nor live in security', Deleuze writes, 'unless they assume that the active struggle between the earth and water is over, or at least contained.'[21] For Freud, in *Civilisation and its Discontents*, as I have noted previously, the problem of civilisation is that it relies on the continued, and ultimately problematic, abjuration of humanity's immanent animality. In the light of Deleuze it is possible to say that the very concept of the human depends on the repeated literary, philosophical, and scientific reproduction of the fantasy of the desert island, the existence of which is based on the perpetual repression of the processual, dynamic nature of life which in Darwinian terms can only be coterminous with animality.

This chapter seeks further to explore the contradictions and competing conceptualisations of the figure of the island in the context of Darwinian evolutionary

[21] Deleuze, 'Desert Islands', p. 9.

theory by focusing on the role of the island in literary art, as Deleuze himself does in his essay on desert islands. I shall be focusing on three novels, Samuel Butler's *Erewhon*, Aldous Huxley's *Island*, and Michel Houellebecq's *The Possibility of an Island*.[22]

The country of Erewhon in Butler's novel is a distant, hermetic polity, encircled by a vertiginous mountain range in the interior of New Zealand. Its isolation has resulted in the evolution of a culture whose laws and customs appear opposed but uncannily similar to those of Butler's nineteenth-century socio-political milieu. The novel's topographical rhetoric echoes the dynamics of island speciation in de Landa's characterisation of Darwin's thought, where the radical divergence of a species is facilitated by reproductive isolation and, moreover, where an ancestral trace produces the resemblance of that species to nominally different, geographically distant groups of organisms. Butler's novel also undertakes an explicit examination of the ramifications of Darwin's theory of evolution in a section of the novel entitled "The Book of the Machines". This book, written by a scholar of Erewhon and quoted at length by the novel's narrator, explores the threat that machinery and industry would represent to humanity should the principle of biological evolution turn out to apply also to the progress of technology. Seeking to transcend the evolutionary threat of a rival species, in this case the non-human threat of technology, the book counsels the autarchic isolation of the human through the destruction of its evolutionary opponents.

Huxley's work, *Island*, depicts a similarly hermetic island nation named Pala, whose remote oceanic location and isolationist social policy has facilitated the evolution of a spiritually elevated, peaceful, and economically efficient society. This work's engagement with Darwin's theory of evolution is made explicit in the novel's *récit*, which tells of a society whose prosperity is purportedly founded on the utilitarian application of evolutionary principles in all aspects of social, political, and economic life. Selective, eugenic breeding practices ensure the continued success of crops and agriculture as well as the biological improvement of their population, while a religious hybrid of Darwinian materialism and Buddhist stoicism engenders a collective, ecological conception of nature and distaste for individual self-interest.

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[22] Samuel Butler, *Erewhon*, ed. by Peter Mudford, The Penguin English Library, New & rev. edn (Harmondsworth: Penguin, 1970); Aldous Huxley, *Island*, ed. by David Bradshaw (London: Vintage Books, 2005); Michel Houellebecq, *The Possibility of an Island*, trans. by Gavin Bowd (New York: Vintage, 2007).

The latter stages of Houellebecq's *The Possibility of an Island* depicts a distant, nominally Utopian future, in which the figure of the island is not merely a geographical one but both temporal and biological in nature too. The future Houellebecq's work comes to describe is populated by so called 'neohumans', cloned, genetically modified human individuals, each of whom lives alone in hermetically sealed, isolated compounds, which protect them from the hostile external environment. The novel's engagement with Darwin's evolutionary theory takes place on a number of levels. It is, in part, like *Island*, an exploration of the Utopian possibilities of genomic technology and evolutionary biological theory: each neohuman lives peacefully, without perturbation, dedicating his or her life to study and religious observance. But the novel also examines the negative effects of Darwinian thought, in particular the extension of the principle of the struggle to survive not only to the economic, but also the social, sexual, and affective aspects of human life. The majority of the novel is narrated from the perspective of a twenty-first century human individual, Daniel, whose acerbic and depressive autobiographical narrative describes the misery of living in a society in which individualist, neo-liberal capitalist competition and the principle of natural selection have hegemonised and degraded all forms of social relation. Seeking to mitigate and ultimately escape from the alienation and horror of this social Darwinian milieu, Daniel mysteriously and suddenly joins a techno-religious, Utopian cult whose research into genomics leads to the development of the hermetic, island mode of neohumanity, from whose future perspective the latter part of the novel is narrated.

In each of these texts, then, a sealed, hermetic island space represents the impossible aspiration to biological as well as ontological autonomy. Each novel creates a topographical and a textual site within which to examine the future socio-political and bio-technological possibilities of Darwin's theory of evolution. What I seek to demonstrate is how through that literary and spatial figure of the island, these novels articulate competing conceptions of biological life and competing iterations of Darwinian evolution, and how their respective explorations illuminate each other. Part of the aim of this chapter is to argue for importance of recognising the literary trope of the island as a privileged site through which literature can explore the implications of Darwinian evolutionary theory. As this chapter proceeds, and as I elaborate my readings of each novel's treatment of Darwin's thought, I hope to demonstrate that these three novels

represent a heretofore unrecognised genealogy of works whose response to Darwin's work is dynamically driven by the meta-poetic figure of the island. Ultimately, this chapter joins in the literary critical exploration in the dissertation as a whole of humanity's place in nature as addressed by Darwin's theory of evolution. In my reading of Zola's literary response to Darwin, the human is caught in a bind, between the nihilistic embrace of evolutionary violence and the delusion of transcendent autonomy. Zola's literary Naturalism confirms that bind and allows us to reflect on it. In Hardy's works that deadlock persists, but represents the starting point for an affirmative, materialist engagement with the natural world through art and desire. The co-creation of artistic and erotic excess which I have read in Hardy's novels does not offer humanity autonomy from evolutionary mortality, but demonstrates instead that the everyday creative and erotic life of humanity offers real conciliatory power, and ensures that our biological future is mercifully, creatively, unknowable. The three island-fictions with which I am concerned here ask through their art whether the evolutionary autonomy that appears to be unavailable in Hardy and Zola can be achieved not through political or artistic means, but by engaging further with Darwinian materialism itself and exploiting its Utopian possibilities. In that respect, each novel represents a Utopian envisagement, a dream or fantasy, an attempt to articulate what is impossible in the context of Darwin's evolutionary materialism: a transcendent island of autonomy for humanity.

The Utopian Impulse in the Islands of Butler, Huxley, and Houellebecq

Each of these novels mobilises a fantasy of transcendence in the meta-poetic figure of the island in order to inquire into the social and political ramifications of Darwinian evolution. To that end they also engage with Utopian discourse and thought, and in this section I shall examine the meaning and role of "the Utopian" in these three works.

Butler's novel signals its engagement with the Utopian literary tradition in its title, which is also the name of the Utopian country it depicts: '*Erewhon'* is an inversion and a distortion of the English translation of the neologistic title of Thomas More's originary work *Utopia* (1516), signifying "nowhere", "*Ou-topia"* being an Ancient Greek portmanteau meaning "no-place". More's *Utopia* takes the form of a fictional travelogue, narrating in its second book the discovery by the philosopher-sailor, Rafael Hythloday, of a peaceful,

socio-politically ideal island-nation at the margins of a colonial frontier.[23] Similarly, Butler's text is narrated by an unnamed traveller who retrospectively unfolds the story of his journey to the colonial margins of the British Empire, this time in a nineteenth-century context. Arriving in New Zealand and travelling to its uncharted interior in search of new land, the novel's protagonist fortuitously discovers a geographically, politically, and culturally autarchic nation, the sheer splendour of which initially promises Utopian perfection. The narrator-protagonist's first encounter in Erewhon is with two young women whose physical beauty 'dazzles' him, and as he is guided towards the capital city of this country, his continued meetings with the 'majestic', graceful, 'handsome', 'beautiful', and 'divine' Erewhonians confirm his sense that he has landed in a heavenly, otherworldly place (*Erewhon*, 79). Mirroring More's description of the architectural beauty of Utopia and its capital city in particular, with its combination of broad streets, stately arches, and 'well-ordered and fruitful gardens', Butler's narrator is struck by the beauty of Erewhon, the capital city of which combines 'majestic towers', arcades, and marble statues with pastoral gardens replete with an abundance of birds and fruit, giving the narrator 'the impression of great peace and plenty' (*Erewhon*, 138).[24] *Erewhon*'s title does not merely signal its engagement with More's *Utopia* but that it mirrors the sixteenth-century text's metaphorical and thematic characteristics.

Huxley's novel *Island* is a formal and narrative echo of both these texts. The novel is narrated by Will Farnaby, a British journalist, who relates his travels to the remote and previously impenetrable, hermetic island nation of Pala. Just as *Erewhon*'s narrator travels in search of colonial wealth, Farnaby's aim in travelling to Pala is to facilitate the usurpation of its leader by a neighbouring nation, the exploitation of its natural oil reserves, and the effective colonisation of the island. And just as *Erewhon*'s narrator and More's Hythloday discover places of phantasmagorical beauty, Farnaby finds on the island of Pala, a population of impossibly attractive men, women, and children, who inhabit a country of Edenic, pastoral plenitude. On his first encounter with the Palanese, Farnaby, like *Erewhon*'s narrator, is struck by the 'exquisite' beauty of the people he meets (*Island*, 13). And as Farnaby is given a tour of the island he marvels at the splendour of its built

[23] Thomas More, *Utopia*, eds Robert M. Adams and George M. Logan, trans. by Robert M. Adams, *Cambridge Texts in the History of Political Thought* (Cambridge: Cambridge University Press, 1989).
[24] More, pp. 45–46.

environment and the ingenuity of its agricultural landscape: 'Nature here was no longer merely natural', Farnaby says of a series of terraces for rice paddies, houses, and boundary walls that ascend the slope of a mountain range; 'the landscape had been composed, had been reduced to its geometrical essences, and rendered, by what in a painter would have been a miracle of virtuosity' (*Island*, 25). Just as in More's *Utopia* and Butler's *Erewhon*, where nature and civilisation have been wrought in frictionless synthesis to create paradisiacal Utopias, on Pala nature and culture no longer seem opposed but fixed in a dynamic of complementary mutuality.

The homology between Huxley's *Island* and Butler's *Erewhon* is acknowledged by Huxley, with an intertextual reference to Butler's work. Although the island of Pala is understood to be inaccessibly remote and surrounded by impassable and treacherous seas, Farnaby does manage to access the island. As his boat flounders near the coast of Pala, Farnaby first finds himself shipwrecked on the island, only to survive a fall from a cliff as well as an encounter with a deadly snake. Commenting on the miraculous nature of his arrival on the island, Farnaby recalls Butler's novel, and offers a quotation from its protagonist, who himself marvels at his luck in discovering a beautiful and apparently perfect society: '"Remember the beginning of Erewhon" he said. " 'As luck would have it, Providence was on my side."' (*Island*, 22). As well as signalling the genealogical continuity between these two texts, thereby undermining the notion of the genetic autonomy of the literary text, this meta-fictional indicates a spatial and textual element in Utopian literary discourse. Farnaby's comments here not only on his luck at finding such an exquisitely prepossessing people and country, but also on the fortuitous nature of penetrating a physically and theoretically enclosed, autarchic space. The narrator of *Erewhon* makes an identical observation, from which *Island* quotes, upon breaching the seemingly impenetrable borders of the country of Erewhon. Although not an island in the oceanic sense, Erewhon is encircled by a mountain range which seals the country off from its external environment, making it in effect an inland island. Moreover, Erewhon's inhabitants actively police its borders with a set of grotesque, threatening statues, designed to ward off potential interlopers, just as the Palanese rigorously police their borders, supplementing their natural oceanic boundary by enforcing the summary deportation of those they deem 'undesirable' to the island's larger cultural ethos. The genealogical, intertextual point, prefigures the topographical one: in the same moment

that these narrators penetrate and describe the islands of Pala and Erewhon, their autonomy from the world is undermined.

In *Utopics*, Louis Marin explores the relation between Utopian narratives and the semiotic valences of their topographical features. He argues that More's island of Utopia is not "natural" but constituted by an act of enclosure – a 'pure act of creation'.[25] In More's work, Marin notes, Utopia, both the country and the island, is created by its King and creator, Utopus, by removing the isthmus that once connected the country previously known as 'Abraxas' to the mainland. In other words, Utopia is not a pre-existing place, or deserted island waiting to be discovered, but is co-extensive with an act of deliberate self-isolation through the constitution of its boundaries. Moreover, Marin goes on, the passage from Abraxas to Utopia, from the chaos of undifferentiated continuous space to the order of differentiated, discontinuous spaces, represents nothing less than the passage from nature to culture, from the animal 'to the true state of humanity'.[26] Utopian enclosure is a form of incision through which the human makes itself discontinuous from that which constitutes it, instituting a boundary between humanity and the animal, between civilisation and savagery. This recalls the analysis I made, in my introductory chapter of the work, of social theorists like Francis Galton and Herbert Spencer, who call upon an ideal of a perfect, sovereign human in order to institute a break between human and animal. Similarly, for Deleuze in "Desert Islands" humanity's disavowal of the differential dynamics through desert island creation is also a Utopian act of inscription, marking out nothing other than the fantasy of transcendent autonomy on which the idea of the human is based, to which it appeals and to which it clings.

Fredric Jameson's theorisation of Utopian discourse accords with the argument that geographic, political Utopian enclosure and humanity's act of ontological self-creation are complementary. Jameson implicitly elaborates upon Deleuze's notion that desert islands and Utopian spaces originate in a foundational human fantasy of autonomy. 'The Utopian', according to him, is practically an unlimited category, citing in addition to the usual tradition of Utopian literature, day-dreams, advertising, commercial speculation, revolutionary political theory, reactionary ideological fantasies, consumer products, and

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[25] Louis Marin, *Utopics: The Semiological Play of Textual Spaces*, trans. by Robert Vollrath (Atlantic Highlands, NJ: Humanities Press International, 1990), pp. 105–106.
[26] Marin, p. 106.

so on *ad infinitum*.[27] Jameson argues, however, that common to all forms of any 'properly Utopian program or realization' is a 'commitment to closure (and thereby to totality)'.[28] Thus Utopian desire is expressed unconsciously in unexpected and banal non-literary or ostensibly a-political objects and practices. He sees in the most prosaic elements of contemporary culture a Utopian unconscious which is defined by a commitment to enacting closure and the construction of definitive boundaries of individual difference. 'Even the most subordinate and shamefaced products of everyday life, such as aspirins, laxatives and deodorants, organ transplants and plastic surgery' all offer the prospect of a enclosed, finalised body.[29] These quotidian, corporeal forms of Utopian enclosure re-affirm that what the creation of a desert island, 'Utopic' space seeks to achieve is the constitution of a pure and definitively autonomous human, in both individual and collective terms.

The "islands" of Erewhon and Pala are exemplary Utopian spaces in Jameson and Marin's terms. Both countries are couched in naturally isolated, remote locations; Erewhon is located in a remote part of New Zealand, hidden behind a seemingly impassable mountain range, while Pala is similarly remote, located on an inaccessible oceanic island bordered by dangerous seas. And both countries deliberately seek to maintain and finalise that natural enclosure, enacting what Marin calls Utopic inscription, seeking, as Jameson suggests, definitively to close themselves off and thereby to re-create themselves as a form of finalised totality. The incursions of Farnaby and *Erewhon*'s narrator only re-confirm the fundamentally unnatural character of Utopia. For these islands to sustain their Utopic disconnection from their surroundings, those acts of repudiation must be repeatedly carried out – or interlopers such Farnaby and his literary predecessor from *Erewhon* will undermine their isolation. The complementarity of nature and culture that exists on these islands, therefore, is achieved not through a simple synthesis of the two but, paradoxically, through violent human acts of organised tyranny: Erewhon's and Pala's perfection and plenitude is premised on negation, on their capacity

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[27] Fredric Jameson, *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions* (London: Verso, 2007); Ernst Bloch, *The Principle of Hope*. vol. 3, trans. by Neville Plaice, Studies in Contemporary German Social Thought, 1 (Cambridge, Mass: MIT Press, 1995). Jameson highlights an incisive summary of Bloch's theory of the Utopian by Wayne Hudson in *The Marxist Philosophy of Ernst Bloch* (London: Macmillan, 1982), p. 107.
[28] Jameson, p. 4.
[29] Jameson, p. 6.

to delimit access to their walled cities, and the corresponding organisation of nature's chaos into walled gardens and agricultural landscapes. The harmonious synthesis of nature and culture – the highest form of humanity – is premised on act of Utopic inscription, the intention of which is to both excise the human from nature and in that way to enable the human to dominate it. In Deleuze's terms, these two islands, by seeking to abjure all relation with the external world, by attempting to render themselves discontinuous with the continuous space of the land or the ocean, are material, political, and geographical enactments of the *dream* of an island: repeated, neurotic expressions of humanity's primary narcissism, the fantasy of being already separate from and superior to the natural world from which it derived.

This Utopian drive to human autonomy and its expression in geo-political, corporeal, and ontological guises is suggestively explored in Houellebecq's *The Possibility of an Island*. This novel's narrative and form, like those of *Island* and *Erewhon*, echoes that of the classical Utopian tradition. It traces, in part, Daniel's journey towards and arrival at an island Utopia – which in Marin's terms can be read as journey from savagery to a form of notionally superior humanity. The twenty-first century iteration of Daniel, who in the novel is designated simply by the name 'Daniel1' is a cynical, nihilistic, and provocative French comedian and screen-writer. His disaffected autobiographical narrative casts Western society as an affective desert – a savagely competitive and brutally uncaring world, where the nihilistic embrace of narcotic self-destruction, sexual hedonism, consumerism, and an attitude of ironic distance together represent the only possible reparative possibilities in an otherwise barbarous world. In contrast, The Elohimite cult Daniel joins promise redemption through immortality: but this offer is only partly understood as a spiritual achievement and is presented largely as a material, technological possibility enabled by research into genomic technology, human cloning, and genetic modification. Daniel's journey then, unlike that of Farnaby, *Erewhon*'s unnamed narrator, and *Utopia's* Rafael Hythloday, is not geographical but temporal. Daniel1 commits himself to the Elohimite programme of genomic immortality and the other half of the novel, narrated from the perspective of two of Daniel1's cloned descendants, Daniel24 and Daniel25, details the Utopian conditions of isolation in which Daniel1's new iterations live.

Together, the neohuman individual and the compound in which that neohuman lives represent a dual form of Utopic enclosure. Daniel24's and Daniel25's narratives

describe a world riven by cataclysmic environmental collapse, and overrun by groups of apparently fierce bands of non-cloned humans, whose lives, in opposition to those of the neohumans, seem barbarous and anachronistic. The neohuman race, including Daniel1's neohuman iterations, live in hermetically sealed, environmentally controlled compounds which protect their inhabitants from the external world. Each compound is fitted with its own electric generator which powers its protective, electric fence to exclude non-neohumans and, moreover, the external walls of Daniel24 and 25's 'residence' are coated with a layer of 'slightly radioactive radium, which gave effective protection' from their climatically hostile external environment (*Possibility*, 152). In addition, the neohuman is itself a form of Utopian island. The neohumans do not require food or water to nourish themselves; they have been genetically modified to derive nutrition autotrophically, from the sun as well as from the mineral salts generated by a machine within each compound. The neohuman has dispensed with the need to introject and excrete any physical matter, constituting itself as a physically closed system. Moreover, and crucially, neohuman reproduction is not premised on sexual relation; at the expiry of each clone, a newly minted body is delivered to the compound from a centralised cloning centre, to take up the identity of the last clone and that of each of its predecessors, theoretically projecting the personhood of Daniel into an abstract timelessness. So the body of the neohuman is a biological projection of the compound itself: a sealed, sovereign and timeless monad, excised from the world in which which it lives, to which it no longer has any relation except in the form of repudiation. In the shape of the neohuman, the human has become, in effect, a desert island. And in this state of pure biological and social autarchy, the neohumans live in a state of total, untroubled serenity, in which neither the joy nor the misery of being mortal and relating to others penetrates their state of unadulterated hermetic isolation.

Formally speaking, Houellebecq's novel echoes the dialogic narrative structure of More's *Utopia*. The first section of More's work, the "Dialogue of Counsel", is made up of series of discussions on the ills of contemporary, fifteenth-century Europe, between More in a fictional guise and the sailor-philosopher, Rafael Hythloday, as well as on various aspects of political philosophy. The second book, "Discourse on Utopia", consists in the detailed elaboration of the ideal state of the Utopian commonwealth, as related to More by Hythloday, and subsequently narrated by More to the reader. Similarly, Houellebecq's

work is divided into two distinct parts. The first book, Daniel1's narrative, both diagnoses the ills of the cultural, political wasteland of Europe as he perceives it, and is interpolated with numerous discussions between Daniel1, and other characters on political philosophy, religion, and evolutionary theory, a number of which are rehearsed within Daniel1's various comedy performances, films, and other writings. The second book of *The Possibility of the Island*, narrated by Daniel24 and, on his expiry, Daniel25, describes Utopian life and the conditions which sustain and make that life possible. As George Logan and Robert Adams note in their introduction to More's work, the relation between the two books of *Utopia* is an oppositional one, the 'analysis of the evils of the existing society' forming an 'appropriate prelude to a discussion of a possibly better one'.[30] It is in this juxtaposition of these two books and by extension, the juxtaposition of Europe and Utopia, that sharpens what is distinctive about each. Houellebecq's work echoes and complicates this oppositional structure, by dispensing entirely with a linear passage from book one to book two, from Europe to Utopia, by formally intertwining their two narratives.

This formal conceit in Houellebecq's work is integral to the novel's plot and can be read as a structural enactment of the tension between humanity's desire for autonomy and its individual and collective reliance on a relational social, biological, and political ecology. The Elohimites, for all their technological advancement, do not succeed in developing the capacity to download human consciousness and in that way transmit it seamlessly from one clone to the next. Instead, "Book 1", Daniel1's autobiographical account of his life, of his distaste for the world, his increasing depression, and his drift towards the Elohimite cult, represents for the neohumans a document of his consciousness. "Book 2" describes the lives of Daniel1's clones who, in lieu of the capacity download and in that way digitally transmit consciousness across generations, read Daniel1's autobiographical testimony, in response to which they compose their own exegetical commentary. The novel continuously oscillates between the individual narratives and testimonies of Daniel1, 24, and 25, each of which is implicitly implicated in the other, setting up a dialogic configuration between times, between consciousnesses, and between texts. Upon its arrival, a newly delivered neohuman takes up the endeavour of reading and commenting

[30] More, p. xxi.

upon the life-stories and commentaries of each of his predecessors, with the intention of extending Daniel's consciousness indefinitely. Houellebecq's novel formalises the impossibility of that attempt, however, by grounding the identity of each neohuman clone in an individual text, each of which is constituted by its relation to the texts in response to which it is composed. The theoretical, singular ur-text of Daniel's consciousness, therefore, is revealed to be constituted by a series of internal dialogues, whose extension into futurity is constituted by an imperfect form of interpretive transmission. Daniel's conscious is not a desert island – it is not a homogenous, unchanging entity extended into the future. Rather, it is a dynamic network of multiple, interrelated, textually constituted consciousnesses, whose dialogue with one another engenders a continual transformation of that entity.

The genealogical, intertextual relations between these three novels is itself an instance of this tension. Each novel is both an autonomous text as well as a text written in response to More's *Utopia* specifically, and to the Utopian literary tradition generally. Moreover, each novel can be read in relation to the other; as intertexts in the case of *Erewhon* and *Island,* but also as exegetical commentaries on one another, the relations between each text constituting a literary network or genealogy of Utopian literature. Houellebecq's neohuman/human dialogue is a commentary on how the tradition of Utopian literature – and by implication the evolution literary art in general – proceeds paradoxically on the basis of originality grounded in repetition. This point also raises the issue of genre and the extent to which, in opposition to the Jamesonian conception of "the Utopian" as a broader, multi-medial, praxis that includes political thought and everyday life, these types of novels constitute a distinctive kind of Utopian novel. Perhaps it is indeed less productive to read these novels as part of a distinctive Utopian genre than in terms of their common satirical functions. As Dominic Baker-Smith points out, contemporary discussions about *Utopia* oscillate uneasily between taking seriously the apparent political and philosophical programme of More's work and taking seriously his humour and wit by regarding the work as a 'sophisticated game, a *jeu d'esprit*'.[31] More's *Utopia* is an affirmative negation of the political situation of sixteenth-century England and an uncanny mirror of it, possessing many of the same geographical and political

[31] Dominic Baker-Smith, *More's Utopia* (Toronto: University of Toronto Press, 2000), p. 39.

features. This ironic uncertainty, however, can be regarded as an integral part of this work's effect, eliciting in readers a hermeneutic uncertainty, a readerly attentiveness which alerts the reader to their own interpretive decision making.

Similarly, readers of Butler's *Erewhon* have frequently emphasised the satirical intentions of the novel as well as the ironic, satirical tenor of Butler's *œuvre* as a whole. Lewis Mumford's introduction to the 1927 Modern Library edition of *Erewhon* argues for the satirical nature of the text and rejects its association with Utopianism.[32] James Paradis classifies *Erewhon*, along with his later work, *The Way of All Flesh* (1903), a biting, humorous autobiographical novel that targets the stultifying social conventions of Victorian society, as 'two culture-probing satires'.[33] Both Joshua Gooche and Sue Zemka affirm that it is through the lens of satire and not Utopianism or the Utopian literary tradition that Butler's work has usually been understood by critics.[34] But Roger Robinson's reading of the 'antipodean reversal' of Utopia in *Erewhon* suggests that in the title's distinctive, part-reversal of the title of More's text, and in the 'recurrent trope of reversal' throughout the novel, lies the key to reading the work as neither absolutely Utopian nor entirely satirical, but as a satire of Utopian literature itself. [35] What Butler's protagonist finds in the country of Erewhon is not a Utopian paradise, as he initially believes, but a society that is ruled by a venal elite, where illness is punishable as a crime, where financial corruption is treated with empathy, and where religion and faith has been superseded by the worship of money. He discovers that Erewhon's universities, 'The Colleges of Unreason', are decadent, anachronistic institutions dedicated solely to the study of 'hypothetics'; that Erewhon's financial institutions, the 'Musical Banks', are empty, purely symbolic entities where the Erewhonians visit to indulge in religious self-deception. In other words, what the narrator finds in Erewhon is not a Utopian negation of the Victorian society from which he came, but an inversion of the expectations of the reader

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[32] Lewis Mumford, 'Introduction', in Samuel Butler, *Erewhon, and Erewhon Revisited* (New York: Modern Library, 1927).
[33] James G. Paradis, 'Introduction', in *Samuel Butler, Victorian Against the Grain: A Critical Overview*, ed. by James G. Paradis (Toronto: University of Toronto Press, 2007), pp. 1–18 (p. 1).
[34] Joshua A. Gooch, 'Figures of Nineteenth-Century Biopower in Samuel Butler's *Erewhon*', *Nineteenth-Century Contexts*, 36.1 (2014), 53–71 (pp. 54–57); Sue Zemka, '"Erewhon" and the End of Utopian Humanism', *ELH*, 69.2 (2002), 439–72 (p. 439).
[35] Ann-Barbara Graff argues that Utopian satire is a distinctively Victorian trope that arises out of the ethical concerns with futurity suggested by evolutionary science. See: '"Administrative Nihilism": Evolution, Ethics and Victorian Utopian Satire', *Utopian Studies*, 12.2 (2001), 33–52.

of Utopian fiction, such that the Utopian island represents nothing other than a mirror of Victorian society's worst elements. This 'devious trick', writes Zemka, means that '*Gulliver's Travels* and not *Utopia* is the true template for [*Erewhon*]'.[36] In that sense, *Erewhon* can be read as a satire of Utopian literature's conventions. And, furthermore, in this way *Erewhon* can be read as a sharp, satirical, and formally sophisticated commentary on Victorian society by revealing the strange delusions of a foreign island to be those of the very public that reads the novel.

Critical responses to Huxley's *Island* note its own satirical intentions and the manner in which, like Butler's work, the novel wreathes itself in ironic reversals. Frank Kermode calls *Island* 'one of the worst novels ever written'; less dismissive but equally negative, William Barrett accuses Huxley of a derogation of the duty of the novelist by capitulating to Utopian dogma and didacticism.[37] But Wayne Booth sees value in these limitations. He argues that the novel's didacticism, incoherent religious philosophy and uneven plotting should not be dismissed, but understood instead as a function of its status as a text in the 'non-Leavisonian' critical tradition, according to which the function of certain literary works is to instigate thought through satirical negation rather than to effect, narrate, or describe.[38] Robert Elliot also pursues this line of argument, arguing that the most compelling aspect of *Island* is its capacity to respond to theoretical and political questions. He argues that its generic Utopianism is primary, and that its didacticism is central to understanding the novel's repudiation of the hegemonic, ideologically cynical atmosphere of the day. Although the islanders themselves purport to reject the ideological positions of both of capitalism and communism, and can themselves be read as resisting ideological Utopianism, Elliot argues that their post-ideological optimism is itself a negation of anti-Utopian pessimism. For that reason, *Island*, Elliot argues, can be read as an attempt 'to [speak] cogently against despair', the despair of anti-Utopianism, while at the same time warning against the consequences of that optimism turning into blind, ideological dogmatism.[39]

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[36] Zemka, p. 439.
[37] Frank Kermode, '"Island" by Aldous Huxley', *The Partisan Review*, 29.3 (1962), 472–73 (p. 472); William Barrett, 'Atlantic Bookshelf', *Atlantic Monthly*, April 1962, pp. 150–60.
[38] Booth includes *Candide, Rasselas,* and *Gulliver's Travels* in this grouping; Wayne Booth, 'Yes, But Are They Really Novels?', *Yale Review*, LI/4, 1962, 631.
[39] Robert C. Elliott, *The Shape of Utopia: Studies in a Literary Genre* (1970), ed. by Phillip E. Wegner (Oxford: Peter Lang, 2013), p. 97.

Huxley's work does not engage in the kind of narrative, generic or satirical inversions that Butler's work does. But its earnestness in seeking to portray a Utopian world, in contrast with the strikingly dystopian picture he constructs in *A Brave New World* to which *Island* can be read as a response, poses the question of how to read the latter. Simon Dentith, commenting on *Erewhon*, argues that the hermeneutic difficulties that the combination of Utopian and satiric writing poses, the shifting of positions through multiple layers of negation, prompts 'alert reading'.[40] Huxley's island urges a similar alertness, inviting the reader to question the sincerity of its didacticism, while at the same resisting any over-determined reading. Similarly, the problem that irony, satire, and Utopian negation poses to hermeneutic certainty is perhaps the most distinctive aspect of Houellebecq's entire *œuvre* as a novelist. Martin Crowley and Victoria Best argue that Houellebecq's work seems dedicated to 'essaying a complete picture of the contemporary world (though more in the mode of satire than of realism)'. Houellebecq, they submit, is ethically concerned with offering a critique of the hegemony of the so-called free market, liberal economics, as well as lamenting the reactionary, hierarchical 'sexual liberalisation' which he sees at its consequence.[41] But he undertakes this critique by adopting aesthetically the features of the cultural and ideological atmosphere he decries. Houellebecq's fiction is replete with glorifications of consumerism, pornographic descriptions of sex, and misogynistic commentaries. This satirically cynical and yet ethical earnestness, Crowley and Best argue, 'intermittently juxtapose[s] irony and sincerity in a manner which makes it impossible to know which tone we should be taking seriously, if any.'[42] Houellebecq's work, they argue, rebuffs any hermeneutic approach that seeks either to argue for its earnest satirical aims, or its ironic questioning of the effectiveness of satire itself.

The figure of Daniel1, who can be read as a meta-fictional proxy for Houellebecq in *The Possibility of an Island*, is an excellent example of the manner in which Houellebecq's work seems to resist all attempts at a readerly command of its aims or sincerity. Daniel1

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[40] Simon Dentith, 'Imagination and Inversion in Nineteenth-Century Utopian Writing', in *Anticipations: Essays on Early Science Fiction and Its Precursors*, ed. by David Seed (Syracuse: Syracuse University Press, 1995), pp. 137–52 (p. 139).
[41] Victoria Best and Martin Crowley, *The New Pornographies: Explicit Sex in Recent French Fiction and Film* (Manchester: Manchester Univ Press, 2007), p. 181.
[42] Best and Crowley, p. 181.

himself reflects on the ineffectiveness of his own grotesque, racist, violent, and misogynistic satire which, he observes, has been earnestly seized upon by politically progressive groups as a critique of the grotesque, racist, and violent world which they all share. Laughter, he begins to argue, is an expression of humanity's most deeply concealed cruelty, an expression of its willingness to delight openly in the very violence and sexism it claims to condemn. Moreover, laughter abjures any revolutionary possibility for satire; comedy, Daniel1 argues, does not 'transform the world', but makes it acceptable (*Possibility*, 133-134). The satirist and his reader, Houellebecq argues through the voice of Daniel1, is in this respect a collaborator with evil: the satirist illuminates injustice while eradicating hope. So any critical attempt to assess the earnestness of Houellebecq's Utopian envisioning of an improved world, let alone his politically problematic critique of this world, is likely to be frustrated. This is not only because of the difficulty of establishing any ethical, ideological, generic ground in his work, but because the very act of doing so is anticipated and thus nullified by Houellebecq's proxy in the novel. In this way, Houellebecq through Daniel addresses his readers, condemning both their serious critical pretensions as well as their laughter. At the same Daniel's acerbic, unforgiving picture of Western decadence anticipates the consequences of a world which has dispensed with critical circumspection and in which laughter is only available through ironic distance.

Readers of More's *Utopia* are divided between a commitment to reading it as sincere and engaged political envisagement of a better world, and seeing it as a humorous comment on England's venality. Reading each of these Utopian, island novels demands its readers to make a similar hermeneutic decision. But satirical irony is not opposed to Utopian desire. In resisting and evading attempts to establish a hermeneutic foundation on which to ground a reading, these novels themselves engage in Utopian acts of inscription and enclosure. By attempting to protect themselves from a finalised or totalising interpretation, these novels re-enact the foreclosure of meaning that is itself a Utopian fantasy, sealing each novel off as an unreachable, impenetrable literary island. These novels ask the critic to relinquish an unconscious Utopian yearning for a "correct" and exclusive reading, while at the same time enacting and triggering that yearning.

I shall be reading these novels in relation to their engagement with Darwin's theory of evolution with this epistemological point in mind. I shall examine first how

critical literature views the contextual and genetic relationship between each of these authors, and arguing that these works exceed readings based predominantly on influence or historical context. As I have suggested, each of these novels constructs a textual ontology: the text as an island – a contained dynamism – whose singularity and isolation are both in themselves irreducible. I want to explore the Utopian self-isolation that these novels perform and how that act paradoxically rejects mono-logical readings of these texts, which is the point at which literary reading begins.

The Conflicted Darwinisms of Butler, Huxley, and Houellebecq

In a recent study of Butler's life and works, David Gillott argues that to over-emphasise the influence of Darwinian evolution in Butler's literature under-estimates the significance of the evolutionary thought of Jean-Baptiste Lamarck.[43] For as well as a novelist and essayist, Butler was an art critic, a biblical critic, a painter, and wrote four works of evolutionary theory, *Life and Habit* (1878), *Evolution old and New* (1879), *Unconscious Memory* (1880), and *Luck, or Cunning* (1887), as well numerous essays on the subject. Broadly speaking, in these works Butler argues against the professionalised, scientific orthodoxy of the Darwinian mode of evolutionary thought and outlines an idiosyncratic, heterodox version of Lamarckian evolution. This approach stresses individual agency, skill, and the transmission of ancestral memory, as opposed to random variation and brutal selection. Butler, Gillott suggests, rejects Darwinian 'luck' in favour of Lamarckian 'cunning': life in Butler's view does not evolve as if mechanically driven onwards by random processes of variation and selection, but proceeds on the basis of the ingenuity and volition of the individual will.[44] Moreover, Butler sees the human organism as a cultural entity whose 'personal identity' exceeds the boundaries of the physical body, and sees non-physical entities like tools, texts, and ideas as 'extra-corporaneous limbs'.[45] Thus evolution for Butler is a cultural process as well as a biological one. The organism and the species, he believes, evolves in dialogue with the environment which it inhabits and, following

[43] David Gillott, *Samuel Butler against the Professionals: Rethinking Lamarckism 1860 - 1900*, Studies in Comparative Literature, 32 (Oxford: Legenda, 2015).
[44] Gillott, p. 5.
[45] Gillott, p. 9.

Lamarck, transmits 'acquired characteristics' developed in response to that environment to its progeny.

Gillott's analysis is aimed at correcting a critical 'commonplace' which tends to read Butler in relation to his fervent opposition to Darwinian natural selection, rather than through the positive project of a Lamarckian philosophy and aesthetics. But the negative aspect of Butler's project is difficult to ignore since his critique of the nineteenth century's most prominent and influential evolutionary theorist, as well as being implicit in his adoption of Lamarckian concepts, takes place in a series of public *ad hominem* attacks on Darwin in the periodical press.[46] Gillott argues, however, that even the manner in which Butler repudiated Darwin was integrally Lamarckian. At the centre of Butler's dismissal of Darwinism lies a personal indictment of Darwin's failure as an author to acknowledge his antecedents in evolutionary theory. Butler's Lamarckism, then, seeks to right this by championing Enlightenment theories of evolution, including that of Darwin's grandfather, Erasmus Darwin as well that of Lamarck. Butler's strategy, Gillott argues, is to emphasise the disingenuousness of Darwin's conceptual and literary methodology, since the latter's disavowal of his sources allows him also to disavow the importance of what he himself has inherited culturally, in Lamarckian fashion. This relational, constructivist ontology of author and text, nature and culture, allows Butler to attack Darwin's personal integrity, since his dishonesty is also scientifically insincere. Not only does this constitute a critique of professional, scientific orthodoxy, with its emphasis on disinterested assessment of natural phenomena, but for Butler, in Gillott's view at least, an attack on a text's author constitutes an attack on the text itself.[47]

The supposed critical commonplace that Butler's Lamarckism is largely unrecognised, in opposition to which Gillott constructs this suggestive reading of Butler's idiosyncratic conception of cultural and biological evolution, is not shared by all critics. Or rather, almost all critics recognise the influence of Lamarck on Butler, but they do not share Gillott's desire to privilege Lamarckian evolution to the same degree. In the most recent, comprehensive collection on Butler, Gillian Beer acknowledges Butler's

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[46] James G. Paradis, 'The Butler-Darwin Biographical Controversy in the Victorian Periodical Press', in *Science Serialized: Representations of the Sciences in Nineteenth-Century Periodicals*, ed. by Geoffrey Cantor and Sally Shuttleworth (Cambridge, MA: MIT Press, 2004), pp. 307–29.
[47] Gillott, pp. 55–77.

Lamarckism, as do James Paradis and David Amigoni.[48] Beer, however, frames Butler's singular attempt at an alternative form of evolutionary thought in terms of Butler's self-confessed contrarianism which, she suggests, allows us to re-read Darwin's work with renewed energy.[49] As George Levine points out, latent in Butler's critical attitude, 'in an astonishingly anticipatory way', was an almost deconstructive ethos which stated that '[e]very proposition, nay every idea, carries within itself the seeds of its own undoing.'[50] Thus, to read Darwin through Butler, Levine suggests, is not to dismiss Darwin's theory of evolution entirely but to seize upon those contradictions and slippages in Darwin's thought and in that way to enrich it.

This mode of reading, Amigoni notes, 'led Butler to the paradoxical conclusion that Darwin "was at no time a thorough-going Darwinian, but was throughout an unconscious Lamarckian, though ever anxious to conceal the fact from himself and his readers"'.[51] Whether or not Darwin is an unconfessed Lamarckian, or whether Butler's Lamarckism is ungraspable without an understanding of his anti-Darwinism, Amigoni affirms that what interests Butler fundamentally is the ontological paradox at the heart of the evolutionary concept of nature. In "The Deadlock in Darwinism" (1890) Butler writes:

> Everything both is and is not. There is no such thing as strict identity between any two things in any two consecutive seconds. In strictness they are identical and yet not identical, so that in strictness they violate a fundamental rule of strictness – namely, that a thing shall never be itself and not itself at one and the same time.[52]

Butler's conception of biological materiality is remarkably similar to that of Deleuze, who through Darwin and Bergson argues that organic life is immanently different – and differing – from itself. This identification of the immanently contradictory nature of evolutionary materiality and being, Amigoni argues, enables Butler to interrogate

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[48] James G. Paradis, 'Introduction', in *Samuel Butler, Victorian Against the Grain: A Critical Overview* (Toronto: University of Toronto Press, 2007), pp. 1–18 (p. 3); Gillian Beer, 'Butler, Memory, and the Future' , pp. 45–57 (p. 45); David Amigoni, 'The Written Symbol Extends Infinitely: Samuel Butler and the Writing of Evolutionary Theory', in Paradis, pp. 91–112.
[49] Beer, 'Butler, Memory, and the Future', p. 51.
[50] George Levine, *Dying to Know: Scientific Epistemology and Narrative in Victorian England* (Chicago: University of Chicago Press, 2002), p. 273; Samuel Butler, 'Life and Habit, Vol. 2', in *The Shrewsbury Edition of the Works of Samuel Butler*, ed. by Henry Festing Jones and A.T. Bartholomew, 20 vols (London: Dutton, 1923), p. 112.
[51] Amigoni, p. 105; Samuel Butler, *Luck, or Cunning as the Main Means of Organic Modification?* (London: Trübner, 1887), pp. 179–180.
[52] Samuel Butler, 'The Deadlock in Darwinism', in *Essays on Life, Art, and Science*, ed. by R.A. Streatfield (London: A.C. Fifield, 1908), p. 243.

evolution through literary forms like satire and dialogue, and its implications in relation to identity, authorship, and culture. These ironizing, dialectical forms allow Butler to address the inherently unstable, durational of nature with literary modes to which self-contradiction is intrinsic.[53]

This way of understanding Butler's critical and literary methodology allows us to understand how even in his adoption of Lamarckian evolution, Butler is fundamentally engaged with Darwin. Indeed, Butler engages with Darwin's evolutionary theory in his earliest engagements with evolutionary thought. Butler published an anonymous, philosophical dialogue entitled "Darwin on the Origin of Species" in 1862, which was followed in 1863 by "Darwin Among the Machines", and in 1865 by "*Lucubratio Ebria*", both of which provide important source material for *Erewhon*.[54] In the former essay, Butler is supportive of Darwin's work, undertaking a sophisticated analysis of the Malthusian aspect of natural selection and its implications for religious faith. In the latter two essays, Butler draws upon an analogy between natural selection in a biological context and technological evolution, wondering about the consequences for humanity should technology continue to evolve apace. In *Erewhon,* these speculative essays are given fictional treatment. The country of Erewhon has concluded that technological evolution is a threat to humanity and, thus, must be destroyed; which offers a further, purer vision of the human evolutionary future. Butler plays upon the notion that evolution dissolves the 'strictness' of identity between objects, – between human and machine, responding critically to the Darwinian affirmation of evolutionary descent. Just as his reading of Darwin leads him to envisage evolutionary futurity based upon 'what is' becoming something other than itself, his engagement with Darwin's thought is founded on an interpretative ethos which sees evolutionary thought as something that carries the seeds of its own transformation. Butler cannot be read either as a Darwinian author or a Lamarckian author, for his engagement with one is dialectically involved with the other. His evolutionism evolves in a singularly critical attitude developed and explored in his literary imagination.

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[53] Amigoni, p. 105.
[54] Samuel Butler, 'Darwin Among the Machines', in *A First Year in Canterbury Settlement With Other Early Essays*, ed. by R.A. Streatfield (London: A.C. Fifield, 1914), pp. 180–85; Samuel Butler, 'Lucubratio Ebria', in *A First Year in Canterbury Settlement With Other Early Essays*, ed. by R.A. Streatfield (London: A.C. Fifield, 1914), pp. 186–95.

The question of whether Aldous Huxley is, unlike Butler, a straightforward disciple of the Darwinian model of evolution by natural selection and sexual selection is both simpler and equally complex. Huxley's grandfather, T.H. Huxley, known also as "Darwin's Bulldog", was one of Darwin's most fervent defenders and a committed Darwinian evolutionist in his own right, whose legacy, R.S. Deese argues, neither Aldous nor his brother Julian Huxley, himself a prominent Darwinian evolutionist, could escape. The extent to which Darwinism, metonymically represented and defended by T.H. Huxley, exerted a powerful influence over Aldous is emphasised by Deese who relates how, at the age of six, a young Aldous attended the unveiling by the Prince of Wales of a monumental statue dedicated to his eminent grandfather. Aldous, Deese writes, 'stood nervously to see the proceedings, and to gaze at this imposing statue through the throng of adults'.[55] Aldous, for his own part, described himself as being, 'in the tradition established by his grandfather', 'a cheerleader for evolution'.[56] Huxley, unlike Butler, could be read as being a comparatively uncomplicated Darwinian.

But Huxley did not simply champion evolutionary thought. He sought also, like Butler did in his early essays on Darwin and technological futurity, to examine its ethical and political implications in relation to human society. His depiction of a eugenic dystopia in *Brave New World* can be read as a critique of the supposed Utopian possibilities of Darwinian evolutionary thought. The portrayal in his late work, *Ape and Essence* (1948), of a world destroyed by nuclear war interspersed with vignettes of a society run by baboons, is a transparent indictment of the notion of scientific and technological progress, as well as an affirmation of the savagery at the heart of human evolution.[57] For Peter Bowering, the primary influence of Darwinian evolution on Aldous Huxley came in the form of T.H. Huxley's assertion, anticipating Jacques Barzun's historical analysis, that the progress of evolutionary science would strip the world of spirit and spontaneity. Accordingly, Bowering argues, 'the debasement of man's moral nature by the increase of his knowledge'

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[55] R. S. Deese, *We Are Amphibians: Julian and Aldous Huxley on the Future of Our Species* (Berkeley, CA: University of California Press, 2014), p. 23.
[56] Deese, p. 5; Huxley is reported to have described himself as a 'cheerleader for evolution' in a conversation with Timothy Leary recorded in an unpublished document in possession of the U.S. Immigration and Naturalization Service; quoted in David King Dunaway, *Huxley in Hollywood* (Harper & Row, 1989), p. 354.
[57] Aldous Huxley, *Ape and Essence* (Chicago: Ivan R. Dee, 1992); Aldous Huxley, *Brave New World* (New York: Vintage Classics, 2007).

represents the central theme in Huxley's fiction.[58] Milton Birnbaum recognises the influence of his Aldous's paternal grandfather and the body of thought of which he was the defender in chief, and extends the genealogical argument further. 'Huxley's soul', Birnbaum writes, 'was always the battleground between the challenging barks of "Darwin's Bulldog"' and the 'melancholy promptings' of his maternal granduncle, Matthew Arnold.

These two genealogical pressures meet in synthesis, Birnbaum says, in Aldous's exploration in his later years of the Utopian possibilities of science and narcotics.[59] Ronald Sion echoes this reading, tracing the dominant thematic preoccupations of Huxley's fiction to Arnold's 'struggle for certainty in the late Victorian world of religious doubt', and to his grandfather's support for the scientific revolution that would cause this struggle.[60] Robert S. Baker identifies the culmination of these two competing exigencies in Huxley's *Brave New World*, whose dystopian vision of a eugenic future, he argues, is symptomatic of the post-Darwinian focus on 'process', but expresses an ambivalence about the consequences of that process for humankind.[61] This work depicts, what for Huxley, would be the oppressive, nightmarish consequence of humanity developing the capacity to control the process of evolution through eugenic engineering: a world where humanity is deprived of individuality, the capacity to think critically, and is coerced into submission by the state with hallucinogenic drugs and the opiate of popular entertainment.

I have said Beer describes Butler's attitude towards Darwin and his drift towards a Lamarckian conception of cultural evolution as symptomatic of a general iconoclasm. In the same manner, Huxley's rebellious view of the technological and societal ramifications of Darwin's theory could be said to originate in a primary Oedipal antagonism towards Darwinism. Like Butler, Huxley's rebellion against Darwinism is defined neither by outright rejection nor wholesale acceptance, but a desire to explore the possibilities and implications of evolutionary thought. Butler's enactment of this desire took literary form: he examined Darwin's thought through fictional dialogue and speculative, creative essays,

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[58] Peter Bowering, *Aldous Huxley: A Study of the Major Novels* (London: A&C Black, 2014), p. 25.
[59] Milton Birnbaum, *Aldous Huxley: A Quest for Values* (New Brunswick, PA: Transaction Publishers, 2005), p. 172.
[60] Ronald T. Sion, *Aldous Huxley and the Search for Meaning: A Study of the Eleven Novels* (Jefferson, NC: McFarland, 2010), p. 14.
[61] Robert S. Baker, 'Brave New World: Huxley's Dystopian Dilemma', in *Aldous Huxley's 'Brave New World'*, Bloom's Modern Critical Interpretations (Broomall, PA: Chelsea House, 2003), p. 93.

and criticised Darwin's own literary failings which he saw as symptomatic of the weakness of the evolutionary philosophy. Similarly, Huxley drew upon the possibilities of literary form: the dystopian fiction of *Brave New World* and the Utopian fiction of *Island* are spaces in which to interrogate both the destructive and the redemptive possibilities of Darwin's philosophy.

The ambivalence towards Darwinian evolution shared by Butler and Huxley, the sense that both authors accept the basic fact of evolutionary descent and seek to explore critically its consequences for humanity, is echoed in Crowley and Best's characterisation of Houellebecq as 'a materialist who is infinitely depressed by materialism'.[62] Houellebecq, they argue, is both committed to a broadly Darwinian, naturalist conception of nature and society and is simultaneously appalled at the suffering, the violence, and the despair it anticipates for human life. Commenting on the title of Houellebecq's first novel, *Extension du domaine de la lutte*, John McCann affirms that Houellebecq's fiction takes place 'in a Darwinian world', where a brutal Schopenhauerian conception of the struggle to survive has been extended to the emotional, economic, and social lives of humans.[63] In Houellebecq's fictional universe, McCann writes, '[e]volution is neither goal-directed nor a process of growth that realises some potential essence. It proceeds by natural selection, the means by which the fittest survive. The struggle eliminates those who do not fit into the circumstances.'[64] Carole Sweeney reads Houellebecq's materialist depression in political-economic terms, framing the extension of this merciless dynamic of struggle from the realm of the biological to the realm of society as a consequence of neoliberal capitalism. Houellebecq's central thematic concern, she argues, is 'the encroachment of capitalism in its neoliberal biopolitical form into all areas of affective human life'.[65] Ben Jeffery couches this preoccupation with struggle in slightly different terms, locating Houellebecq's depressive materialism in his reading of H.P. Lovecraft's misanthropic and malignant worldview.[66] Unlike Lovecraft's overtly fantastical stories, however, Jeffery

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[62] Best and Crowley, p. 209.
[63] This novel has been translated in English as *Whatever*. But a literal translation, "The extension of the Realm of Struggle" offers us a better sense of McCann's point.
[64] John McCann, *Michel Houellebecq: Author of Our Times* (Peter Lang, 2010), p. 8.
[65] Carole Sweeney, *Michel Houellebecq and the Literature of Despair* (London: A&C Black, 2013), p. ix.
[66] Houellebecq reads Lovecraft's depiction of malovolent, monstrous, alien beings as symbolic of the disgust he felt for the world as well as symptomatic of his desire to escape it. See Michel

argues that Houellebecq seeks to delineate the cruelty of the real in biologically materialist terms, precisely because materialism seems to affirm that our biological condition is inescapable. 'Humans are just animals', Jeffery writes of Houellebecq's fictional universe, and that makes 'self-interest paramount'. Even as Houellebecq's characters are incapable of anything other than absolute, instinctual narcissism, they are also aware 'with some horror' of 'the essential unsustainability of individualism'.[67] Here again we discover Houellebecq's paradoxical materialism – hopelessly stuck between a faith in materialism, naturalism, and realism, and the despair produced by that faith.

Louis Betty argues that Houellebecq's combination of naturalism, Darwinian realism and determinism, and his critical attitude towards the consequences of humanity's biologically determined existence, echoes the Zolian experimental novel. Citing Sandrine Rabosseau's comparative study of Zola's and Houellebecq's respective literary strategies of experimentation and provocation, Betty argues that where Zola's method is to 'confront his characters with the inexorabilities of their biological and environmental conditioning', Houellebecq's method is also thematically naturalistic but has in addition a specifically religious or metaphysical purpose.[68] 'Heredity and environment are not […] Houellebecq's central concerns; he is interested in God's absence and the submission to matter that such absence demands, which deprives human life of a meaning that might escape its immediate conditioning.'[69] This recalls Jacques Barzun's evocation of a post-deistic, materialist world after Darwin and also reprises Hillis Miller's approach to Hardy. As I have discussed in Chapter 2, Hillis Miller casts Hardy's realism as a response to and critique of the absolute determinism of material life stripped of the possibility of any deity-proffered or metaphysical form of redemption. However, where Betty argues that Houellebecq's concern is primarily metaphysical and not naturalistic, Hillis Miller recognises that the two cannot be dissociated. More importantly, Hillis Miller submits no

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Houellebecq, *H. P. Lovecraft: Against the World, against Life*, trans. by Dorna Khazeni (London: Gollancz, 2008).
Ben Jeffery, *Anti-Matter: Michel Houellebecq and Depressive Realism* (Winchester, UK: Zero Books, 2011), pp. 6–8.

[67] Jeffery, p. 15.

[68] Sandrine Rabboseau, 'Zola et Houellebecq: Le Roman expérimental comme provocation et réflexion', in *Michel Houellebecq Sous La Loupe*, ed. by S. Van Wesemael (Amsterdam: Rodopi, 2007); Louis Betty, *Without God: Michel Houellebecq and Materialist Horror* (University Park, PA: Penn State University Press, 2016), p. 21.

[69] Betty, p. 21.

assessment as to whether naturalism or metaphysics were Hardy's primary concerns, but seeks instead to examine how reading Hardy's literary art provides a singular, idiosyncratic vision of each of these mutually reinforcing philosophical visions: naturalism, materialism, evolutionism.

It is clear that Darwin, his theory of evolution and natural selection in particular, and its broad philosophical, sociological, technological, and economic implications have exercised significant influence over each of these three authors. Butler, Huxley, and Houellebecq, along with Zola and Hardy whose works I have analysed in my previous chapters, belong to an important genealogy of prominent European novelists for whom naturalism, science, and Darwinian thought are thematically crucial to their fiction. However, just as I have done in my chapters on Zola and on Hardy, I shall eschew speculating further on the extent to which Butler, Huxley, and Houellebecq are disciples of Darwin or anti-Darwinian authors, or the degree to which their works are primarily, partly, or accidentally responses to the Darwinian mode of evolutionary thought. Instead, I shall be continuing to explore how reading their literary artworks, specifically those works that centre upon the figure of the Utopian island, can offer a singular reflection upon Darwin's thought, and specifically the challenge that his theory of evolution represents to humanity's conception of its own place in nature.

With that said, the trend in the secondary literature on each author's relation to Darwinism does anticipate the theme of my following section, for this group is at least united in being ambivalent about Darwin's theory of evolution. Butler's career can be crudely divided into a pro- and anti-Darwinian period, the latter being inseparable from the former; Huxley is divided by competing genealogical and philosophical exigencies, being both wedded to Darwinian naturalism and sceptical of its Utopian implications; and Houellebecq is a paradoxical Darwinian, critical of the consequences of the encroachment of naturalism and materialism on human relations, but seemingly pessimistic about the possibility of resisting that process. In the following section I want to demonstrate how that sense of division and paradox in relation to Darwinian evolution is echoed in their novels; how their novels represent fantasies about the Utopian possibilities offered by Darwin's theory of evolution, dreams which are haunted by a sense of the dangers those possibilities bring about.

Darwinian Contradiction and the Utopian Island

As I have suggested, Deleuze argues that islands symbolise a philosophical contradiction. They can be understood as exemplars of the ontological dynamism and immanently transformative nature of material life. But they can be also understood, and usually are, Deleuze suggests, as an embodiment of a sublime form of transcendent autonomy, attractive because it suppresses the painful, chaotic, and material reality of human mortality in favour of an illusory individual freedom and agency. This duality is evident in readings of Darwinian evolution. Manuel de Landa, elaborating upon Deleuze's conception of the individual as a processual, differential, and historical entity, understands the island to embody the dynamic quality of evolution through which species diverge, individuate, and evolve. But for some readers, the island remains a site of transcendental creation. This is evident not only in the construction of the Galapagos Islands as a place of pristine, scientific and natural productivity that I discussed before; but also in readings of Darwinian evolution that, paradoxically, are aimed at the re-establishment of human perfectibility and autonomy.

This latter form of nominally materialist but actually transcendent idealism, wherein the island is considered both a product of and timelessly separate from the forces that engender it, is also present in what Jameson and Marin designate as Utopian desire. Deleuze argues that humanity seeks at all times to imagine or convince itself that the material, differential forces from which it emerges have somehow ceased to operate; and Jameson argues that this is reflected in both everyday efforts at corporeal purity, dreams of individual autonomy, as much as it is in grand political programmes for change and literary constructions of the future. Marin goes further and suggests that the very concept of the human is premised on this Utopian fantasy of differentiation and its enactment in 'Utopic' self-enclosure. He suggests that the very act of the human naming itself, inscribing itself into existence by excising itself from nature, is co-extensive with the desire for human transcendence, since the act attributes itself the power to dominate.

Utopianism as I have understood it, then, with its stress on isolation, autonomy, control, and a transcendence which it seeks to enact through the destruction of social, economic, and geographical ecologies, would seem irreconcilable with the dynamism of the materialist networks involved in Darwinian evolution. Darwin's theory of evolution by natural selection argues that beyond the superficial differences and resemblances between

individuals, variations, and species - the taxonomical, classificatory representation of which he designated as 'arbitrary' - there exists an ineradicable bond of genealogical and historical entanglement. Species, Darwin argues, are not 'independently created' by an *ex nihilo* agency, whose authority we can ratify with timeless taxonomies, but by a wholly materialist process of evolution, through which all species are irreducibly connected.

Patrick Parrinder's work on the profusion of scientific Utopian literature in the nineteenth century shows that, far from abnegating Utopian desire, Darwinian evolution engenders a proliferation of new expressions for transcendence. Exploring Utopian fantasies of racial perfection in William Morris's *News from Nowhere* and Francis Galton's unpublished novel, *Kantsaywhere*, Parrinder argues that a precondition of Utopian perfection is corporeal perfection – the improvement of the species. This desire for bodily perfection, he argues, is derived not from More but from Plato's *Republic*, and moreover the discovery of the mechanics of Darwinian sexual selection in the nineteenth century enables us to conceive of enacting this perfectibility in material terms.[70] Eugenics (literally "good breeding") was inaugurated by Francis Galton, and is conceived in the belief that Darwinian evolution could allow science objectively to identify the undesirable biological traits of the human species. In turn, as Mike Hawkins judiciously puts it, eugenics would allow us 'reduce [the] numbers [of undesirables] through relevant social controls - negative eugenics - while at the same time encouraging the reproduction of the better elements - positive eugenics.'[71] Positive eugenics, Parrinder suggests, amounts to a form of Utopian project, since it aims at the perfection of the human race as a prequel to the perfection of society. But he also argues elsewhere that sexual selection itself, the choice of mates based on their perceived capacity to ensure the improvement of the species, is itself a form of eugenic breeding.[72] This does not suggest that eugenics is a Utopian perversion of nature, but that nature and evolution are themselves, according to this argument, compelled by a Utopian desire for completion and perfection.

By historicising the Utopian drive beyond More's work, Parrinder demonstrates how a latent, historically persistent Utopian desire for human beauty and corporeal vigour

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[70] Patrick Parrinder, 'Eugenics and Utopia: Sexual Selection from Galton to Morris', *Utopian Studies*, 8.2 (1997), 1–12.
[71] Hawkins, p. 217.
[72] Patrick Parrinder, *Utopian Literature and Science: From the Scientific Revolution to Brave New World and beyond* (London: Palgrave Macmillan, 2015), p. 13.

might find an alliance in Darwinian evolution, specifically in the form eugenic theory which promises to make that Utopian fantasy a biological reality. Indeed, the extraordinary beauty of the inhabitants of Pala and Erewhon as well as the corporeal purity desired by the neohuman confirm that. And by claiming that eugenic breeding is integral to the Darwinian conception of sexual selection, Parrinder performs the very reading of sexual selection that theoretically ratifies the plausibility of that promise. In response, Elizabeth Grosz's re-reading of Darwin's theory of sexual selection argues for a consideration of the manner in which beauty, desire, and sexuality – and thus reproduction – are historically, socially, and aesthetically contingent; she argues that their goal, even in evolutionary terms, is only partly to reproduce or "improve" the species. By contrast, Parrinder's interpretation of Darwinian sexual selection as a Utopian process is itself Utopian, since it assumes the calculability of beauty and desire and thus capacity for a predictable, linear type of biological "progress". But by that very token, Parrinder's work shows that the Utopian desire for perfection – for the creation of a human desert island – persists, and that in literature influenced by Darwin as much as literary critical readings of those works, the unconscious drive towards transcendence perseveres in the face of the non-teleological materialism outlined by Darwin himself in his theory of evolution.

Those beautiful, seemingly corporeally perfect inhabitants of Huxley's Pala seem similarly oblivious to the contradictory nature of their Utopian project, which involves a combination of religious mysticism, economic and social autarchy, and eugenic population policies, all in pursuit of the stability of their island enclave. Pala's claim is that their politically autarchic, economically isolationist polity owes its stability and serenity to structures of social organisation based on an application of Darwinian evolutionary theories, and the elevation of biological science to the status of a religious creed. Beginning at the end of the nineteenth century, the island's inhabitants, through a chance encounter with a Western, evolutionist named McPhail, adopt alongside their traditional religious practices a set of Darwinian principles applied to the task of personal and social improvement. This 'new wisdom', they say, is simply 'biological theory realized in living practice, is Darwinism raised to the level of compassion and spiritual insight' (*Island*, 193-194). Practically, this translates into eugenic breeding controls for humans and non-humans, enabling the genesis of 'a child of superior quality' with selective reproductive planning (*Island*, 183). It also negates the necessity for external economic and political

relations by genetically improving crops. These practices, combined with a faith in "rational" Buddhism, allows the island and its inhabitants to remain biologically and politically separate from the world, and from its aggressively expansionist industrial neighbour, the island of 'Rendang'.

If, as Krishnan Kumar claims, *Brave New World* was intended as a prescient warning against the enactment of Utopian desire through biopower, *Island*, like Galton's novel *Kantsaywhere*, appears to stand as its antithesis: an earnest, literary imagining of social improvement through Darwinian bio-politics.[73] The novel advances a reading of Darwin's thought, specifically the application of sexual selection for 'positive' eugenics, not merely as a means by which biological Utopian transcendence is materially possible, but as the intellectual and religious lodestone around which society can organise itself. *Island's* Darwinian programme for the perfection of society is based on making hegemonic a version of Darwin's thought that seeks to minimise the threat to humanity of evolution itself. However, just as Deleuze identifies the manner in which Defoe's desert island reveals the anti-materialist fallacy of its own implicit thesis, Huxley's island points to the paradox of its own conception of Darwinian evolution. As I have mentioned previously, Farnaby's chance entry into Pala is an explicit irruption of materiality into the island's space of transcendent autonomy; a pointed example of the way in which the island's isolation, no matter how complete it appears, is always contingent. But even as their Utopian isolation is punctured, the Palanese continue to evangelise their Darwinian conception of religion and economics. Farnaby is instructed by a teacher at a Palanese school how their educational ethos is founded on an ecological conception of nature and the world:

> "That's precisely the reason why begin with [ecology]. Never give children a chance of imagining that anything exists in isolation. Make it plain from the very first that all living is a relationship. Show them relationships in the woods, in the fields, in the ponds and streams, in the village and country around it. Rub it in." (*Island*, 18)

This educational policy reveals the contradictory core of their Utopian project. While claiming to adopt an elevated reading of Darwin, evoking once more the ecological image of the 'entangled bank', the Palanese fail to apply to principle of life as indefinite relation

[73] Krishan Kumar, *Utopianism*, Concepts in Social Thought (Minneapolis: University of Minnesota Press, 1991), p. 55.

to their own Utopian pretensions. On the contrary, their adoption of eugenic breeding is by definition anti-ecological, since it is premised on the possibility of human enclosure and civilising perfection.

This logical inconsistency in Pala's Darwinian politics and economics can be read as a consequence of the novel's own inconsistent quality and its apparent didacticism – both factors prompting critics to dismiss the novel. Putting aside speculative accounts of Huxley's perceived intentions, however, the novel's didactic rhetoric can also be read as a (perhaps accidental) critical comment, warning its readers against dogmatic, Utopian thought and religious zeal. The paradox with which readers are confronted involves Utopian isolation and an interpretation of Darwinian evolution as an ecological conception of nature; and this paradox recalls the literary paradox of the desert island. The imaginary transcendence of the island is negated by the philosophical reading of Darwin through which the Palanese build their island. This reading is further confirmed by the conclusion of the novel. Despite Pala's eugenic and political isolationism, the novel concludes with Farnaby witnessing the imminent destruction of this Utopian nation in a military coup conducted by the heir to the throne of Pala, a young demagogue named Murugan. Just as Farnaby's infiltration of the country is a repudiation of its pretensions to transcendent autonomy, Murugan's destruction of Pala is enabled by his relation to a political and ideological world external to Pala. Visiting the neighbouring industrialist, capitalist, and imperialist country of Rendang, Murugan is seduced by the material pleasures of capitalist consumption and expansion, which triggers his desire to seize power in Pala. Huxley's novel, then, shows the delusion of the desert island fantasy, as well as the brutal consequences of its destruction. For all its totalising didacticism, *Island*, in this respect, can be read as a sobering warning against scientific determinism and the prospect of human autonomy, even as it acknowledges the biological and technological possibilities of Darwin-inspired methods of breeding and human improvement.

Butler's *Erewhon* reveals a similar tension at play between the pretensions of Utopian idealism and the realities of Darwinian materialism, between the fantasy of a desert island and a cruel biological materiality. That the novel's protagonist manages to penetrate the nominally enclosed boundaries of the country of Erewhon shows those boundaries to be porous, and the desert island not to be separate, but part of the dynamic, constantly shifting material world. And just as Butler's depiction of the breaching of

Erewhon's sealed space prefigures Huxley's similar gesture in the form of Farnaby's discovery of Pala, the conclusion of *Erewhon* anticipates the ending of *Island*. Having been imprisoned by the Erewhonians and forced to abide by their oppressive laws, the protagonist escapes along with his Erewhonian lover, Arowhena, in a hot air balloon, showing the borders of this Utopia to be both internally and externally porous. In its concluding pages, the novel's protagonist outlines his plans to return to Erewhon with a military, colonial force with a view to exploiting the country's labour. The narrator observes that '[o]ne of the rivers which descends from the Snowy Mountains, and passes through Erewhon, is known to be navigable for several hundred miles from its mouth' (*Erewhon*, 255). And with this knowledge of Erewhon's geographical materiality he plans on penetrating their island once again, this time with heavily armed gunboats, to intimidate its inhabitants who have dispossessed themselves of all means of defence, and to coerce them into accepting wage labour for a colonial sugar-growing company. The conclusion of Huxley's novel suggests that while sovereignty from evolutionary relation is impossible, the dynamic materialism of the island and an ecological application of Darwinian naturalism can itself lead to violent tensions. In the same way, Butler's novel shows Utopian island to be a delusion as well as showing materialist reality of the encounter of the different "races" of man to engender violence and colonial rapacity rather than steady perfectibility.

Through reading the Erewhonian "Book of the Machines", which is quoted at length by the novel's narrator, it is possible to perceive how the figure of the Utopic island enacts a tension between peaceful transcendent fantasy and violent materialist reality with respect to Darwinian natural selection. As I have already mentioned, the "Book of the Machines" is a development of two earlier essays by Butler in which he speculates on the consequences of technological evolution. The novel's protagonist discovers on his arrival in Erewhon that the success of the country, as the Erewhonians see it, is based on their decision to destroy all machinery and prohibit the development of technology. Butler's narrator writes:

> I learnt that about four hundred years previously, the state of mechanical knowledge was far beyond our own, and was advancing with prodigious rapidity, until one of the most learned professors of hypothetics wrote an extraordinary book (from which I propose to give extracts later on), proving that the machines were ultimately destined to supplant the race of man, and to become instinct with

> a vitality as different from, and superior to, that of animals, as animal to vegetable life. (*Erewhon*, 97)

This professor of hypothetics explains in his book that the threat represented by technology is analogous to the threat represented by a rival species in the struggle to survive. In the "Book of the Machines", this fictitious writer explains that technology has an evolutionary advantage over humanity, for where the human is mentally fallible and physically weak, the machine possesses undimmed enthusiasm for work and inhuman strength:

> […] the machine is brisk and active, when the man is weary; it is clear-headed and collected, when the man is stupid and dull; it needs no slumber, when man must sleep or drop; ever at its post, every ready for work, its alacrity never flags, its patience never gives in. (*Erewhon*, 205)

The Erewhonians destruction of machinery is analogous to what Marin theorises as the Utopic repression of the animal. The destruction of machinery represents a desperate attempt to sustain human domination and, since dominance and autonomy is constitutive of humanity's self-conception, to reconstitute and sustain the very idea humanity itself. The conclusion of Butler's novel, then, sharpens the contradictory nature of this selective understanding of evolution. By destroying machinery in the hopes of sustaining their own autonomy, the Erewhonians deprive themselves of any military technology or form of defence against potential attackers. The Erewhonians' assumption that their autonomy is secured by one violent intervention in evolutionary competition is shattered by the violently antagonistic relations inherent to the evolutionary competition, which made their temporary seclusion possible.

A similar narrative critique of the contradictory and ultimately doomed nature of the Darwinian Utopian island unfolds in Houellebecq's *The Possibility of an Island*. Commenting on his previous novel, *Les Particules élémentaires*, in which Houellebecq describes a similar type of neohuman life made possible by cloning, John McCann points out that the non-relational, purely repetitive form of reproduction achieved by genomic cloning means that for the human, in effect, evolution can be halted.[74] Similarly, in *The Possibility of an Island*, since the neohuman does not age and reproduces only itself in an act of genetic repetition, each individual – and the species of neohumanity – becomes a

[74] McCann, p. 174.

biological desert island amidst an otherwise dynamic sea of dynamic and cyclical biological life, relations, hybridisations, and transformations. Like Butler's Erewhonians seeking to remove themselves from the world of evolutionary competition, the neohumans are a consequence of humanity's capacity to enact that desire for autonomy and put it into biological practice with genomic technology. Daniel25 comments on Friedrich Nietzsche's characterisation of humanity as 'the species whose type is not yet fixed', observing dismissively that 'if humans in no way merited such an assessment—less so than most of the animal species in any case—it certainly no longer applies to the neohumans who followed them' (*Possibility,* 361). But as McCann notes, *The Possibility of an Island* is dedicated also to taking on the idea of an evolutionary island, exploring its consequences and its lived reality. The neohumans still depend on light, air, and minerals derived from their external environment, meaning they are strictly not autonomous in relation to the material world. As with Butler's punctured Utopian enclave and Huxley's colonised island, Houellebecq's neohuman Utopia shows the transcendence of a biological Utopia to be materially impossible.

Further to this critique of the material impossibility of biological autonomy, Houellebecq's novel explores ways in which the form of affective isolation enacted by the neohumans is psychically unsustainable. The neohumans, McCann observes, are like Swift's Struldbruggs: 'although the problem of degeneration of the body has been solved, the novel shows the immortals are still accursed.'[75] The life of the neohuman, for all that it offers serenity and freedom from the biological relations of evolutionary change, in both its sexual and competitive forms, is a sterile form of emotional imprisonment. But human relations do manage persist through the neohumans' reading of and exegetical commentary on the life stories of their genetic predecessors. Indeed, it is precisely this act of reading that alerts the neohumans to the emptiness of their own lives. In digital conversation with another neohuman, Daniel25 discovers that one of his former correspondents, Marie23, has been driven to escape her own compound. This decision effectively ends her life, but she undertakes it with the intention to seek out human relation in the external world, and in response to the ecstatic suicide note of Daniel1 in

[75] McCann, p. 174.

which he affirms the redemptive, timeless nature of love. Reflecting upon this with contempt, Daniel25's interlocutor observes that

> this letter that has had a catastrophic effect on Marie23, and drove her to leave, to imagine that a social community—of humans and neohumans, basically she didn't really know—had formed somewhere, and that she had discovered a new mode of relational organization; that the radical individual separation we now know could be abolished immediately. (*Possibility*, 376-377)

And just as Marie23 is compelled to abolish isolation and vacate her compound in search of affective connection, Daniel25 is inspired to do the same after reading Daniel1's final poem addressed to his lover, Esther. Erewhon's technological application of the Darwinian principle of competition turns out also to be their undoing, as their destruction of technology leaves their country vulnerable to enemies. Similarly, the Palanese delusion of transcendence from socio-economic relation, based on a Darwinian-inspired technology leaves them blind to the threat of material threats to their Utopia. And in Houellebecq's neohuman Utopia, the techniques of reading, re-reading, and commentary which enable neohumanity to transcend evolution, are also the very conditions which destroy that transcendence, drawing the neohumans back to evolutionary, materiality, the promise of relational life, and death.

Each of these novels, then, show the fantasy of a Darwinian Utopia – of a timeless, autarchic socio-political and biological territory – to be analogous to the desert island: a myth. The desert island is an ideation whose fantastical and impossible nature is confirmed by the laws of evolutionary naturalism in which its creators place their idealistic faith. In this light, these Utopian novels appear to recapitulate the apparent Naturalist determinism of Zola and the specifically Darwinian pessimism of certain aspects of Hardy's fiction, where biology negates the prospect of redemption, even though these narratives raise the possibility of an improved world. In *The Shape of Utopia,* Robert Elliot argues that Utopian hope is historically and formally connected to satirical cynicism.[76] By this reading, these three island novels articulate reactionary pessimism not Utopian idealism, as their creativity or idealism is hopelessly self-defeating. Commenting

[76] Elliot offers the example of Saturnalia which, he submits, is a Utopian break from the real which works to ridicule prevailing conditions, confirming the essentially negative function of Utopian imagination rather than its political or philosophical project of envisioning an improved future; Elliott, p. 6.

on the specific case of Houellebecq, Crowley and Best make the observation that this type of self-defeating Utopianism is a particularly despairing literary form:

> When utopia is no longer available as the end point of an ultimately eschatological progressive narrative [...] it can only be configured as an attempt at withdrawal, a sidestep, an interruption, a puncture - a kind of utopia under erasure.
> [...]
> But if utopia is only conceivable as a puncture, or as under erasure, then any denunciation of all the misery that surrounds this utopia may well find itself also punctured, semi-effaced, irretrievably in hock to this hegemonic misery.[77]

According to this interpretation of Houellebecq's work, neither Utopian imagining nor its satirical denunciation can be redemptive, nor even cathartic. Both the earnest act of imagining an improved future and the critical act of condemnation work in the service of prevailing hopelessness. The act of criticism confirms the essentially malignant nature of life, while realism about Utopian fantasy confirms the impossibility of escaping that malignance.

I choose to read the relation between Utopia and satire in a different way, to focus on a different aspect of the dynamics of island creation. Like Elliot, I acknowledge the formal, historical overlap in these three novels between satirical critique and Utopian speculation. But I do not see satire as a fundamentally negative form nor do I conceive of the Utopian imagination as an inherently hopeless one. Socio-political and biological forms of Utopian withdrawal are shown in Houellebecq, Huxley, and Butler's stories to be symptomatic of unrealisable and doctrinal desire for timeless sovereignty. This can be read positively, as an affirmation of the processes of death and renewal which characterises and constitutes the fundamentally indeterminate nature of social, historical, and, crucially, biological life. We can focus on the productive consequences of the emergence of a temporary Utopia, of the causal ripples that radiate from the emergent island, as opposed to fixating upon the inevitable and, therefore, banal fact of that island's dissolution. Utopia's failure is inevitable, just as death is unavoidable and geological forms are temporary. But the act of Utopian creation, what Deleuze calls the 'beginning again' of the island, engenders an abundance of new relations. It is upon these new relations that I focus in the final section of this chapter.

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[77] Best and Crowley, pp. 209–210.

The Dialectics of Darwinian Utopias

Louis Marin shares with Deleuze an affirmative understanding of island creation. The Utopian act of withdrawal is a positive act of inscription at the same time as a violent incision. Abraxas is destroyed when a monumental trench is dug and it becomes excised from the continent to which it physically attached, which is the condition by which Utopia is created. But Utopia, Marin points out, can never truly become independent of relation and connection, and instead seeks to bury its connections to the continent from which it came by bribing its neighbours, quietly assassinating its enemies, and repudiating international treaties.[78] This act of disingenuous insulation is mirrored by More who writes *Utopia* in the form of a factual travel narrative, creating the text by disguising its fictional origins. But just as More's work describes the act of incision that creates the island, thereby undermining the island's own attempt to conceal its origins, Hythloday's description of the island of Utopia and its uncanny resemblance to England, its phantom referent, undermines More's assertion of the text's factuality. Utopia is similar in size to England, although different in shape; the number of Utopian cities, fifty-three, matches the number of counties in England and Wales in the sixteenth century.[79] For all that the country of Utopia appears historically, geographically, and politically disconnected, as Christopher Kendrick points out, England 'provides [Utopia] with the raw material from which [the text] is spun'.[80] Utopia therefore is enchained to its source material – the earth, history, political reality – by a variety of different forms of relation. For at the same time as Utopia represents a negation of its referent, it also narrates the process by which Utopia seeks to efface the trace of that referent, revealing Utopia in its representation by More to be a negation of, a mirror of, and penetrated by, the trace of its referent all at the same time.

Marin's analysis illustrates that *Utopia* represents a 'textual staging' of the contradictions that constitute textual and discursive creation. *Utopia* is a story about discursive foundation, describing the conditions of possibility that make texts, addressing the act of concealment which grants More's text political urgency. The creation of the

[78] Marin, pp. 99–100.
[79] Robert Adams and George Logan refer to William Harrison's 1587 *Description of England* in which this tally is made. More, p. 43, note 6.
[80] Christopher Kendrick, 'More's Utopia and Uneven Development', *Boundary 2*, 13.2/3 (1985), 233–66 (p. 243).

island does not simply seek to create a desert island and fail, but 'engenders a plurality of spaces in the totality of one project'.[81] The violent cutting away of relation with the intention of creating a political, spatial, or discursive totality instead explosively proliferates relations between discursive, political, geographical, and historical spaces, formalising and staging these relations in a single text. This formal point about the creation of Utopian textual space has consequences for how I read the treatment of Darwinian evolution in *Erewhon*, *Island*, and *The Possibility of an Island*. Each of these novels undermines the assumed a-historicity, transcendence, and autonomy of the Utopian island that claims to sustain this autarchy through the application of various Darwinian principles to political, biological, and economic realities. But the delicate and rigorously maintained autonomies of Erewhon, Pala, and the neohuman state of Daniel24 and Daniel25 do exist for a time, however briefly. And in this time, these novels set up a dialogic relation between the positive project of Utopian creation and the source material which that creative act seeks to negate.

In Huxley's *Island*, Pala's attempt to engender an autarchic state through the adoption of Darwinian eugenics and the creation of a scientific religion is shown to be internally contradictory. The final scene of the novel depicts the ultimate consequences of this contradiction, as the form of Darwinian, competitive imperialism of which Pala is intended to be a definitive negation, undoes its Utopian autarchy from within. However, the novel's depiction of the inherent impossibility of the island's project of self-enclosure can be read as more than a reconfirmation of the irreducible antagonism between a nihilistic acceptance and political enactment of the Darwinian 'war of nature' and the Utopian disavowal of the materialist dynamism of evolution from which violence is inseparable. Instead, this conflict allows us to see the continuities between these two Darwinisms. The *laissez-faire* nihilism of the war of nature is implicitly Utopian at the same time as it is self-destructive. As one educated Palanese man points out, Rendang's population continues to increase at an unsustainably high pace as a result of unchecked capitalist growth, resulting in widespread poverty and misery, threatening the very stability of the country. So even as Rendang's actions imply its acceptance of the ephemerality of life and the immanent violence of evolutionary competition, their colonial

[81] Marin, p. 12.

project is conducted as if it were not itself a threat to Rendang's own existence. In contrast with Pala's rigid eugenic programme for population control which demands an impossible level of biological control, Rendang's unwillingness to interfere with the dynamics of evolutionary change through the use of contraceptives reveals the illusions of immortality that are concealed by heedless nihilism.

While Pala's inevitably self-defeating Utopianism is understood to be an explicit expression of a desire for timeless human autonomy, Rendang's imperialist anarchism conceals that desire beneath an apparent nihilistic approach to life. Similarly, Pala's supposed Utopian desire seeks to efface any historical trace of this nihilism within their own body politic and Darwinian ethos, but finds that trace revealing itself in the figure of Murugan. As I have previously pointed out, this figure, the island's heir-in-waiting, Murugan, facilitates the colonisation of Pala by Rendang, his affinity for the capitalist industrialism of countries outside Pala's borders inspiring his betrayal. But Murugan understands his action in precisely the opposite way, arguing that imperialism and capitalism are the logical conclusion of the history of Pala and its embrace of Darwinian evolution. Murugan argues that Pala's current, Utopian political settlement is a deviation from the fundamental principles of Darwinian evolution and that, in contrast, his vision for a dynamic, aggressive, and industrial state represents a more accurate vision of a political ideology driven by Darwinian evolution. Murugan argues that his plans for militarisation, industrialisation, and opening Pala's borders to trade is a continuation of 'the revolution that was started more than a hundred years ago' by the evolutionary scientist McPhail, who introduced Western science to Pala (*Island*, 47). Murugan, then, reintroduces the spectre of evolutionary theory's history, specifically the nineteenth century origins of evolutionary Darwinism, and implicitly alludes to the ideological climate of imperialism and capitalist industrialism of which Darwinian natural selection was a reflection and which it sustained in turn. For all that Pala seeks to repudiate ideology and history through its Utopian reading of Darwinian evolution, it is the persistence of the ideological undertow in the history of Darwinism's development and which leads to the destruction of Pala.

Butler's *Erewhon* also stages a dialectically interlaced set of relations between ostensibly divergent iterations of Darwinism. As I have previously pointed out, Erewhon symbolises an inversion of Victorian Britain and a reflection of it, the initially strange and

corrupt world of Erewhon coming to represent a mirror image of Victorian society. Each of these worlds, the imaginary construction of Erewhon and its implicit referent, Butler's Victorian milieu, corresponds to nominally opposing uses of Darwin, specifically in relation to technology. "The Book of the Machines" argues for the destruction of all machinery, justifying this destruction by arguing that machines represent an evolutionary threat to humanity. By contrast, Darwinian natural selection seems to complement the Victorian *laissez faire* economics of free-market competition which, Herbert Sussman argues, was fundamental to the industrial revolution.[82] These contrasting uses of Darwin, however, have at their core an identical goal. Erewhon's desire in destroying machines is to sustain the dominance of the human and although, as Marx argues in *Capital,* technological advancement threatened to alienate humanity from any sense of agency, the goal of Victorian industrial and technological progress was nothing other than that of human advancement and implicitly human perfection.

Marx's understanding of the Luddite movement allows us to develop this relationship between the Victorian embrace of technological advancement understood as a form of evolutionary progress on the one hand, and, on the other hand the Erewhonian use of Darwinian evolution to reject technology altogether. In *Capital*, Marx identifies the struggle between technology and wage-labour in terms of the fundamental contradictions inherent to capitalism, outlining the ways in which the increasing speed of mechanisation renders skilled labourers obsolete and stripping them of economic agency.[83] Butler's Erewhon represents a desire to withdraw from this exploitative set of economic relations, from the Darwinian and economic war of nature, which, in the context of the Industrial Revolution in Britain and its afterlife in the nineteenth century, are exemplified by the struggle between the human and the machine. Marx's response to the exploitative nature of technological evolution, however, is not reactionary like Erewhon's wholesale destruction of machinery. He defines his theoretical position in relation to the Luddite movement, of which the Erewhonians are a plausible literary cipher. The Luddites, Marx argues, were fundamentally mistaken in identifying technological evolution as the source of their exploitation. They should instead have 'directed their attacks, not against the

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[82] Herbert L. Sussman, *Victorian Technology: Invention, Innovation, and the Rise of the Machine*, Victorian Life and Times (Santa Barbara, CA: Praeger Publishers, 2009), p. 3.
[83] Karl Marx, *Capital, Volume One: A Critique of Political Economy*, ed. by Friedrich Engels, trans. by Samuel Moore and Edward Aveling (New York: Dover, 2012), pp. 466–471.

material instruments of production, but against the mode in which they are used'.[84] That is to say, Marx advocates analysing the relations between technology and humanity, and illuminating the specific ways in which these relations allow certain 'modes' of exploitative relation, rather than attacking the objects as such.

This focus on the relations between labour and technology catalyses Deleuze and Guattari's argument in *Anti-Oedipus* that the ontological difference between the human and the machine is insubstantial. Quoting from Marx's *Economic and Philosophic Manuscripts of 1844*, Deleuze and Guattari cite his brief allusion to the dynamics of human sexuality as a radical intervention in theorising human-machine relations. [85] When Marx writes that 'the direct, natural, and necessary relation of person to person' is that of the relation between man and woman, according to Deleuze and Guattari, this should be understood as a statement of the 'molarity' of specifically human sexuality amidst myriad forms of other 'molecular' libidinal relations that exceed the oppressive network of the Oedipal family.[86] Similar to Elizabeth Grosz who argues the libidinal relations between individual organisms should be understood within the context of a co-creative dynamic between culture and nature, Deleuze and Guattari argue that a merely biologically reproductive understanding of the sexual relation of person to person lacks the dynamic co-creative possibilities engendered by non-human forms of libidinal relations. Two humans merely produce other humans in a linear, genealogical fashion; humans and non-humans catalyse an explosive increase in reproductive potentialities, opening up the possibility of new life-forms, or dynamic assemblages, that are constituted by multiple, interrelated beings, both human, non-human, and even virtual. Deleuze and Guattari argue as a result that, for Marx, sexual difference lies not between man and woman but between the human and non-human.

Further analysis of "The Book of the Machines" reveals a similar conception of the relation between humanity and technology as outlined by the Erewhonians. *Erewhon*'s narrator offers the following excerpt:

> How greatly," he wrote, "do we not now live with our external limbs? We vary our physique with the seasons, with age, with advancing or decreasing wealth. If it is

[84] Marx, *Capital, Volume One*, p. 468.
[85] Gilles Deleuze and Félix Guattari, *Anti-Oedipus: Capitalism and Schizophrenia*, trans. by Robert Hurley, Mark Seem, & Helen R. Lane (Minneapolis: University of Minnesota Press, 1983), p. 294.
[86] Karl Marx, *Economic and Philosophic Manuscripts of 1844*, ed. & trans. by Martin Milligan (New York: Dover, 2012), p. 101.

> wet we are furnished with an organ commonly called an umbrella, and which is designed for the purpose of protecting our clothes or our skins from the injurious effects of rain. Man has now many extra-corporeal members, which are of more importance to him than a good deal of his hair, or at any rate than his whiskers. (*Erewhon*, 224)

Humanity's dependence on technological prosthesis, he argues, has become so thorough that technology must cease to be viewed as wholly organic, but as an assemblage of human and non-human organs. In fact, the fictional author of this work argues, such is the deep evolutionary history of technological prosthesis that the very idea of the human itself comes under question, 'the earliest accidental use of the stick having set the ball rolling' (*Erewhon*, 223). This mirrors Friedrich Engels reading of Darwin's theory of the law of 'correlation of growth' in *The Part played by Labour in the Transition from Ape to Man*. 'Labour', Engels argues, which distinguishes man from animal, 'begins with the making of tools' leading to the paradoxical conclusion that the human begins with the incorporation of non-human organs at the point when humanity as a category ends.[87] The human island, according to this reading, is neither a non-existent entity lost in evolutionary flux, nor a transcendent category infused with supreme agency. The human exists as a physical dynamism, whose capacity to exploit the supplementary quality of its external environment makes a definitive image of that entity impossible.

Butler's staging of a dialectic of a Victorian belief in technological advancement as a correlative of evolutionary progress and the rejection of that advancement by the Erewhonians allows us to see how both Erewhon and the Victorian progressive mind-set share a common Utopian aim. Both seek to maintain human biological and ontological supremacy, and this novel illustrates how that aim is undermined by the Utopian conception of humanity upon which that desire relies. Butler's Erewhonians do not merely fear being made extinct by technology, but being rendered part of a larger technological reproductive assemblage, which implies that the human is not inherently autonomous but that it already exists as part of a network of relations. Conversely, even though the Victorian emphasis on technological evolution is aimed at human advancement, the result of this evolution is, as Marx, Deleuze, and Butler suggest, the erasure of the very human autonomy upon which humanity's self-conception depends. In that respect, the Ludditism

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[87] Friedrich Engels, *The Part Played by Labour in the Transition from Ape to Man* (Foreign Languages Press, 1975 [1895-1906]).

of the Erewhonians is merely an intensification and, in a way, a more explicit version of the human egotism that drives technological advancement in Victorian society.

Butler's negative image of the co-constitutive nature of human and non-human relations is not only allied to the fundamental biological challenge to humanity Darwin makes with his theory of evolution. It also anticipates with remarkable prescience Donna Harraway's essay, *A Cyborg Manifesto*, on the feminist possibilities engendered by the relation between humanity and technology.[88] Elizabeth Grosz, as I have shown, offers an affirmative reading of the libidinal relations between the sexes which argues that the co-creative dynamics encoded in biological sexuality engender the possibility of a genuinely indeterminate, evolutionary future. Similarly, Harraway posits an affirmative interpretation of the possibilities of human-machine relations which is premised on the biological indeterminacy of humanity. She argues that new digital technologies open up the possibility of an indeterminate 'cyborg' ontology through which it is possible to write and rewrite social, political, economic, and gender realities. Becoming integrated with technology, becoming inhuman, she says, should not be dreaded as the Erewhonians argue, but should be embraced and harnessed 'through the skilful task of reconstructing the boundaries of daily life, in partial connection with others, in communication with all of our parts.'[89] Harraway's theory of cyborg indeterminacy celebrates the dissolution of the category of the human, a category, Freud observed, to which we as a species hold fast resiliently, opening her theory up to the accusation of being as misguided as the image of the over-determined human she seeks to dismantle. But Harraway's Utopianism does not imagine that it destroys all forms of human ontology or subjectivity. Instead it is tasked with the dissolution and replacement of a specifically transcendental Western human, which bolsters exploitative Western capitalist ideology.

The cyborg in *The Possibility of an Island* is tasked with precisely the opposite goal. The neohuman is an effort at total evolutionary, biological stasis – an attempt at a determinism so complete that the predictive capacities of evolutionary science are not required, since science is tasked with the negation of change. And although we know that

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[88] Donna Harraway, 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century', in *Theorizing Feminism: Parallel Trends in the Humanities and Social Sciences*, ed. by Anne C. Hermann and Abigail J. Stewart (Boulder, Colorado: Westview Press, 1994), pp. 424–57.

[89] Harraway, p. 456.

this effort is ultimately unsuccessful, in creating that temporary textual and conceptual island space, Houellebecq, like Huxley, Butler, and More, engenders within a single text a set of relations between two apparently divergent bio-political Darwinisms. On the one hand, the narrative of Daniel1 is dedicated to describing the conditions of a contemporary Western society where what Sylvia Winter calls Darwin's 'redescription of the human' has resulted in an intensification of the capitalist ideology of ruthless competition as natural law. On the other hand, the Utopian state of neohumanity described in the narratives of Daniel24 and 25 is designed to escape and negate that world, and sketches a state of being where the advancement of Darwinian science and the development of genomic technology has engendered a world devoid of competition specifically, and all human relation generally. Where More's *Utopia*, Huxley's *Island*, and Butler's *Erewhon* create implicitly dialectical relations between the Utopian state of withdrawal and its phantom referent, Houellebecq makes these relations explicit by formally intertwining the three narratives of Daniel1, 24, and 25, constructing, according to John McCann, a narrative structure analogous to the double helix model of DNA.[90]

Douglas Morrey observes that in Daniel1's twenty-first century world of neo-liberal, competitive hegemony, the economic urge for domination is understood to be driven by an evolutionary compulsion for survival. The cruelty of applying free-market logic to sexual relations, Morrey argues, is not merely a function of the extension of capitalist rationality to libidinal relations; it originates in 'a deep atavistic heritage that serves to underline these aspects of human behaviour as so many evolutionary facts'.[91] This line of reasoning is borne out by the conception of human sexual competitiveness that Daniel1's first wife, Isabelle, identifies as originating in a primitive instinctual will to power. Explaining her success as an editor of magazines for teenage girls she elaborates upon this theory:

> If girls are sexually attracted to guys who get up on stage [...] it's not simply that they are seeking fame; it's also that they feel an individual who gets up on stage risks his neck, because the public is a big dangerous animal that can annihilate its creation, hunt it down, and force it to flee, booed off in shame. The reward these girls can offer to the guy who risks his neck by going on stage is their body; it's

[90] McCann, p. 174.
[91] Douglas Morrey, *Michel Houellebecq: Humanity and Its Aftermath* (Liverpool University Press, 2013), p. 131.

> exactly the same thing with a gladiator, or a matador. It would be stupid to imagine that these primitive mechanisms have disappeared; I know them, I use them, I earn my living from them. (*Possibility*, 25)

Sexual desire, she argues, has its origins in a primitive evolutionary mechanism that enables women to identify suitably combative mates, those who seem primed for a violent struggle for survival. Eliding the restrictive economy of natural selection with the general economy of sexual selection, Isabelle reduces sexual desire to a market-driven competition, in which the failure of an individual is understood to be fatal. Daniel1 both benefits and suffers from this competitive, individualist conception of human relation and sexuality. He uses his wealth and status as a means to secure 'access to nubile bodies' as well as suffering from the cruelty of this system organises its social hierarchy according to sexual market-value and, in doing so, mercilessly sidelines the elderly. Consequently, Daniel1's relationship with the much younger actress, Esther, is both a source of profound pleasure and existential pain. With Esther, Daniel loses himself in the ecstasy of orgasm and revels in the enactment of the pornographic fantasies reified by a society organised around reductive conceptions of sexuality; at the same time, he is constantly aware of his age, physical decline, and his superfluity to Esther, who is an exemplary sexual consumer. It is for this reason that the relational and evolutionary stasis of neohumanity is so attractive to Daniel1, since it is a renunciation of all forms of relation, those that cause pleasure as well as those that cause pain.

Reflecting upon the pain which humanity's evolutionary position entails, Daniel24 outlines the reasons that neohumanity represents such a welcome proposition.

> Man had a large brain, disproportionate in relation to the primitive demands arising from the struggle to survive, from the elementary quest for food and sex; we were, at last, going to be able to use it. No culture of the mind, he reminded me, had ever been able to develop in societies with a high level of delinquency, simply because physical security is the condition for free thought; no reflection, no poetry nor idea of the slightest creativity has ever been engendered in an individual who has to worry about his survival, who has to be constantly on his guard. (*Possibility*, 280)

Like Thomas Hardy, Daniel24 argues that misery originates in humanity's capacity to understand its own biological plight. But unlike Hardy's conception of transcendent evolutionary meliorism, which Hardy's fiction shows to be hopeless, Daniel24 reaffirms the idea that the very evolutionary thought that consigns us to misery can also deliver us

from that predicament. In that way, Houellebecq shows the neohuman island not as a break with an archaic, mortal humanity, but as a logical development of that humanity's desire for immortality. More than that, Houellebecq suggests that neohumanity is nothing other than an intensification of the capitalistic form of individualism that causes so much misery in twenty-first century Western society. The image of the neohuman enacts the Utopian work of re-discovering and re-affirming the literally transcendental figure of the human individual; it pushes the image of sovereign individual to its logical end, seeking to become immune to the very conditions that produced it.

In these three works, the Utopian island is not a transcendent figure, but a textual, material, and dynamic entity whose function is to encode a multiplicity of relations in a single text. In this way, the Utopic act of self-enclosure, formalised by the hermeneutic repudiation provided by satirical irony, is undertaken with the intention of proliferating relations: between readings of Darwinisms, between visions of humanity; as well as between the Utopian envisagement of futurity and the trace of reality from which it is derived. This proliferation of relations allows us to trace the way in which various readings of Darwin are mobilised in the service either of Utopian idealism or desperate nihilism, showing the relation between the two to be one of continuity. The withdrawal of life involved in Utopia is itself a form of nihilistic renunciation, while the hedonistic embrace of evolutionary competition is itself Utopian in its underlying assumption of immunity to the consequences of that violence.

Conclusion: 'closing brackets on becoming'

In Houellebecq's *The Possibility of an Island*, the neohuman clone Daniel25 describes to his future readers the rationale behind the neohuman, Utopian impulse. His explanation is not couched in biological or evolutionary terms, but metaphysical ones. 'Rejecting the incomplete paradigm of form, we aspire to rejoin the universe of countless potentialities. Closing the brackets on becoming, we are from now on in unlimited, indefinite stasis' (*Possibility*, 372). He suggests here an interaction between the ontological, the biological, and Utopian desire, the relations between which in three Utopian novels has been the focus of this chapter. For the neohumans, the Utopian desire for ontological stasis – a state of pure, timeless, metaphysical being – is realisable through the applied laws of evolution and genetics. But in this the contradictory nature of the neohumans' Utopian

project is also disclosed. The neohumans reject the incompletion of form but embrace evolutionary science, which, as Deleuze and Grosz show, re-confirms the durational nature of biological materiality, the constant becoming of natural life.

This relationship between a desire for impossible ontological and biological stasis and the attempt at realising that desire with applied versions of Darwinian evolutionary thought runs throughout the novels I have read in this chapter. Erewhon's rejection of becoming a cog in a dynamic, machinic assemblage is the expression of a desire to secure biological autonomy for the human from evolutionary change stasis for the human being. But in rejecting incompletion through the destruction of machinery, the illusory nature of their ontological, societal, and evolutionary isolation is revealed with force, as their lack of machinery leads to the downfall of their Utopian enclave. Similarly, the Palanese, for all that they espouse ecological interconnection, desire more than anything autonomy from any political, social, and evolutionary network of relation and reproduction that threatens the racial and ideological purity of their Utopian settlement. Like Erewhon, the illusory nature of their Utopian isolation is revealed to them with brute force, as the socio-political aspect of Darwin's war of nature re-asserts itself in the shape of Rendang.

The spatial figure of the island and the dialectical form of the Utopian novel allows these novels to articulate these contradictions. In the process, they allow us once more to explore the relationship between nihilistic and optimisitic responses to Darwin's theory of evolution. While showing the Utopian islands to be guilty of what Deleuze in his essay on "Desert Islands" reveals as transcendent delusions, each of these novels is equally concerned to show that anti-Utopian nihilism is as delusional as it is dangerous. This has significant consequences for our understanding of the historical and social milieus of which each of these novels, through a combination of Utopian affirmation as well as satirical negation, is offering a critique. In *Erewhon*, the reactionary Utopianism of Ludditism is shown as continuous with the nihilism of industrial capitalism; in *Island*, the spiritualist, post-ideological delusions of Pala and its programme of human eugenics is revealed to be historically and ideologically reliant on the nineteenth-century industrial capitalism it decries; and in *The Possibility of an Island*, the supposedly transcendent, anti-relational genetic Utopia is exposed as an intensification of the cruel and atomised, capitalist individualism, for which the invention of the neohuman was designed to escape.

Nihilist and Utopian responses to Darwin's assertion of humanity's animality are shown equally to be aimed, desperately, at the reconstitution of human sovereignty.

With that said, each of the novels I have discussed here acknowledges the persistence of Utopian desire, is sympathetic to that desire, and reminds us both of the productivity of its imaginary consequences as well as its potential dangers. They show how Utopian withdrawal can offer humanity the experience of serenity, of peace, and the prospect of redemption and of real agency, even as these are granted to some to the exclusion of others and are ultimately ephemeral. But in those temporary Utopian enclaves there is a trace of the dead reality from which they came, a remainder of what the imaginary desert island seeks to repudiate.

The Utopian island in these works gives literary form to the combined sense of agency and brutal limitation that characterises human life in the light of Darwin. The human, like the island, is a contained dynamism: both real and always on the verge of death. These works give voice to that reality – to the reality of sexual pleasure, to the peace of isolation, to the possibilities engendered by and the enjoyment of our Utopian delusions – as well as the necessary telos of all evolutionary life, death. As reflections on the general condition of the human as an evolutionary being, these works remind us that the very idea of the human is an ontological impossibility but a performative reality, made material by humanity's inscription of itself into the world. They remind us that for all the delusions involved in that Utopian performance, humanity is a reality worth performing.

Conclusion

Reading Darwin: Paranoia and Reparation

I began this dissertation by asking how does humanity respond to the existential death sentence pronounced by Darwinian evolutionary thought? The question immediately raises others. Darwin's theory of evolution shows that humanity is united with and derived from the animal, and puts paid to any notion of anthropocentric autonomy. On the other hand, such a destruction of human sovereignty also problematises the epistemological authority upon which Darwin's theory subsists. By revealing the human to be biologically and ontologically indissociable from its object of inquiry, nature, Darwin questions the epistemological universality implicit in his own theory, and evolutionary thought is revealed to be symptomatic of the same anthropocentrism it asks us to reject.

This dissertation has sought to address this tension in Darwin's theory of evolution by looking specifically at responses to it in literary art. I have sought to demonstrate that the very fact of literature's existence and its capacity to respond to Darwin's evolutionary thought presupposes a kind of unique human agency which complicates humanity's inaugural fall from grace with which the argument begins. Darwin's destruction of humanity is ontological, but it does not destroy humanity. Humanity is performative, inscribing itself into the world, not definitively, but in a way that is contingent on that act of inscription itself. Similarly, we can read the Cartesian epistemological position of scientific autonomy that Darwin assumes as a kind of performance – a staging of his own authority. I have sought, therefore, to explore how the performative truth of literary art responds to Darwin's theory of evolution; specifically, how in their responses to Darwin the novels I have studied perform complex, contradictory readings of Darwin's theory of evolution.

What modes of reading is it possible to employ, when the biological, ontological, and epistemological position from which to read is unstable? Examining the contemporary usage of what Paul Ricœur calls the 'hermeneutics of suspicion', Eve Kosofky Sedgwick suggests that two interpretive *ethea*, two modes of reading, are available to the critical

subject: paranoid reading and reparative reading.[1] Paranoid reading, Sedgwick suggests, has its origin in the works of the 'masters of suspicion', Freud, Marx, and Nietzsche.[2] Their 'destructive' critical methods privilege exposure; seek to anticipate surprise and thus to negate its existence; and endeavour at all times to apply themselves to the broadest and most diverse spectrum of phenomena possible by tracing their emergence to a single source. Reparative reading, by contrast, is less concerned with the exposure of false consciousness, with anticipation, or with wide applicability. It seeks instead to explore the specific contingencies and local consequences that arise out of the performative nature of knowledge. In other words, by insisting on the need 'to hypothetically disentangle the question of truth value from the question of performative effect', reparative reading attempts to respond to a given body of knowledge or theory by exploring how best to 'move amongst its causes and effects'. Without accepting that a truth is given, the reparative reader seeks ways to live positively and without self-destructive paranoia in relation to that truth. Even true paranoiacs, Sedgwick argues, have real enemies: the paranoid ethos can never be paranoid enough, seeking as it does to interminably reconfirm its originary neurosis. Reparation is dedicated the epistemological primacy of the affective life of humanity, to the recovery of that life, and seeks to resist the categorical imperative associated with paranoia which, in Sedgwick's view, has obscured the otherwise productively diagnostic practice of critical suspicion. Reparation is committed to negotiating truth as it is constructed, and finding redemptive possibility and consolation in that process of construction.

Sedgwick's notion of reparative reading is a productive one when it comes to assessing critically the work of scientific naturalism. Alluding to the conspiracy theories that plagued the AIDS crisis in the last two decades of the twentieth century, Sedgwick reflects upon the value of knowing the 'probably natural history of HIV'. Suppose we knew that HIV originated as a deliberately engineered virus designed by the US state to decimate non-combatant enemies, she asks, rather than a biologically contingent and unpredictable viral emergence? What specific epistemological and practical consequences

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[1] Eve Kosofsky Sedgwick, 'Paranoid Reading, Reparative Reading, or You're So Paranoid, You Probably Think This Essay Is About You', in *Touching Feeling: Affect, Pedagogy, Performativity* (Durham: Duke University Press, 2003), pp. 123–51.

[2] Paul Ricœur, *Freud and Philosophy: An Essay on Interpretation*, trans. by Denis Savage (New Haven, CT: Yale University Press, 1970) pp. 32-33; Sedgwick, p. 129.

would that have? Suppose science could reveal definitively that conspiracy to be true, exposing the state's indifference to the deaths of millions in the third world: 'what would we know that we don't already know?'[3]

Sedgwick here challenges the idea of the intrinsic value of truth, versus the question of who wields it and in what way. The question suggests that the epistemological ethos of natural history by definition engenders a paranoid method of reading life. The categorical imperative of institutional science is to expose truths; demystify false assumptions; reduce as many diverse phenomena to as many little causes as possible; and to eliminate surprise from humanity's view of nature. Darwin's theory of evolution can be viewed in the same way. And like those two other great demystifying figures in Western scientific thought, Copernicus and Freud, Darwin's theory of evolution exposes what, for Elizabeth Grosz, is the fundamental element of all false consciousness: humanity's assertion of ontological sovereignty. On the other hand, Sedgwick also asks us to consider how we as critical readers can relate to Darwin's thought. What if the Darwinian conspiracy is true and, as Daniel1 puts in *The Possibility of an Island*, human life is nothing but 'a pretty arrangement of particles, a smooth surface, without individuality, whose disappearance would hold no importance'; a meaningless, valueless, biological contingency; guilty of deluding itself of the opposite by virtue of the human capacity to think (*Possibility*, 292)? What do we then know that we did not already? Certainly, Darwin's work can be understood as adding further scientific credence to an already existing economic, philosophical, and naturalist pessimism outlined by Hobbes, Schopenhauer, and Malthus. A more productive question would be then: in what way can we relate to the pessimistic truth of Darwin's theory of evolution as it is constructed without recapitulating the paranoia this truth seems to beget? It is this question which has driven my reading of responses to Darwin in novel form. How can the performance of our humanity offer us consolation from the evolutionary nature of life?

In answering Darwinian evolution's paranoid quest for biological truth, and the implicitly suspicious thesis arising out of that which states that human life is ontologically unimportant, these novelists offer rich combinations of reparative as well as paranoid modes of relating to Darwin's thought. The plots of the novels I have discussed confirm

[3] Sedgwick, pp. 123–124.

the inescapable nature of hereditary fate and perform an acceptance of the conspiratorial thesis of biological determinism. On the other hand, we can read Zola's literary Naturalism as drawing attention to its own scientific posture and the performative nature of its own truth. In this way, Zola's fiction is a vessel through which we can direct our suspicion at the truth claims made by Darwinian science and heredity determinism. In *Germinal*, Zola rehearses opposing interpretations of Darwin's theory of evolution, both of which are themselves paranoid in nature: the anarchist, Souvarine, insists on the intrinsic truth of his reading that Darwinian natural selection abnegates the possibility of all revolutionary action while, in response, Étienne, demands the same status for his own historically determinist, Marxist reading of Darwin. This dialogue, in which each man seeks to reveal the false consciousness of the other's Darwinism, gives literary form to a paranoid attitude in relation to Darwin's theory of natural selection. Zola presents Darwin's work as a body of thought open to conflicting interpretations, implicitly dismantling the objectivity on which literary as well as scientific naturalism subsists.

Furthermore, Zola's deconstructive, literary performance in *Germinal* is also a reparative one. Staging Darwin's theory of evolution in terms of irreconcilable possibilities denies natural selection the insidious, various, and mutually reinforcing social iterations it creates. In this way, the novel opens an interval between discourse and life, offering humanity a space in which to constitute itself in relation to the discourses of evolutionary science without becoming overcome by them. If the dialogic combination of Souvarine's nihilism and Étienne's utopianism can be read as a form of resistance to an implacable scientific objectivity, the figure of Claude in *L'Œuvre,* who first appears in *Le Ventre de Paris*, represents actively transformative attitudes towards the grim reality of evolutionary truth. Although his art is implicitly involved in questioning the scientific theories with which it is engaged, Claude's aim is to wrest some redemptive potential from that world view. In his plan to create a revolutionary artwork that represents the scientific narrative of the creation of the world, Claude negotiates truth as it is constructed and experiments with the consequences of that construction, in the hope of transforming the conditions of human life. The irony of this reparative aesthetic is that the artist's search for redemption is presented by Zola as false consciousness even as he performs it himself. Zola's revolutionaries are failures. The laws of biological struggle and hereditary determinism re-assert themselves, and those seeking to transform the natural world become victims of the

violence to which they sought to respond. But by bearing witness to that repeated failure, to humanity's struggle against its own violent condition, Zola offers us a vociferous, performative re-assertion of humanity's recuperative, creative life.

Thomas Hardy's literary responses to Darwin present us with their own braid of suspicion and restorative optimism. Hardy's attitude towards the truth of the Darwinian paranoia – the possibility that human life is contingent, cruel, and devoid of intrinsic value – is one of reparative acceptance. Less concerned with the truth or untruth of this thesis, Hardy instead explores how everyday human life lives under its shadow. His depictions of the erotic lives of everyday female sexuality in *The Return of the Native* in particular evinces a reparative relation to evolutionary destiny and its temporality. Focusing on the virtuosity of sexual desire and its rituals Hardy refuses to measure life's value in relation to its inevitable death, and depicts instead its fertility and creativity.

In his depiction of the relations of the sexes, Hardy focuses on what Sedgwick calls 'pleasure and amelioration', on the affective realities of people seeking to live affirmatively in relation to their own evolutionary fate. Under a regime of paranoid reading, such a focus is vulnerable to accusations of being "merely" reformist or aesthetic, rather than rigorous or universally applicable.[4] But this emphasis in Hardy on pleasure and aesthetics as evolutionary meliorism offers a critical attitude towards evolutionary temporality and the determinist logic that derives from it. Through my engagement with Elizabeth Grosz, I have sought to show how Hardy's rituals in *The Return of the Native* are not limited to resisting evolutionary fatalism. In his depiction of the relation of contingent, unpredictable cultural life with natural life, Hardy's fiction dramatises and values the unknowable futurity of evolutionary progress. In Sedgwick's terms his attitude to natural life is opposed to the paranoid attitude which seeks to anticipate and eliminate the unexpected. In Hardy's materialist and naturalist literary cosmology, aesthetic surprise is inherent to evolutionary contingency, re-emphasising how in Darwin's own work the paranoid neurosis of natural selection is supplemented by the descriptive, reparative work of sexual selection. *The Origin of Species* is dedicated to unfolding the thesis that the conditions of natural life consist of random, contingent processes of extinction and variation. By contrast, *The Descent of Man* can be read as a descriptive text which details

[4] Sedgwick, p. 144.

the myriad ways that life elaborates itself, extends itself, and reproduces itself unpredictably. In this way, Hardy fiction rebukes the attempt of evolutionary science to arm itself against surprise, and offers us a vision of a materialism that stands in readiness, potentially at least, to appreciate the new.

Like Zola, Hardy's fiction is a testimony to the epistemological consequences of a paranoid response to Darwin's original thesis. His fiction, I have tried to show, details with unflinching candour the fatally sexist biological determinism of Darwin's theory of sexual difference as it becomes naturalised in Victorian society. But where in Zola the act of witnessing can itself be viewed as reparative, Hardy supplements this reparation further with a reading of Darwin's theory of sexual selection which allows him to re-cast of the type of agency available to humans in the evolutionary world. Hardy eschews the breathless, messianic hope of Zola's revolutionaries, but also the withdrawal from life involved in the act of observation. In Hardy's literary accounts, the rituals of sexual selection, evolutionary eroticism, and aesthetic participation offer us a reparative partaking in natural life without becoming engulfed by it.

Butler's, Huxley's, and Houellebecq's Utopian responses to Darwin give dialectical form to the relationship between suspicious modes and restorative modes of reading Darwin's theory of evolution. On the one hand, the spatially and semantically closed figure of the Utopian island represents the impossible, transcendent core of truth towards which a paranoid mode of reading travels. And through the construction of this truth, the Utopian island takes up a paranoid position of critique in relation to the source material from which it was originally derived. As with More's *Utopia*, Houellebecq's, Huxley's, and Butler's Utopian islands function as critiques of the contemporary historical, political, and biological conditions under which they written. A perfect, stable future can only be conceived in opposition to a degraded, unstable present. Above all, in these novels the sense that Darwin's theory of evolution is complicit in that degradation confirms the paranoid reading of Darwin: life is inescapably cruel and pointless.

On the other hand, these novels explore the difficulty that evolutionary incompletion presents to humanity's affective life and existential safety. In response, they affirm the reparative power of the Utopian imagination. Unlike Zola's and Hardy's works which give precedence to the act of bearing witness, for the protagonists in these Utopian novels the condition of the human under the regime of Darwinian evolution is too painful

even to observe. Travelling to an existence that is temporally, geographically, and biologically displaced from the Darwinian world allows them to escape that pain momentarily. And for the reader, the imaginative act of reading these Utopian novels delivers us from the hegemony of the Darwinian conspiracy, reacquainting us with the possibility of imagining another reality. To make this reading a reparative act, paradoxically, requires that these Utopian futures be revealed as impossible. The destruction of Erewhon, Pala, and the neohuman in these novels respectively represents a rejection of the paranoiac epistemology. Acknowledging that evolutionary temporality entails the renewal as well as the destruction of all life is the starting point of an acceptance.

In such a light I have avoided making paranoid pronouncements which seek to fix the Darwinian context of these novels. It has been enough for me that these novelists were aware of Darwin's fundamental thesis and its scientific importance, and could respond to that thesis in their work. It is also in the spirit of reparation that I have turned repeatedly to the work of Gilles Deleuze to try and read these novels' responses to Darwin in a positive light. Deleuze's reading of Darwin is unusual in the broad spectrum of critical theory and philosophy. Unlike many of his peers in critical theory, Deleuze's relation to biological discourse is not defined by suspicion or paranoia, but by a readiness to take what is useful for his own philosophical project without insisting on the transcendent truth of that project or the work he adapts for it. I have attempted to follow that example myself by exploring how literary authors enact this mode of reading Darwin's work, and how this enactment allows readers to appreciate the complexity, virtuosity, and philosophical ambition of these novelists' engagement with Darwin's theory of evolution.

But what of the paranoid dimension that remains of Darwin's work? As Eve Kosofsky Sedgwick notes, paranoia is contagious. When suspicion is deployed as a primary methodology, she writes, it 'seems to grow like a crystal in a hypersaturated solution, blotting out any sense of possibility of alternative ways of understanding *or* things to understand.'[5] Such a remark in relation to the methodology of Darwin seems prescient when viewed in light of the increasingly reductive, essentialist, and unreflective iterations of Darwinian thought that have become prominent in the Humanities as well as in

[5] Sedgwick, p. 131.

specifically scientific contexts. As a so-called 'strong theory', the goal of Darwinian evolution in almost all its iterations seems to be to reduce as disparate a range of phenomena as possible to as few causal origins as possible. But this constant search for a mechanistic coherence in the natural world threatens to blot out the specific contingencies of life, the diversity of its kinds, the creativity of its living and its affective reality. For his own part, this constant drive to reduce difference to sameness exhausted Darwin. I have alluded before to the letter Darwin writes to his wife from the hydrotherapeutic clinic at Moor Park where he was recovering from chronic stomach pains. Lying in the grass amidst the sound of birdsong and the skittering play of squirrels, he gives up for a moment the desire to discover the origins of all things: 'I did not care one penny how any of the beasts or birds had been formed'.[6] Deleuze notes that Darwin may have failed to see the value of his own work – the way in which it does not reduce difference to sameness but privileges the irreducible difference of all natural life and the constant action of difference in the natural world.

I have tried in my readings here to articulate how these novelists' responses to Darwin privilege the primacy of difference over sameness. Their works, like Darwin's, re-assert the tragic nature of evolution: in these novels life for humanity is grim, short, and defined by relentless struggle. But by offering us a sense of the reparative power of literature, of its capacity to dramatise the lives of those who live under Darwin's shadow, they invite us to prostrate ourselves, like Darwin, and appreciate the variety, beauty, and complexity of the world, even as beneath us the war of nature continues to rage.

[6] Charles Darwin, 'Letter 2261, Darwin, C,R, to Darwin, Emma', 28 April 1858, Darwin Correspondence Project <http://www.darwinproject.ac.uk/entry-2261> [accessed 3 November 2014].

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